# The Extent to which the national and organisational Culture Contributes to Delays of Libyan Construction Projects.

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## ABSTRACT

Since economic growth and progress are so important to a country's economic development, governments always put them at the top of their list of priorities. The Libyan construction industry LCI, like its counterparts around the world, plays a critical role in economic growth and development. Despite the government's increasing focus on the sector, the LCI continues to struggle due to project failures and delays. Previous research has identified several elements that are creating delays in Libyan building projects; however, all previous studies have mostly focused on performance-based concerns. There are no studies identifying that national or organisational culture influences the delay of construction projects in Libya.

The present study hypothesised that Libyan national culture (NC) and organisational culture (OC) in Libyan construction enterprises might have a substantial effect on project completion. To prove this hypothesis, the present study used a mixed-methods approach (quantitative and qualitative) that included a structured questionnaire and interviews. Participants in the research are workers of construction businesses in Misurata, Libya, since it is one of the most populous cities in Libya, with 40 construction enterprises working there. The data gathered from these participants is analysed using SPSS and NVIVO. The research involved 103 construction employees—80 men and 23 women. According to the descriptive study, most engineers in Libyan construction companies are university graduates, with some holding postgraduate degrees. They have been working for their company for an average of 5 years, with some having over 15 years of experience. These participants were questioned about their companies' national and organisational cultures.

According to response analysis, the prevailing organisational culture in Libyan construction businesses is hierarchical, with extensive hierarchies that include the influence of national culture on uncertainty avoidance (UA), power distance (PD) and individualism (IND). The rigid hierarchical culture has been identified as a significant contributor to project delays because decision-making takes too long to accept through various hierarchical levels, whether it is at the initial levels of projects, i.e., project planning, or any sudden decision to cope with uncertain situations.

Delays in decision-making led to delays in project completion. Furthermore, longer hierarchies with big power gaps between workers and management do not create a huge communication gap, so neither employees nor managers are motivated to offer feedback throughout the implementation phase. Because project managers and lower-level staff are not authorised to take any rapid action without the consent of senior management, issues that emerge on construction projects take too long to settle. Consequently, development projects in Libya are delayed.

Individualism is also seen in the way Libyans run construction projects. Personal needs and interests are put ahead of business goals. This causes stress and anxiety among employees, affecting the project's overall performance. Moreover, the culture of uncertainty avoidance in Libyan construction companies stifles employee creativity and innovation.

In today's dynamic markets, industries that accept, change, develop and innovate thrive while Libyan construction firms operate differently. In fact, management encourages employees to minimise uncertainties and risks by brainstorming and coming up with fresh solutions. The culture of uncertainty avoidance creates delays since employees are not allowed to take rapid action and must instead wait for upper management's judgement.

These construction companies' national cultures also affect how they manage projects, which can cause projects to be late. According to the findings, Libyan national culture has a significant impact on organisational culture and project management, ultimately contributing to project delays. In order to reduce project delays and contribute to Libya's economic progress, the study advises fundamental cultural changes at both the national and organisational levels.

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# List of Abbreviations

| | |
|---|---|
| **CI** | **Construction Industry** |
| **LCI** | **Libyan Construction Industry** |
| **PD** | **Power Distance** |
| **UA** | **Uncertainty Avoidance** |
| **IND** | **Individualism** |
| **MAS** | **Masculinity** |
| **CPM** | **Construction Project Management** |
| **CSF** | **Critical Success Factors** |
| **CPD** | **Construction Project Delays** |
| **PMBOK** | **Project Management Body of Knowledge** |
| **PM** | **Project Management** |
| **GDP** | **Gross Domestic Product** |

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## DECLARATION

This dissertation was mainly submitted in fulfilment of the requirements for the degree of Doctor of Philosophy at the Bournemouth University-United Kingdom. Thus, I acknowledge that this dissertation is original and was not published or submitted before either in whole or in part to any Journal or academic institution.

# Chapter One: Introduction

## 1.1 Introduction

The current chapter incorporates the overview of the study, including an overview of the construction industry (CI) in Libya and its development, as well as a description of the key factors that are contributing to the success or failure of construction projects. Additionally, this chapter also focuses on presenting the study's background, the study's problem, the study's aims and objectives, the proposed research questions as well as the thesis's structure.

## 1.2 Overview of Libyan Construction Industry

Although there are numerous factors affecting the success or failure of projects across industries, the cost-effectiveness and timely accomplishment of projects are seen as common in all industries. Therefore, cost and time management are deemed critical success factors ("CSF") in construction industries all over the world (Fackroon et al., 2008). Unfortunately, the construction industries in most countries face critical challenges due to delays in construction projects, and the Libyan construction industry is no different. It has also been facing critical challenges for the last decade. Thus, in an attempt to solve this issue, the current study is primarily aimed at examining the major determinants of these delays. In this regard, the current research explores the contribution of the national culture and organisational culture of Libyan construction companies to delays in projects. In developed and developing economies alike, construction industries are considered one of the mainly focused sectors due to their significant and positive contribution towards economic growth and development (Garbharran et al., 2012). Whereas construction projects in many economies contribute approximately 5–10% of the gross domestic product (GDP) across the world (Salifu-Asubay and Mensah, 2015), likewise, the LCI is almost contributing 5.2% of the Libyan gross domestic product (GDP) while employing almost 3.2% of the total workforce in Libya, including both Libyan nationals and foreigners. Moreover, the public sector in Libya accounts for the commission of more than 85% of the building construction projects, and that's why the public building construction projects are considered the core source of work in Libya (El-Hasia, 2005). Therefore, in this way, the LCI makes a tremendous contribution to the Libyan national economy (Cridland, 2009).

Despite all these facts, the magnitude of failures of construction projects in LCI has increased dramatically (Kusakci et al., 2017); therefore, there is a vital need to understand

the key reasons and factors that are causing the failures of Libyan construction projects.

Although various factors that contribute to the success or failure of construction projects, such as the performance of management, planning and control, laws and regulations, project management practices, and the leadership of the organisations (Bailey et al., 2017), the timely accomplishment of the project while meeting the targeted quality standards is widely considered one of the most significant factors that is impacting the success or failure of construction projects (Naoum et al., 2015). Furthermore, one of the other significant factors influencing projects' success or failure is the performance of the project managers in terms of how well they are able to manage the whole project, including their leadership qualities, assigning key roles and responsibilities to the project team members, and getting the work done through the project's team in an efficient manner (Garbharran et al., 2012).

In addition to the things listed above, LCI has a lot of problems with construction projects, such as delays, poor quality, and high costs that affect the overall budget (Fackroon et al., 2008; Higham & Trough, 2018). One of the main reasons for the failure of such projects is their late completion, which also leads to higher cost levels. Because of these problems, hundreds of construction projects have been stopped, put on hold or given up on (Higham and Trough, 2018). This has also affected the demand for construction in the United States. Therefore, it is very important to look into the main things that are causing these projects to fail. This means that an in-depth analysis is needed to find the main things that are causing problems before moving on to come up with a solution to make future construction projects successful so that LCI can help Libya's economy grow and develop. For the CI to be able to play its important social and economic role in the future development of the country, it is crucial that large-scale construction projects are handled effectively and efficiently.

### 1.3 The Study Background

Indeed, the major issue that is faced by CI in any nation is delayed projects, and project failures due to delays have a significant impact on national priorities for focusing on CI in the future (Enshassi et al., 2010; Kazaz et al., 2012). Thus, due to the vital role of construction projects in economic growth and development, previous studies focused on studying the potential determinants of the delays of construction projects (e.g., Fallahnejad 2013, Mahamid et al. 2012, Abd El-Razek et al. 2008). However, the review of the literature also showed that there are various factors influencing the overall performance of construction projects (e.g., Sambasivan and Soon, 2020) and how these factors are able to cause delays in construction projects (Hegazy and Menesi, 2008; Shi et al., 2001; Arditi and Pattanakitchamroon, 2006, 2008). Although construction projects across nations face delays, the degree of those delays, their causes, triggers and solutions vary across nations (Al-Kharashi and Skitmore, 2009; Sambasivan and Soon, 2007; Frimpong and Oluyowe, 2003). In addition, studies including Al-Kharashi and Skitmore (2009), Sambasivan and Soon (2007), Frimpong and Oluyowe (2003), Gunduz and Almuajebh (2000) highlighted the various internal and external factors that contribute to project delays, including deteriorating economies, unfavourable weather conditions, poor site management, poor scheduling, subcontractor problems, financial difficulties, poor understanding and the lack of experience of project managers.

In addition, studies like Lewis's (2005) show that national culture is seen as one of the main causes of project delays. This is because different countries have different ideas about time limits and some are very punctual while others are not. Moreover, organisational culture also contributes to the success and failure of construction projects, as the decision-making approach, working ties and contact efficiency of the project's participants significantly depend on their organisational culture (Naoum et al., 2015). Hence, based on these facts, which have been highlighted by previous studies, a particular question arises here: Does the accomplishment of construction projects depend on the construction company's organisational culture? Although the literature reports that time and corporate culture are interlinked, it lacks evidence regarding the impact of organisational culture on the timing of project accomplishment. However, although previous research highlighted that national culture influences how activities are performed by project participants, the available literature lacks evidence regarding the contribution of national culture to the timely accomplishment of projects. As a result, it appears that answering whether the national and organisational culture has a link with the timely accomplishment of projects in the construction industry because if such cultural influences are

found to be contributors to project accomplishment, then their negative contribution may also cause delays of construction projects. Thus, since construction projects in Libya are constantly facing delays and failures, the current research aims at identifying the impact of national culture (the national culture of Libya) and organisational culture (the organisational culture of Libyan construction companies) on the delays of such construction projects to unveil the fact that if such cultural influences significantly contribute towards project delays, then there would be a need for transformations in these cultural aspects. Identification of the influence of these significant factors is critically important because CI is required to be a positive contributor towards the economic development of the country, so there is a need to reduce construction delays as well as improve construction productivity.

### 1.4 Factors of Construction Project Delays

Although construction project delays (CPD) are seen as a critical issue that is encountered by construction industries in almost all nations, the magnitude varies across projects and nations, ranging from a few days to even years. Some of the most significant factors, which impact the execution of construction projects, are time, budget and efficiency (Hancher and Rowings, 1981). However, it is important to consider the exact causes and their significance to minimise and eliminate the impact of delays in construction projects. In this context, Mansfield et al. (1994) indicated that the efficiency of the construction projects implies the timely accomplishment of the project, while the timely accomplishment is influenced by various unpredictable factors that emerge from various sources including the productivity of construction project stakeholders, the availability of required services, site conditions, weather conditions, contract forms and contractual relationships of stakeholders.

The construction industry (CI) in almost all countries contributes positively in economic development of the country; it is the case with Libya. Libyan construction industry (LCI) is also among the attractive industries that have the potential to contribute significantly to the economic development of Libya (Fackroon, 2008). In contrast to other industries, the CI has special features; especially in a way that each project in the CI is unique in terms of its form, scale, involved participants of the projects as well as geographic location. Therefore, construction projects in Libya are also unique and may have different factors; that

are causing delays in their accomplishment. It is therefore believed that the construction projects must be investigated in national and organisational contexts for the aim of finding out the underlying causes, which are contributing to delays (Wells, 1986; Sambasivan and Soon; 2007; Olawale and Sun, 2010; Garbharran et al., 2012; Gunduz and Almuajebh, 2020). Through relying on the discussion, it is indicated that although there are various factors highlighted by previous studies regarding the reasons behind the success and failure of construction projects, however, there is a gap regarding investigating the interrelationship between CPD and national and Organisational Culture. Therefore, the current research attempts to fill this gap by investigating the impact of Libyan National Culture and Libyan construction companies' Organisational Culture on CPD in LCI. To accomplish this aim, the current research assumes that the Libyan National Culture and Organisational Culture significantly influence the delays of construction projects in Libya.

The CI is among the significant contributing sectors of each economy and most governments including the Libyan government are focusing on enhancing the productivity of this sector. Therefore, the desire of the government and the private sector to improve the development of Libyan infrastructure has generated intense competition among foreign construction organisations and a few indigenous companies, even though some foreign construction organisations aim to enter the sector by collaborating with local organisations to comply with Libya's local content law and regulations. However, despite enhancing the level of competition, construction projects are frequently facing delays; hence, it is necessary to concentrate on the major issues underlying such delays in the LCI (Fackroon, 2008).

Since the CI in Libya is seen as one of the major contributors to Libyan economic growth and development, the identification of the factors that cause delays in construction projects is a significant contribution so that focusing on these factors and making improvements accordingly may result in eliminating such delays, ultimately leading to a successful CI as well as a flourishing economy. Therefore, by highlighting the impact of national and Organisational Culture on CPD as well as the key aspects that require modification to avoid delays of projects in Libya; the current research would contribute not only to filling the gap in the available literature but rather enriching the knowledge of key stakeholders in Libya so that they can make significant changes in their cultures at organisational and national levels. Eliminating delays in building projects will significantly boost the quality of construction and will have a positive impact on the economy.

## 1.5 The Problem Statement

Although numerous studies have identified the factors, which are contributing to the success and failure of construction projects, there is no research identifying the impact of National Culture and Organisational Culture on the delays of projects. As the major reason for the failure of construction projects in Libya is their delays, it seems to be essential to find out the key factors, that are contributing to the delays of the Libyan construction projects, subsequently, and that will assist these projects to avoid delay issues.

For instance, through discussing the impact of cultural differences, studies including (Schein, 2004; McKenna and Beech, 2002; Rameezdeen and Gunarathna, 2003; Abu-Jarad et al., 2010; Abdul Nifa and Ahmed, 2002; Abu-Jarad et al., 2010; Abdul Nifa and Ahmed et al., 2010) revealed that cultures vary from one nation to another, from one industry to another and from one organisation to another and have a significant influence on the ways activities are being performed by individuals under such cultural influences. Hence, due to the cultural differences between developing and developed nations, as well as between the Arab region countries; there is a need to focus on the impact of Libyan national culture and organisational culture of Libyan construction firms on the construction projects' performance, especially the delays.

Furthermore, although previous research like Fuar and Agyakwah-Baah (2010) have identified the link between Organisational Culture and construction project success or efficiency in other jurisdictions, however, all performance-related studies, which are conducted in the Construction Industry have not taken into consideration the impact of Organisational Culture during the past years. Within LCI, although organisations are varying in their size, unfortunately, none of the previous research focused on elaborating the cultural differences in these firms except for (Tsui et al., 2006) as they studied China's entire private domestic and foreign-invested companies. Additionally, other studies like (Ankrah 2007; Ankrah et al., 2007; Kheni et al., 2007) have focused on the project environment without focusing on the organisation. Beyond that, the influence of National and Organisational Culture in Libya has been studied in different other sectors (e.g. Altaher, 2012; Twati and Gammack, 2006; Zahari and Shurbagi, 2012) without taking into consideration the construction industry.

Briefly, even though the review of literature has explored the influential factors, which are causing delays in construction projects; there is a lack of literature regarding the core reasons behind the delay of Libyan construction projects. Therefore, the current study aims at investigating the effect of the construction companies' Organisational Culture on the delays of

Libyan construction projects. Consequently, findings from this research are estimated to contribute to enhancing the practice of construction project management by developing strategies to avoid or reduce the causes of delays.

### 1.6 Research Aims and Objectives

The core aim of this research is to investigate how cultural values can influence project delays, as well as identify whether those values can be one of the fundamental reasons. Therefore, the study explores and explains the influential relationships of cultural dimensions with project delay, at both national and organisational levels. These aims will be attained by achieving the following objectives:

- To identify the effect of Libyan construction companies' organisational culture and Libyan national culture on construction project delays.
- To determine which organisational culture type is currently predominant in Libyan construction companies.
- To recommend significant implications of the existing organisational culture and the main strategies and control methods for avoiding the delays of construction projects.

### 1.7 Research Questions

In order to fulfil the objectives of the current research, the study attempt to answer the following questions, which are formulated by relying upon the gap in the literature:

1- Does the Libyan national culture contribute to the delays of Libyan construction projects?

2- What type of organisational culture is currently predominating in Libyan construction companies?

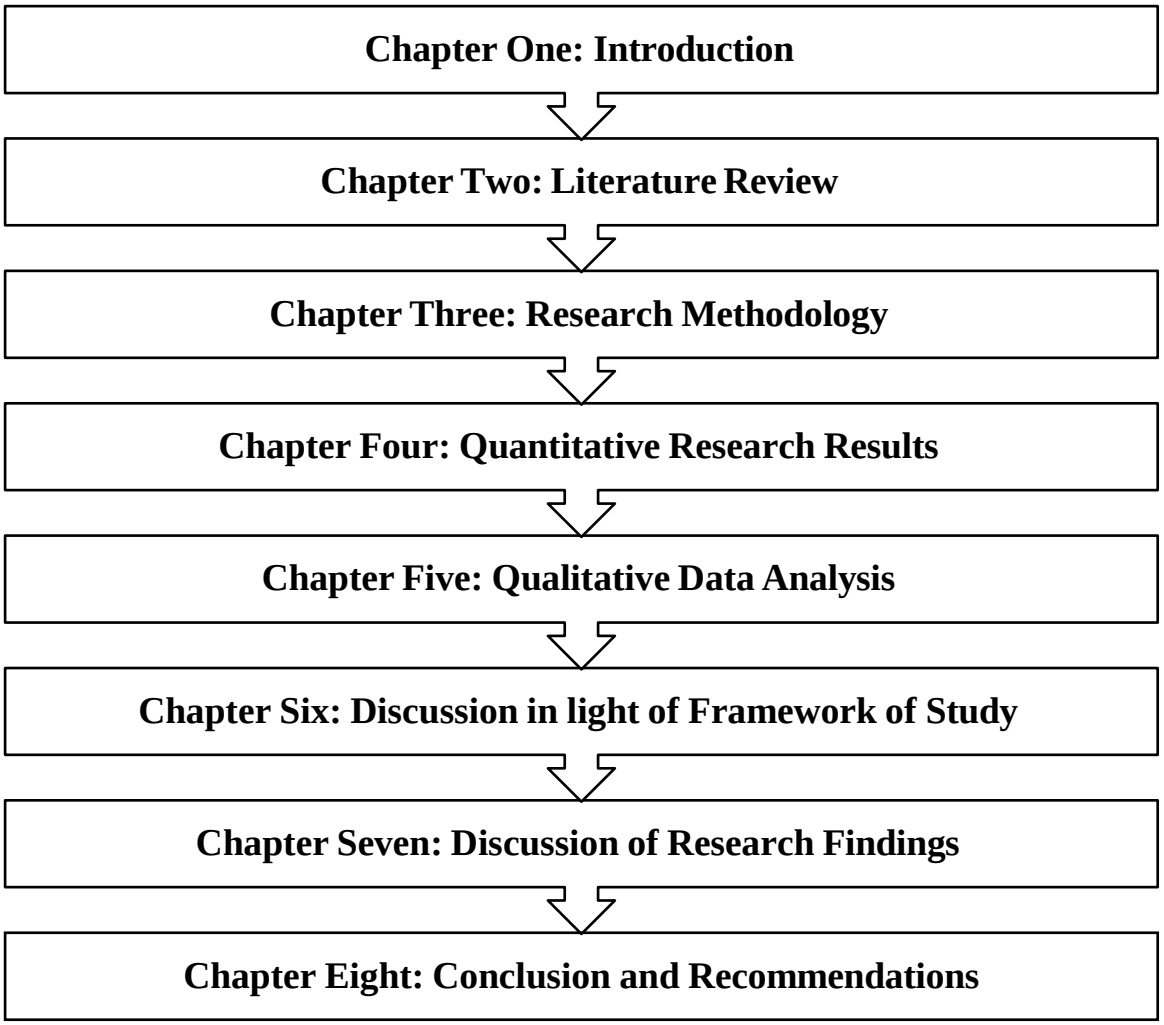
3- Does the organisational culture of Libyan construction companies contribute to the delays of Libyan construction projects?

### 1.8 The Thesis Structure

The current research incorporates eight chapters, where the first chapter is the introductory chapter that is focusing on presenting a comprehensive overview regarding the LCI, the study's background, the problem statement, the study's aims and objectives, as well as the set

of proposed research questions. However, the second chapter of this research focuses on reviewing the previous related studies with the aim of identifying the gap in the literature that needs to be addressed as well as the supporting studies that help identify the relationships among variables of interest. The third chapter incorporates the research methodology, research philosophy, research approach and analysis techniques, which are adopted by this research in order to test hypotheses as well as answer the proposed questions. Thereafter, in the fourth, chapter the study moves on to present the results of the quantitative approach, before the findings of the qualitative approach, which are presented in the fifth chapter of this research. In the sixth chapter, the study provided a detailed discussion regarding the theoretical framework considering the previous literature in order to highlight the fact that how the findings of current research contradict/validate the findings of previous studies. In chapter seven, the study discussed the findings, which are presented in chapters four and five regarding how national and organisational cultures contribute to the delays of Libyan construction projects in terms of the theoretical framework discussed in chapter two. Eventually, chapter eight includes the study conclusion as well as recommendations. Moreover, the structure of this thesis is divided as shown in the following figure (1.1):

Figure 1.1: Thesis's Structure




Thus, since the first chapter focused on introducing the study's core purpose, the coming chapter is proceeding to provide an intensive discussion regarding the previous related studies to help the current research identify the gap in the current literature.

# Chapter Two: Literature Review

## 2.1 Introduction

The success or failure of a project mainly relies upon the underlying managerial practices, which are incorporated into the project itself; hence, Project Management (PM) is considered an effective way to efficiently manage the projects to gain the desired outcomes from it. Such as all other projects in different industries, construction projects within the CI also require the essential tools, techniques, and expertise of PM in order to make construction projects more successful (Richardson & Jackson, 2018); Where, PM is defined as the process of accomplishing the targeted project in an efficient way in terms of time, cost and quality management. Project managers are responsible for the efficient and smooth working of all operations of the projects as well as developing a healthy communication network among all concerned parties. Like traditional PM, construction project management (CPM) is also seen as a set of interrelated activities, that are performed to accomplish a construction project while focusing on the delivery time, available finance and other resources as well as the quality of the product (Ramos, 2015). In addition, construction project managers also require all the essential skills, expertise and sufficient knowledge to run the project successfully. When a competent project manager leads the project smoothly in all aspects, the success of the project is ensured (Richardson & Jackson, 2018). While the success of the project is measured, the project is considered to be successful if it is completed within the pre-specified time and the budget limits. Indeed, construction projects are rarely completed on time and most of the time face issues of delays due to a set of internal and external factors. Construction projects incorporate different stakeholders, so issues are created at different levels that if not worked properly cause significant delays in the functioning as well as the overall success of the project. However, the conflicts among the involved parties and the other materialistic issues cause delays in the accomplishment of the projects. Moreover, organisational culture and national culture are among the significant factors, which impact the project's performance (Koskela and Howell, 2002b).

Moreover, since the current research aims at scrutinizing the impact of national and organisational culture on project delays in the LCI; this chapter focuses on providing a detailed discussion about PM, CPM, culture and its aspects, National Culture, Organisational Culture, Libyan culture and the interrelationships of these cultures along with PM and management practices of construction projects. Moreover, since this research

focuses on exploring the factors, which are causing delays in the projects of LCI; this chapter focuses on reviewing previous related studies, which are concerned with the factors that contribute to the success of construction projects or the factors that cause delays in construction projects.

## 2.2 Project Management

Project management PM is a complete process of achieving the desired goals and meeting success at a pre-defined time by leading the activities of a group or a team. The core challenge that is faced by project managers is attaining all the desired goals by meeting the deadline (Koskela and Howell, 2002a). Warburton and Cioffi (2014) stated that the core conceptualisation of PM is dividing the total work of the project into smaller lumps of work called tasks or activities by the Project Management Body of Knowledge (PMBOK). Where, the basic purpose of dividing the work into chunks or tasks is to manage the work appropriately, so that work can be done within a pre-specified time limit. In short, the theory of PM can be defined as the conversion of input into outputs.

In this regard, Koskela and Howell (2002a) indicated that there is no clear theory for PM rather the PMBOK provides statements that can be helpful in deducing a theory. The PMBOK guide indicates that projects incorporate two particular processes such as processes related to PM and processes related to product orientation (specifying and creating the desired product of the project). PM processes further involve initiating, planning, executing, controlling and closing the process.

Lousberg (2006) stated that among all the activities that are defined as the processes of PM, planning dominates among all. Because the basic plan of the project is the backbone of the project's success. As it provides a guide to the team as well as project managers relating to how they could achieve the desired goals and lead the team towards the final goals. If the basic plan lacks efficiency and does not work as required, the success of the project is not ensured. On the other hand, a proper plan facilitates the meeting of all desired outcomes from the project. Richardson & Jackson (2018) defined PM as a bundle of interrelated management tasks and activities that are joined temporarily for the aim of forming a unique desired project. Moreover, PM comprises of implementation of specified techniques and tools through skills and knowledge towards project activities to meet the desired outcomes. The basic issue that is faced by management is forming a schedule, defining a budget and estimating the required resources for producing the desired outputs.

However, it is significant to know that just implementation of the technical requirements of the projects is not enough and does not ensure the success of the project rather it is a complete process that incorporates many factors. Among various factors defining the success or failure of the project, organisational internal and external factors are among the most important ones. Because the organisation in which the project is being executed is the direct contributor to the project, so that is why project's outcomes are completely based on a set of organisational factors (Koskela and Howell, 2002b).

Ramos (2015) stated that PM is an art that directs and coordinates human capital and material resources, over the whole life of any project through implementing the latest management tools and techniques for achieving pre-specified goals of scope, cost reduction, enhanced quality, time management and contributing objectives. According to this definition, PM incorporates a set of soft and hard resources that may vary according to the type of project and the underlying goals of the organisation.

### 2.3 Construction Projects

Construction projects, like all other projects, are based on a collection of interconnected activities that, when done correctly and effectively, result in the intended results; they are also a set of organised procedures for the rehabilitation, construction, or refurbishment of infrastructure or buildings. Like all other projects, it begins with a detailed strategy of what is needed and how it will be accomplished (Chan, et al., 2004). Creating a feasibility study first defines the overall criteria before moving on to the available choices, planning the project, funding it, or the building phase. In other words, building projects are seen as a collection of actions in which a group of people, money, and a plan are brought together to create a unique design for the project. All of these things, including the crew, primarily collaborate on a single project and seldom collaborate again (Walker, 2015).

Construction projects are likewise built on the essence of PM techniques, and being a construction project manager necessitates gaining a set of knowledge and abilities required for project navigation and creating good relationships with all involved authorities. Construction projects need frequent and rapid changes, which are only achievable with the proper use of PM methods (Esmaeili, et al., 2014). Construction projects vary in terms of their types like housing projects or known as residential projects, heavy civil projects, commercial projects, industrial projects, private projects and public projects, such as constructions for the development or up gradation of the national infrastructure (Ramee et al., 2016).

### 2.3.1 Construction Project Management

The management of a construction project is defined as the supervision, direction and regulation of a construction project from its initial stages to the end of the project, based on the basic assumptions and practices of the PM (Williams, 2016). The core purpose of CPM is attaining a successful project in terms of client satisfaction, through timely delivery and within the required financial limits. Therefore, CPM is not different from PM as it is based on the basic assumptions and practices of PM, keeping in mind that each project is unique in all aspects just like the projects in all other industries (Walker, 2015). Moreover, the project should be good in terms of its functionality and the desired outcome. Where, the basic conceptualisation of all construction projects and their management is primarily concentrated on the technical parameters of the projects, such as their execution and financing, but such projects are also requiring good communication networks among all the agents, which are involved in the project (Williams, 2016). Construction management is seen as a combination of various functions and practices; that is jointly implemented for the success and accomplishment of particular projects. On the other hand, the construction project manager is responsible for performing all these functions and practices. Construction projects start from the specification of the project's objectives which leads towards making a suitable and appropriate plan for it. The plan of the project incorporates scheduling the desired time of delivery or accomplishment of the project, required resources and the budget accordingly. Additionally, the plan also includes the selection of the concerned parties, which are participating in the project like contractors, workforce etc. (Alias et al., 2014). The construction project manager is also responsible for the effective and efficient utilization of the available resources of the project, by employing appropriate practices, a skilful workforce and suitable equipment (Walker, 2015). However, all the other practices, which are performed for the project's accomplishment, are monitored in terms of their alignment with the Organisational Culture, as well as the legislative boundaries of the country. On the other hand, the project manager is also responsible for developing healthy communication relations with different parties, in order to eliminate conflicts among them (Williams, 2016).

According to Ramos (2015), the CPM is based on the underlying rules and practices of PM, which are extended towards construction projects. This means that a CPM is about executing a construction project by managing soft and hard resources such as material, financing and human in a pre-planned way to construct the desired structure or building while managing time, cost, quality and contributing objectives. At the initial level, CPM holds a plan, coordinates all the required activities, and executes the project. But typically, construction projects are complicated and incorporate a complex set of activities that can be modified depending on the work under process, and most significant construction projects require a deep knowledge of construction processes, higher levels of communication skills, and problem-solving capabilities. Moreover, CPM could not be practised only through relying on the basis of construction knowledge, rather requires a good knowledge of a variety of areas that are basic for a project's success, like knowledge of law, finance, business and mediation (Chan et al., 2004).

Thus, the most important factors, that are contributing towards the construction project are the organisation that is owing the project, and the project manager who is responsible to execute the project. Therefore, a project manager is the only one who can ensure that the project is being executed according to the proposed plan and that it is going to be completed at a scheduled time within the defined limits of the available financial resources (Ramos, 2015). The construction project manager is responsible for a set of activities; that work together to ensure the project's success. These activities include time management, contract administration, cost management, safety management and project planning as well as quality management. Project managers are required to hold professional practices of construction management and the core responsibility lies within the organisation that ensures the presence of all these attributes in project managers (Chan et al., 2004).

Jha (2011) indicated that although the CPM is based on the traditional rules, and procedures of PM; however, the CPM is learnt through on-the-job practices while taking more time than traditional PM. It could not be learnt through any single project rather one can get the grip by taking part in almost three to four projects. The construction project manager could not get all the required skills unless taking a part in complex tasks and activities of different projects. The knowledge and skills of the construction project manager transform the resources into desired outcomes or inefficiency can transform these into failures. Andersen (2006) argued that PM considers projects as primarily analogous. However, it is evident that projects are managed in quite different ways systematically. Therefore, each field requires its

unique PM theories, because each project is seen as an organisation established temporarily for some particular purpose while taking instructions and directions from their mother organisations (Walker, 2015). Hence, projects in CI are also dealt with in a similar manner. Although construction projects are executed by the construction project manager, however, the plan and instructions all belong to the mother organisation and the manager, who is working under it. Hence, the mother organisation, its rules, regulations and the basic culture of the organisation are deemed as the most important factors, which are contributing to the organisation's success (Andersen, 2006).

### 2.3.2 Construction Projects in Libya

The CI in Libya has changed tremendously, over the last five decades. In the initial stages, it was supposed to face the challenges of limited financial resources, because the country was involved in other occupations, but the CI was not the prime focus and had a limited value. The construction skills were hereditary and reflected the values as well as a particular culture of the people who are executing them. While after the oil boom in the 1970s, the LCI contributed to a large extent towards economic development, due to which construction activities and projects increased tremendously (Zahari and Shurbagi, 2012). However, the CI faced turmoil due to various policy changes, at the national level as well as seeing the decrease in oil revenues (Ngab, 2008). To date, the CI in Libya has gone through three different stages. For instance, at the initial stage, it faced the challenges of limited resources and budget. While at the second stage from the 1970s to 2000, it has gone through the stage of high spending by the government on all construction sectors. At the final stage, the CI has contributed to meeting the vital requirements of the population for infrastructures, roads, houses and schools. In addition, the construction operations and practices faced dynamic changes during this stage (Altaher, 2012). In addition, the construction boom resulted in transforming the industry into a cement-based industry. The industry progressed and transformed from dry construction material-based local projects towards professionallly guided projects, and organisations that were based on standard materials, and formal rules and regulations (Ngab, 2008).

In the recent era, huge amounts are being invested in water projects, the gas industry and power generation. Due to advancements in the tourism industry, the country required investments in infrastructure like building railways, airports, roads and ports, as well as their upgradation. Financial policies, which are formulated by the government like supporting small and medium enterprises, are in a favour of CI (Gunduz and Almuajebh, 2020) and

due to the dynamic business and economical transformations on the local and global level, the industry is moving forward positively (Libya, 2003). Private construction enterprises that were eradicated during the 1970s are the highest priority of the country to be re-established (Libya, 2002). Nevertheless, the most critical challenge for the LCI is the dependence on a foreign workforce in terms of technicians, skills and knowledge, as well as the sufficient labour, which is required to run the available or the coming projects. An increase in oil revenues due to the increase in oil prices enabled the government to enhance the budget of the CI and focus towards building and upgrading the required infrastructure (Libya, 2003). Although the government focused on running huge investments in CI, however, resulted in a huge burden on the Libyan economy, increased the prices of construction materials, as well as increased labour costs. All these outcomes are just similar to the situations, which were generated in the 1970s, much time before the construction boom happened (Ngab, 2008).

Currently, the CI is contributing to the economy, but to a very low extent in comparison with the other services and manufacturing sectors; i.e. it is contributing only 2.1% of the GDP (Gross Domestic Product) (Libya, 2003). However, its growth can contribute largely to the overall growth and development of the economy, because the construction sector in any country contributes well to the growth, and development of all other industries. This can be attained by establishing the required infrastructures. The CI in Libya requires special attention from the government to improve its efficiency and enhance its contribution towards economic development by enhancing its effectiveness, project efficiencies as well as time management. Meeting timelines and cost-effective results in saving costs, and that can be quite beneficial for the country's economy as a whole (Fackroon et al., 2008).

Recently, various investments are being made in the construction and building industry of Libya, while this sector still has not reached the level of development. The LCI's recent capacity lacks the ability to meet the desired and required housing supply and demands. Moreover, many buildings require urgent construction or upgradation including both the public and private sectors. Such developments are not only necessary for the development of the CI itself; rather these are also essential for other industries, most importantly the tourism industry (Higham and Trough, 2018). However, since the tourism industry is developing in Libya; various infrastructures require construction and upgradation. Briefly, the CI in Libya requires a special focus by the Libyan government on the reasons behind the failures of construction projects or the causes of their delays. Therefore, the lack of financial support for LCI seems to be one of the major challenges, which are faced by individuals in this industry. Although private construction enterprises are establishing again and the increase in oil revenues of the country

allows for making investments in this industry; however, the construction boom seems to occur soon (Fackroon et al., 2008).

### 2.4 Critical Success Factors of Construction Project Management

The most critical factors, which are successfully contributing to construction projects, are their cost effectiveness and time efficiency. Because timely accomplished tasks and projects with controlled costs result in cost savings; eventually, defining the success of the project (Fackroon et al., 2008).

Gunduz and Almuajebh (2020) studied different organisational factors in an attempt to identify the success factors in construction projects like clients related factors, project-related factors, PM-related factors, work and company-related factors, design team-related factors, and project-related factors, as well as the efficiency and effectiveness of each of these factors. Consequently, the study revealed that although all of these factors contribute towards a project's progress and success, however, the most important ones are; financial factors such as the availability of sufficient funds, and timely payments, as well as the organisation's approval mechanism, experienced manager and skilful workforce. These are some of the critical factors, which are contributing towards the project's success. Ramee et al., (2016) indicated that CSFs have a direct significant influence on the project's success. In the recent era, industries are operating in dynamic business environments, and the same case is regarding the CI (Gunduz and Almuajebh, 2020). Moreover, construction projects, unlike the projects of other industries, are involved in a more complex and vibrant working environment (Higham and Trough, 2018). Amplified uncertainties in terms of budgets, technical advancements and development procedures have created a dynamic working environment in the CI. Some basic criteria, as a measure of construction project success, are universal like quality; cost and time of the project and many parties are concerned with the success, or failure of a construction project like communities, owners, users and government.

Esmaeili et al., (2014) have identified four critical dimensions of the success of construction projects, and these are including the short-term objective of the project's efficiency, a medium-term goal of achieving customers' satisfaction in terms of technical specifications, the desired outcome of the project, long run business success by attaining a huge market share and finally another long run goal of preparations for future like the developments of making novel tools and techniques and getting new products while capturing new markets.

Ramee et al. (2016) identified some "CSF" for construction projects like the past performance, finance, quality and safety, managerial and technological aspects, working environment, organisation and its culture, available resources, the experience of the team involved in the project, as well as the extent of success of the previous project. Moreover, organisations' quality policy, availability of required staff and resources, disposal of water, and the image of the organisation are among the "CSF". Saleh (2009) focused on determining the potential factors, which can ensure the success of construction projects. The most important factors are found to include the cost, quality and time because owners do not want extended times or costs; moreover, they are concerned with the quality of the project. If these three criteria are achieved, then the project is ensured to be a successful one.

Alias et al., (2014) identified the management and its control as critical factors of the success of construction projects, indicating that it depends on the management of the organisation that leads its projects towards success or failure. The efficient utilisation of the involved resources by management is critical to the project's success. While on the other hand, the skills and knowledge of management to achieve this success depends on the organisation's culture. Moreover, some other "CSF" is including the motivation of the team that is involved in the project, the commitment of all concerned participants, troubleshooting, appropriate communication channels among the involved parties, the details of the plan, skilful managers, and design appropriateness, sufficient financial budgets and productive feedbacks. All these critical factors contribute critically towards the project's success.

Cheung et al., (2011) indicated that Organisational Culture is among the most critical factors for the success of construction projects. Organisational Culture gives shape to the activities of the team members, and their actions depict their organisation. Although all organisations have their unique Organisational Culture, some characteristics are shared by almost all organisations in the construction industry including their objective, strategies, team orientation, integration and coordination of activities, innovations of the organisation, emphasis on performance, reward orientation and members' participation. All these characteristics of Organisational Culture significantly contribute to the success of the organisation (Williams, 2016). Most of the success factors of construction projects are dependent on Organisational Culture among which an Organisational Culture of clear objectives along with stability is the most significant one. The internal culture of the organisation is found to be comparatively more involved in ensuring innovation, and success (Cheung et al., 2011).

Arditi et al., (2016) denoted that on one side, Organisational Culture contributes significantly to the success of organisations, but on the other side, it may also be the reason for the delays of

projects if it fails to establish an effective working environment for the projects. The CI is more frequently facing delays and it depends on Organisational Culture and how it helps resolve this particular issue. In some economies, organisations hold clan culture, while others hold marketing culture, and the length of the delay is directly dependent on the prevailing Organisational Culture. It is found that delays are less frequently faced by organisations, which are adopting clan culture (Arditi et al., 2016). Although delays are a fact of CI, Organisational Culture helps reduce the length of such delays. Well-established Organisational Cultures help their individual to successfully tackle such situations. Arditi et al., (2016) pointed out that various factors result in the delay of the project, but a strong significant relationship is evident between the magnitude of delay and Organisational Culture.

### 2.5 Construction Project Delays

One of the most critical challenges, those are faced by the CI is delays. Delays have a significant and negative impact on all stakeholders in terms of social and financial drawbacks. Although, various factors cause delays in construction projects; however, the extent of loss depends on its severity and occurrence frequency, while its timely accomplishment indicates the efficiency of the project team and its management. Thus, to minimise the impact of such delays in construction projects, it is important to focus on the underlying reasons, which are causing these delays (Shebob et al., 2011).

Zaneldin (2006) indicated that there are various factors contributing to the success or delay of the project that should be considered before the start of the project, hence that delay could not happen during its execution. The study argued that to make the contract document free of discrepancies and errors, the designing team should allocate a reasonable time. Moreover, there should be a significant focus on quality control mechanisms and practices. There should also be a well-established strategy to meet the scheduled requirements.

Alaghbari et al, (2007) documented that delays can be considered as an extended time that is taken by the construction project, due to some unpredictable circumstances. In addition, delay can be initiated by the contracting organisation or any factor that is directly contributing towards the project's accomplishment. Thus, the time end extent of delay varies according to the project; whereas, some projects are delayed just for a few days, while others are delayed for an extended period.

Fackroon et al., (2008) pointed out that construction project delays are evident universally, and most projects face delay even before their accomplishment. The reasons for delays vary according to the type of project. However, the team and management required to focus on the

underlying reasons causing such delays.

The underlying reasons for delays may vary depending on the location of the project, prevailing rules, regulations and laws and accessibility and availability of the advanced technologies implemented in the project. moreover, globalisation, the local economy's working environment and at a narrow level the organisations' working environment contribute a lot to the timely accomplishment or delay of the project (Shebob et al., 2011).

Most of the developing economies face CPD due to inadequacies of infrastructure of the CI, its limited resources, issues created by the consultants, contractors, and clients, and most importantly the inefficiencies and lack of skills of contractors that is major cause of mismanagement of the project (Alaghbari et al., 2007).

Most construction projects have to face delays in many forms like work stoppage for a temporary time period and due to temporary reasons that can be eliminated after some time or elongated delays due to some serious issues that could not be resolved very soon. Organisations have to face wastage of time and resources due to such delays moreover, the productivity of the organisation is affected. Delays in projects not only result in cost and time issues moreover it creates issues among the involved parties. In order to eliminate such issues, the most important factor to be considered by the organisation is the active involvement of all the concerned parties from the initial stages of the project like planning to the end of the project (Fackroon et al., 2008).

### 2.5.1 Type of Delays

The majority of construction projects industries are facing delays, due to different reasons but these delays vary in nature according to the type of project, or the resulting damage that is created by the delay of the project. Two basic categories of delays are explained as follows:

#### 2.5.1.1 Critical and Non- Critical Delay

Gajare (2014) indicated that some projects have to face critical delays, while others face non-critical delays.

Critical delays are the ones that cause a delay in the project's accomplishment within the pre-specified time limits, while non-critical delays are the ones that are caused during the project's execution, but that does not affect the overall completion of the project. This means that critical delays are either elongated delays, which are extending the time, or some delays, which are caused by some technical inefficiency that makes the project to be

uncompleted within the specified time limit. On the other hand, non-critical delays are the ones that are either for a shorter time or due to any reason that could be resolved soon as well as do not affect the overall accomplishment of the project.

#### 2.5.1.2 Excusable and Non-Excusable Delay

According to Fackroon et al., (2008), some delays in construction projects are excusable, while others are not, and that is elaborated as shown below:

**A. Excusable delays**

Excusable delays are further divided into two main types:

I. Compensable delays
II. Non-compensable delays

**I. Compensable Delays**

These delays, which are caused by the agent of the owner, or the owner itself, are the ones that are considered compensable delays. Such delays result in an extension of the scheduled time of the project, like a delay in the delivery of the design by the architecture of the owner. Such delays can cause financial losses to the owner in terms of the claimed payments. In such cases, the contractor claims additional costs in the form of an extension of time duration of the field office or the extension of the home office as well (Fackroon et al., 2008).

**II. Non-Compensable Delays**

These delays, which are caused by third parties or any incident that was unpredictable, as well as not in the control of the contractor, or the owner by itself are non-compensable. Examples of such delays are unpredictable weather conditions, uncertain economic, or the country's political stability, any mishap like fire etc. and any change in the policy of the government that results in delays of the construction projects. All these are delays that are neither predictable by the contractor nor the owner nor are under their control and they have to face a delay in all circumstances (Fackroon et al., 2008).

**B. Non-Excusable Delay**

The delays, those caused by the contractors to their suppliers can be inexcusable or non-excusable delays. They are called non-excusable, because the contractor is not relieved of the loss rather the owner is compensated by the contractor, either in terms of the delay's costs, or the project's acceleration. Such compensations may be for the actual damages or the liquidated damages in case there is no clause mentioned in the contract regarding the liquidated damages. Liquidated damages are mostly charged by the owner in the form of daily rates, which are

forecasted by the owner like not paying for the delayed time of the project (Fackroon et al., 2008).

### 2.5.2 Delay Factors in Construction Projects

Shebob et al., (2011) stated that there are various factors causing delays in construction projects, including the poor preparation of the plan and its execution, delay in design approval, financial constraints, alterations in construction designs, delays in cash flows, shortage of labour and errors in designs that take more time than the expected one.

Alaghbari et al., (2007, (2012) identified some critical factors that are the major cause of CPD. These include the inefficiencies of the contractors, problems that are created by the consultants, alterations in designs during the project's execution and cost overruns that result in waiting for the next cash flows. Fackroon et al., (2008) identified some critical factors such as the shortage of financing, poor management by contractors, delays in payments of the accomplished tasks, material shortage, varying site conditions, and most importantly poor planning of the project.

Fackroon et al., (2008) indicated some of the critical factors, which are contributing to the execution and timely completion of the project. Some important factors, that must be the top priority of the organisation, include the project's plan, its available resources and the involvement of the concerned parties. A poor plan causes many inefficiencies in the projects' execution and eventually, leads to temporary or elongated delays. Moreover, the availability of the required resources or its shortage during the execution of the project also causes delays. In addition, one of the most important factors is the involvement of the concerned parties, because if any discrepancy is created during the project term this could be resolved timely, due to the presence of the concerned authorities. Waiting for approvals takes too much time and results in delays.

Arditi et al., (2016) found a strong significant relationship between the delays of construction projects along with Organisational Culture, contributing significantly to extending or shortening the delay of the construction project. If Organisational Culture is not so enriched to motivate and eliminate all the hurdles in the execution of the project it definitely leads towards delays in the construction project, but at the same time, Organisational Culture can be a positive factor that can reduce the magnitude of delay.

Sheikh et al., (2010) identified four critical factors, that are causing delays in construction projects; these include contractor problems that take a long time, the contractor

doesn't get a satisfactory solution to the problem, client problems like achieving satisfaction of the client by making all the necessary efforts to make them satisfied, resources problems such

as insufficient resources cause delay, unless the requirement is not fulfilled, and the last factor is the general problems like any uncontrollable factors surrounding the project.

Gunduz et al., (2013) indicated that delays are very common in the CI and have a significant impact on the overall performance of the project. Delays are caused by many different factors, but among the most significant factors is the organisation's culture. Because Organisational Culture shapes all projects' activities from its initial stage of planning to the last stage of delivering the project. The preferences set by the organisation, and commonly practised by it as a part of Organisational Culture will define the delivery of the project.

### 2.5.3 Delay Factors in Libyan Construction Projects

In comparison with other industries like the services or manufacturing industries, the construction industry in Libya is not a major contributor to economic growth and development. One of the major hurdles in the progress and development of this industry is the delays that are occurred in construction projects. The delays, which are occurring so frequently are that most projects are delayed or either fail or shut down (Fackroon et al., 2008).

Higham and Trough (2018) indicated that most of the construction projects in Libya deviate from the pre-specified projects' timelines. Therefore, these delays are posing a financial burden on stakeholders, and the economy as well. Therefore, one of the most important reasons for such delays is the poor PM practices that are implemented on construction projects. Such delays in Libyan construction projects occur so frequently that these have become a routine part of LCI.

An important reason for the poor performance of construction projects in Libya is the priorities of concerned authorities in the state who are completely dependent on oil revenues, and do not focus on the CI as a priority (Shebob et al., 2011). Additionally, as indicated by (Adam et al., 2017), some other factors, that are causing delays in construction projects in Libya include the lack of communication between stakeholders which causes significant delays in projects, due to poor communication that creates discrepancies, that are resolved after a significant delay in the practices, while if there was a good communication interlink age between stakeholders, they would get the desired outcomes with the consent of all the concerned parties and the work would also remain unaffected. Moreover, some other managerial factors, which

are significantly contributing towards project delays, include poor management, control and monitoring. Poor and inadequate site management in terms of less involvement of the managerial staff at the site leads to poor performance of workers, eventually resulting in project delays. The decision-making process has a significant impact on the project's timely

completion. Thus, if the decision-making process is slower, then the implementation of these decisions will also be late, eventually causing a delay in the project's delivery. Moreover, financial factors also have a great contribution towards project delays in the LCI, like delayed payments along with price fluctuations, as well as inadequate financial planning results in delayed projects (Adam et al., 2017).

Adam et al., (2017) indicated that developing countries like Libya have to face poor planning and shortage of resources that result in delayed projects. Moreover, unpredictable ground and weather conditions along with project complexity, and poor planning about the timing of the project result in delayed projects. Thereafter, according to Higham and Trough (2018) one of the most important factors, which are causing a delay in Libyan construction projects, is the structure of the organisation, and its prevailing culture. Moreover, the poor strategic management in client companies; and inefficiencies in PM along with complexities of state laws in terms of hiring international experts cause poor performance of construction projects in Libya. Some other factors, that are causing delays in Libyan construction projects include security failures, shortage of labour, uncertain political environment, inefficiencies of procurement procedures and the poor selection of contractors. These are seen as some major contributors towards delayed projects in LCI.

Kusaki et al., (2017) indicated that although different factors affect the performance of projects some key indicators that determine the performance of projects are budget, time and quality. Cost overrun and quality issues indicate poor performance of the projects while effective time management is the essence of a project's success that is rarely found in construction projects in Libya and result in delayed or failed projects. While on the other hand, time management, cost efficiencies and quality controls are the main components of the Organisational Culture, because an organisation's culture flourishes such practices in its individuals. Management and other staff learn the practices from Organisational Culture that enable them to run a successful project, or a delayed one. In Libya, most projects are inefficient in these traits, due to which they have to face project failures or delays quite frequently.

## 2.6 Culture, Organisational Culture and Theories of Culture

The fields of sociology and organisational psychology provide a variety of concepts that help in understanding individual behaviours in organisations and the methods used by organisations to structure themselves. It is significantly found that Organisational Culture is an important contributor to developing organisational behaviours. Organisational development is found to be dependent upon the Organisational Culture this emphasised the need to understand the fact that organisational behaviours are not only dependent on the internal culture of the organisation, rather these are the result of national and international cultural influences, due to globalisation (Abridah, 2012). Hofstede (1980, pp. 21-23) defines culture as "the collective programming of the mind which distinguishes the members of one group from another", It is usual that one's culture is taken for granted and assumed to be correct because it is the only one, or at least the first, to be learned.

In addition, "Culture" is considered to be the civilisation or modification of mind that results from a collective phenomenon that is shared by a group of people, who live in a similar social setting and share similarities with the people of this same group but distinguish from others (Abridah, 2012). Moreover, culture is termed as a set of values that are passed from one generation to another and incorporate knowledge, laws, skills, beliefs, morals, arts, customs and some other capabilities like human habits, those are developed in a certain social setting (Abridah, 2012).

### 2.6.1 National Culture

A National Culture is a distinct culture that exists inside a country and results in commonalities among the people of that country because of the impacts of national boundaries. The nation's culture is a major social and environmental backdrop that is responsible for variations in behaviour between individuals from that country and those from other countries.

Most individuals, according to Hofstede (1991), belong to multiple cultural strata such as regional, ethnical, national, lingual, generational, religion, gender, industry, social class, or corporate affiliation. Nonetheless, it is vital to recognise that the mental programming of all members of the culture is not in sync. According to Hofstede (1980), people's mental programming is shaped by their national cultures.

According to Abridah (2012), National Culture is a collection of behaviours, beliefs and values that a group of people, or the majority of them, share in a specific national context. Wherever such ideas and practices exist, Values are represented in people's behaviours in their families,

educational institutions, and workplaces, and are reinforced by government policies and national laws in business, education, and personal life. National culture may be defined as a collection of ideas and values held by a group of people that are handed down from elder members of a social context to younger ones, influencing their morality, traditions, laws, and values.

Hofstede (1997; 2001) defines culture as mental programming that develops throughout infancy in a home environment and is reinforced by schools at the beginning and by organisations at the end. One person's mental programming is quite distinct from another's, although some of it is shared with others. While it is difficult to draw a dividing line between various types of mental programming, (Hofstede, 1997) identifies three stages of such human mental programming, as indicated below:

The mental programming, which was characterised by Hofstede (1997), has three levels, among which the universal level is the most fundamental. It is mostly shared by all humans in the world i.e., traits that are part of human nature. Such traits are related to the biological aspects of the human body, as well as various behaviours expressed by all humans like crying, laughing, and some other expressive behaviour. These are termed generalisations; that are shared by all National Cultures. The unique part of mental programming is the individual level as no two humans are programmed similarly; this level of programming forms the human personality. While the third level is the cultural level which is seen as a set of mental programming that is shared by a group of individuals, who are living in similar settings. Such a level is shared by a group of people, due to their development and growth in a similar social setting. Although they do not share similar genes, their learning processes are the same and result in some similar or shared mental programming level. This mental programming is also linked with the shared practices and values at organisational levels. These sets of mental programming and their resulting values, and beliefs are the foundation of Organisational Culture as well (Ansah and Louw, 2019).

#### 2.6.1.1 Cultural Dimensions Framework of Hofstede

In order to understand the effect of National Culture on organisations' success, Hofstede's cultural component concept was commonly utilised (Ármannsdóttir, 2015); hence, Hofstede's work on the impact of culture in project execution needs to be examined. Based on a study of over 50 countries comprising more than 120,000 respondents, the (Hofstede, 1980) model of National Culture characterised National Culture in five separate, behaviourally- predictable culturally dimensioned areas. Dimensions are Power Distance Index, Collectivism/individualism (IND) Index, Masculinity/Femininity Index, Long-Term Orientation and Long-Term Index. The five dimensions can be used to describe the principles that influence the behaviour and the behaviour of individuals in various cultures within a job framework (Hofstede, 1980).

Power distance corresponds to a country's level of equity or injustice. A high power gap means that power and wealth are unequally dominating the nation. Managers in countries with large power distances are more likely to take rising measures, and control income if power is centralised in their hands (Hofstede, 2001) and are the major decision-making body (Dechow et al., 1996).

IND relates to the extent to which national or group accomplishment is supported by one nation. A high degree of IND means that in one nation individual rights prevail. Managers in highly individual countries care more for their own needs than about the resources of owners and partners' conditions, and they are more inclined to handle the benefit in self-interest (Zhang et al., 2015).

In the allocation of social functions, Masculinity (MAS) applies to the value of sex (men and women). A low masculinity score indicates that ties, modesty, concern for the poor and quality of life are more important than anyone in government. Managers attach considerable significance to operational success in strongly male cultures, since sound business performance brings them greater social respect and personal confidence (Zhang et al., 2015).

Uncertainty avoidance indicates the acceptance of the level of uncertainty by people as most of the people in different nations do not accept higher levels of uncertainty and go for further clarity and minimisation of the complexity and uncertainty. Managers are more risk-averse and have more questions about costs in environments, where there is greater uncertainty avoidance (Zhang et al., 2015).

Hofstede has criticised the dimension of its importance for its limited ability, methodology and

limited access to calculations to expand the values prevalent in the multinational institution to reflect the cultural values of the region (Hofstede, 2001). But these writers agree for its accessibility, recognition of the prevailing themes and interpretation of cultural transformations the structure in Hofstede is widely embraced by literature. A number of comparative studies have cited Hofstede in 140 cases as proof that Hofstede's framework is of relevance (Lim et al., 2004). A cultural gap analysis has been widely used to describe the vast variety of multinational companies' policies, and operational characteristics in international market research (Rickset al., 1980) (Thi-any et al., 2005). Most recent studies of intercultural models draw on the dimensions of Hofstede and are based on them. One of the first cross-cultural experiments involving 116,000 people was and could still be Hofstede's study; its success stemmed from the widespread survey, and the usage of observational evidence to show cultural variations and to establish cultural aspects in the society (Adler, 1997; Parr, Shanks and Darke, 1999). Sondergaard (1994) noted that Hofstede's cultural aspects are adequately sponsored to search the effect of National Culture in PM in the review of cross-cultural studies, in view of the above:

**The fact that Hofstede was chosen as the method**

Hofstede's method was chosen because it has been studied in more countries than any other national culture model, including more Arab countries than any other model (Hofstede, 2001). This is why Hofstede's framework is frequently regarded as a paradigm, with his dimensions and resulting nation scores taken as given to explain the effects of culture in a variety of contexts. In his book "The Cultural Dimensions of Economic Performance," Hofstede describes the model he developed (Sondergaard, 1994). According to Soars et al. (2007), Hofstede's national culture paradigm is a simple, useful, and practical way to incorporate culture into cross-national diffusion research. Soars et al. (2007) rely on this sensation to support their claim. His work has been mentioned in over 900 papers since then, indicating that it has had a significant impact (Triandis, 2004).

According to Hofstede (2011), the cross-cultural data he collected in 1967 was the largest cross-national matched-sample database available at the time. These facts were gathered in 1967. "Any publication that discusses cultural differences is likely to cite Hofstede," Triandis says (2004). "any publication that discusses cultural differences." His framework is the most frequently cited and used national culture framework in fields such as marketing, sociology, psychology, accounting, and management studies, among others (Sondergaard, 1994; Steenkamp, 2001; Soares et al., 2007). Marketing, sociology, psychology, accounting and management studies are just a few examples. According to De Mooji and Hofstede (2011),

his body of work has become an important part of cross-cultural studies as well as the gold standard against which all new cultural studies are judged.

According to Hofstede's supporters, his research has been confirmed by a large number of experts in various subfields of cross-cultural research (Sondergaard, 1994; Triandis, 2004). Replications and comparisons of other academics' studies. These findings back up Hofstede's dimensions. It also includes a list of 400 interesting correlations that demonstrate the validity of his work (Hofstede, 2003). According to Hofstede, this is more evidence that his theory is correct because a flawed test would not have been able to produce scores that correlate so strongly with data from other sources (Hofstede, 2001). The following section will discuss the cross-national diffusion studies that have been conducted. These studies investigated how ideas spread and are used in various cultures. They also investigated his theory.

Some people have criticised Hofstede's actions. It has been discussed for a long time and has received a lot of attention in books. The majority of the criticisms have come from methodological (generalisability, cultural bounding, subjectivity, and data collection) and theoretical (dimension creation, theory of culture, and current application) perspectives (McSweeney, 2002).

Concerns have been raised about generalisability. This is due to Hofstede's study sample consisting of only one very large multinational corporation (IBM). Many academics have questioned whether IBM's culture can be generalised to other societies. This brings us to the second and third limitations, cultural constraints and subjectivity. People from different cultures behave in ways that are difficult to comprehend if you were not raised in that culture. In 1988, Yeh stated that Hofstede was constrained by his own cultural background ( Chiang, 2005).

Hofstede began his career at IBM in the marketing and service departments. This could have influenced his study's findings because it only shows different subcultures within the company and not the entire company (McSweeney, 2002; Smith, 1996). The majority of Hofstede's respondents were men, and McSweeney (2002) and Merker (1982) suggested that this may have influenced the study's findings. Questionnaires have also been used as the sole source of information.

When researching a complex topic like culture, you will need more than one tool to cover all of its bases.

According to Triandis (1988), a multi-method study design could be a solution to this problem. One of the theoretical limits raised by Hofstede's data is the presence of values.

Although values are thought to be an internal factor that influences behaviour, there are other external factors that can influence behaviour as well (Smith, 1996).

According to Triandis, Hofstede's dimensions can only be used to study occupational values, which are not always the same as national values (1988). Some dimensions can also be combined to form a single dimension. According to Yeh and Lawrence (1995) and Mead (1994), the Confucian dynamism component is based on the same cultural values as individualism, and thus the two should not be considered separate.

Other scholars have questioned how well this model applies to today's world (c.f McSweeney, 2002; Verbeke, 2000). Smith (1996) and Sondergaard (1994) questioned the usefulness of dimensions based on data from 1968 to 1973. Perhaps the constant changes of modernity have changed the time's main cultural differences.

Some of Hofstede's criticisms, on the other hand, have been debunked by other researchers who discovered similar results. These findings demonstrate that Hofstede's framework is still relevant today. For example, Smith, Dugan, and Trompenaars (1996) examined the corporate cultures of 43 countries and discovered that Hofstede's model was correct about individualism and the distance between people in power. Tayeb's 1988 study of British and Iranian organisations, based on Hofstede's IBM questions, yielded the same dimensions as Hofstede's model.

Despite some flaws, Hofstede's study remains one of the most important studies of national culture. Hofstede's findings have been replicated in a number of studies that used his questionnaire or another research tool (c.f Smith et al., 1996; Smith, 1996; Sondergaard, 1994; Tayeb, 1988).

According to Mead (1998), Hofstede's research is without a doubt the best study of civilizations, and it would be wrong to ignore its findings.

### 2.6.1.2 The Effect of National Culture on Projects' Management

"Culture may affect the pace of work, decision-making and the urgent need to take action without enough preparation. In certain organisations, this can contribute to stresses and conflicts, which impair project managers and project teams' results" (Book of Matters, 2008, p. 421).

The PD dimension is defined by Hofstede (2005, p. 46), as "the extent to which the less powerful members of institutions, and organisations within country expect and accept that the power is distributed unequally". However, PM is built on a decentralised system with an emphasis on structured and informal coordination (PMI, 2004, p. 221); and lessons gained in terms of critical operational method properties that favour highly project executing and controlled budget and capital (PMI, 2004, p. 28). It encourages advisory management and switches positions in line with the project's goals (PMI, 2004, p. 199). Therefore, in countries with limited power distance, or low power distance, the Project Management discipline is expected to be stronger than in countries with large power distance.

The IND/collectivism dimension is defined by Hofstede and Hofstede (2005, p. 76) as "individualism pertains to societies, in which the ties between individuals are loose: everyone is expected to look after himself or herself, and his or her immediate family. Collectivism, as it's opposite, pertains to societies in which people from birth onward are integrated into strong, cohesive in-groups, which throughout people's lifetime continue to protect them in exchange for unquestioning loyalty". The PM is based on the predefined tasks, and skills of the project team participants (PMI, 2004, pp. 199–207), so they do not take emotional, collectivist connections into account. Each team member is accountable for completing his/her part of the work personally, as well as independently. The project organisations (Hoffman et al., 2004) have defined career options and fostered contests and obstacles among the project team members. Individualistic countries can then deploy PM discipline more effectively than collectivist countries. Hofstede (2005, p. 120) defined this dimension as "A society is called masculine when emotional gender roles are clearly distinct; men are supposed to be assertive, tough, and focused on material success, whereas women are supposed to be more modest, tender, and concerned with the quality of life. A society is called feminine when emotional gender roles overlap both men, and women are supposed to be modest, tender, and concerned with quality of life".

The PM methodology provides a basis to handle human capital adequately (PMI, 2004, p. 213). The PM should be carried out in suitable settings that are consistent with the fundamental

component of the nation (masculinity or femininity). The practice of PM is intended to be used regardless of the male and female dimensions of nations. The uncertainty avoidance UA dimension is defined by (Hofstede, 2005, p. 167) as "the extent to which the members of a culture feel threatened by ambiguous or unknown situations". An organised organisation in line with mission constraints, priorities and goals is provided by the PM system (Project Management Institute, 2004, p. 28). Uncertainty is resolved (as concern about unknown risk) within the PM context by merely providing a conservative answer to the provision of the general contingency (p. 240). Thus, the practice of a PM may be more effective in countries that avoid weak uncertainty than in countries that prevent strong uncertainty. Studies utilising the Hofstede cultural component in each step of the project cycle were carried out according to (Muriithi and Crawford, 2003; Jessen, 1998). Thus, the findings are shown in the table below. Table 1: Ideal Phase of the Cultural Approach by Muriithi and Crawford (2003) and Jessen Masculinity/Femininity (1998).

| **Trait** | **Project Phase** | | | |
|---|---|---|---|---|
| | **Initiation** | **Design** | **Execution** | **Termination** |
| **Power Distance** | **High** | **Low** | **Low** | **Medium** |
| **Uncertainty Avoidance** | **High** | **Medium** | **Medium** | **High** |
| **Individualism/Collectivism** | **Medium** | **Medium** | **Medium** | **High** |
| **Masculinity/Femininity** | **Low** | **Medium** | **Medium** | **Medium** |

### 2.6.2 Organisational Culture

Organisational Culture is defined as a unique set of shared norms, assumptions and values that collectively form the outline of language, rites, socialisation activities, symbols and ceremonies of a particular group of people. In such a way various organisational cultural aspects are highlighted like the shared symbols and languages, shared norms and practices, shared socialisation and values, practices and narratives. Moreover, it highlights how Organisational Culture facilitates employees in being recognised by other organisations. Organisational Culture enables employees to cope with new situations or even problems (Abridah, 2012).

Organisational Culture is also deemed as a set of values, practices, and expectations that inform and direct the activities, and actions of all team members. It is a collection of behaviours and traits that are joint from the organisation. Organisational Culture can be a positive one; leading to improvements in organisational activities and the activities of its team members, on the other hand, it could be a dysfunctional culture that hinders the activities at operational, as well as organisational levels (Peterson, 2001). However, it is noteworthy that Organisational Culture is not about the organisation's mission statement, or its goals, while this helps define and form Organisational Culture. An authentic and reliable sets of behaviours together form Organisational Culture like the behaviours of higher management responding towards crisis, adapting to varying customer demands and correcting employees for their mistakes (Richardson & Jackson, 2018).

A great well-developed Organisational Culture facilitates management in defining and establishing required traits essential for the growth, and development of business because it has a direct significant influence on employees and their activities that together lead an organisation towards success. Therefore, organisations should be aware of the fact that Organisational Culture could be one of its competitive advantages that ensures business success, or failure (Abridah, 2012). Different views prevail that there are two related prominent perspectives of Organisational Culture, like organisations as culture, or Organisational Culture is a part of the organisation. The first view of organisations as culture indicates that organisations and their cultures are inseparable, and cannot be managed or measured; while the other view indicates that Organisational Culture is a part of an organisation implies that culture is the important part of organisation that can be measured and managed properly. These definitions and different views of Organisational Culture indicate that it is not an easy task to perfectly define an organisation's culture (Peter and Waterman, 2004).

Organisations are viewed from different perspectives that are why their culture is also defined in different ways. Most importantly, the Organisational Culture incorporates five basic interrelated components shared by all organisations like the basic values of the organisation, fundamental assumptions, artefacts, behavioural norms, and the behaviours of people of the organisation. These components help identify the important factors being focused on by individuals, actions taken in uncertain situations, and emotional reactions of the organisation's employees in different work settings, and situations (Abridah, 2012).

Arditi et al. (2017) found a strong link between Organisational Culture and construction project delays. They also found that Organisational Culture is one of the most important factors that determine how long a project takes. Just like any other business, construction companies have different cultures, and the dominant Organisational Culture either makes it possible to finish the project on time or causes it to take longer than expected. Organisational Cultures that focus on the technical and critical factors and put them into action well may be able to reduce the size of these delays. On the other hand, Organisational Cultures that do not focus on the technical and critical factors may cause the delays to last longer. Therefore, it is also clear that construction projects in developed countries are either less likely to be delayed or that problems are dealt with so well through cooperation and coordination that any delays are only short-term. On the other hand, construction companies in emerging economies either have to deal with project delays more often or are not able to deal with the problems that could make delays shorter.

### 2.6.3 Organisational Culture Assessment Instrument (OCAI)

Cameron and Quinn (1999) developed organisational Culture Assessment Instrument (OCAI) and it is considered a reliable research tool for assessing Organisational Culture. This assessment instrument is based on CVF (Competing values framework), which is widely used in businesses for reliability in representing Organisational Culture. The competing values framework is based on the four types of Organisational Cultures that prevail in almost every organisation in varying combinations. Organisations vary in their internal, or external dimensions some rely on internal dimensions, and focus on internal factors of the organisation to achieve desired levels of development, coordination, integration of practices, and collaboration; while others may have external orientation like focusing on external factors of markets, emerging technologies, competitors, needs of customers and diversification activities. Internal and external, both orientations are critical for organisational success, but it depends on the organisational environment or a culture that is preferably dominated (OCAI, 2011).

The other dimension, which is being focused on by organisations, is stability, or flexibility. Organisations, which prefer stability, also prefer structure crystallisation, budgets, planning, and reliability assuming that reality could be known, and can be controlled as well. While quite the opposite is preferred by the organisations preferring flexibility assuming that the reality cannot be predicted and hence can't be controlled. Hence, a flexible attitude is preferred, and such organisations are capable of adopting changes quickly focusing less on procedures, planning and structures while having a major focus on the people of the organisation. Stability and flexibility could not be prevailed in the same organisation, while Cameron and Quinn (1999) prefer flexible organisations considering them more effective by adopting changes quickly.

Four leading cultures are established, according to Cameron and Quinn (1999). The OCAI is often chosen over alternative measures of organisational culture because (1) it allows for the graphical representation of four culture archetypes, simplifying the enormous number of dimensions of culture; (2) it covers four key presuppositions that boost organisational effectiveness: collaborate, create, compete, and control; (3) it is concise and can be easily incorporated into studies with other sets of instruments and (4) it is user-friendly and easy to administer.

Each organisation has its own Organisational Culture of these four types, which have been shown below in Figure (2.1). The four forms of Organisational Culture trait are including "clan culture", "adhocracy", "hierarchy", and "market culture".

**Clan culture:** This organisation plays a role in cooperation, collaboration and morality and loyalty. It has several parallels between its people.

**Hierarchy culture:** this organisation conserves the organisation together, with its formalised framework, official laws, regulations, and arrangements. The long-term goals are consistency and results, along with efficiency and smooth performance.

**Market Culture:** this organisation emphasises the completion and completion of projects. It retains the organisation's value to win and Concentrate on finishing the work with a competitive goal.

**Adhocracy Culture**: this organisation assigns importance to creativity and imagination. The long-term aims are to promote and develop the organisation's current possessions.

The competing value framework further forms different types of Organisational Culture, such as entrepreneurial create (the dynamic) culture, Structured control (process-oriented) culture, friendly collaborative (people-oriented) culture, and competitive compete (result-oriented) culture.

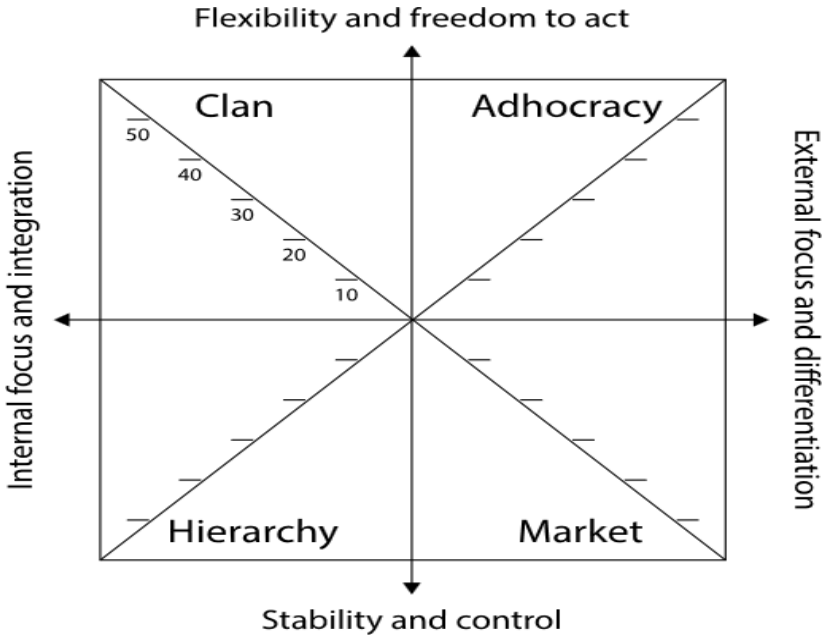



Figure (2.1). The Competing Values Framework (OCAI, 2011).

In a creative culture, employees and leaders are risk-takers and innovators, they do experiments and innovate. Hence, a dynamic and highly creative environment prevails in such organisations. It facilitates individuals to innovate and provides them with the freedom of doing this. While, in a clan culture, the organisation has a friendly environment and people share most of the things, and feel like a family. The leaders perform as mentors and are involved in activities to a great extent. The success of an organisation, in a such cultural setting, is defined as meeting a client’s requirements and showing care to people. On the other hand, the control

culture is a well-structured organisational setting and people are directed by the procedures. The efficiency-based coordination is a source of pride for leaders who try to keep the organisation functioning smoothly by formal policies and rules. The long-run goals of such organisational settings are stability and smooth and efficient execution of working activities.

Such cultural settings focus on doing the right things by eliminating errors. The market or compete culture is focused on a result-based environment that focuses on deadlines, and targets and achieving the desired outcomes on pre-specified timelines. Leaders perform like producers, rivals and drivers while employees are focused on goals through their competencies (OCAI, 2019).

### 2.6.4 The Relationship between Organisational Culture Type and National Culture

The impact of National Culture on corporate culture is an undeniable fact across the globe. Wide evidence is found in the literature for the impact on individual, as well as National Cultures in forming Organisational Cultures. Because National Culture is inherent in individuals, which is reflected in managerial decision-making, managerial practices, human resources and more importantly in leadership styles prevailing in organisations. Moreover, such influences of National Cultures are also evident in other managerial functions such as organisational structuring and design, reward systems, motivation, work designs and communication (Khan and Law, 2018).

On the other hand, national institutions have a significant influence on managerial decision-making in terms of vocational training practices, labour laws, educational reforms, industrial rules, regulations, and law enforcement. Briefly, the culture of a country shapes the mental programming of individuals, which is reflected in individual behaviour in organisations and such behaviour shape the culture of an organisation. Organisations, which are operating within the same national boundaries, may have similar cultural dimensions in terms of working practices, layouts, final products and physical plants. Because such factors are not only influenced by technological advancements and changing market environments, they rather have a high influence on human characteristics in terms of managerial decision-making leadership practices (Kattman, 2014). Cultural differences dominate the ways of people do jobs and their behaviours in work environments. Thus, culture is seen as a set of common practices and characteristics that have a significant influence on the behaviours of humans in terms of their response towards their personal and working environments (Khan and Law, 2018).

At an organisational level, cultural differences are essential to understand, otherwise, failure to understand cultural differences may result in the failure of businesses. But it is also a known

fact that National Culture can influence Organisational Culture not only in local organisations but also in multinational companies who have a greater influence on culture from local, as well as international market (Gerhart, 2009).

At organisational levels, management is concerned with getting the work done through others; so, the ways in which they manage work, as well as the ways of individuals, who are working under them are influenced by their individual and National Culture. So, the resulting practices from both sides collectively help shape the Organisational Culture (Kattman, 2014).

Although all managerial practices have a significant influence on the overall environment of the organisation, decision-making is among the most important ones. Leaders and managers make critical decisions upon which the overall performance of the organisation is dependent (Gerhart, 2009). While, besides organisational and industrial factors, these decisions are also influenced by the individual traits of managers and leaders. They are the individuals, who are residing in a particular social setting that has a significant influence on their environment, thinking and lifestyles. So, the decision-making process by these managers, and leaders is also influenced by their traits, which are adopted and developed in a particular social setting. As their decision-making and persistent practices result in shaping Organisational Culture; hence, it is extracted that Organisational Cultures are the results of traits that came from National Culture (Khan and Law, 2014).

Talking about PM, projects do not only involve stakeholders from the particular organisation; rather different stakeholders collectively form a project, like contractors, suppliers, designers etc. that may be from the broader settings beyond the boundaries of an organisation. Hence, their traits in the form of their requirements, opinions and decisions also become part of the PM practice, while these traits are the result of National Culture. Hence National Culture is not only influential for Organisational Culture but also for the practices of PM (Tahir, 2015).

Although Organisational Culture is a result of national culture, however, they still both differ on various levels of National Culture as the essence of values, while Organisational Culture is the essence of practices learnt on the job. National cultures are inherited and transferred from generation to generation and there are very rare chances of having changes in these. However, Organisational Culture is the result of learning in organisations that may change quite frequently, as well as according to the demand, and requirements of business environments (Peterson, 2001). National cultures are based on some common traits, like power distance (PD) of the society, individualism versus collectivism, long-term versus short-term orientation of the people i.e., their focus on past, present or future, uncertainty vs. avoidance and restraint vs. indulgence. While Organisational Culture is at some other levels like result orientation or

process orientation, employee orientation versus job orientation, parochial versus professional, closed systems and open systems, tight control versus lose control and normative versus pragmatic like the flexibility or the rigidity of the organisation (Kattman, 2014). These are a few dimensions of national and Organisational Culture that are quite distinctive from each other but at the same time Organisational Culture is under high influence of National Culture (Gerhart, 2009).

### 2.6.5 Organisational Culture and Project Management

Even though PM groups and practices may be found in any organisation, their operation is distinct from that of any other organisation and the culture of that organisation has a substantial impact on how PM is implemented. For the simple reason that people working together on a comparable project should have similar views and ideals, allowing them to come to a common understanding of the project's goals and methods (Tahir, 2015). The contrasts in Organisational Culture between developing and developed countries provide unique challenges for PM approaches in both contexts (Titov et al., 2020).

Project management is always done within the framework of the company's culture. Managers that are aware of this reality will be in a better position to ensure that the project's goals and the organization's goals are linked, as well as to ensure that the PM processes are aligned with the conventional practices of the organisation. Managers and other interested parties must be aware of the ways in which organisational culture affects PM procedures. PM procedures might vary widely from one organisation to the next, even among those operating in the same market (Yazici, 2009). Organisations have varying approaches to recordkeeping, planning, resource allocation, employee selection, and leadership. Accordingly, the outcomes of PM methods vary. As a result, PM methods aren't the sole factor in a project's success or failure; Organisational Culture plays a significant role as well. Given that project managers are embedded inside the larger business, the organisational culture has an impact on the way they do business and the decisions they make (Marrison et al., 2008).

Project manager effectiveness and the development of PM techniques are both affected by the maturity of the organisational culture and its support for efficient project management. Since the purpose of organisational culture is to establish the norms and practises that give an organisation its unique identity, the PM of any given business will vary depending on the country's cultural norms and practises. However, in nations where strict cultural norms are widely held and have a major impact on corporate practises, most businesses have a common

"Organisational Culture," which is reflected in the PM procedures used across the country (Ajmal and Koskinen, 2008)

Projects are highly aligned with the Organisational Culture and are easy to manage within the cultural practices of organisations. Nevertheless, the success of such projects is only ensured if an organisation also has a well-established culture promoting a smooth working environment that results in a higher level of success in projects. On the other hand, as projects are highly influenced by the Organisational Culture, then organisations having rigid cultures that do not support change in a dynamic environment and not only hinder the success of common practices of organisations but also the projects. Therefore, under the influence of such organisation culture projects mostly face delays, failures or inefficiencies (Titov et al., 2020).

Project managers are required to understand and interact with the broad cultural settings of the organisation. Most of the time, managers and especially project managers are not well aware of the cultural influences, so misunderstandings and conflicts arise in such projects that result in dissatisfied clients, wastage of resources and time etc. most of the projects also face failures due to the lack of efficient communication systems at organisational as well as a project level. Lack of communication or a weak communication culture in an organisation leads to a weak communication culture in projects as well, which results in conflicts among concerned authorities, and resulting outcomes of project are very poor (Ajmal and Koskinen, 2008). Moreover, mostly projects do not involve just local workforce or community, rather international partners, managers, experts, or even workforce is involved in most of the projects in almost all organisations. In such cases a clear and open communication system is the need of the era, so Organisational Cultures that do not support such communication practices are the ones that face project failures frequently. So, a clear communication environment must be the part of PM practice at a narrow level but also of the Organisational Culture at a broader level. Organisational Culture should be enriched with these communication methods. Although conflicts still arise in the projects, but such communication setups can help eliminating or even decreasing such conflicts (Yazici, 2009).

It is significant for managers to understand the factors of Organisational Culture that contribute to PM, including the development of an understanding of all the benefits and values that the project will add towards the project as well as the organisation. Moreover, a good understanding of the Organisational Culture is essential for managers to align the goals of the project with that of the business strategy of the company as well as with the goals and objectives of the organisation. In short, there are many factors of Organisational Culture that contribute to the smooth working of the project and ensure the project's success. But it is also important that

managers must develop such understanding at the initial stages of the project, i.e. the planning stage. The planning stage helps in understanding the harmony of project objectives with those organisational objectives that only make the management practices quite understandable as well as improve their effectiveness and efficiencies (Marrison et al., 2008).

Organisations vary in their cultures in adopting and disseminating knowledge called knowledge-based organisations. So knowledge-based organisations differ in their culture in collecting and disseminating knowledge so that such knowledge based culture has a significant influence on the working of projects of these organisations. Because it is found that knowledge-based organisations are more efficient in completing their projects as compared to the other ones that prefer some other tangible resource of the company. Projects running under organisations of knowledge-based cultures are well aware of the requirements of an organisation as well as surrounding environments at industrial and national levels. Therefore, they work smoothly as compared to others and the chances of success of these organisations are more ensured. On the other hand, organisations that do not believe in establishing a knowledge-based culture are the ones that face discrepancies in the smooth working of the project more frequently because project managers are not well aware of the facts; moreover, they are not motivated to gather the required knowledge. Such Organisational Culture lead projects to face delays due to the inefficiency of project managers and their poor managerial skills (Ajmal and Koskinen, 2008).

Cheung et al., (2011) indicated that although construction project face delays more frequently than other types of projects; due to different reasons, Organisational Culture is among the most significant factors as well. The Organisational Culture of developed economies is quite different from that of developing economies. Most developed nations have a clan culture, promoting a cooperative and coordinated working culture, in their construction industries, while on the other hand; developing companies are mostly based on the market-based culture in their construction companies. Therefore, focusing on the Organisational Culture in terms of PM, it has been found that organisations implementing and holding a clan culture are found to be more successful in terms of their projects' successes as compared to the organisations with market-based culture. It is also evident that organisations in developed nations have clan culture, and they have more ratio of successful projects as compared to the organisations of developing nations that hold market-based culture and more frequently face project delays or failures (Marrison et al., 2008).

## 2.7 Libyan Culture

Each country has its own specific culture that may have some similarities to the region, but it can be quite different from other countries and has its distinctive features. It is the way of life of a particular community where religion, politics, language, education, technology, economics and laws are shared by a group of people. Libyan culture has distinctive features that are mostly based on religion, as well as focusing on Muslim aspects for social and economic systems. The Islamic culture emphasised the responsibility of leaders to care for the welfare of the group, and they must be treated with kindness, and respect; while it is also essential that the group must obey the leader (Tahir, 2015). On the other hand, Organisational Cultures in Libya are quite different from Organisational Cultures in developed economies in the sense that Libyan managers, instead of focusing on merit, they mostly focus on seniority, hence implementing a hierarchy culture, which has a significant influence on the decision-making processes as well as developing employee's relations. Selection of managers, as well as decision-makers, is under the influence of kinships, family-owned cultures and tribal backgrounds, which results in inappropriate selection of people for important positions in the organisation as well as inexperienced and incompetent managers are selected, so leading to long-term disaster for a company (Abridah et al., 2012).

Although Islam promotes being concentrated and committed towards your responsibilities and tasks assigned to you, a lack of interest and commitment is a common trait in Libyan managers. It results in disputes between managerial staff and owners of the company. Moreover, the significant impact of tribal and social context in Libyan industries results in informalities of operations and commitments by the government as well (Tahir, 2015). Such influences result in inefficiencies in the operations of construction projects, low levels of capabilities and capacities, higher cost overruns, delayed projects and poor reputation of the industry in the country. Therefore, it is the responsibility of higher authorities at the industrial as well as national levels they should shift the focus of family-owned businesses towards merit-based selections. The current culture in Libyan organisations is a bit rigid, having a major focus on the differences between different levels of the hierarchies. Such culture does not favour flexibility and results in poor adoption of advancements in the market, technology, communication, professionalism, decision-making and employment (Tahir, 2015).

Moreover, LCI also faces the problem of insufficient knowledge of PM which results in a lack of expertise and required training and development of employees working on such projects. The education planning of the country is not sufficient to transform Organisational Culture from its traditional aspects towards the latest aspects to enable it to move into international

markets. To achieve the objectives of successful projects and development of the industry, trained and educated manpower is the need of the era so that the gaps in the industry must be fulfilled (Tahir, 2015).

### 2.7.1 Libyan Organisational Culture and Construction Project Management

Arab organisations lack modern management knowledge, which compounds these issues. They often accept Western values and customs without considering their roots. Arab organisations struggle with poor operations, direction, conventional workforce patterns, and societal changes due to a failure to adapt ideas to Arab culture (Ali, 1995). Arab culture explains this. Employees' loyalty to colleagues over the company may be a concern. Since Arab workers are more devoted to individuals than to the organisation, Al-Rasheed (2001) says the personalised superior/subordinate connection is one of the biggest challenges. Al-Rasheed believes the customised superior-subordinate relationship may cause further issues (2001). Arab organisations lack cohesiveness and simplicity, indicating a lack of coordination and connection between activities, vocations, and positions. Al-Rasheed says this factor emerges in the imbalance of power and duties and the organization's adaptation of roles and responsibilities to suit individuals rather than its requirements. Attiyah blamed organisational, economic, and political issues (1993). He called these issues organisational "roots." Culture does not cause centralisation or other organisational issues, according to Attiyah's research. Arab firms lack future focus, according to Al-Rasheed (2001). He claimed these traits differ by nation and organisation. Al-Rasheed claims Arab organisations lack performance assessment, career routes, HR management planning, and laws.

Arab management has Hofstede's power distance centralisation dilemma. Arab management lacks delegation. Non-senior top management lacks autonomy and authority (Al-Rasheed, 2001). Like all other economies, the Libyan economy is also concerned with the success of projects, which are running in the country. Projects are seen as a contributor to the development of the economy because any successful project not only contributes to the success of the organisation; but also has a positive influence on the society and economy (Shebob et al., 2011). According to Hofstede’s study, the Organisational Culture in Libya is mostly a “high power distance” based culture which faces communication gaps as well. Higher authorities are at a level where they do not prefer having direct relations with lower-level workers. Such communication gaps create discrepancies among concerned authorities because workers are unable to address their issues and when they move forward with such issues it results in the

failure of projects. Alternatively, sometimes projects face delays due to such communication gaps because work in progress is stopped due to some issues while workers are unable to discuss these issues to make further progress (Ngab, 2008). Therefore, in Libya, Organisational Culture is mostly prominent with family-owned businesses that have rich cultural values of their National Culture. On the other hand, the construction industry in Libya is not at a very developed stage rather it depends on the revenues generated by the oil industry. Therefore, the construction industry is under the influence of Organisational Culture, industry-level culture and National Culture as a whole (Gajare et al., 2014).

Family-owned businesses and kinships, with some restrictive working environments, cause a significant influence on the working of projects of the construction industry in Libya. As all basic elements of projects like management styles, leadership processes, risk tolerance attitudes, communication and project request management are mostly influenced by organisational culture. Therefore, the Libyan CPM has a high influence on the national culture prevailing in it (Shebob et al., 2011). Management styles and leadership processes are all according to the efficiency of the local community which is mostly not educated or trained and restricted Organisational Culture also does not favour the adoption of new and effective managerial and leadership practices. Additionally, the risk tolerance behaviour of Libyan stakeholders is one of the significant factors contributing to the success or failure of the project. As the industry is not well developed, like other services, and manufacturing sectors of the country so investment in construction projects is considered a risky one. While most of the investors in Libya are risk-adverse so financial constraints are an important factor causing delays in construction projects in Libya (Abridah, 2012).

## 2.8 Theoretical Framework

As discussed earlier that in order to study the role of national and Organisational Culture in project delays; the current study revolves around three major theories i.e., PM theory, Hofstede's cultural dimension theory, and Schein's theory of Organisational Culture. These three major theories helped understand the relationships of the key variables of current research, which are including the National Culture, Organisational Culture, and project delays.

### 2.8.1 Project management theory

According to Koskela and Howell (2002a) PM is a comprehensive process of successfully attaining targeted goals at a determined time. Thus, the basic challenge for the project manager is to achieve the desired goals within the time limit. Warburton and Cioffi (2014) indicated that

the core concept of PM is to divide the whole project into smaller lumps of work termed as tasks, or activities by PMBOK. The basic intention of dividing the work into chunks, or tasks is the appropriate management of work; so that it should be completed within a pre-specified time limit. Briefly, the theory of PM can be defined as the conversion of input into output.

Koskela and Howell (2002a) pointed out that there is no clear theory for PM; rather PMBOK provided statements that can be helpful in deducing theory from these. Like PMBOK guide indicated that PM processes further involve initiating, planning, executing, controling and closing the process. Richardson & Jackson (2018) defined PM as a bundle of interrelated management tasks, and activities, that are joined temporarily to form a unique desired project. However, it is significant to know that just implementation of the technical requirements of the projects is not enough, and does not ensure the success of the project; rather it is a complete process that incorporates many factors. Among various factors defining the success, or failure of the project, organisational internal and external factors are among the most important ones. Because the organisation in which the project is being executed is the direct contributor to the project, so project's outcomes are completely based on organisational factors (Koskela and Howell,2002b).

### 2.8.2 Hofstede’s Cultural Dimension Theory

Hofstede (1980) revealed that people’s mental programming is designed by their National Culture. Although most people belong to various layers of culture, like regional, ethnical, national, linguistics, generation, religion, gender, industry, social class, or corporate affiliation; however, it is necessary to understand that the mental programs of all members of the culture are not in harmony (Hofstede, 1991). Hofstede (1997; 2001) terms culture as mental programming that is developed during childhood in a family setting; while reinforced by schools at initial levels, or by organisations at professional levels. Although individuals have unique mental programming, a part of it is shared with others so Hofstede (1997) defined three different levels of such mental programming of humans.

Moreover, the most fundamental level is the universal level, which is common almost in all humans in the world like the traits, which are related to the biological aspects of the human body, and various behaviours expressed by all humans, which are essentially part of human nature. Further, the individual level is the unique part of mental programming, as each individual is programmed uniquely, and this level of programming forms the human personality. The cultural level is the third level, which is a set of mental programming shared by a group of individuals, due to their development and growth in a similar social setting. Although they don’t share similar genes, their learning processes are the same that result in some similar or shared mental programming level which leads to shared practices and values at organisational levels as well. These sets of mental programming and their resulting values, and beliefs become the foundation of Organisational Culture as well.

Hofstede's cultural component concept describes the behaviour of individuals in various cultures within a job framework (Hofstede, 1980). PD corresponds to a country's level of equity or injustice. A high-power gap means that power and wealth inequality dominates the nation. Managers in countries with large PD is more likely to take rising measures, and control income if power is centralised in their hands (Hofstede, 2001) and are the major decision-making body (Dechow et al., 1996). On the other hand, IND relates to the extent to which national, or group accomplishment is supported by one nation. Where a high degree of IND means that in one nation individual rights prevail. Managers in highly individual countries care more for their own needs than about the resources of owners, and partners' conditions, and they are more inclined to handle the benefit in self-interest (Zhang et al., 2015).

In the allocation of social functions, MAS applies to the value of sex (men and women). A low MAS score indicates that ties, modesty, concern for the poor, and quality of life are more important than any one government. Managers attach considerable significance to operational success in strongly male cultures, since sound business performance brings them greater social respect and personal confidence (Zhang et al., 2015). The emphasis of avoidance of confusion is on how often people in one nation accept uncertainty and misunderstanding. The fact that citizens in an individual nation don't accept a high level of confusion and want further legislation, and institutions to minimise complexity means a high level of uncertainty preventing them. Managers are more risk-averse and have more questions about costs in environments; where there is greater volatility avoidance (Zhang et al., 2015). Furthermore, Hofstede's cultural aspects are adequately sponsored to research the effect of National Culture on PM.

### 2.8.3 Schein’s Theory of Organisational Culture

Schein (2004) indicated that Organisational Culture should be analysed at three major levels; artefacts, beliefs and values, and the underlying assumptions of the organisation. Artefacts are the tangible aspects of Organisational Culture, like the physical environment, clothing, language, technology, published values, products, ceremonies and the rituals of the organisation. Beliefs and values and the underlying assumptions are the intangible aspects of the Organisational Culture, in which beliefs and values incorporate the shared perceptions, goals, strategies, and the norms, values and beliefs implanted by the founders and leaders of the organisation (Fink et al., 2012). At a third level, the underlying assumptions are the foundation level of Organisational Culture, which is the deeply implanted assumptions that are taken for granted, and unconsciously passed from generation to generation. Challenging these assumptions leads to defensiveness and anxiety in the organisation (Schein, 2004). Thus, in order to understand the role of Organisational Culture in project delays, the study is focusing on the two levels of Schein’s (2004) organisational theory: the beliefs and values, and the underlying assumptions. Values and beliefs reflect the shared opinions of the members of the organisations that how things should be and how things should work in an organisation. Therefore, these values facilitate the organisational members to categorise actions and situations as either desirable or undesirable (Bailey et al., 2017).

Similarly, the underlying assumptions are the kind of beliefs, which are well understood by the members and taken for granted as fact, so these are never challenged. Hence, these assumptions are the core part of Organisational Culture and contribute to the accomplishment of the goals of the organisation (Bailey et al., 2017). The iceberg model developed by Schein indicates that organisational culture is comprised of both components that are openly visible and others that are not. Written documents, such as strategic plans, job descriptions, and regulations regarding disciplinary action, are examples of visible aspects. According to Schein, organisational culture is comprised of values, ideas, and customs that exist in people's minds. Because of this, it presents a challenge to identify and explain these components of organisational culture. These three levels of study, according to Schein's thesis, have the potential to result in a more in-depth comprehension of the many different aspects that make up an organisation's culture. The method that Schein developed was one of the first practical academic studies, and it was crucial in establishing a relationship between intellectual endeavour and practical application. In addition to this, the model assures that there will be rationales for the failure of a targeted cultural shift. The disparities in knowledge and behaviour that existed between levels two and three helped explain, at least in part, why it was so difficult for organisations to establish united cultures. This method used by Schein demonstrates the value of culture to businesses, as it can either bring employees together or drive them farther apart (Schein, 2004).

These three theories helped understand the proposed relationships of the study's variables like the PM theory that emphasises the role of management in the effectiveness of project tasks and ultimately their timely accomplishment. Therefore, since the study is mainly focusing on project delays, the PM theory provides the foundation for having an in-depth insight into the role of management in project delays. On the other hand, Hofstede's cultural dimensions indicated that the mental programming of individuals in their work settings is under the influence of the National Cultures in which they are grown. However, although in work settings they act, and behave professionally, the foundations of their professional attitudes are deeply enrooted in their National Cultures, and it ultimately becomes part of their work and decision-making. Hence, as the PM theory emphasises the role of management; if the management is under the influence of their National Culture, then obviously the PM practices from planning to decision making to the accomplishment of tasks are all under the influence of National Culture as well. Moreover, Schein's Organisational Culture theory emphasises that the Organisational Culture is based on the beliefs, values, and underlying assumptions, as well as the organisation's management and leadership set the foundations for these beliefs, values and underlying assumptions. Hence, again considering Hofstede's cultural dimensions as individuals' mental

programming is always under the influence of their National Culture so the beliefs, values and the assumptions, which are the base of Organisational Culture, are also under the influence of National Culture. Therefore, the theoretical framework of current research, based on these three major theories, will contribute to creating the conceptual framework of current research. As above mentioned the relationships are supported by the theoretical framework of the study. Therefore, since the study is mainly focusing on Libyan construction companies. Therefore, this chapter discussed in-depth related studies done before and pointed out where there was a gap in the literature. It also explained a framework that shows how the relationships between variables can be used to answer the following questions:

1- Does the Libyan national culture contribute to the delays of Libyan construction projects?

2- What type of organisational culture is currently predominating in Libyan construction companies?

3 Does the organisational culture of Libyan construction companies contribute to the delays of Libyan construction projects?

## 2.9 Conceptual Framework

Kothari (2006) says that conceptual frameworks are made up of a set of big ideas and theories that help researchers figure out what they are looking at, how to ask the right questions, and where to find the right literature. Most academic research starts with a conceptual framework because it helps the researcher get clear on the questions and goals of the research. Conceptual frameworks help researchers figure out how to collect and analyse data. Sociologists Haralambos and Holborn (2008) say that a conceptual framework helps the researcher see how the existing literature fits with his or her own research goals. There was a gap in the research about how these cultures affect each other and how they affect the performance of construction projects in a single setting. The main variables of the current study were found by laying out the relevant literature, theories, and research questions. Therefore, the current research suggests that national culture does not directly cause projects to be late. Instead, national culture affects the culture of the organisation, which in turn causes projects to be late. In addition, studies like (Abdul and Ahmed, 2010; Arditi et al., 2017; Kattman, 2014; Baumann, 2013; Gerhart, 2009; Ansah and Louw, 2019) have shown that National Culture and Organisational Culture have different effects on project delays. The conceptual framework shows that the relationships between National Culture and project delays in LCI are significantly mediated by organisational culture figure (2.2).

The accompanying diagram depicts not just the conceptual framework of the current research but also the interconnectedness of the several factors under investigation. The present study's goal is to show how CPD in LCI is affected by national and organizational culture, and how CPM-related difficulties cause construction projects in Libya to run behind schedule. Because of this, this chapter provides an in-depth examination of comparable studies that came before it, highlighting gaps in the literature. Additionally, it offered a structure for illuminating the potential solutions to research issues by exploiting interrelationships between variables. In Chapter 6, a deeper dive is taken into the conceptual underpinnings. Conversely, the next chapter will focus on the study's methodology, which will be used to try to achieve the research aims, develop the study's conceptual framework, address the literature's gaps, and provide answers to the study's questions. In the next chapter, we will go into the methods as well.

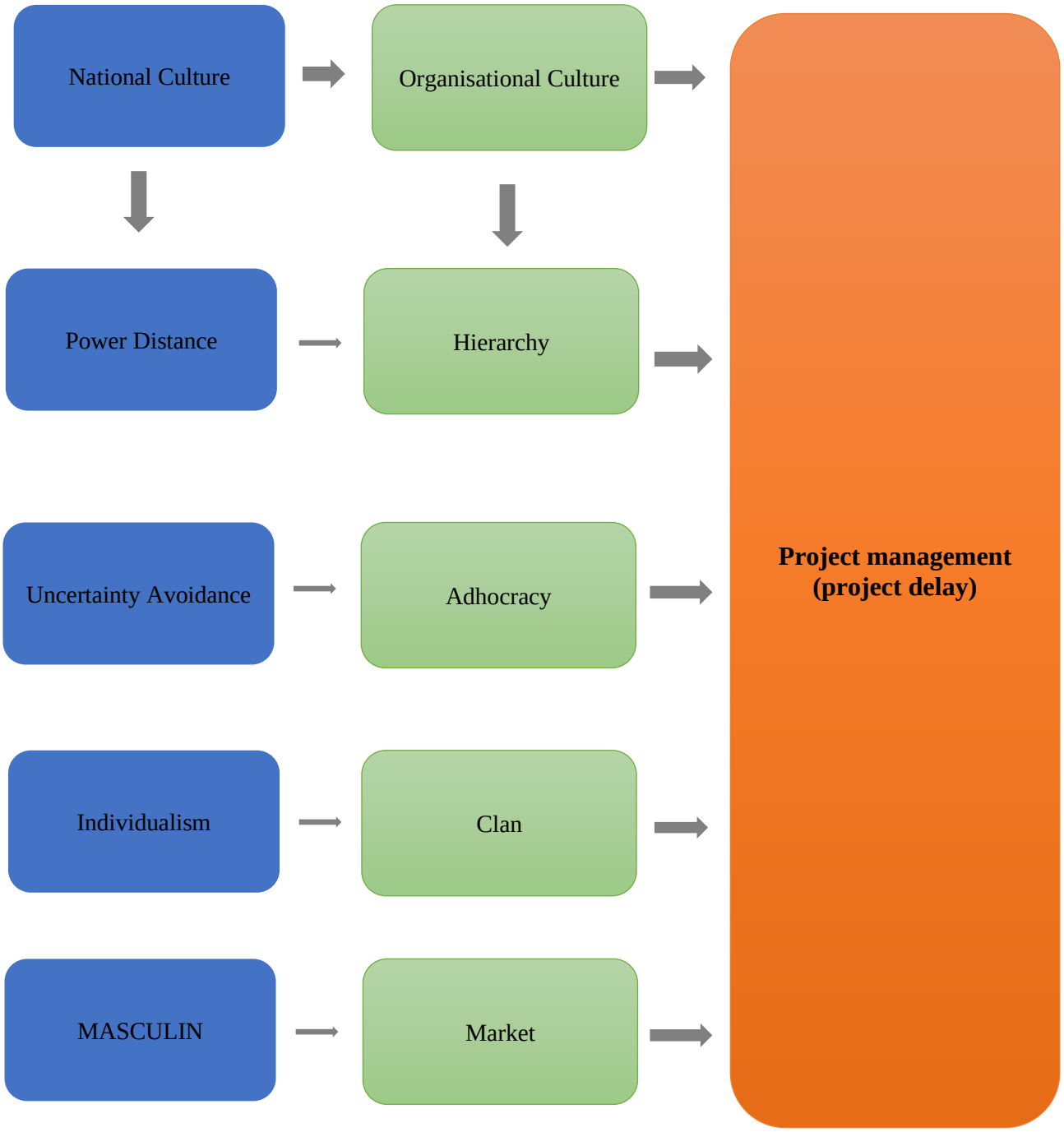



Figure (2.2): Conceptual Framework of Current Research

# Chapter Three: Research Methodology

## 3.1 Introduction

The current chapter presents the research philosophy, research approach, research strategy, population, sampling, data description, data collection and methodologies of the empirical analysis. Where, a research methodology refers to the plan, strategy, and design or processes that are required to collect and analyse the needed data in order to achieve the main aim and objectives. An appropriate research methodology plays an important role in attaining the core purpose of research because it enables the researcher to find out the answers to the proposed research questions. Thus, since the current research aims at investigating the impact of national and organisational cultural aspects on the CPD in Libya; the adopted research methodology is elaborated further.

## 3.2 Research Philosophy

The methodology is a broad research plan that defines how research should be conducted. It consists of a set of beliefs and philosophical assumptions that affect the understanding of the research topics and guide the selection of research methodologies. A dissertation or thesis' research methodology is an essential component that helps to maintain consistency across the tools, procedures, and underlying philosophy.

One technique for developing research methodology is based on the theoretical idea of the "research onion" Figure (3.1) developed by Saunders et al (2016). The research onion gives a lengthy overview of the essential layers or steps that must be completed in order to develop a successful technique (Raithatha, 2017). According to Milinkovic (2018), the future studies research onion structure is not intended to be the only way for developing a research plan. Rather, it aims to assist academics and practitioners in the field of future studies by giving a comprehensive grasp of how to use existing methodologies and methods. The research methodology begins with the definition of the basic philosophy, followed by the selection of approaches, methods, and strategies, as well as the establishment of time horizons, all of which lead to the study design - the key techniques and processes for data collecting and analysis Figure (3.1).

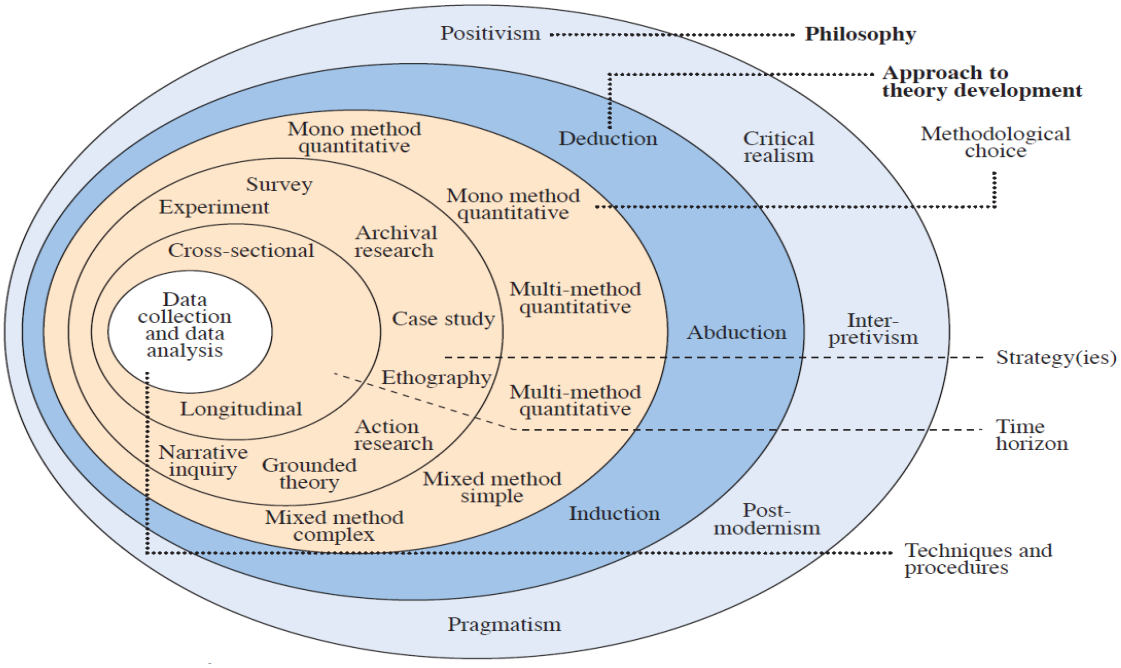



Figure (3.1). Research onion

Research should be seen as an independent inquiry that furthers one's awareness of the world around them. It is "a methodical examination to identify solutions to an issue," as Burns (2002: 3) puts it. According to Eldabi et al. (2002), researchers of any stripe should adhere to an articulated research process founded on hard scientific principles. Hussey and Hussey (1997) believe that studies may be categorised in this way. To start, there is the study's reasons, or its stated goals. The second is the research methodology, or how the data is actually gathered and analysed. The third consideration concerns the logical progression of the study itself, namely if the researcher is going from broad to narrow. The last consideration is whether the study is meant to shed light on a specific issue or provide a broader addition to knowledge. However, the research ethic or paradigm the researcher adheres to dictates the precise methods they use (Creswell, 2003).

In light of a number of comments addressing the means by which the pursuit of truth, as represented in the successful completion of the study's stated objectives, is to be accomplished, it is clear that familiarity with the philosophical concerns surrounding research is crucial. In their article "At Least Three Reasons Why an Understanding of Philosophical Issues Is Very Useful," (Smith et al). As a first reason, it may aid in making research methods more transparent. Second, understanding philosophical principles may aid the researcher in determining the viability of various study strategies. It should help researchers avoid wasting time and energy on fruitless avenues of inquiry by highlighting the limits of various methodologies. Third, understanding philosophical principles might aid the researcher in

recognising and even conceptualising designs that may lie beyond the researcher's comfort zone. It could also provide clues as to how to modify research methodology to fit the bounds imposed by various fields of study.

Most scientific investigations based on the natural world rely on either unstated or stated assumptions in their methodology (Burrell and Morgan, 1985). There are several presumptions made about human civilisation. These presumptions concern such topics as ontology, epistemology, humanity, and methodology (Burrell and Morgan, 1985). The assumptions directly affect the research strategy, the way in which investigations are conducted, and the way in which information about the social environment is obtained.

**Epistemology**

The study of epistemology, often known as the philosophy of knowing, provides guidelines for the methods that are to be used and, as a result, has an impact on the research process (Yeganeh, Su and Chrysostome 2004:67). It is impossible to study methodology in a vacuum; it must always be contextualised within the larger universe of knowledge (Venkatesh and Dholakia, 1986). "Culture" has not yet been defined, and there are no concrete concepts on how to handle people from different cultures (Sekaran, 1983: 66; Firkola and Lim, 2003). Albaum and Peterson agree with Sekaran that there is a "lack of solid theoretical and operationalisation of variables," which is their primary concern (1985). The vast majority of work done in the field of cross-cultural research is founded on realism and makes use of a positivistic/analytical research style that places a focus on the unity of methodology in natural and social sciences.

**Ontology**

There are three different ways to describe culture, all of which are ontologies. The dominant ontology is that of structural realism. Organizational culture is only one of many distinguishing characteristics of any given establishment. According to structural realists, organisations are just structures that also have cultures (Ashkanasy et al., 2000).

In contrast, a social construction ontology places a focus on the fluid regularity of events and gives observers discretion over which occurrences to group together as cultural norms. Culture is defined by social construction as patterns of occurrence. Smith and Peterson (1988) found that an organization's culture may be seen in the way it handles and responds to workplace incidents. Culture, therefore, is the essence of an organisation.

The third methodological stance takes into account the language necessities of established institutions and cultural norms. Structure and tradition facilitate reflection. Anything's link to anything else is incidental given that structure, procedures and events are constructed or abandoned based on a party's needs (Ashkanasy et al., 2000).

**The position for research**

Research methods that take cultural differences into account are called "cross-cultural." According to Nasif et al. (1991), "the study in which culture is the key dependent or independent variable" constitutes cross-cultural research (Yeganeh, Su and Chrysostome, 2004). Studies that employ cultural background as a controlling variable are considered to be cross-cultural studies (e.g. Hofstede, 1980; Roth, 1995; Steenkamp, 2001). (e.g. Merritt, 1998; Lee and Peterson, 2000; House et al., 2002; Pheng and Yuquan, 2002; Chiang, 2005; Dwyer, Mesak, and Hsu, 2005; Lam and Lee, 2005; Sigala, 2006). To that end, we may classify as "cross-cultural research" any investigation that employs cultural differences as a factor, whether it was conducted on a global scale, inside a single organisation, or within a single country. The great majority of studies examining cultural differences have a realist stance and use a positivistic/analytical research approach that places a premium on methodological consistency in the hard sciences and the social sciences.

According to the arguments of Easterby-Smith et al. (2002) and Collis and Hussey (2003), the study's design may be broken down into two main paradigms or ideologies. Phenomenology is the qualitative, subjective, humanistic, interpretative and social constructionism paradigm, whereas positivism is the quantitative, objective, scientific, experimentalist, and traditionalist paradigm. However, the terms quantitative and qualitative are the most used (Collis and Hussey, 2003).

Creswell (2003) suggests adding pragmatism as a third paradigm to these two, where the researcher is not bound to any specific school of philosophy or paradigm, and where it is said that researchers should stop enquiring about reality and natural laws while doing social science research. To that end, the problem is more important than the approach; attention should be paid to applications and solutions rather than the latter. As a result, researchers should use a wide variety of strategies to investigate the problem from many angles, learn as much as possible about it, and find effective solutions. The pragmatic method was used for this study's framework. In light of what has been said thus far, as well as the research paradigm, research questions, and research objectives, this study used a mixed methods approach, with the quantitative approach serving as the primary method and the qualitative approach serving as the secondary method.

## The Research Philosophy of the Current Study

Feilzer (2010) says that pragmatism is a good research paradigm because it uses both quantitative and qualitative research methods and takes advantage of the fact that data has two sides. So, Feilzer's work is meant to show that pragmatism allows for a wide range of research methods and points of view to be used while still keeping a cycle of abductive reasoning. Dudovskiy (2018) says that the right information for a study can come from either observable events or subjective interpretations. Johnson and Onwuegbuzie (2004) say that mixed-methods research works well with traditional qualitative and quantitative research and that pragmatism is a good fit for mixed-methods research. They talk briefly about the "wars" between paradigms and the "incompatibility thesis." They also point out some similarities between quantitative and qualitative research. Williams (2007) says that in order to answer the research question, researchers must not only collect or analyse numerical data but also narrative data for qualitative research. Mixed-methods research is viewed as an extension of, rather than a replacement for, quantitative and qualitative methodologies. (Johnson & Onwuegbuzie, 2004). Researchers that utilise a mixed methods approach to study hope to capitalize on both benefits while minimising the drawbacks of a more traditional single strategy. Even though quantitative methods are philosophically aligned with positivism and qualitative methods are aligned with postmodernism (Fraenkel and Wallen, 2008), the mixed-methods approach, which is more closely associated with pragmatism, is best suited to aid the researcher in gaining a deeper understanding of cultural issues.

Even though quantitative methods are philosophically aligned with positivism and qualitative methods are aligned with postmodernism (Fraenkel and Wallen, 2008), the mixed methods approach, which is more closely associated with pragmatism, is best suited to aid the researcher in gaining a deeper understanding of cultures issues.

There seems to be an agreement within the area of mixed methods research that a pragmatic justification must exist for a mixed methodology. Rather than beginning with certain philosophical assumptions, it is believed that the option for a mixed method should be driven by the research questions themselves. Biesta (2010) argues that while the pragmatic justification for mixed methods research is relatively unproblematic, complications arise when the claim for everyday pragmatism is taken as an argument for philosophical pragmatism to the extent that the latter is viewed as the philosophical "paradigm" for mixed methods research. This is the position taken by Tashakkori and Teddlie when they assert that 'the paradigm of pragmatism can be used as the philosophical underpinning for using mixed methods and mixed models' (Tashakkori and Teddlie, 1998: 167; see also Johnson and Onwuegbuzie, 2004 and

Morgan, 2007; for a more cautious approach, see Gorard and Taylor, 2004: 144); or by Johnson, Onwuegbuzie, and Turner ( Greene (2008: 8) sees pragmatism as a 'strong candidate for the philosophical champion of the mixed methods arena', which is consistent with this notion.

Given the positivist nature of quantitative procedures and the postmodernist nature of qualitative approaches (Fraenkel and Wallen, 2008), a more pragmatic strategy like a mixed methods study may be useful in understanding cultural contexts and artistic obstacles for the researcher. Researchers using mixed methods tend to agree that it is important to provide a pragmatic justification for their methodology. Questions posed by the study are what drive a hybrid approach, rather than any underlying philosophical assumptions. According to Biesta (2010), the pragmatic justification for mixed methods research poses no difficulties; however, when the claim for everyday pragmatism is taken as an argument for philosophical pragmatism, which is seen as the philosophical "paradigm" for mixed methods research, the situation becomes more complicated. A number of authors, including Tashakkori and Teddlie (1998: 167; see also Johnson and Onwuegbuzie (2004) and Morgan (2007); for a more cautious approach, see Gorard and Taylor (2004): 144), have argued that pragmatism can be used as the philosophical underpinning for using mixed methods and mixed models. According to Greene (2008), Pragmatism is "a prominent contender for the philosophical champion of the mixed methods area".

## 3.3 Research Approach

The following stage would be to define the research approach once the proper research philosophy has been identified in light of the study's central goal. Whereas, a research methodology specifies a detailed strategy and set of steps for doing the study based on the specifics of the research topic at hand. Because it includes generalisations and specifics about data gathering, analysis, and interpretation (Pickard, 2013). Inductive and deductive methods of inquiry are the two primary methodologies. Unlike the inductive strategy, which attempts to establish a new theory by going from particular to generalisation, the deductive approach aims to investigate an already-existing one. Nevertheless, the deductive method works in the other way. Although both methods are used by a variety of researchers, they often coexist in the same study (Richey & Klein, 2014). The inductive research approach is adopted in a research setting when the literature lacks evidence on the topic, and there is no theory to be tested by the researcher. Rather the researcher makes an observation that is followed by a pattern of observations and then induces the theory based on that observed pattern. However, there are

certain limitations to the inductive approach like the conclusion that will be drawn from the inductive approach could never be proven; rather it could be invalidated (Patten & Newhart, 2017).

On the other hand, there's a third potential strategy to try. Abductive reasoning, also known as the "abductive method," is intended to compensate for flaws in both the "deductive" and "inductive" ways of thinking. Charles Sanders Peirce, an American philosopher, logician, mathematician, and scientist, popularised this method for the first time in 1903. He was the founder of pragmatic thought. Mabsout (2015) says that because social reality is always changing, economic ideas need to be changed, updated, or thrown out, even if they are true today. Even if their hypotheses seem to be supported by evidence, economists have to keep evaluating them to stay up-to-date in their field. The field of economics might benefit from a method that explains things and can come up with new ways to explain things. Karl Popper wrote in The Logic of Scientific Discovery that he didn't think there was such a procedure. Mitchell (2018) and Reichertz (2010) both say that abduction is a way to draw a conclusion that adds to what you already know. This is different from the usual logical conclusion, which is based only on deduction or induction. In social science, the idea that abduction can lead to knowledge that can be repeated and is based on rules is becoming more popular. "What does Peirce mean when he talks about abductive reasoning?" Chiasson (2001) asked why Peirce used the words "abduction" and "retroduction" interchangeably. Chiasson says that finding the "best" answer might become a skill that can be taught if researchers use a method that combines abduction, deduction, and induction.

Chong (1994) says that abduction and deduction are ways of thinking about a phenomenon, but that induction is the quantitative proof. At the abduction stage, the goal is to look at the data, find a pattern, and come up with a plausible hypothesis using the right categories. The present study used an abductive method to examine the link between cultural factors and project delays by comparing and contrasting two distinct sources of information gathered from workers and managers using various methods of data collecting.

Therefore, in order to have a thorough grasp of the issue at hand, the researcher obtains data from one group of respondents and then validates the results by collecting data from other sets of respondents on identical features.

### 3.4 Research methodology

The fields of the social sciences and business administration have seen the greatest increase in the use of mixed-methods research (Tashakkori & Teddlie, 2010). The Journal of Mixed Methods Research was first published by SAGE in 2007. Quantitative and qualitative research approaches, positivism and interpretivism, etc., have all been thrown into the same paradigmatic pot, raising questions about whether or not doing so is naive (or worse). Keywords like "abduction" and "pragmatism" have been trending as of late. Newly trained researchers also employ inductive and deductive reasoning. In a mixed-methods research design, researchers use both qualitative and quantitative techniques to probe participants' experiences of an event (Williams, 2007). Proponents argue that mixed techniques are superior to other approaches for studying, predicting, investigating, characterising, and understanding this phenomenon. Mixed-methods research is supported by the compatibility and complementarity of quantitative and qualitative methods (Johnson & Onwuegbuzie, 2004; Tashakkori & Teddlie, 2010). Multiple methods were used in this study. Data collection and analysis in mixed-methods studies may be either qualitative or quantitative. The quality of research is enhanced when qualitative and quantitative methods are used together (Creswell, 2009; Fraenkel and Wallen, 2008). The recent surge in the popularity of mixed-methods studies likely stems from the benefits this strategy provides for expanding our understanding of the world (Creswell, 2009).

Mixed methods are often used in exploratory, explanatory, and triangulation designs (Fraenkel and Wallen, 2008). Sequential explanatory design sequential exploratory design sequential transformational design concurrent triangulation design concurrent embedded design and concurrent transformative design are the ways that Creswell (2009) divides up these strategies (Creswell, 2009). Making a dataset from an existing one is one approach to design. A sequential design alternates between qualitative and quantitative approaches. In this research, qualitative information was used to provide light on the quantitative techniques used. Qualitative follow-up data was gathered to help make sense of the results of the survey scale. This study follows a logical progression of explanatory steps. This hybrid technique is becoming more common as quantitative and qualitative data are increasingly blended or integrated within the same research setting or programme of inquiry. The basic premise behind combining the two is that it will allow for a more thorough and synergistic utilisation of the data, resulting in more productive outcomes than either qualitative or quantitative research could provide alone (Pandey & Mishra, 2015). The use of both quantitative and qualitative research approaches was beneficial in this study since it wanted to uncover how Libyan

national and organisational culture influenced CPD in the country. It enables the researcher to do both qualitative and quantitative assessments of the issue at hand, which is necessary for acquiring a thorough understanding of the situation (Creswell, 2014). The study may be able to further examine many hypotheses and identify causal correlations between previously unknown elements by merging them. The "both techniques" methodology was the greatest choice for this specific study since it allowed for information to be acquired from two distinct sides. It is beneficial to gather knowledge about a phenomenon from several viewpoints.

Table 1. Offers an overview of the data collecting strategy used for each RQ in this research in terms to Research objectives.

| Research Q | Research objectives | Methods used to answer RQ |
|---|---|---|
| **RQ1/** | Identifying the effect of Libyan construction companies' national culture in construction project delays.<br><br>-Recommending significant implications of the existing organisational culture and the main strategies and control methods for avoiding the delays of construction projects. | By Questionnaire survey section three (phase 1) and Interview questions related to national culture (phase 2)<br><br>(The information obtained from the questionnaire is confirmed by interview questions) Variables A,C in Conceptual framework |
| **RQ2/** | Determining which organisational culture type is currently predominant in Libyan construction companies. | By Questionnaire survey (phase 1) and Interview questions related to organisational culture (phase 2) Variable B in Conceptual framework |
| **RQ3/** | - Identifying the effect of Libyan construction companies' organisational culture in construction project delays.<br><br>- Recommending significant implications of the existing organisational culture and the main strategies and control methods for avoiding the delays of construction projects. | By Questionnaire survey section two (phase 1) and Interview questions related to organisational culture (phase 2)<br><br>(The information obtained from the questionnaire is confirmed by interview questions) Variables B,C in Conceptual framework |

### 3.5 Data collection

Based on the selected research philosophy, research approach, strategy and methods, it is indicated that the current research incorporates collecting both quantitative and qualitative data. Generally, there are two main sources for collecting required information: secondary and primary (Walliman, 2010). Secondary data implies the information that is already available i.e., collected or produced by others and is available in various sources like books, published articles, journals, published statistics, films, annual reports and government surveys. The other one is the primary data which is collected for the first time from the relevant audience because the required information is not already available (Patten & Newhart, 2017).

Therefore, the data collected for the current research includes the primary data, because the current research focuses on the national and organisational culture as well as project delays; while there is no secondary source of information for the exact relationships of these variables that are readily available. Therefore, the primary data, which are collected from respondents, would help the researcher in testing these relationships and developing an understanding of these relationships (Fellow & Liu, 2015).

As the current research is based on both quantitative and qualitative information, the primary data required from respondents is collected through two different research instruments i.e. self-completion questionnaire (quantitative) (for the questionnaire items, see appendix A) and data that is required for the qualitative analysis was collected by interviews (for interviews' questions, see Appendix A).

#### 3.5.1 Phases of Data Collection

This research basically employs the positivist (quantitative) paradigm by conducting a self-completion questionnaire survey on construction companies in Misurata city in Libya; followed by the positivist paradigm through conducting interviews with the respondents from these Libyan construction organisations. The data collection process for current research is divided into two phases, which are progressed in a sequential way as the quantitative data collection will serve as the foundation for qualitative data collection. Such an approach is considered an ideal approach as one phase contributes to the next phase and enriches the findings of the study. The two involved phases are connected in a way that results obtained from the analysis of the initial data set e.g. quantitative survey are informed to the respondents of interviews (qualitative data collection) to gather their perspective about the collected information so that the information could be validated and strong conclusions could be made. Such progressive data collection and analysis techniques facilitate the researcher in developing a thorough

understanding of the problem of interest that could be elaborated in the discussion section of the thesis as combined results of both phases. This collected information helps find the answers to proposed research questions which are as follows;

Does the Libyan national culture contribute to the delays of Libyan construction projects?

What type of organisational culture is currently predominating in Libyan construction companies?

Does the organisational culture of Libyan construction companies contribute to the delays of Libyan construction projects?

- **The first phase of data collection**

The first phase of data collection starts with the distribution of questionnaires to collect information about the type of culture currently prevailing in Libya and the Libyan construction industry whereas the targeted population is the employees of the construction companies in Misurata city in Libya (population discussed in detail in coming sections). The objective of collecting quantitative information is to highlight the prevailing national and organisational cultural values in these construction companies and highlight the fact that how these cultural values are contributing to the delays of the projects. Hence, this stage of data collection facilitates testing the hypothesis regarding the relationship between National Culture and organisational culture with project delays of Libyan construction companies. Moreover, the current stage also facilitates identifying the prevailing organisational culture type in Libyan construction companies by finding the scores of these companies on the scale employed by current research as explained above in table 1. Then these findings are further employed to find out the values and beliefs that lead to such findings.

- **The second phase of data collection**

In the second stage of data collection, semi-structured interviews were used to learn more about the cultural norms and customs of Libyan institutions and the country as a whole. Because upper-level employees or management of organisations set the foundation for organisational cultures, interviews were conducted with eight managers from Libyan construction companies to learn their perspectives on cultural characteristics and their impact

on project delays. Therefore, their input would improve our comprehension to whether or not cultural factors are adding to project delays.

### 3.5.2 Population and Sampling

The targeted population of the current research is the construction companies in Misurata city in Libya. Misurata city has been chosen due to several reasons it is one of the most populated cities in Libya having approximately 40 construction companies, so it provides sufficient a sample for data collection.

The participants of the current research are higher-level employees or operative managers because these have the ability to influence the organisational culture. In order to attain the maximum output from the respondents few measures are taken like clear and concise language being used to make the survey easy to understand for the participants. Questionnaires are also accompanied by consent letters which incorporate the introduction of the topic, the influence of the results, the purpose of conducting this research along with the name and contact information of the researcher. Moreover, 100% confidentiality is ensured by the participants.
The selected sample is chosen based on the information provided in the literature because choosing an appropriate sample is very important for having valid research findings. So, the sample size estimation is made on the basis of the Yamane formula quoted in Israel (1992).

$$\boldsymbol{n = \frac{N}{1+N(e)^2}} \quad \text{..... (1)}$$

Where,
n = the sample size

N = the number of populations
e = Margin of Error
Confidence level= 95%, margin of error = 5%

The size of the targeted population is 30 construction companies in Misurata city, so the sample of the current research was 27 companies, hence 140 questionnaires were distributed manually to the employees of these companies.

### 3.5.3 Questionnaire Surveys

The quantitative research methods vary according to the research objectives. For instance, the survey research method is seen as one of the most commonly used quantitative methods in cultural research. It is a powerful tool for collecting data from multiple units of analysis, and cases. Therefore, it is a widely accepted and utilised research method in social sciences for studying cultural and organisational issues (Babbie, 1998; Bond, 1988; Cameron and Quinn, 1999; Hofstede, 1980; Schein, 1992; Straub et al., 2001).

In addition, researchers have also defined survey research according to their individual research objectives and disciplines. In this regard, Fink (1995) defines a 'survey' as "a system of collecting information to describe, compare, or explain knowledge, attitudes, and behaviour". Thus, it is a way of collecting information about the characteristics, attitudes, actions or opinions of a large sample of people, clusters, organisations, or other units referred to as a population. Survey research can be either cross-sectional or longitudinal. There are three different characteristics of the survey method. Firstly, it is designed to generate quantitative explanations of some features of a population. Secondly, it gathers information by asking people structured, predefined questions. Thirdly, the data it collects is generally gathered from a portion of the study population and is collected in such a way as to be able to generalise findings to the population.

Questionnaires are among the most popular methods of data collection, which incorporate a well-structured list of questions (Collis and Hussey, 2003; Collis and Hussey, 2003; Sekaran, 2003; Saunders, et al., 2007). Moreover, questionnaires provide the researcher with a choice to collect information in any possible way i.e. through the use of close-ended questions or open-ended questions for collecting required information (Crowther & Lancaster, 2008). Questionnaires are considered appropriate data collection instruments for descriptive or explanatory research. However, they are not appropriate for exploratory research, which is conducted by collecting data using qualitative instruments (Newby, 2014).

The questionnaire-based survey could be conducted in different ways; such as online questionnaires, post/mail questionnaires, telephone questionnaires and individual distribution/self-administered questionnaires- each having its advantages, and disadvantages (Richey & Klein, 2014). According to the nature of the research population (Libyan employees) for the current research; a self-administered questionnaire (self-collection by the researcher) is developed because it is considered the most appropriate method to collect the required and

effective information. In a self-administered questionnaire, the researcher distributes the questionnaire by himself (to contact the targeted population) to the construction companies, clearly explaining the research purpose.

Some of the significant advantages of conducting a self-administered questionnaire survey are the high response rate, the advantage of the degree of personal contact, the most appropriate sample being very precisely targeted, and the sample bias problem, if any, being overcome. The researcher has the opportunity to introduce the research topic to motivate respondents to give their answers honestly, to clarify any ambiguous questions and to retrieve the completed questionnaires (Pandey & Mishra, 2015).

Along with enjoying all benefits of a self-administered questionnaire mentioned above, some other reasons for the selection of this method for conducting the survey are; the unreliable Libyan postal services, which could cause a low response rate and be time-consuming, making it unadvisable to use a postal questionnaire. The difficulties in finding correct personal details (e.g. email, telephone number) for the targeted respondents in Libyan companies, made it impossible to use email or telephone questionnaires. Moreover, as the questionnaire is comprehensive and quite long; therefore, if it is posted, or emailed to the respondents, it would have been neglected, and the response rate would have been minimal.

### 3.5.4 Questionnaire Design

The core purpose of conducting a questionnaire-based survey for the current research is to undertake cross-sectional exploratory research which investigates the influence of national and organisational culture on project delays in the Libyan construction sector. Therefore, the questionnaire is designed accordingly.

Due to the lack of studies, and evidence for evaluating the impact of National Culture and Organisational Culture on CPD in Arab countries, the current study translated widely cited and used Western-developed instruments that have been validated and found to be reliable so four different types of questionnaire instruments were adopted from previous literature incorporating demographic data as well. So the questions most relevant to the proposed questions of current research are adopted from previous literature which supports and contributes to answering Research Question and creating a conceptual framework as mentioned above in table (1).

So the questionnaire designed for current research is divided into a few sections; the first section incorporates questions about the demographics of participants and their organisations. The Second section incorporates questions about the type of organisational culture dominating in Libyan construction companies. Questions for this section are adopted from Cameron and

Quinn (1999). The Organisational Culture of the Libyan construction companies would be measured by collecting the respective respondents' assessments of six dimensions of Organisational Culture as described in Cameron and Quinn (1999), including:

1-The dominant characteristics of the organisation.

2-The leadership style that penetrates the organisation.

3-The organisational glue or bonding mechanisms which keep the organisation together.

4-The strategic emphasis that defines what areas of emphasis lead the strategy of the organisation.

5-The success criteria that identify how victory is defined and what gets rewarded.

6-Employee management or the manner that distinguishes how employees are treated and what the working environment is like.

Each attribute mentioned above has four questions and each question describes the type of organisational culture including Clan culture, Adhocracy culture, Hierarchy culture and Market culture, which helps identify the organisational culture currently prevailing in Libyan construction companies. The next section incorporates the set of questions adopted from Hofstede's Value Survey Module. These questions help identify the aspects of Libyan National Culture prevailing in Libyan construction companies based on Hofstede's national cultural dimensions. Based on Hofstede's VSM questionnaire, Hofstede's (1980) original four cultural dimensions are used to investigate and measure the impact of National Culture on organisational culture in Libyan construction companies. Since the development of these dimensions by Hofstede, almost 70% of cross-cultural studies have employed these cultural dimensions in their studies, so these cultural dimensions are the widely validated dimensions to be incorporated in any study investigating culture. The National Culture questionnaire was divided into four culture dimensions: PD, UA, MAS versus femininity, and IND versus collectivism. The fourth section addressed project delay. In this section, respondents are asked to rate the size of delay in the projects in which they were involved as a percentage of the scheduled project period. The respondents are also asked to provide information about the percentage of the delay caused by the contractors. Hence, four different instruments are combined and employed in a single research setting to collect the required information.

Each section of the questionnaire is assigned a unique code to differentiate it from the others to facilitate the analysis process to be performed more effectively. Adopting the research instrument from a diverse cultural setting and translating it into the local language to have appropriate responses from the participants is a challenging task for the researcher but the

instrument is translated in light of the guidelines provided by previous literature. After translation into the Arabic language the instrument is reviewed by the lecturers of the University of Misurata who are fluent in both Arabic and English, to ensure the appropriate use of Arabic vocabulary and so that changes are made accordingly.

### 3.5.5 The Pilot Study

The pilot study demonstrates a research instrument's ability to measure what it claims to assess. Conducting a modest pilot study is a beneficial and economical way to ensure that the proposed instrument will fulfil its intended goal. It is critical to ensure that the components required to be tested in realistic conditions to assuring the smooth development of the research are tested using a pilot study before beginning the real research and to avoid any unanticipated complications that may occur in the actual setting (Punch & Oancea, 2014).

For conducting the pilot study for current research, the proposed questionnaire is presented to a small group of PM or civil engineering Libyan professors residing in the UK for adding their opinion and observations about the instrument. It also helps define the validity and accuracy of the words, the degree of inclusiveness and the ideas generated in their minds while understanding any inefficiencies or amendments if required.

### 3.5.6 Reliability

Reliability of the research instrument refers to the consistency of the instrument that can collect the same information in repeated observations in the same situation (Fellow & Liu, 2015). Employing SPSS, an internal consistency analysis would be performed for accessing the reliability aspect of the OCAI, VSM and Delay factors instruments. So the results of Cronbach's alpha reliability for all dimensions within each variable would define the reliability of the research instrument.

### 3.5.7 Analysis of Questionnaire Data

The data collected through questionnaires (the quantitative data) is analysed through quantitative data analysis techniques employing the SPSS software. The correlation coefficients analysis (Pearson's Correlation) is used to identify the interrelationship among different variables of study, while the regression analysis is employed to investigate the impact of independent variables i.e. the cultural aspects on the delays of projects.

### 3.5.8 Semi- structured Interviews

Although required information could be collected only by employing the questionnaires; but combining the quantitative information with qualitative information set in similar aspects

enriches the in-depth understanding of the issues under study. Moreover, the information collected through the questionnaires is validated by the information collected through other research instruments like interviews (Creswell, 2014).

Interviews help explore the thinking, perceptions and feelings of participants about the certain aspect being explored by the researcher. These could be structured, semi-structured or unstructured according to the aims and purpose of the researcher and could fall under both paradigms like positivist approach favours structured interviews with close-ended questions, while interpretivism favours unstructured interviews and open-ended questions (Crowther & Lancaster, 2008). In this context, Saunders et al. (2007) associated each type of interview with the purpose of research suggesting that in-depth/unstructured or semi-structured interviews help conduct exploratory studies, structured interviews are useful in descriptive studies and semi-structured and structured interviews are helpful in explanatory studies. Furthermore, interviews are considered a useful tool for understanding the construct that the interviewee uses in relation to their opinions and beliefs about the issues under consideration (Pickard, 2013). Consequently, the current study adopted semi-structured interviews. These interviews will be conducted with eight participants, to obtain and explore more in-depth information about the research issues, with specific emphasis on the factors influencing delay in construction projects in the Libyan context. Semi-structured interviews were used as a data collection tool to obtain qualitative information because the current research is exploratory in nature. The semi-structured interview was based on the main topics and questions that the researcher must address based on the conceptual framework as shown in the second chapter formed as a result of the research questions as mentioned above in table 1. While such questions could vary from one interviewee to another, which means the researcher or the interviewee has the option to omit some questions while focusing on some other questions (Richey & Klein, 2014). The information collected through these interviews is stored in a word document after the appropriate permission of the respondents. The drawbacks of conducting such interviews are the time consumption and the concern of participants about their confidentiality.

### 3.5.9 Participants

Managers from various levels of seniority and responsibility were invited to participate in semi-structured interviews via a question placed at the end of the questionnaire. In order to get answers to the questions of interest, in-depth interviews are done with eight participants from Libyan construction enterprises. The selection of upper-level management aids in learning more about the guiding principles that have shaped the company's culture to date.

Second, it tells us how they feel about their companies as places to work. Furthermore, the perspectives of middle-level managers and operational-level personnel assist identify the various cultural features present in the organisations, and how these contribute to the delays of projects in these businesses.

### 3.5.10 Semi-structured Interview Process

The interview questions are divided into two parts: the first part incorporates the questions about the National Culture and explores its impact on the delays of projects. So questions in the first part are coded as N1, N2 etc., and the N represents the National Culture. The second part incorporates the questions about the organisational culture and its impact on the delays of projects in the perception of the participants of the study, so these questions are coded as O1, O2, where the O represents "Organisational culture". The research arranged a convenient time and place with the participants and interviews were conducted in Arabic so that participants could provide comprehensive information, and maximum and effective output could be gained from the respondents. Each interview took almost 40 to 45 minutes and responses were recorded by phone and then transcribed into words before conducting the next interview so that effective information could be enclosed for further analysis. The recorded responses were discussed with the respondents while a copy of the responses also gave to the particular respondents.

### 3.5.11 Pilot Test of Interview Questions

Just like the pilot study of the questionnaire, the pilot study is also conducted for the interview questions to ensure the lack of ambiguity in the questions, the wording used for designing the questions and the measurement capacity of the questions incorporated in the interviews. The target time for conducting interviews is less than 50 minutes. After the accomplishment of the pilot testing, a debrief of the results of the pre-test will be provided to the sample, allowing time for additional information to be gathered from the group on their general reactions to the interview questions. This additional information will be useful when making amendments to the final interview questions.

### 3.5.12 Analysis of Interview Data

Qualitative research data were analysed using different techniques according to the objectives and proposed research questions of current research (Fellow & Liu, 2015). Similarly, cross-cultural studies have also employed various techniques of data analysis such as pattern matching, time series analysis, logic models, cross-case synthesis and explanation building. Thematic analysis is also among the popular techniques being employed by cross-cultural studies. So the current research adopts thematic analysis to extract the information from

collected data, which is performed through computerised analysing tools like NUD*IST or NVIVO. Thematic analysis is based on developing themes from the collected information that further facilitate the description of the phenomenon under study. The process incorporates the careful reading and re-reading of the data for creating and establishing meaningful patterns through a six-phase process. These phases are familiarisation with data, generating initial codes, searching for themes among codes, reviewing themes, defining and naming themes, and producing the final report. It is a form of pattern recognition within the data, where emerging themes become the categories for analysis (Pickard, 2013). Similarly, the data collected through interviews are analysed based on these processes to develop the themes about the impact of national and organisational culture on the CPD in Libya.

- **Thematic Analysis**

The current study followed the six-phase guideline provided by Braun and Clarke (2006) as a base for conducting the thematic analysis.

**Phase 1:** The initial step is " familiarising yourself with your data, is focused on reading and re-reading the data, noting down initial ideas" (Braun and Clarke, 2006, p.87).

In order to complete this phase, the data collected in throw interviews are transcribed and reread at least thrice for developing an understanding of the collected data and extracting the meanings and patterns. Although NVIVO software is also used as a tool of analysis to pull out significant patterns themes and languages of the participants' interviews.

**Phase 2:** "Generating initial codes: coding interesting features of the data systematically across the entire data set, collating data relevant to each code" (Braun and Clarke, 2006, p. 87). Thus, this phase focuses on the reduction of data, and the production of initial codes like some manageable, and meaningful chunks of text like quotations, or even single words, and then developing themes from them (Braun and Clarke, 2006, p. 87). So the initial codes for this study are:

- Organisational culture
- National culture
- Uncertainty avoidance
- Power distance
- Project delays

**Phase 3:** "Searching for themes, collating codes into potential themes, gathering all data relevant to each potential theme" (Braun & Clarke, 2006, p. 87). In this phase, the codes are analysed and sorted for identification of the themes and were used as a draft of code placement and theme development.

**Phase 4:** "Reviewing themes, checking if the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis" (Braun & Clarke, 2006, p. 87).

In this phase, the main focus is to refine the draft themes that are identified in the third phase employing the two-stage analysis of the codes. The first stage involves reading the codes in thealignment of each theme for identifying the development of coherent patterns (Braun and Clarke, 2006). If the coherent pattern is identified, then it involves moving to the next stage of analysis. But if the codes do not fit the themes, then there is a need to analyse whether the theme itself is the issue or the codes and the relevant information are the issue. While, the second level of the analysis incorporates reading through the whole data set to ensure the alignment of themes, and data (Braun and Clarke, 2006).

**Phase 5:** "Defining and naming themes, ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells, generating clear definition and names for each theme" (Braun and Clarke, 2006, p. 87).

This phase is focused on clearly defining what the themes are and what they are not. For the accomplishment of this purpose; the main focus was on defining the themes, identification of the essence of the themes and determination of the aspects of the data and the proposed research questions under which the theme fits (Braun and Clarke, 2006).

**Phase 6:** "Producing the report: the final opportunity for analysis. Selection of vivid, completing extract examples, the final analysis of selected extracts, relating of the analysis to the research questions and literature, producing a scholarly report of the analysis" (Braun and Clarke, 2006, p. 87). This final stage is focused on the analysis of the data and writing down the narrative of the data like making the argument in relation to the research questions while also portraying the concise, logical, coherent and interesting story that the data elaborates across the themes (Braun and Clarke, 2006). Furthermore, the World Cloud and Cluster analysis are also performed. World cloud helps identify the main themes used in the responses by the participants while indicating the more frequently used words in more dominating ways in the cloud. In this way, it helps identify the main focus of the responses. Moreover, the cluster analysis indicates the relationships among different themes indicated by the responses of the

participants. It also helps identify the interrelationships among different themes which helps with elaborating the relationships among variables of interest.

### 3.6 Ethical Issues

All social science researchers have an ethical obligation to protect the welfare of the people they study, and the researcher carefully thinks about the likely impact on the participants during each stage of data collection. To cope with these issues, a number of steps are taken; receiving the assurance from the companies' sample to conduct the study in their companies in the form of written permissions after the researcher wrote in detail all the information that the author intends to collect from the expected participants. Afterwards, the author will meet with human resource managers in these companies to discuss and explain the reason for choosing their company to participate in this study, as well as the kind of information that would be collected. This study is about cultures and delays in projects that have been implemented, so no ethical issues were anticipated. However, the specific ethical issues stated below were addressed by the researcher to safeguard the rights of the participants in the research activities:

1. Respondents were informed that participation in the survey and interviews will voluntary and that they had the right to decline to respond to any question asked.
2. No participants' names were required; either of the questionnaire respondents or the interviewees. However, positions and organisations were mentioned where necessary.
3. The researcher explained the objectives and the importance of the research and clarified the importance of their answers in obtaining reliable results and enabling the researcher to design a good framework for cultures and project performance. However, since the current chapter stated that this research adopted both quantitative and qualitative research approaches to achieve its objectives; the coming chapter provides results from the quantitative research method, while chapter five focused on discussing results from the qualitative research approach.

# Chapter Four: Quantitative Research Results

## 4.1 Introduction

The data was collected from two different sources i.e. through questionnaires from 103 employees of Libyan construction companies and through semi-structured interviews with eight managers of these companies. The collected information is then analysed to extract the findings of current research which are elaborated as follows.

## 4.2 Descriptive Test

### 4.2.1 Frequency Tables

Tables 5-9 in appendix B, demonstrate the frequencies of demographic variables, which are used in this research:

Where table (5) in appendix B indicates of the overall gender response rate. As it demonstrates that the sample of this research consists of 80 males and 23 females. There were 77.7% male, and 22.3% female respondents. Thus, the majority of respondents were male. This was reasonably consistent for all companies, which have been surveyed.

Indeed, gender is considered an important factor in the case of studying different behaviour patterns in which men and women differ. For example, stone et al. (1983) found that men and women use different influence strategies in business activities, and showed that men and women have different norms regarding how rewards should be used to influence creative organisational behaviour. Thus, the importance of examining creativity in relation to gender is based primarily on the socio-cultural differences among females and males (Abra, 1991). In addition, some studies found that males have significantly favourable attitudes towards creativity compared with their female counterparts (Mostafa, 2005). Furthermore, social expectations, conformity pressures and attitudes towards women in Arab countries may create 'cultural blocks' to female creativity (Mostafa, 2003).

However, figure 4.1 describes the occupation of the study sample, where it shows that the sample includes 27 contractors, 10 clients, and 63 engineers, while 3 of the respondents were classified as others see table 6 in appendix B.

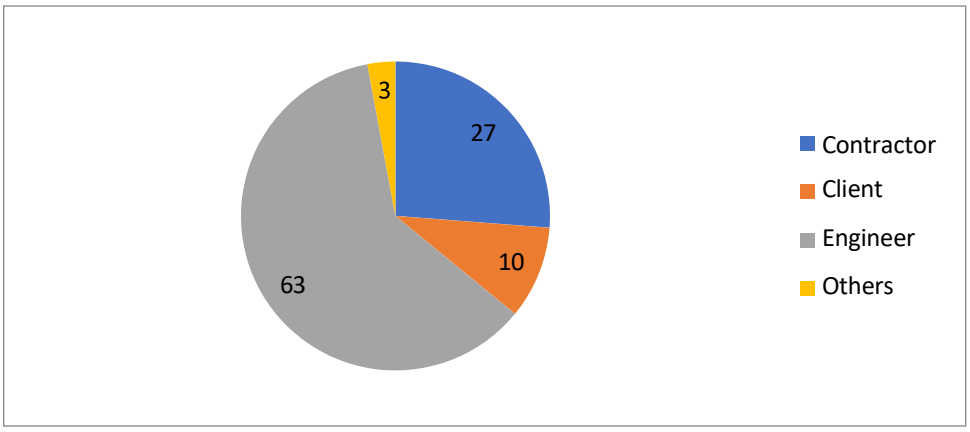



Figure 4.1: Occupation of Respondents

Furthermore, Figure 4.2 indicates the education levels of the study's respondents. Where, it shows that the number of people in secondary school is 4, 12 are with high institute level, 50 individuals with a university level, and 37 are holding postgraduate certificates see table 7 in appendix B. Indicates the high level of education in the management positions in these companies, which potentially helps the ability to generate, and implement new ideas. However, most of the participants from Libyan companies are found to hold university and post-graduate level educational qualifications.

Theoretically, the figure shows that most companies have a good educational infrastructure for creativity. In addition, education associated with a positive outlook towards creativity, and high performance in construction projects (Kimberly and Evanisko, 1981). The higher the education of an employee, the more likely he or she is to adopt creative activities and accept ambiguity (Hambrick, 2007).

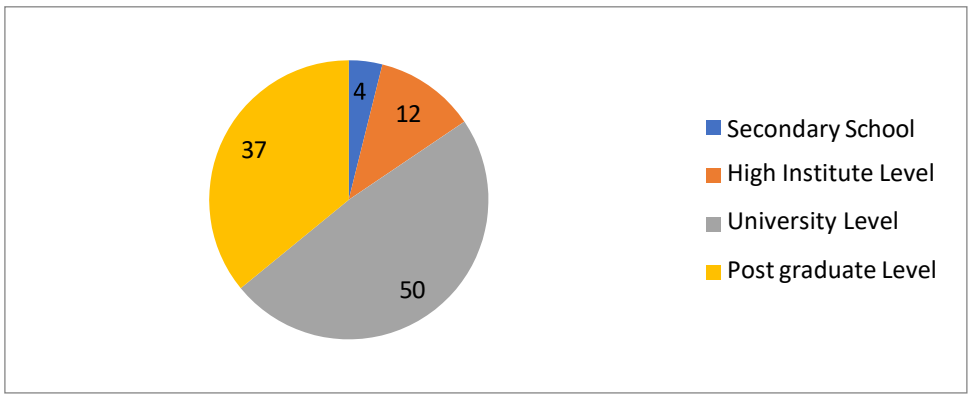



Figure 4.2: Education Level of Respondents

Figure 4.3 relates to the sector of the study's sample. Where 40 companies are found to be related to the private sector, 6 are classified as public, and 57 are related to both. Hence it is indicated that most participants work in both sectors see table 8 in appendix B.

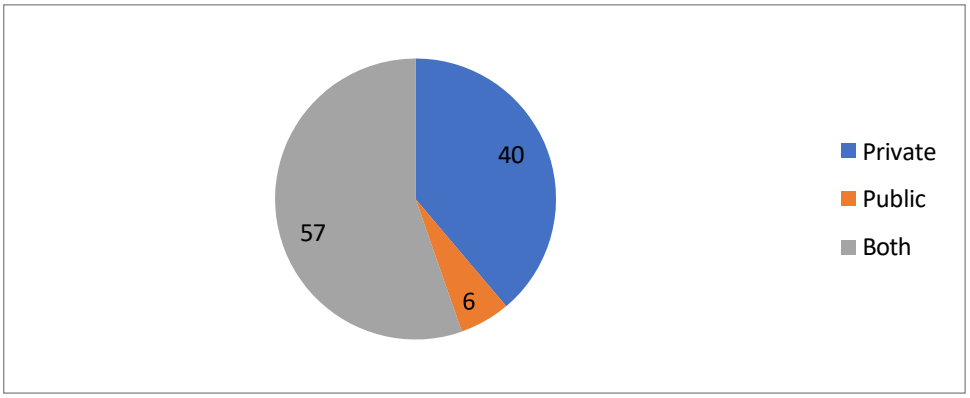



Figure 4.3: Sectors of Study Sample

However, in a relation to respondents' experience; figure 4.4 indicates that 28 respondents have experienced less than five years, 54 respondents have five to ten years of experience, 19 between ten to fifteen, and only 2 have experienced more than fifteen. Comparatively, previous researchers found that younger, and less experienced employees are more likely to pursue new strategies since more experienced or older employees dislike change from the status quo and show greater adherence to the norms of the organisation (e.g. Hambrick, 2007). However, in table 9 in appendix B, it can be seen that Libyan construction companies' workers had work experience from 5 to 10 years; this is because of the employment system in Libya, which employs people for the duration of their lifetime.

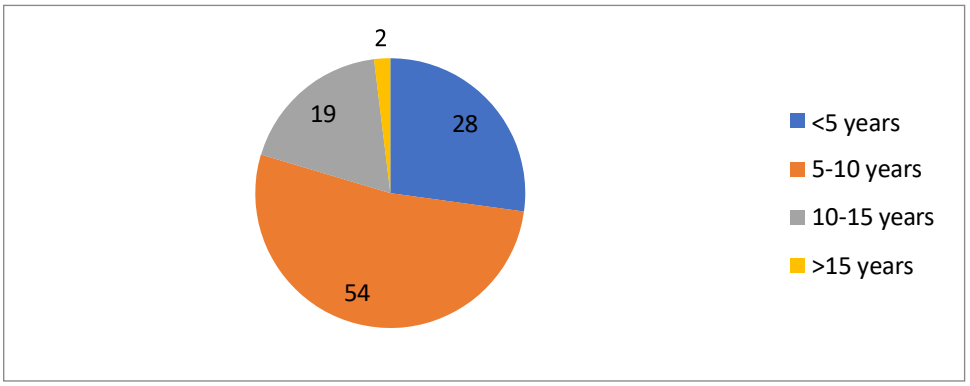



Figure 4.4: Experience of Respondents

### 4.2.2 The Normality Test for Demographic Variables

In order to check the normality of the used variables, the study ran the Histogram test and the results proved that the demographic variables used in this study are found to be abnormally distributed (see charts 5-9 in appendix B), indicating that the population under study has certain

characteristics dominating the whole population i.e. having more males, greater experiences, holding higher degrees etc.

### 4.3 Cronbach's Alpha

As demonstrated by table 10 in appendix B; results from the reliability test found that the data collection instrument is reliable. Whereas, the coefficient (Cronbach's) alpha is the basic measure of reliability (Green et al., 2000). However, the items in each factor were grouped into scales, and the coefficient alpha was calculated for each group of questions. The VSM (National culture) instrument had an acceptable coefficient alpha (PD 0.693, UA 0.644, Individual Collectivism ID 0.760, and MAS 0.658). While, the Organisational Culture had an acceptable coefficient alpha (CLAN 0.646, ADHOCRACY 0.681, HIERARCHY 0.751, and MARKET 0.631). The delay factors of construction project questions also had an acceptable reliability score (0.812). Nunnally (1978) suggested that in exploratory research such as this research; an alpha value of 0.6 is considered to be sufficient. The alpha values found for each scale indicated. Therefore, each instrument is a sufficiently reliable measure. Thus, by relying on results from Cronbach's Alpha test; the questions of VSM (national culture), Organisational Culture and Delay factors of construction projects are found to be fairly valid and reliable measures. It is clear that the data through the analysis of the alpha value for all independent and dependent variables of the questionnaire were good, as this means there is an acceptable degree of reliability and validity, and thus this verifies the stability and consistency as acceptable for scientific research.

### 4.4 Typologies Organisation Culture of the Construction companies based OCAI

As seen in Table 11 in appendix B; the strengths of different cultures were computed by calculating the respective average of the scores, which are assigned by respondents to each dimension of Organisational Culture.

Culture typologies based on the CVF (Competing values framework), dimensions actually; the CVF assesses the performance of organisations based on the aforementioned six dimensions. This dimension reveals the identity, the management, and the role of the organisation. The study revealed that all six dimensions are highly recognised in the LCI. In addition, the study revealed that Hierarchy is the dominant culture in Libyan construction companies with an average of 38.7, whilst Adhocracy is the weakest culture typology with a mean of 19.4. Meanwhile, Market and Clan culture is with an average of 21.4 and 20.3 respectively. Therefore, as can be seen from the Table; the participants of construction companies have pointed out the dominant culture was Hierarchy culture. Researcher through previous studies could not found

any study has investigated the Organisational Culture in Libyan construction companies. However, this result is consistent with previous studies (Twati, 2006; Shurbagi, 2014) as they pointed out that the dominant culture in Banking and Oil sector in Libya was the Hierarchy culture. Cameron and Quinn (2006) argued that organisations take turns at different cultures, as they progress from clan culture to adhocracy culture, market culture and finally hierarchy culture.

### 4. 5 Correlation Test

- **The Correlation Matrix of National Culture and Project Delay**

This study ran the Pearson Correlation test in order to examine the relationship between the National Culture as represented by PD, UA, ID and MAS along with project delay. As it is shown in table (12) in Appendix B, the project delay is insignificantly related to PD and MAS, as it is shown in the table the $p > 0.05$ for both. it was 0.515 and 0.949, respectively; while, there is a significant correlation between UA and ID along with project delay, as it is shown in the table $P < 0.05$ for both. It was 0.028 and 0.031, respectively.

- **The Correlation Matrix of National Culture and Organisational culture**

Table (13) in appendix B describes the relationship between the variables of National Culture as captured by PD, UA, ID and MAS along with the Organisational Culture. Consequently, the results proved that except for adhocracy; the Organisational Culture are significantly related to the PD. In addition, according to literature review 2.6.7, the PD dimension of National Culture is related to the hierarchy dimension of Organisational Culture, because both types of culture share an underlying driver of respect for power. As proved by results from the Pearson test; the Correlation between PD and Hierarchy is found to be positive (0.205), The UA is found to be significantly correlated with adhocracy and market. This result agreed with literature review 2.6.7 that the UA dimension of National Culture is related to the adhocracy dimension of Organisational Culture because both types of culture share an underlying driver of risk focus, according to the correlation results; the Pearson Correlation between UA and Adhocracy is found to be negatively correlated by -0.365.

### 4.6 Linear Regression Tests

**- The Impact of Individualism/Collectivism (ID) in Project Delay**

This study utilised the linear regression test to check the effect of IND on the project delay. Consequently, the results confirmed that IND is significantly causing a delay in the project because $p<0.05$, where was the value of (**p 0.031**) (see table 14, in appendix B).

- **The Impact of Individualism and Clan in Project Delay (Mediator)**

The previous test revealed a significant impact on the IND in project delay. Thus, since this test aims at finding out the ability of a clan to mediate the relationship between IND and project delay; the following test was mainly applied. Consequently, the findings showed that when the Clan variable was used in the regression test the relationship between IND and Clan along with project delay is shown to be insignificant because $p>0.05$, where was the value of (**p 0.688**). Which in other words means that the project delay is not significantly impacted by Clan (see table 15, in appendix B).

- **The Impact of Uncertainty Avoidance in Project Delay**

This study utilised the linear regression test to check the effect of UA in project delay. Consequently, the results confirmed that UA on significantly causing a project delay, because $p<0.05$, where the value was (**p=0.028**), (see table 16, in appendix B).

- **The Impact of Uncertainty Avoidance and Adhocracy in Project Delay (Mediator)**

Results from the regression test revealed that UA is significantly impacting project delay. Thus, since this research aims at finding out the validity of adhocracy to mediate the relationship between uncertainty and project delay; results from the regression tables revealed that when the adhocracy variable was used in the regression test the relationship between UA and adhocracy along with project delay is found to be insignificant. This in other words means that the project delay is not significantly impacted by adhocracy, where was the value of (**p=0.580**), $p >0.05$. This result agrees with Hofstede's Libyan culture study, he concluded that Libya receives a high score of 68 in UA dimensions, meaning they stick to their rigid beliefs and have a need for rules and guidelines. UA in this context has to do with the idea that the future is unknown (Hofstede, 2001). In addition, since the negative relationship between avoiding uncertainty and the culture of adhocracy, reinforces the result of the Organisational Culture of the Libyan contracting companies in the city of Misurata, which was obtained previously as it

showed a decrease in the dominance of the adhocracy culture over the contracting companies in Misurata. This contributed to the increase in the concept of a culture of avoiding uncertainty for these companies. UA describes how societies deal with unknown aspects of the future. Cultures low in UA has a more relaxed attitude toward risks in which practice counts more than principles (Hofstede, 2001). Such attitude fits with the adhocracy Organisational Culture because the adhocracy culture is also unafraid of risks in that it has entrepreneurial spirit, and seeks growth, resource acquisition, and development to innovate (Denison, Hooijberg, and Quinn, 1995), (see table 17, in appendix B).

- **The Impact of Masculinity/Femininity (MAS) in Project Delay**

This study utilised the linear regression test to check the impact of MAS on project delay. Consequently, results from the regression technique showed that a project delay is insignificantly affected by MAS, because p>0.05, where was the value of **(p=0.944),** (see table 18, in appendix B).

- **The Impact of Masculinity/Femininity and Market in Project Delay (Mediator)**

When the study tried to test the impact of MAS on project delay, the regression results showed that project delay is insignificantly related to MAS. However, this research aims at finding out the role of the market to mediate the relationship between MAS and project delay. Consequently, results from the regression test revealed that although the market variable was entered into the model the results still show an insignificant correlation between MAS and the market along with a project delay, because p>0.05, where was the value of **(p=0.501).** However, to be more accurate, the usage of the market in the model contributed to enhancing the amount of P-value, while the relationship is still insignificant. This, in other words, means that the project delay is insignificantly related to MAS and the market (see table 19, in appendix B).

- **The Impact of Power Distance in Project Delay**

This study utilised the linear regression test to examine the impact of PD on project delay. Consequently, results from the regression technique showed that a project delay is insignificantly related to PD, because p>0.05, where the value of **(p=0.515)** (see table 20, in appendix B).

- **The Impact of Power Distance and Hierarchy in Project Delay (Mediator)**

When the study tried to test the impact of PD on project delay, the regression results showed that project delay is insignificantly related to PD. However, this research aims at finding out the role of hierarchy to mediate the relationship between PD and project delay; the following test was mainly applied. Consequently, results from the regression test revealed that although the hierarchy variable was used in the regression model; the findings still show an insignificant correlation between PD and hierarchy along with a project delay because p>0.05, where was the value of **(p=0.358).** However, to be more accurate, the usage of hierarchy in the model contributed to enhancing the P-value, while the relationship is still insignificant. To sum up, the results confirmed that project delay is insignificantly related to PD and hierarchy (see table 21, in appendix B).

- **The Impact of Uncertainty Avoidance, Individualism and Power Distance on Project Management**

Of the four national cultural characteristics studied, it was determined that masculinity and femininity have no impact on project delays experienced by Libyan construction enterprises. The other three characteristics of UA, IND, and PD, on the other hand, were determined to influence on either the organisational culture or the delays that Libyan construction businesses face due to p0.05. As a result, the relationship between these three national cultural aspects and PM was investigated to highlight the fact that these national cultural aspects influence the PM of construction companies, resulting in delays in Libyan construction projects where the values of p were 0.001, 0.005, and 0.032, respectively. The goal of this analysis was to illustrate how these national cultural factors impact the PM of construction firms. As a result, using regression analysis, these linkages are shown (see table 22, in appendix B). As previously stated, the next chapter will provide a discussion of the findings from the qualitative research approach.

# Chapter Five: Qualitative Data Analysis

## 5.1 Introduction

This part devotes its attention to discussing the results of the qualitative data analysis. In addition to employing a variety of methods, as was explained in Chapter three, in order to conduct in-depth interviews, semi-structured questions were used in order to elicit replies from the participants. For the purpose of this research, interviews were conducted with eight middle and upper-level managers of Libyan construction enterprises. Through the use of these interviews, we were able to get the perspectives of these managers on the impact of NC and OC on the delays that occur in projects.

This section presents the findings that were obtained from the examination of the qualitative data. The collected responses were analysed using a qualitative approach that included thematic analysis, which provided a more in-depth look at the qualitative data and allowed for more precise information extraction and comprehension of the results. Although it begins with a discussion of participant responses, this was followed by the analysis of the collected responses using a qualitative approach.

## 5.2 The Findings of Qualitative Data

Interviews with a semi-structured format were carried out with eight of the participants who are now employed in upper or intermediate management positions in Libyan construction enterprises and who have consented to take part in this research. The researchers asked the participants a variety of questions that were based on the research topics that were suggested for this study. As a result, the present section will give the narrative of the themes, which will be produced from the analysis of the data in order to answer research questions. The present research focuses mostly on the following topics: national culture, organisational culture type, PD and UA, and project delays. The following is an expansion of the replies that were given by the participants in light of the issues that were discussed:

### 5.2.1 Organisational Culture

The type of culture, which was almost identified by all respondents in the Libyan construction projects, is a hierarchy with some indicating clan as well, but the most dominating Organisational Culture type in Libyan construction companies is hierarchy culture. The important dimensions of Organisational Culture, which are identified by respondents, are including meeting timelines proper distribution of responsibilities, laws and procedures being followed by the company,

and the interrelationship of employees and management. According to them, all these dimensions contribute significantly towards the delays or timely accomplishment of projects in Libyan construction companies. But as the predominant culture in these organisations is hierarchy, so there are strict rules and regulations, where employees' opinions are not incorporated in the decision-making in most of the organisations, so such organisations face problems in meeting timelines and delays occur. Some quotations from the responses of the participants are stated as follows:

**Participant A**: "*The organisational culture currently prevailing in the organisation is the hierarchy as well as the culture of the clan. But in most Libyan institutions, the hierarchy is prevalent. Laws and procedures play a significant role in the work of the institution.*"

**Participant B**: "*Regarding our culture, the hierarchy, of course and the organisation are consisting of a president, employees, and engineers, meaning three levels."*
*"The type of organisational culture for me in our country in Libya depends 90% on the companies' organisational structure. Each project manager and the project engineers and administrators accompany him, each according to the job hierarchy."*

**Participant F**: *"The top management never shared their vision with the whole organisation and doesn't make a significant effort to foster a friendly work environment for workers. "The upper management requested us to put certain ideas into practice, but they never shared their vision with the whole organisation." They issue orders to implement these ideas since doing so was essential for maintaining the organisation's general order."*

**Participant G:** *"A management style characterised by strict adherence to regulations." The administration is hesitant to bend the rules or demonstrate flexibility. This perception was a result of the hierarchical-control style of Libyan management and the bureaucratic nature of the organisational structures, since everyone's tasks and responsibilities were well-defined and it was quite clear what was expected of them. When we experienced a problem with the pipe of the concrete pouring machine while casting the columns of one of the project's buildings and made repairs without the administration's knowledge, they wrote us a "awareness letter" stating that our actions violated the norms of work. The report is sent up the chain of command to the supervisor, then the head of the relevant department, then the maintenance manager, and lastly to top management. Even the tiniest facts that must be disclosed to management fall*

*under this category. If you do not comply, a fine awaits you."*

**Participant H:** *"Most of the time, employees have to follow certain rules and procedures when doing their jobs or working on projects. In this situation, they had no choice but to stay the same. We can't make a decision without permission from the top. We have to follow procedures and rules that make us feel like we can't do our jobs the way we want to."*

The responses of participants indicate that the dominating organisational culture type is Hierarchical culture. However, participant A has indicated that clan culture also prevails in some organisations but hierarchical culture is more dominating. Similarly, participants B, F, G, and H have also indicated the presence of hierarchal culture. When leaders conceal facts or ideas to prevent others from gaining understanding, they jeopardise their own positions and harm the organisation as a whole. There is an abundance of literature on Libyan culture that emphasises the significance of worker participation in the workplace. According to the comments of the respondents, employees do not actively participate in day-to-day activities, indicating that issues affecting employee participation are not receiving sufficient attention. If the company and its leadership attempt to execute any of these strategies, they may encounter severe difficulties. Staff employees must be made aware of their duties and responsibilities in order to realise the company's vision and ensure organisational success. Only then will workers feel comfortable working together and sharing their own ideas, enabling the organisation to establish a family-like environment of cooperation.

### 5.2.2 National Culture

The participants indicated that of course, each country has its own working culture in Libya the culture of favouritism prevails so the efficiency of the projects is affected because such culture influences the payments of financial obligations or the allocated costs of the projects. Moreover, the speed of work, responsiveness, achievement, and speed of implementation of the work also differs among different workers depending on their National Culture, due to the differing prioritise among nations. Similarly, the delays in Libyan construction projects are quite different from the delays in construction projects of developed nations, due to the difference in workers working in these economies.

Moreover, the responses are as shown below:

**Participant A:** *"Of course, in our case, we in Libya have a culture of favouritism, so the culture of social considerations and society's prevailing culture prevails, affecting companies even in contracting projects."*

**Participant B:** *"Indeed, cultures differ between countries. For example, lands whose culture depends on the clan culture deliver their projects on time and avoid many problems during the project's implementation because of the team spirit and clear among the members. But the issue of organisational restructuring and others forces you to work with certain procedures and laws in a specific line. Like the speed of work, achievement, responsiveness, and speed of implementation of work in a place. This has to do with different cultures, as well as prevailing in the Libyan culture. Egyptian workers are faster in performance and achievement, unlike Filipino workers who are good but slow and Vietnamese and Thai as good quality but take time to complete the work."*

**Participant C:** *"Yes, indeed, the delay in projects differs in different countries according to their national culture, which affects the institution's organisational transformation. Therefore, we find a difference in urbanisation levels that vary from one country to another according to its different cultures."*

**Participant D:** *"A natural culture that extends from country to country shows that Libya's state does not look like Dubai's state in terms of the construction developments since culture and the economy differ."*

**Participant E:** *"We are far behind the developed countries, and we say, for example, the delays in construction projects in Libya other than projects delay in America, it late for less than the period in which the exact opposite decided in Libya. This is the result of different cultures as a result of practicing work. Most of them have more capabilities and the influence of the culture if it influences culture. The global market differs from the local market from the current situation. With the development of urbanisation and reliance on foreign labour, there is a difference in achievement before, particularly in infrastructure and reconstruction."*

**Participant F:** *"This will be evident in every aspect of your life, including your family, school, and all other social institutions. The society of Libya is governed by an ethos of rules and prohibitions. And this results in a situation in which the individual lacks initiative and waits*

*for direction. The younger generation avoided eye contact with the older generation when there was friction between the generations in an effort to hide their disapproval. This caused the youth to become passive, which may be keeping them from being innovative."*

**Participant G:** *"In Libyan culture, giving freedom is viewed as a sign of a lack of control, and control is highly valued; a good man is characterised by power, harshness, and dominance. In addition, from the perspective of Libyan culture, surrender from the person with power over the person who should not have it is regarded improper. We have reached the point where we feel that freedom is wicked and causes issues because it encourages the son to violate his father's authority, the student to disobey their teacher's authority, and the person to disobey the authority of his or her tribe, family, or community. And disobedience is outlawed not by statutes but by conventions, traditions, and social norms."*

**Participant H:** *"It is reasonable to anticipate that personnel would, if it is practicable, adhere to any and all established rules and standards. They had no way out of their routine and were forced to come to terms with it. Without the okay of management, we are unable to go further with this. In work, our flexibility is limited by several rules and laws that must be followed. Our culture suffers from a major deficiency in the value of personal liberty. There is a lack of opportunity for members of the community to present and discuss novel concepts because parents do not give their children freedom, teachers do not give their students freedom, managers do not give their employees freedom, and the community as a whole does not give its members freedom. In point of fact, there are a lot of individuals who are reluctant to share their views and emotions about a certain subject or any ideas that they may have in general."*

The above quotations indicate that each of the participants agreed that national cultures differ and have a significant impact on the working environments of those countries. Similarly, the national culture of Libya also significantly influences the ways how people work in Libyan organisations. Therefore, it is indicated that national culture influences the ways of working workers and contributes significantly to the delays of the projects. In Libya, there is a culture of favouritism, which implies that the culture of social considerations and the culture of the general populace prevail, which has an influence on enterprises even throughout the contracting process. Egyptian employees are more efficient in their performance and success than Filipino workers, who are great but slow, and Vietnamese and Thai workers, who have good quality but take more time to complete the assignment. Giving individuals greater freedom is seen as an indicator that there is insufficient control in Libya, a society where control is highly valued.

When there was disagreement between the generations, the younger generation tried to avoid establishing eye contact with the older generation in order to hide their anger. According to participants, as a consequence of this, young people have become more passive, which may be impeding their capacity to be imaginative.

### 5.2.3 Power Distance

The study conducted by Hofstede indicates that Libya has the greatest power distance index (PDI) score of 80. The ratings demonstrate that there is a growing imbalance in the allocation of power in Libya. Those who live in countries with a high PDI, like Libya's, often rely more on formal restrictions; this exemplifies how Libyan culture deals with the reality that people are not equal in terms of authority (power). The data, as well as an analysis of those data, will be produced by researching the impact that excessive power distance has on project management in Libyan construction companies.

The findings revealed that the responses of the respondents were compatible with the Hofstede research. The interviewees felt that there is a significant PD between various levels of the organisation, particularly between workers and construction company management. They also imply that such PD is regarded as the core reason for the hierarchal culture of the organisations, since lengthier hierarchies exist and PD dominates among different hierarchal levels throughout the hierarchy. In reality, the hierarchical structure and PD among various levels in the organisation are the result of the impact of Libyan National Culture, and most workers accept it naturally since they are also part of the same National Culture.

**Participant A:** *"The power distance between the members of the organisation is present as manager, employees and workers. There are consultations and Acceptance of opinion that takes in the statement of the employee's Acceptance of idea differs from one person to another. I can say it distributed relatively. I mean, the thoughts are accepted from a person. However, it doesn't receive from another person. This result is the dominant culture in Libyan construction companies. My company's organisational culture has affected by the national culture of the institution managers (Libyan culture), and this is the case in most of the existing companies*

**Participant B:** *"According to my experience, there is a power distance between management and employees because of the dominant hierarchy of the company's management culture. Now I am a director of the Office of Quality and Control. I was the general manager of the company and the projects manager at the same time for a year until I grew old. In my management, we try to change this role and culture to a teamwork culture."*

**Participant C:** *"The manager has always opened the door to any employee, even if they are a driver. But the other person makes the right decision, even if he is a driver. The right of the manager means an impact on the company's performance on projects. Of course, there are positives because it is constantly taking opinion from all employees."*

**Participant D:** *"Concerning the distance of power depends on the boss and subordinates. The manager deals with people equally in relations between employees. Of course, it depends on the type of employee. He has high efficiency and professionalism. so, naturally, you see that the dealings are unequal between the manager and the employees."*

**Participant E:** *"According to my experience, the power distance between the entire organisation's team members as a manager and members exists mainly due to the hierarchical character of management formation. However, the clan culture also exists among the organisation members, whereby we work as a team and support each other."*

**Participant F:** *"Even though I am entitled to express my opinion at the moment, after a decision has been made, I am expected to accept it regardless of whether I agree with it. It has been drilled into all of us in my family, as it is in other Libyan households, to never question the decisions made by my parents. This is something that has been pounded into all of us members of my family. This is reflected in the behavior of employees within the institutions when it comes to presenting ideas and discussing decisions."*

***Participant G**: "Customs tie us and prohibit us from achieving freedom. When we live with our parents, we lack life and future independence. The father's authority is sacrosanct and cannot be questioned, even for crucial decisions like where to study, what job to choose, and whom to marry. To preserve rituals and traditions, we must accept the father's decisions, even if they contradict what we think is right. This happens at work. Middle-level employees are*

*unwilling to take initiative and share their thoughts and ideas because they feel management has a different perspective that cannot be debated."*

***Participant H**: "The power discrepancy that develops between a manager and those under his or her supervision is largely attributable, according to my work, to the hierarchical structure of management training. In addition to a strong "clan culture," the organisation's members are known for their strong feeling of brotherhood and willingness to assist one another." "The extent of senior management engagement in project choices compromised the project manager's capacity to operate as the project's overall coordinator and diminished his authority with the team." As a consequence of the effect of the power distance culture, contraction companies in Libya have a rigid hierarchical structure, which has led to the delay in decision-making and the uniqueness of the senior management in making decisions without consulting the projects managers."*

Due to the primarily hierarchical nature of the management culture in these organisations, there is a power disparity between management and workers in Libyan construction enterprises. Management authority comprises the capacity to affect how an organisation performs its obligations and responsibilities. There are many advantages, the most significant of which is the constant practice of soliciting opinions from every member of the team. However, in their relationships with one another, management and labour do not engage on an equal footing. The power disparity that exists between managers and the people who work under their supervision is mostly due to the hierarchical structure of management training. People at the organisation's intermediate levels are afraid to take the initiative and speak out because they believe management has a monopoly on the proper viewpoint, which cannot be contested.

The responses of the participants indicate the presence of power distance due to the hierarchical culture in Libyan organisations. All participants indicated that managers do not deal with employees at different levels in similar ways. Rather their dealings differ with the level of employees hence having huge differences among the different levels of hierarchies. According to interviews with Libyan managers, there is a lack of communication between high and bottom management, which is required to foster a culture of cooperation and participation among employees. Establishing two-way communication channels between senior management and employees is the first step toward mutual understanding, trust, and respect. The wide power distance in Libyan culture between top management and employees may be linked back to the gap and lack of strength in communication between levels within

an organisation or enterprise. This led to lengthy discussions and, as a consequence, project difficulties.

### 5.2.4 Uncertainty Avoidance

Uncertainty avoidance (UA) is the degree to which individuals feel threatened by ambiguity in a situation and attempt to avoid it. The high uncertainty avoidance index (UAI) value of 68 for Libya shows a poor degree of tolerance for uncertainty among the Libyan community. Libyans are fearful of hazy, unknown conditions and an unforeseeable future, and as a result, they may be less eager to embrace and implement new ideas. The data and its analysis will be presented via a discussion of the factors of high uncertainty avoidance that influence creativity in Libyan society. According to the literature.

The participants indicated that Libyan companies' management does not like or appreciate taking a risk, rather the UA attitude is dominating the society as well as the organisational cultures of the construction companies. Although such a UA attitude of management hinders engineers' performance, due to their inability to innovate.

**Participant A:** *"From my experience, avoiding uncertainty is present in the Libyan institutions, and sometimes it hinders the work and the engineers' inability to innovate. Therefore, before implementing the project, a risk item or budget must be allocated within the project budget during the project study. This is to control the unforeseen things that may happen or where you take into account the unexpected (The future)."*

**Participant B:** *"According to my long experience with them, avoiding uncertainty in this organisation exists by setting a budget for risk management. Employees in this company are reluctant to risk and improvise concerning implementation. This is my view."*

**Participant C:** *"The manager always tells the structural engineer to design from him because the design has two roles only. But, says the engineer the creation of three functions. The reason is the development within twenty-five years. First, to increase the population. Secondly, due to the circumstances that occurs in the country. When we design a building, we consider the risk that may arise in the future, and it becomes certain in a specific budget because they know the status of the projects."*

**Participant D:** *"Yes, they take a positive attitude towards risks because workers inform management when they know that risks will occur, or any problems have occurred to be treated and managed."*

**Participant E:** *"In light of the deterioration of the employees' experience and the individual's culture, they take individual decisions, such as buying raw materials quickly for the project without considering the difference in prices between suppliers to complete the project soon and risk it. So, in such situations, we consult, advise, and communicate with them so that there is no delay in receiving the materials and affecting the project's delivery."*

**Participant F:** *"In every manner, we are a conventional society, which causes us to despise change at the individual, social, and institutional levels; we always wish to live as our ancestors did, by the same standards and practices. This attitude, known in Libya as "love of stability," has been upheld by both society and the government. This results in a fear of the future and reluctance to adopt new ideas and technologies that may make the firm more efficient."*

**Participant G:** *"I can say with absolute conviction, based on my own experiences, that fear is the number one opponent of creativity." After completing my civil engineering degree abroad and returning to Libya, I intended to establish an engineering office. I did it because I am a manager at one of Libya's businesses and I was surprised to discover some new ideas in my profession that I wanted to share it with the construction projects companies in Libya. the constrictions companies in my city has not yet adopted the most recent techniques for monitoring and controlling projects, such as budgeting and scheduling. In addition, the significance and requirements of the initiative were not determined through consultation with relevant parties. When I returned from studying abroad with knowledge of cutting-edge project management techniques, I discovered that the administration was unprepared to take my suggestions. The administration's responses suggested that they were averse to adopt a new business strategy, preferring instead to preserve the current situation. They cited the time and money required to acquire new methods, in addition to the cost of new devices, equipment, and programmers, as reasons for keeping things as they are.".*

**Participant H:** *"Because authorities at all levels (political, economic, social, and community) have the ability to marginalise and isolate individuals, various types of anxiety are rife in the Libyan community. These forms of anxiety include the fear of failing, the fear of losing prestige and respect, the fear of society, and the fear of authority."*

The responses indicate that the majority of the respondents have similar views that want to avoid uncertainty as much as possible and do not prefer to take risks. They take measures to avoid risk and uncertainty and if any uncertain situation happens they try their best to avoid

uncertainty. In Libyan society, it seems that stability is cherished and change is resisted. Multiple interviewers have raised this issue. Due to a fear of the unknown that compels them to cling to the familiar and the known and place their confidence in it, the average Libyan prefers dealing with predictable circumstances and solutions over those that are hazy and fraught with danger. This may be reflected in ancient Libyan customs, in which members of a social institution (such as a family, school, or organisation) may feel bound to tackle new problems in the same manner as previous ones. Many individuals believe that violating established conventions and procedures is wrong. According to the words of one participant, "fear is the number one opponent to creativity." According to him, the "love of stability" that exists in Libya has been maintained by both the public and the state. Current tactics for monitoring and managing projects in terms of forecasting expenses and defining a timetable have not been embraced in his city. This is a problem since these aspects are essential for successful project completion. There was no engagement with the relevant stakeholders to establish the project's applicability and the needs that were vital to its success. Their objective is to maintain their managerial positions for as long as possible while staunchly opposing any changes that may be made to the organisation's guidelines. There seems to be a divide between the elder generation, which has held power for a long time and dominated all aspects of Libyan society (political, economic, and social), and the younger generation, which represents those seeking change. The potential of the first group to keep power and resist change has not diminished. According to other responses, individuals who benefit from the status quo are naturally averse to change that might jeopardise their position or reputation.

### 5.2.5 Project Delays

The participants indicated the role of national, and Organisational Culture in project delays can be elaborated in the following ways:

**Participant A:** *"Certainly, there is cooperation in the organisations of the organisational structure from the individual decision and prioritises the public interest and takes opinions from all employees participating in the project. That will be facilitated to avoid common mistakes, give morale in the team, and help in the use of time in its meaning in the best of circumstances."*

**Participant B:** *"The controls and orders of the hierarchical culture are prevalent in the company. There is a lack of organisational aspects that determine the employees' relationship, making a big gap between management and employees. There is no consultative explanation*

*because the regulations do not govern it. So, we must organise a mechanism that would renew the relationship between workers and management."*

**Participant C:** *"As an engineer, I argue that the company should develop more and move from a hierarchical culture to a culture of creativity and innovation. This culture exists, but in a small percentage: the possibility of change is available in light of available resources and a geographical location rich in wealth."*

**Participant D:** *"As I told you in the past, through one of the parties to the project, one of the team members acts or takes an individual decision without consulting with the rest of the team members, which affects our legitimate thinking. I am possible with the least experienced team because any decision affects the whole team and the project's success. We have to adapt, but in general, the current rules and policies are consistent with the workflow. Still, they can be modified, especially with the increase in the volume of work and the receipt of larger projects, so with the increase in employees, the powers of the first team differ with the new employees."*

**Participant E:** *"The hierarchy culture of the rules set is in the organisation. But it does not mean not to participate with others and take their opinions. However, often in Libya at present, the project is being delayed due to two main reasons. Firstly, the country's current state means that the owners do not cooperate in approving the samples on time. Secondly, the consultant engineer, in general, is an engineer who gives an opinion on his part and the engineer imposes on you even if seen something wrong one hundred per cent and because of that problems may be delayed occurred. So, the hierarchy is often predominantly in the subject matter."*

**Participant F:** *"The ideas and practices of contemporary management are still new to Libyan businesses and organisations. For this reason, it is difficult and not encouraged by the upper managements of firms and* organisations *in Libya to embrace Western attitudes and practices in terms of contemporary management systems, such as those employed, for example, in the United States and Britain. Arab* organisations *are plagued by inefficiency, confusion, and outdated practices due to competing ideologies and a lack of leadership."*

**Participant G:** *"Having worked in multiple companies, I can say that the national culture influences the company's workflow through the management's dealings with employees and workers, taking individual decisions and not consulting and taking opinions, which contributes*

*to creating a gap and weak communication between the stakeholders, and this is due to the company's failure to implement a modern project management system."*

*"There are problems in transferring information from the functional department working on a project to upper management arise often due to inefficient communication. Due to inexperience or disagreement, it may be challenging to get departments in different companies to work together. Lack of effective communication and stumbling blocks in coordinating efforts among professionals in many fields are major problems. If a customer makes a modification to a project or one specialty without informing the others, more specialists' time will be squandered and the method will take longer".*

**Participant H:** *"Most people who get training and education abroad want to give back to the organisations and communities in their home countries, but this is difficult because of the lack of stimulation at all levels—governmental, social, and institutional—which leads to inadequate training and experience. People who are thought to be the country's innovators and inventors have been disregarded by Libyan reality. Instead, they are called "modifiers" and accused of having a "Western style. This condition had a part in stifling creativity and innovation, as well as the production of new ideas and solutions with the ability to limit and minimise the amount to which project delays or management's failure to meet its goals contributed."*

Participants provide suggestions for how the connection between employees and management may be improved, as well as how the hierarchical culture of the organisation might be altered. Due to the presence of conflicting ideas and a dearth of leadership, organisations in Libya are beset by inefficiency, uncertainty, and the use of techniques that have become obsolete. The reality of Libya has shown little consideration for the individuals who are traditionally considered to be the country's innovators and inventors. This situation played a role in limiting creativity and innovation, as well as the generation of new ideas and solutions, which was partially due to the fact that this condition contributed. Inadequate training and experience are the results of a lack of stimulation on all levels, including the governmental, social, and institutional levels.

Hence, the participants indicated that management could contribute positively to avoiding project delays by developing healthy relations with employees and creating a collaborative work environment in which employees' opinions are given importance, as well as work is done through mutual consultation. The management should organise periodic meetings in order to resolve problems, and work must be allocated equally and relatively according to the specialisations and expertise of workers. Instead of a hierarchal culture, the management should

adopt a team culture, where management also collaborates, and work with employees as an integrated team. Managers must perform as leaders, motivating their employees and giving directions, also resolving the issues faced by employees and providing them support in all the relevant matters. Such motivation and support would enhance the productivity of the workers and would improve the overall performance of the project so definitely such an approach would help eliminate the delays of projects. Libyan construction companies require modification in their culture. These responses are further analysed through the qualitative analysis software NVIVO, which facilitated an in-depth view of the qualitative data for extracting the required information and understanding the results. Therefore, the findings are extracted from the word cloud and clustered analysis being performed by NVIVO, which are as follows:


Figure (5.1): Word Cloud Created through NVIVO based on Information from Interviews

The word cloud in NVIVO is created using the word frequency query that results in a figure as above. The words indicated in the picture are the most frequently occurring words in the collected information, while the words surrounding each other are the ones, that occur frequently closer to each other. Hence the word cloud for the current study indicates that the respondents discussed OC and project delays more frequently with each other as compared to

other concepts.

So the picture clearly indicates the relationship between OC with PM. Moreover, the culture is further found to be associated with the delays, employees, management and implementation of the projects. The other prominent words in the word cloud are problems, innovations, delays, hierarchy, decision making etc. Such words are aligned with the findings discussed in the earlier part of the qualitative data analysis. Hence, the findings indicated by the discussion of the responses of interviews are further confirmed by the word cloud created on the basis of interview information.

Moreover, cluster analysis is performed to form the clusters of words based on their inter-relationships. Cluster analysis facilitates understanding the correlations among various elements of responses being gathered through unstructured interviews. Cluster analysis being performed for the current study is based on word similarity, while the similarity metric is Pearson's correlation coefficient. Hence, the obtained diagram is as follows:

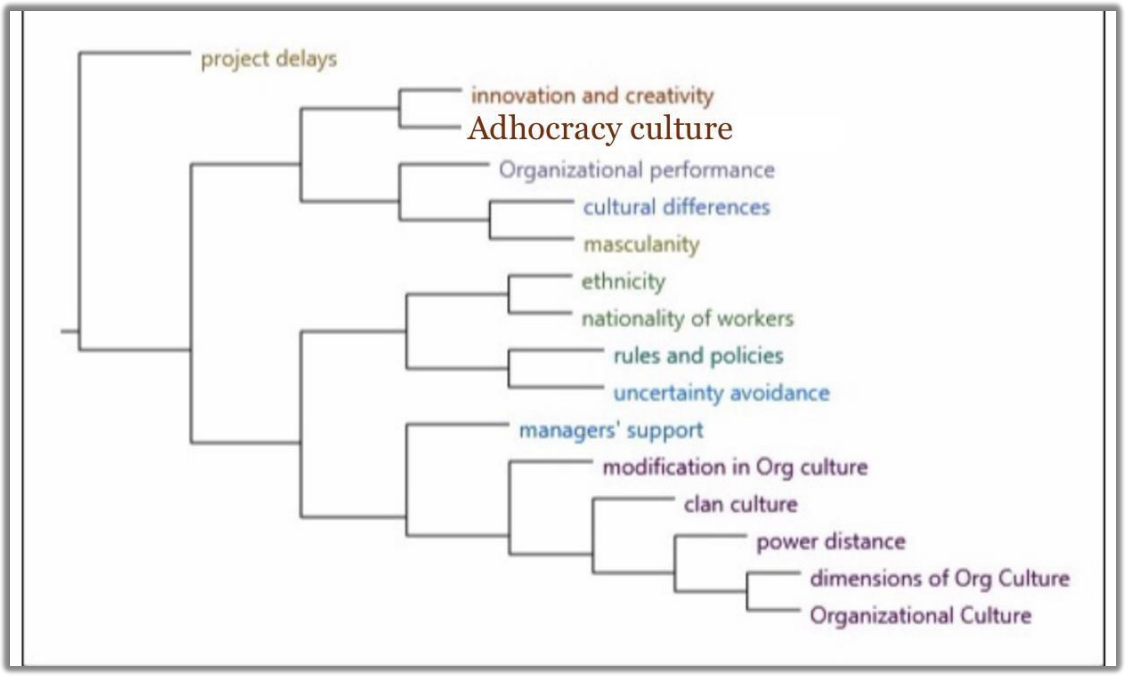



Figure (5.2): Cluster Analysis based on Word Similarity

The above figure indicates the cluster analysis of the current study, while the interconnected nodes extracted from qualitative data based on the responses of interviews are grouped indicating the connections of particular nodes with each other. The above figure indicates that NC, innovation and creativity, organisational performance, nationality of the workforce, rules

and policies and manager's support are the major contributing factors towards project delays. While narrowing down the relationships, it is indicated that managers' support is related to the OC in terms of its different dimensions, PD, and modifications in OC, which eventually contributes towards project delays. On the other hand, the ethnicity and nationality of workers are interlinked with their UA and the rules and policies being followed by them that eventually contribute towards project delays. Moreover, it is indicated that MAS and cultural differences contribute towards organisational performance that eventually interlinked with OC like saturation culture, and innovation and creativity, contribute towards project delays. Hence, the analysis above indicates that organisational performance, managers' support, nationality, OC and NC are the major contributing factors towards project delays in Libya.

Hence, the findings of qualitative data analysis also confirm the findings of quantitative data analysis that the dominating OC in Libyan construction companies is Hierarchical culture which is among the major contributors to the delays of construction projects because the longer hierarchies and the huge communication gaps make the decision-making process so slow that it contributes significantly in the delays of construction projects. Moreover, the PD and UA culture of the organisation, which is due to the influence of the NC are also the major contributors to delays of projects because PD doesn't allow employees to contribute to the decision-making process or providing their opinions at any stage of the project as well as the UA culture hinders the performance of the engineers and other employees because they are not allowed to take independent decisions even in emergency situations which result in the hindrance of operations leading to the delay of the project. However, the coming chapter slights light on discussing the study's findings in a relation to the Framework of the Study.

# Chapter Six: Discussion in light of Framework of Study

## 6.1 Introduction

The current chapter incorporates the findings' discussion for the current study in light of its framework. Where, the findings of current research have not only identified the relationships among the study's variables; rather it has also highlighted the facts about major aspects of National Culture, and Organisational Culture as well as their contribution towards project delays in Libyan construction companies. Such findings provide insight to the construction company management, policymakers, and other stakeholders to think about the role of national and Organisational Culture in delays of projects. Therefore, those significant improvements could be made, and the magnitude of delays in construction projects could be reduced.

## 6.2 The Influence of National Culture on Organisational Culture

The findings of the current study indicated the significant impact of Libyan National Culture on Organisational Culture, and the findings are according to Hofstede's cultural dimensions that individuals act under the influence of their National Cultures in which they are grown and their behaviours become the foundations of their attitudes on their working places (Hofstede, 1980). Therefore, the impact of Libyan National Culture is studied through different cultural dimensions as proposed by Hofstede (1980, 2001); these dimensions are including IND/ collectivism, PD, UA, and MAS. On the other hand, different dimensions of Organisational Culture including clan culture, adhocracy culture, market culture and hierarchy culture are studied because according to Schein's (2004) Organisational Culture theory, Organisational Culture should be studied in light of the beliefs, values and the underlying assumptions, and the type of culture prevailing in any organisation indicate the core beliefs, values and underlying assumptions of the organisation.

The findings of the current research indicated that the PD, UA and IND are found to be the most dominating national cultural aspects of Libya and these cultural dimensions are also the dominating part of Organisational Culture in Libyan construction companies. The findings also indicated that these national cultural aspects contribute significantly to the delays of construction projects in Libyan construction companies. These findings are not only supported by the proposed theories but are also validated by the findings of previous research. Furthermore, by studying the impact of the cultural dimensions of Dubai on its construction industry, Khan and Ahmed (2017) found the significant impact of national cultural dimensions on Organisational Cultures in Dubai. The study indicated that the cultural dimensions

dominating the National Culture of any country are also dominating the Organisational Culture of most of the industries in that country. Organisational Culture in most of Dubai's industries is dominated by the PD, because PD is the dominating aspect of Dubai's National Culture. Thus, such as other industries; the construction industry of Dubai is also found to be under the influence of PD, because the management of an organisation sets the base for Organisational Culture, and the influence of their National Culture on their personalities ultimately becomes the significant part of their Organisational Culture as well. Hence, it is found that most of the time, Organisational Culture is the reflection of their National Culture s. Similarly, Cerovic et al. (2011) investigated the impact of National Culture on Organisational Culture and argue that although National Culture and Organisational Culture incorporate different kinds of sets of values i.e. one shared by individuals in their national settings and the others shared by individuals in their organisational levels, both sets of values ultimately become part of managerial practices, their communication and the attitudes and behaviours of individuals on their work settings. Thereby, the dominating aspects of National Culture are mostly embedded in organisational cultural values, because individuals are being part of the same national setting and jointly establish the culture of the organisation, therefore, it is always dominated by the national values and beliefs and eventually become part of the overall working of the organisation.

By highlighting the role of national, and Organisational Culture in the performance of industries, (Nazarian et al., 2017) indicated that the foundation of Organisational Culture is always set by National Culture, because different aspects of National Culture, like PD, IND, UA, and in some cases masculinity/Femininity become the dominating part of managements' attitudes, and behaviours and contribute significantly in the success and failure of the organisation because management dominated by these national cultural aspects makes decisions under the influence of their national cultural aspects which are dominatingly enrooted in their personalities. Likewise, Baumann (2013) studied the influence of national cultural aspects of the Middle East in the PM practices of different industries in the Middle East and found that Organisational Culture is purely based on national cultural aspects so the performance of projects in these countries is significantly under the influence of their National Culture by being part of Organisational Culture.

The findings of current research indicate that the dominating national cultural aspects in Libya are PD, IND and UA, while masculinity/femininity is not found to be the dominating national cultural aspect in Libya. Consequently, the findings indicate that these national cultural aspects become part of Organisational Culture and contribute significantly to the delays of projects. On the other hand, the dominating Organisational Culture in Libyan construction industries is the Hierarchy culture. The findings indicate that there are longer hierarchies in which huge PD exists and management is only concerned about their goal achievements (IND) and they only allow to obey the well-defined and pre-determined rules and regulations to avoid uncertainty.

Moreover, the findings of the current study indicate the significant negative impact of dominating national cultural aspects like IND and UA. So the findings indicate that the individualistic and UA attitude of Libyan construction companies' management contributes negatively towards the performance of construction projects because the projects are always successful only if the whole team is concerned with the overall goal achievement of the organisation. Moreover, uncertainties are part of such projects so instead of avoiding uncertainty, the management as well as the whole project team must be able to cope with the uncertain circumstances. But as the Libyan managers are found to think about their own benefits and goals and they want to avoid uncertainty as much as possible so not only the routine tasks and activities of the projects are affected by pursuing their own goals but also the overall performance of the projects is halted if any uncertain situation occurs. So, the Libyan national cultural aspects dominating the personalities of Libyan construction managers define and set the culture of organisations of LCI and influence the performance of construction projects and cause delays. These findings are also according to the findings of previous studies like Caldwell and Pinnington (2013) indicated the negative influence of national cultural dimensions on PM practices. Studying the impact of National Culture in British and Arab organisations, the study found that National Culture in any country becomes part of Organisational Culture but it depends on the dominating national cultural dimensions whether it contributes positively or negatively towards the Organisational Culture and the overall performance of the organisation. The study found that Arab countries' national cultural dimensions are quite different from the developed nations' cultural dimensions and are contributing negatively towards the performance of organisations in Arab countries. Because Arab cultures and dominated by huge PD and UA which also becomes the part of the Organisational Culture and negatively influence the overall performance of the organisation by not allowing the contribution and opinion of employees other than the management itself. So the decision making, planning and every important aspect of organisations revolve around some particular people who also do not

appreciate change adoption and implementation (Caldwell and Pinnington, 2013).

Chipulu et al. (2015) indicated the negative influence of PD on PM of organisations working in such national cultural settings. The study indicated that the PD prevailing in the organisations makes the PM practices so inefficient that projects are mostly failed or delayed. In fact, the huge PD between the members of organisations like between the project manager, and the higher authorities and on the other side between the project manager and the other team members of the project team results in poor implementation of plans and policies of the projects. Similarly, Bony (2010) investigated the interrelationship of National Culture and PM and found the significant impact of National Culture on the PM of organisations. Nations that avoid unconstructive dimensions of National Culture like UA, PD, and IND do not face inefficiency issues in PM and vice versa. While the nations having domination of these National Culture dimensions always face inefficiencies in PM and the overall performance of the organisation. Indicating the impact of PD on PM, the study indicates that higher PD results in poor planning, poor communication, poor decisions and poor implementation of project practices as well. Hence, in order to improve the effectiveness and efficiency of PM to have desired outcomes from projects, nations should focus on their national cultural aspects which of these are contributing negatively to the performance of their projects.

Based on these findings it is indicated that the national cultural aspects, dominating Libyan culture, contribute significantly towards delays of projects in Libyan construction companies. As the National Culture of Libya is dominated by UA, and IND both are found to be the major contributors towards project delays in the construction industry. Hence, the current study shows evidence of the impact of National Culture on project delays. While on the other hand, these findings illustrate the implementation of Hofstede's (1980) national cultural dimensions that although individuals have unique mental programming, some part of this programming is shared by others, because they also grow in a similar national setting. So the working capabilities of individuals in their work settings are always under the influence of their National Culture as well. Therefore, the Organisational Culture which is set and established by the members of the organisation are always under the influence of their National Culture.

Hence, as in the case of Libyan construction companies they are dominated with hierarchal culture in which huge PD prevails at each level of the hierarchy and the members of that hierarchy at upper levels always think about their own goals and benefits (individualistic), it is evident that the Organisational Culture is well defined and established by higher authorities of the organisations, which lacks flexibility as well. Therefore, it is evident that Hofstede's (1980, 2001) cultural dimension theory is present in Libyan construction companies' Organisational Culture. Moreover, the discussion above indicates that the first proposed relationship in the conceptual framework of the current study i.e. between National Culture and Organisational Culture is not only evident by the findings of current research but is well understood by the theoretical framework of the study.

### 6.3 Contribution of Organisational Culture to Project Delays

The second proposed relationship in the conceptual framework of the current research was between the Organisational Culture and the project delays, which is also validated by the findings of the current study. Because the findings indicated that the Organisational Culture of Libyan construction companies significantly contributes to the delays of construction projects in Libya, while the dominating organisational cultural type in LCI is the Hierarchical culture. As indicated by Schein's (2004) theory of Organisational Culture, indicates that Organisational Culture should be analysed at three major levels; artefacts, the beliefs and values, and the underlying assumptions of the organisation. Artefacts are the tangible aspects, while beliefs and values and the underlying assumptions are considered the intangible aspects of the Organisational Culture.

Thus, in order to understand the role of Organisational Culture in project delays; the study is focusing on the two levels of Schein's (2004) organisational theory; the beliefs, values, and underlying assumptions. Whereas, values and beliefs reflect the shared opinions of the members of the organisation that how things should be and how things should work in the organisation. So these values facilitate the organisational members to categorise actions and situations as either desirable or undesirable (Bailey et al., 2017). Therefore, in the case of Libyan construction companies, as the Hierarchical culture is found to be the dominant Organisational Culture type, which is based on PD, IND and UA as well, so the shared opinions, beliefs and values of Libyan construction mangers that how the things should be in their organisation are indicated by their individualistic, and UA attitudes.

On the other hand, the underlying assumptions are the kind of beliefs, which are well understood by the members and taken for granted as fact, so these are never challenged (Bailey et al., 2017). As indicated by the findings of current research, which were elaborated and discussed in previous chapters; however, the three national cultural dimensions; IND, UA and PD is found to be part of Organisational Culture but the only two among these
i.e. IND and UA are indicated as the contributors towards project delays by the respondents of the study. These findings indicate that PD is so embedded in the national and Organisational Culture in Libya that even the members of the organisations do not consider it as something negative. So according to Schein's (2004) organisational theory, this PD aspect of Libyan National Culture has become the underlying assumption of the Libyan organisations that it has become the well-accepted fact of their lives and they never challenge it or they do not find it worth challenging because it could never be changed. Hence, the findings indicate that the IND and UA attitude of Libyan managers being part of Organisational Culture negatively impacts the performance of construction projects and causes delays.

The findings of current research indicated that Libyan construction companies have a rigid culture which doesn't allow for creativity, and does not adopt the changes of the varying marketplace; having long hierarchies and well-defined roles, it also doesn't encourage feedback from employees. Such organisations just focus on the day-to-day operations of the organisation in a similar pattern for the long run and do not take an interest to modify things to cope with the changing environment in the marketplace, which results in negative outcomes. Despite having the benefits of a hierarchy culture like the clarity of authority and reporting structure, and well-defined communication pathways where clear policy directions are received from direct managers and employees can also report directly to the manager. But on the other hand, the hurdle for sharing information and discouragement of collaboration, which takes a long time to reach the required information from one end of the hierarchy to some other end, becomes the major drawback of such a cultural setting. Moreover, in such cultures, people compete for power at departmental and managerial levels. Another major drawback of hierarchical culture is the lack of innovation so Libyan construction companies also face such drawbacks as well. In the recent era, one of the most important factors of success for any project or the whole organisation is to be innovative and responsive so organisations adopt changes more frequently and adopt innovative ways of operations are the most successful ones. The rigid Organisational Culture of Libyan construction companies is among one of the reasons for project delays in construction industry because projects face many constraints that require direct communication among higher management and lower level employees while organisations

having longer hierarchies take too much time to get any issue resolved which influences the overall performance of organisation. Moreover, employees are not provided with the flexibility to brainstorm any novel idea or experiment with creativity to resolve any issue so even minor issues too much time to get resolved which causes a delay in the completion of the project. In fact, one of the main reasons for the presence of hierarchical culture in Libyan construction companies is the presence of family-owned businesses in Libya where members of the same family occupy main positions in the company and keep occupying the places in hierarchies. Moreover, reluctance to change in such culture causes long hierarchies as well as a significant influence on the decision-making of the company which results in delayed decisions on critical matters of the company as well as for projects' operations. Libyan construction companies require changing their Organisational Culture so that they can move with the market. In the recent globalised marketplace, stability could be a major hurdle for the survival of organisations so Libyan construction companies require changing Organisational Cultures to flexible ones to improve their projects' performance.

Hence, all these findings also indicate the main aspect of PM Theory because according to Koskela and Howell (2002a) PM is a comprehensive process of successfully attaining targeted goals at a pre-specified time and the basic challenge for a project manager is to achieve the desired goals within the time limit. Warburton and Cioffi (2014) indicate that the core concept of PM is to divide the whole project into smaller lumps of work termed as tasks or activities by PMBOK. The basic intention of dividing the work into chunks or tasks is the appropriate management of work so that it should be completed within a pre-specified time limit. In short, the theory of PM can be defined as the conversion of input into outputs. Koskela and Howell (2002a) indicate that there is no clear theory for PM rather PMBOK provides statements that can be helpful in deducing theory from these. Like PMBOK guide indicates that PM processes further involve initiating, planning, execute, control and closing the process.

Moreover, Richardson & Jackson (2018) define PM as a bundle of interrelated management tasks and activities that are joined temporarily to form a unique desired project. However, it is significant to know that just implementation of the technical requirements of the projects is not enough and does not ensure the success of the project rather it is a complete process that incorporates many factors. Among various factors defining the success or failure of the project, organisational internal and external factors are among the most important ones. Because the organisation in which the project is being executed is the direct contributor to the project so project's outcomes are completely based on organisational factors (Koskela and Howell, 2002b).

### 6.4 Development of research framework

According to theory and subsequent research, the main objective of PM is to split tasks in order to complete them efficiently while working in a collaborative setting. As a result, as the PM Theory emphasises, the project's success is inextricably linked to these factors. However, when these factors are examined in the LCI, it is discovered that PM practises in Libyan construction enterprises are influenced by Organisational Culture, which is defined by Libyan construction managers who do not respect or enable collaborative settings. In the LCI construction organisations, a rigid hierarchical structure predominates, in which team members are only assigned pre-defined responsibilities to execute while completing projects, and they are not allowed to make their own contributions through productive opinions or suggestions. Furthermore, even if an uncertain situation arises during the completion of tasks assigned to them, they are not permitted to act on their own; instead, they must notify higher authorities and wait for their decision, which causes delays in the completion of tasks assigned to team members, ultimately resulting in the overall completion of projects in the construction industry.

In light of the foregoing discussion, it is suggested that the current study's proposed conceptual framework is validated by the findings of the current research, in light of the study's proposed theoretical framework. These three ideas, the PM theory, Hofstede's cultural dimension theory, and Schein's organisational culture theory, laid the groundwork for proposing and investigating the linkages under investigation. As a result, the data suggest that national culture influences a company's organisational culture, and organisational culture, in turn, contributes to project delays. However, because national cultural features and organisational cultural aspects differ from country to country, the current study developed the following framework of interrelationships of variables of study in the context of LCI:

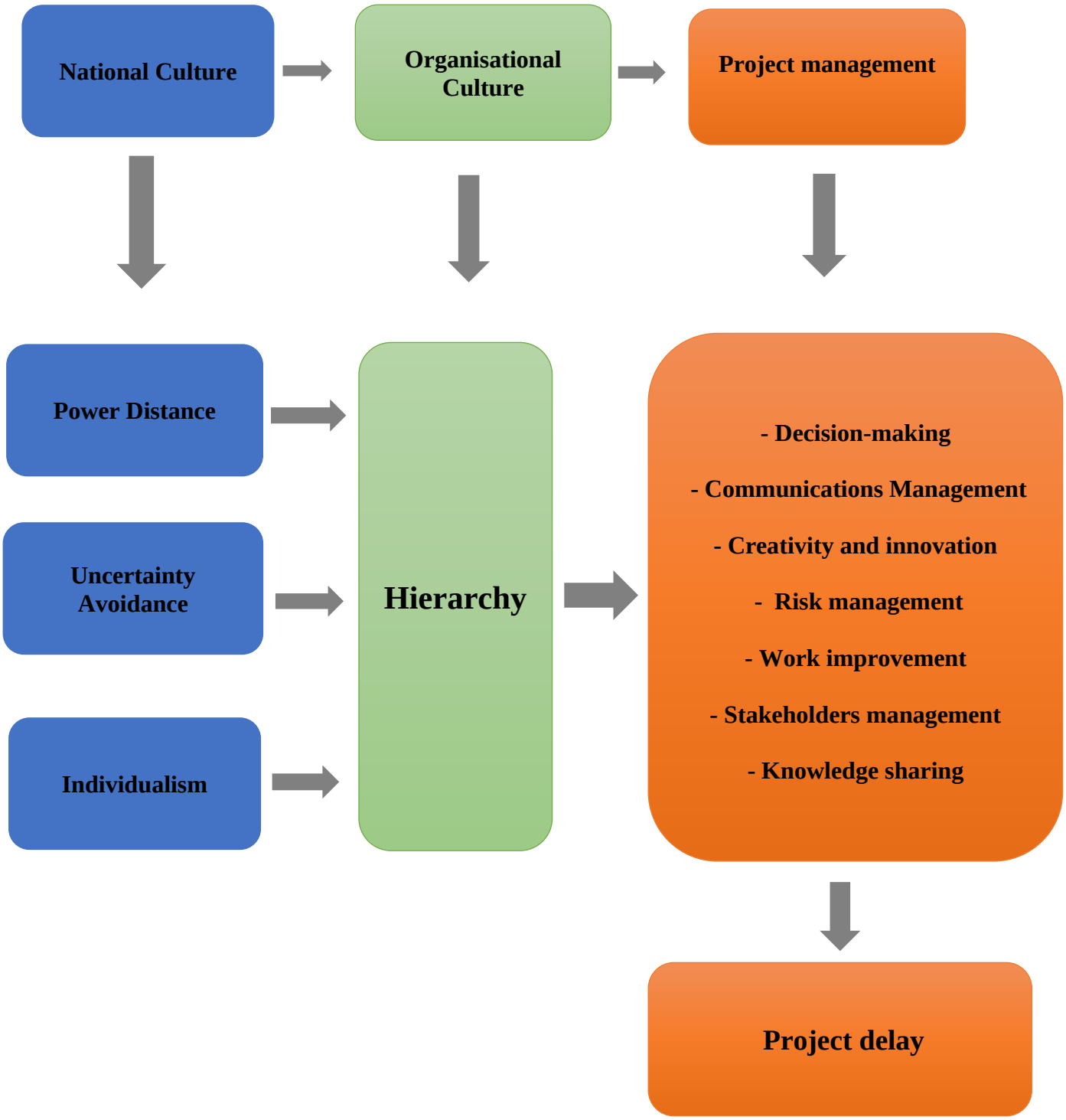



Figure 6.1: Development Research Framework for Libyan Construction Industry

The above framework depicts the links between the various factors associated with LCI. The findings suggest that the hierarchical culture predominates in the LCI and that the IND, UA, and PD components of the Libyan national culture all have an impact on the LCI as an organisation. In addition to the dominance of PD, IND, and UA national cultural qualities, the administration of these institutions lead to the persistent postponement of building projects, resulting in organisational hierarchies in the construction industries.

The research uncovered a huge communication gap between all parties engaged in a particular project, including the project owner and the organisation responsible for its execution, due to the fact that Libyan contracting businesses did not follow modern project management techniques. According to the interviews, the national culture has no direct effect on the project's delay; rather, the management's lack of understanding of risk management processes and the pervasiveness of a culture of avoiding uncertainty among the organisation’s members have caused the delays.

In a more precise explanation, the effects of the national culture embodied in the power distance had an impact on the culture of the organisation represented by the contracting companies in Libya by creating a distance between the senior management, employees, and workers in the company and the difficulty of periodic communication in solving problems and tracking the progress of things, where the work was limited to order and implementation only. This resulted in the formation of a highly tight work environment that does not allow change and does not encourage the interchange of thoughts and ideas in the pursuit of finding rapid solutions that help the execution and timely completion of the project.

On the other hand, the effect of the cultural dimension on avoiding uncertainty contributes to widening the gap between senior management and employees and their fear of initiative and evaluation of new ideas and creativity, because the culture of management has made the avoidance of uncertainty the dominant culture in the organisation and requires employees to adhere to laws and routine procedures. In addition, the culture of individual business in the contracting companies resulted from the preference for the personal interests of the company owners and their precedence over the general interest of the company as a whole, which contributed to the lack of teamwork and the exchange of knowledge and ideas among the company's members. Through the foregoing, it is clear that the contribution of the national cultures represented by IND, UA, and PD to Libyan society is due to their influence on the organisational culture of contracting companies, which resulted in a strict hierarchical culture in which policies and laws developed by senior management are applied and are not subject to discussion or change in order for them to remain at the top of these companies for extended

periods of time in accordance with their personal id. All of this contributed adversely to the management of projects operated by these firms and the absence of application of a clear method for managing these projects, which led to major delays in the project as a result of its effect on PM and the corporate culture as a whole.

As a result, the framework built by the present study suggested that Organisational Culture generating poor PM is a key source of project delays in Libyan construction projects, since it is heavily influenced by Libyan National Culture. As a result, the theoretical framework employed in this study might be used by other researchers to better understand the correlations of these factors in other areas, as well as to further analyse the important reasons for project delays in other countries.

So, based on the whole discussion of the present chapter, it is discovered that the suggested framework offers the basis for studying the proposed research linkages as well as making sense of the interrelationships of the variables under investigation that why and how the two are connected to each other. Hofstede's cultural dimensions provide the groundwork for investigating the influence of national culture on many elements of organisations in any business. The PM theory provides the foundation for studying the factors that contribute to the success or failure of projects in various studies, and similarly, Schein's theory of Organisational Culture provides the foundation for studying Organisational Culture in two ways, influencing one and influencing the other, i.e. in this case, the Organisational Culture of Libyan construction companies is influenced by Libyan National Culture, while it influences the other. Yet, it has been discovered that organisational culture and national culture both contribute to project performance; however, whether the contribution is favourable or bad depends on the dominant characteristics of national and organisational culture. Hence, in the instance of Libya, the negative components of national culture dominate, laying the groundwork for a strict hierarchical structure and causing project delays. Moreover, it was discovered that the present study results might be used in order to create the necessary adjustments in the culture of LCI in order to avoid project delays.

Hence, in light of the theoretical framework of the study, the findings suggest that the efficiency of PM practices depends on the role of management and the organisational internal and external factors (Project Management Theory); while the mental programming of management is always under the influence of their National Culture because although individuals possess unique mental programming the part of it is under the influence of national setting (Hofstede's cultural dimension theory) which sets the foundation of organisational culture that should be investigated in terms of the beliefs, values and the underlying assumptions (Schein's theory of organisational culture) so each project in every industry is always under the influence of National Culture in which the industry is operating and the performance of the project is influenced by the cultural dimensions dominating in that country. So there is a need to understand the influences of these cultural dimensions at not only the industry level but also at the national level. And if it's not possible to make changes at a national level then at least the organisational settings must be kept immune from the influence of national cultural dimensions by providing professional training to the management and higher authorities who set the foundations of organisational culture. Moreover, in the coming chapter, the study is proceeding to discuss the empirical results of this research as well as the extraction of the research's enquiries.

# Chapter Seven: Discussion of Research Findings

## 7.1 Introduction

The current chapter focuses on the discussion of empirical results and their findings so that answers to the proposed research questions of current research could be extracted. Thus, the discussion of findings contributes to highlighting the facts, and figures, which are resulted from conducting particular research, and facilitates identifying whether the goals of the research are achieved, and what the major findings of the research could contribute to the literature, as well as practically to the knowledge of stakeholders. Since the current research focuses on investigating the impact of national and Organisational Culture of CPD; findings from current research will significantly contribute to the knowledge of construction companies in Libya, their management and other stakeholders by highlighting the major factors, which are positively and negatively contributing to the delays of Libyan construction projects. Moreover, the findings are evaluated in relation to the problem statement, proposed hypotheses, objectives, and proposed research questions of current research to find out whether the objectives of the research are successfully fulfilled or not.

The core purpose of this research is to explore the impact of Libyan National Culture and Organisational Culture in Libyan construction companies on the delays of a construction project because, in past, the majority of previous studies have focused on the project environments to find out the reasons for delays, without focusing on the whole organisation and organisational aspects to explore those organisational aspects could also contribute to the delays of projects. Similarly, past studies (Abd El-Razek et al., 2008; Arditi, 2006; Chan et al., 2004; Higham and Troug, 2018) have also not focused on national cultural aspects to be the determinant of CPD so the findings of current research would contribute significantly to fulfilling the gap of literature. For this purpose, the current research mainly highlights two main aspects; what is the dominating Organisational Culture type in Libyan construction companies and to what extent does Libyan National Culture and construction companies' Organisational Culture cause delays in Libyan construction projects? Thus, to fulfil the core purpose of this research and find out the answers to the proposed research questions; the study used both quantitative and qualitative approaches respectively because by incorporating both (quantitative and qualitative) types of information, the researcher enables to unveil the facts more efficiently. Therefore, a semi-structured questionnaire (to collect quantitative information), and interviews (to collect qualitative information) are conducted and gathered information is analysed to extract the

findings. The targeted population of this research encompasses employees from construction companies in the city of Misurata, Libya. This city is selected, due to the huge population, safety and more importantly a large number of construction companies i.e. 40 construction companies operating in the city. 140 questionnaires are distributed to the employees of these construction companies; selecting equal employees from each company, so that factual information is collected to have valid findings of the research. The sample incorporates operative managers, or higher level employees because they are the key people having significant contributions in setting and developing the culture of an organisation. Before getting the questionnaire filled out by participants; they are provided with a brief description regarding the research topic, its purpose, the impact and the expected contribution of its findings so that they are well aware of the significance of the information being provided by them and they provide as much information as possible. Thus, to have a reliable data collection instrument, a pilot study is also conducted, which resulted in a more reliable and well-structured questionnaire able to collect the desired information in a targeted time frame. Moreover, to validate the information collected through the questionnaire, semi-structured interviews are also conducted incorporating eighth Libyan employees in construction companies. In this way, the quantitative data, which was collected through a questionnaire, was validated through the qualitative information that is gathered through semi-structured interviews focusing on the same aspects; i.e. highlighting the aspects of national and Organisational Culture and their impact on project delays. The questionnaire facilitates highlighting participants' attitudes, beliefs and values about cultural dimensions and how they perceive their impact on project delays; while interview questions highlight the participants' views about different aspects of Libyan National Culture and Organisational Culture, and how these two contribute to the delays of projects. Interviews are conducted with senior-level managers, middle-level managers and operational-level employees to highlight their perceptions about cultural values in relation to the delays in construction projects. To keep the confidentiality of the participants they are allowed to participate voluntarily in the data collection process, either through questionnaires or interviews, and they are allowed to decline any question if they want. Moreover, they are not required to mention their names. The participants provided reliable information that facilitates finding the answers for proposed research questions in following ways:

**Q: What organisational culture type is currently predominant in Libyan construction companies?**

In order to find out the dominating organisational cultural type in Libyan construction companies, the four major cultural types in relation to six organisational cultural dimensions are presented to the participants of the study to gather their scores for each culture type and its dimensions.

- **Typologies Organisation Culture of the Construction companies based on OCAI**

Findings indicate that the predominant Organisational Culture type in Libyan construction companies is "Hierarchy culture" while all six Organisational Culture dimensions are highly recognised by Libyan construction company employees. Findings indicate that although the three other cultural types i.e., Clan culture, Adhocracy culture and Market culture also prevail in Libyan construction companies, hierarchy culture was the most dominating one with an average of **38.7**, whilst Adhocracy is the weakest culture typology with a mean **19.4**. Meanwhile, Market and Clan culture is with an average of **21.4** and **20.3** respectively. Therefore, as can be seen from Table 7 in appendix B; the participants of construction companies have pointed out the dominant culture was Hierarchy culture.

The clan culture focuses on the people of the company, as a family and creates a collaborative work environment where individuals are valued, and communication is prioritised. It emphasises breaking the barriers between top management and employees of the organisation. Adhocracy culture focuses on innovation and risk-taking behaviours. Most of the organisations adopting an adhocracy culture are the cutting edge of industries and are always keen to develop big things which are still beyond the discussion of others. In this culture employees are encouraged to think creatively so provides flexibility as well. Market culture has its main focus on profits, growth and competition. In this culture, objectives at all levels are aligned with the overall goal of the company and these are mostly result-oriented organisations, which are successful and profitable as well. In contrast to all these types of culture, the Hierarchy culture is based on typical corporate structure where there is a well-defined chain of command having multiple tiers which separate leadership from other employees of the organisation. Organisations having a hierarchy culture are mostly risk-averse and stable; do not prefer change. Such organisations have well-defined processes aligned with the objectives of the company.

As the findings of the current research signify that Libyan construction industries are dominantly implementing a hierarchy culture; the study indicated that Libyan construction companies have a rigid culture that doesn't allow for creativity and does not adopt the changes of varying marketplace. It also doesn't encourage feedback from employees. Such organisations just focus on the day-to-day operations of the organisation in a similar pattern for the long run and do not take an interest to modify things to cope with the changing environment in the marketplace.

Although there are some benefits of hierarchy culture as well like the clarity of authority and reporting structure, and well-defined communication pathways where clear policy directions are received from direct managers and employees can also report directly to the manager. But on the other hand, the major drawback of such a culture is the hurdle for sharing information and discouragement of collaboration, which takes a long time to reach the required information from one end of the hierarchy to the other end. Moreover, in such cultures, people compete for power at departmental and managerial levels. Another major drawback of hierarchical culture is the lack of innovation so Libyan construction companies also face such drawbacks as well. In the recent era, one of the most important factors of success for any project or the whole organisation is to be innovative and responsive so organisations are adopting change more frequently, and adopting innovative ways of operations are the most successful ones. The rigid Organisational Culture of Libyan construction companies is among one of the reasons for project delays in the construction industry because projects face many constraints that require direct communication among higher management and lower-level employees while organisations having longer hierarchies take too much time to get any issue resolved which influences the overall performance of the organisation. Moreover, employees are not provided with the flexibility to brainstorm any novel ideas or experiment with creativity to resolve any issue so even minor issues take too much time to get resolved which causes a delay in the completion of the projects. In fact, one of the main reasons for the presence of hierarchical culture in Libyan construction companies is the presence of family-owned businesses in Libya, where the members of the same family occupy main positions in the company and keep occupying places in hierarchies. Moreover, reluctance to change in such culture causes long hierarchies as well as a significant influence on the decision-making of the company which results in delayed decisions on critical matters of the company as well as for projects' operations. Libyan construction companies require changing their Organisational Culture so that they can move with the market. In the recent globalised marketplace, stability could be a major hurdle for the survival of the organisation so Libyan construction companies require

changing Organisational Culture to the flexible one to improve their projects' performance.
In order to further investigate which of the national cultural dimensions are dominating in Organisational Culture in Libyan construction companies, the inter relationship of National Culture and Organisational Culture is investigated through correlations.

- **National Culture and Organisational culture**

In order to investigate the relationship of National Culture with Organisational Culture, the inter-relationship of different aspects of both kinds of culture is studied through Pearson correlation. Pearson correlation coefficients and their significance facilitate identifying which national cultural aspects are interlinked with the kind of Organisational Culture and in which direction they co-move.
Findings indicate that the variables of National Culture, as measured by PD, UA, ID, and MAS, relate to the variables of Organisational Culture. So, the results showed that, with the exception of adhocracy, the organisational culture is strongly linked to the PD. Also, the literature reviews 2.6.7 says that the PD dimension of National Culture is related to the "hierarchy" dimension of Organisational Culture because respect for power is a core driver of both. According to Quantitative Research Results in 4.5 the results of the Pearson test, there was a positive correlation between PD and Hierarchy **(0.205)** as shown in table (9) in appendix B. While, The UA has a strong correlation with both Adhocracy and Market. This result agreed with the literature review 2.6.7 that the UA dimension of national culture is related to the "adhocracy" dimension of organisational culture. This is because both types of culture share an underlying driver of risk focus, according to Quantitative Research Results in 4.5, the correlation results: The Pearson Correlation between UA and "adhocracy" was **(-0.365)** as shown in table (9) in Appendix B.
Such significant negative correlations indicate that Libyan construction companies that adopt Clan culture do not prefer PD among employees of the organisation and their management, and companies having Adhocracy culture do not prefer UA and rather prefers to take risks and cope with the changing market conditions. Libyan construction companies have a Market culture that avoids PD and UA. Hence, such firms are more risk-taking and have an increased collaborative work environment. So, the companies having these three types of Organisational Culture have positive aspects of cultural influences on the performance of the organisation and especially on the performance of projects in terms of construction companies. As found earlier the most dominating Organisational Culture is the Hierarchy culture in Libyan construction companies, so in this regard findings indicate that national cultural aspect of

masculinity or femininity (MAS) is not a dominating aspect in Libyan construction companies but (PD) is the dominating national cultural aspect in Libyan construction companies which is clearly visible in the PD gap existing among various hierarchal levels of the organisations in Libya. As indicated earlier, the longer hierarchies in construction companies in Libya also result huge PD among employees and management of the organisation. PD culture is mostly found to be a negative contributor towards performance of projects or overall working of the organisation, so a hierarchical culture having dominance of PD obviously results in delayed decision making, and eventually delayed progress of projects.

Hence, the findings indicate that Libyan construction companies have a hierarchical culture which is mostly dominated by PD. In fact, Libyan society itself is a hierarchical society where people without any hesitation or reluctance accept the hierarchical order and do not require any justification for the place of any other. So PD is a very dominating cultural aspect of Libyan society. In a similar pattern, hierarchy and PD is the dominating aspects of Libyan construction companies as well. Such interrelationship indicates that National Culture has a significant influence on Organisational Culture which eventually influences the working of the organisation i.e., the projects running under the head of organisations. National cultural aspects are dominated by individual characteristics which are the key formers of Organisational Culture hence in this way the aspects of National Culture also become the dominating aspects of Organisational Culture as well. As it is also found through the descriptive stats of the study that Libyan construction companies have job stability and retention i.e., employees (managers) remain part of an organisation for long durations, so their personal beliefs, values and attitudes contribute significantly to forming the Organisational Culture. Senior individuals working for a long duration in the company are also the senior part of society, having a strong influence on National Culture in their personalities. Hence, they set the culture of an organisation according to their personal beliefs, attitudes and behaviours which are dominated by the cultural aspects of the society i.e. National Culture. Moreover, longer hierarchies, having PD and a rigid work environment that lacks flexibility for change and adoption remain in effect on the surrounding culture more significantly because they do not try to change with the changing circumstances in international business markets.

So, the answer to one of the main research questions of current research; What organisational culture type is currently predominant in Libyan construction companies, is that Libyan construction companies are dominatingly under the influence of their National Culture having the dominance of hierarchical culture, with long hierarchies having well-defined roles and duties, PD and UA. The rigidity of the organisational culture, under the influence of their

National Culture, is one of the most dominating drawbacks of Libyan construction companies that hamper the overall performance of these organisations.

In order to investigate the impact of national and organisational culture on CPD in Libya; the following research question is proposed:

**Q: To what extent does the national and organisational culture of construction companies contribute causing of delays in Libyan construction projects?**

The answer for above mentioned question is found by investigating different relationships of variables and then summarising their findings which are as follows:

- **National Culture and Project Delay**

In order to study the inter-relationship between National Culture and project delays, Pearson correlation is implemented on project delays and four dimensions of National Culture; (PD), (UA), (IND) and (MAS). Correlation coefficients facilitate identifying the inter-relationship among variables that whether they co-move with each other, in a similar or opposite direction, or whether having no relationship with each other. This study used the Pearson Correlation test to look at how the National Culture, which was shown by PD, UA, ID, and MAS, was related to project delay. According to Correlation Test in 4.5 the Findings indicate as shown in the table

(8) of appendix B, in Libyan construction companies (PD) and (MAS) have no significant correlation with project delays these companies, since the p-value for both was greater than 0.05. It was **0.515** and **0.949,** respectively; nonetheless, there is a strong association between UA and ID. In addition, significant positive correlation with project delays, as shown in table (8) in appendix B, where was p-value for both lower than 0.05, was **0.028** and **0.031**, respectively. Thus, findings indicate that (UA) aspect of National Culture in Libyan construction companies make the management feeling uncomfortable with ambiguity and uncertainty prevailing in business environment, surrounding markets or at economic levels. So, they have rigid codes of values, beliefs and behaviors and most of the time are intolerant of unconventional ideas and behaviors. But in recent, highly dynamic business environments, uncertainty has become the fact of life. Uncertainties prevail in all aspects like financial, economic, political etc. that should not be avoided rather be treated and dealt with to cope with the situation and moving further accordingly. In contrast to this fact, companies having dominancy of (UA) just avoid the uncertainty and do not prefer risk taking behaviors. In this regard, employees are also not allowed to experience new things, so in construction projects employees are only provided with well-defined guidelines of the operations and procedures

and are not allowed to make any change by themselves even in case any issue arises and required immediate solution. Rather, they have to wait for the decision from management which is again based on the traditional practices and procedures because they are not ready to adopt and implement any new approach or strategy due to their UA culture. Such behaviours due to the dominancy of cultural aspects cause huge delays in the working of the project and eventually, the whole process is delayed, and projects are accomplished beyond the pre-defined timelines.

IND (ID) was also found to have a significant positive correlation with project delays in Libyan construction companies which indicates that the national cultural aspects not only influence the behaviours, attitudes and dealings of individuals in society rather have significant influences on the behaviours and attitudes of individuals at work settings. Hence, IND (ID) is a dominating cultural aspect of Libyan construction companies' management, and they prefer to focus on their individual needs instead of focusing on the needs of their employees. Having individualistic cultural aspect dominance, Libyan construction companies' managers emphasise their own rights, self-expression, personal goals, financial stability, freedoms and autonomy. Such individualistic behaviour of management mostly leads towards stress, anxiety, and insecurities among employees at different levels which also hampers the working of projects. In this regard, managers focusing on their personal goals and achievements try to align projects' objectives to their own objectives rather than with the objectives of the organisation. Such culture makes it difficult to get the employees to feel like a team rather they are just ordered to fulfil the commands given by the management. Employees are not encouraged to provide feedback to the management about the actual working of the processes and project operations and they are not allowed to highlight the drawbacks, if any, to the typical procedures being followed by them.

Hence, the findings suggest that the national cultural aspects of UA and IND have a significant relationship with delays in construction projects in Libya. In fact, the cultural aspects are dominant in the attitudes and behaviours of management in Libyan construction companies which eventually has a significant influence on the working and outcomes of projects. As IND and UA, both, result in a very rigid narrow lined culture which hampers the productivity of the employees as well as takes a long time to resolve issues created in the construction process, both these have a significant contribution to project delays of Libyan construction companies.

To further investigate the impact of various national and organisational culture aspects on project delays, all these are individually investigated through linear regression, because as correlation matrix reveals the interrelationship of both variables under study, regression

analysis highlights the extent and direction of a relationship. So, linear regression analysis of various cultural aspects with project delays highlighted the fact that which of the cultural aspects have a significant positive or negative influence on project delays in Libyan construction companies.

- **The Impact of Individualism/Collectivism (ID) in Project Delay**

Linear regression analysis revealed a significant positive influence of IND on project delays, although correlation analysis also depicts the relationship among variables, regression analysis highlights the extent and direction of the relationship as well. As the results of regression analysis indicate a significant positive impact of IND on project delays, it was found that in Libyan construction companies the cultural aspect of IND contributes positively to delays of a project as illustrated in 4.6 the results of linear regression test see table 10 Appendix B. The higher the extent of individualistic cultural values being dominant in the individuals (higher authorities and management), the higher would be the delays of projects. Having individualistic culture dominance, Libyan construction companies' management prefers their own needs and focuses on the objectives and goals of the organisation aligning with their personal needs and preferences. Managements' emphasis is on their personal financial stability, goals and autonomy which results in ignoring the preferences and needs of other employees of the organisation resulting in stress and anxiety which ultimately affects the productivity of the employees and cause delays in project accomplishments. Individualistic managers do not prefer feedback from employees even if it's about the effectiveness of projects' procedures and operations unless it aligns with their personal objectives. So, one of the major reasons for project delays in Libyan construction companies is the influence of the cultural aspect of IND. The positive and significant relationship of IND with project delays provides evidence of the impact of National Culture on project delays. Although National Culture has different dimensions and different nations possess different cultural aspects, such cultural dimensions either individually or jointly set the behaviours and attitudes of individuals surviving in that culture, so such individuals being part of organisations set the culture of organisation influenced by National Culture. The same is the case in Libya, where IND is found to be a significant dimension of National Culture, so this national cultural dimension of IND also influences the working of projects in organisations and results in delays of projects. So Libyan Construction Company managers should focus on this cultural dimension and its influence should be reduced from the behaviours and attitudes of management so that a negatively contributing factors towards project delays must be eliminated to reduce the magnitude of delays of projects in Libyan construction companies.

- **The Impact of Individualism and Clan in Project Delay (Mediator)**

In order to reveal the fact, that whether IND has a direct influence on the project delays of Libyan construction companies, or whether it influences the presence of Clan culture so the interrelationship of variables i.e. IND, project delays and Clan is studied in a way that Clan is the mediator between IND and project delays. The findings indicate that although IND is found to have a significant influence on project delays individually when the relationship is mediated by Clan, this relationship has become insignificant which means that IND has a significant direct influence on project delays, but clan does not have a significant influence on project delays as illustrated in 4.6 the results of linear regression test see table 11 Appendix B. In fact, clan culture is based on creating a family-like collaborative environment with a commonality of values and goals. In clan culture, empowerment and loyalty of workers are thought to be the drivers of productivity and organisational success while such empowerment and loyalty could be achieved through employee engagement and commitment of employers. As it is clear that IND is quite different from Clan culture so the national cultural aspect of IND does not align with the Organisational Culture type of clan so, the difference between both cultural aspects is the major reason that IND in presence of clan has no significant relationship with project delays. Hence, the findings indicate that the influence of IND in Libyan construction companies contributes significantly to project delays but such influence could be eliminated if the organisation adopts Clan culture. Libyan construction companies are not found to have Clan as a dominating Organisational Culture type so the magnitude of project delays is also higher in these companies. As clan is found to have an insignificant relationship with project delays so, Libyan construction companies should change their Organisational Culture into Clan so that their project delays could be reduced.

- **The Impact of Uncertainty Avoidance in Project Delay**

The impact of UA on project delays is studied through linear regression and it is found that UA has a significant influence on the project delays in Libyan construction companies as shown in 4.6 the results of the linear regression test see table 12 Appendix B. In fact, Libyan construction companies are having rigid Organisational Culture, as found earlier, so the rigidity in leadership roles and management practices also favour UA. The management of Libyan construction companies is found to avoid risk-taking because most of the organisations in LCI are based on older (senior) employees, who like to run the organisations on their traditional practices, policies, rules and regulations. They do not understand the fact that construction projects do not run on the set guidelines but rather face huge unpredictable issues and problems that

require quick decision-making and experiencing new things in some situations. But the management in Libyan construction companies feels comfortable in their stable environments, where they even don't like to take the feedback of the employees. So such UA behavior and attitude of project managers in construction projects in Libya causes delays in resolving issues suddenly. So in UA culture, even minor issues take too much time to be resolved because management lacks predefined policies and strategies to cope with unpredictable issues. Such delays in decision-making and lack of quick actions cause delays in the accomplishment of different stages of projects hence resulting in an overall delay of the project.

- **The Impact of Uncertainty Avoidance and Adhocracy in Project Delay (Mediator)**

Further, the impact of UA on project delays is investigated in the presence of adhocracy as a mediator to find out the fact that whether UA has also a significant influence on project delays of Libyan construction companies if companies adopt and implement Adhocracy culture. It is found that the relationship between UA and project delays becomes insignificant in the presence of Adhocracy. The adhocracy culture favors creativity, energy, innovation, and risk taking behaviors. Organisations having adhocracy culture emphasise on individuals' freedom to think out of the box so that employees can innovate and have highest possible productivity levels. So, such innovative and creative culture which also favours risk taking behaviors cannot match with the UA culture. This is the major reason that when UA is investigated in the presence of adhocracy, it becomes insignificant in relation to project delays as explained in 4.6 the results of linear regression test see table 13 appendix B because organisations moving creatively and innovatively have positive outcomes and could not face project delays. So findings suggest that adoption of Adhocracy culture results eliminating the negative impacts of UA in projects' performance so companies facing delays in accomplishment of their projects could consider adoption of Adhocracy culture. Hence, Libyan construction companies must focus on the adoption and implementation of an adhocracy culture at organisational levels, so that they may decline the magnitude of their project delays. The implementation of Adhocracy culture would also emphasise risk-taking behaviour among construction company management, which would help them with coping with the dynamic market realities. Organisations successfully coping with the changes in markets are always successful in achieving their desired goals, so construction companies in Libya must consider adopting change and making modifications to their Organisational Culture.

- **The Impact of Masculinity/ femininity (MAS) in Project Delay**

The impact of the national cultural aspect of masculinity/femininity is also investigated on project delays through linear regression analysis and it is found that masculinity/femininity does not have a significant influence on project delays of Libyan construction companies, as illustrated in

4.6 the results of the linear regression test see table 14 Appendix B. In fact, masculinity/ femininity is not found to be a dominating cultural aspect of the National Culture of Libya, so in this way, it is also not found to have any significant influence on Organisational Cultures in construction companies in Libya, nor it is found to have a significant influence on the performance of projects in the industry. Hence, masculinity/ femininity was not found to be a significant contributor towards project delays in Libyan construction companies.

- **The Impact of Masculinity/femininity and Market in Project Delay (Mediator)** The impact of masculinity/femininity on project delays is further studied in relation to the Market culture of an organisation and it was found that still masculinity/ femininity have an insignificant influence on project delays even in the presence of Market culture. Market culture is based on a competitive environment and focuses on concrete outcomes. The major focus of market culture is goal achievement, where leaders are demanding and tough towards required goal achievements. Organisations implementing market culture are always concentrating on their rivals and trying to accomplish their goal achievements before others. So such organisations mostly do not face delays in projects. In contrast to the market culture, which has a common goal to beat the market, in the masculinity/ femininity cultural aspect, the roles are defined individually. So, both cultures could not prevail simultaneously. But in the case of Libyan construction companies, both cultural aspects are found to be insignificant in contributing to the delays of the projects as illustrated in 4.6 the results of the linear regression test see table 15 in appendix B. Hence, it is found that neither market culture is dominating cultural aspect of Libyan construction companies, nor masculinity/ femininity is the dominating cultural aspect of National Culture in Libya. So both these also do not have any significant relationship with the delays of projects in Libyan construction companies.

- **The Impact of Power Distance in Project Delay**

The impact of PD on project delays is studied through linear regression and it is found that PD is insignificantly related to project delays as shown in 4.6 the results of the linear regression test see table 16 in appendix B. As indicated by the results of correlation analysis, although the

National Culture aspect of PD is the part of hierarchical culture at organisational level in Libyan construction companies, but still, it does not significantly contribute towards project delays in construction industry. The PD culture is mostly found to have significant negative impact on performance of projects or organisation as a whole, but in case of Libyan construction companies, PD is not found to be a negative contributor in performance of construction projects in terms of timely delivery of the project.

- **The Impact of Power Distance and Hierarchy in Project Delay (Mediator)**

The impact of PD on project delays is further studied in the presence of Hierarchy culture, through linear regression analysis and it is found that still PD has an insignificant relationship with project delays even in the presence of hierarchy as revealed in 4.6 the results of linear regression test see table 17 in appendix B. So, it is found that the national cultural aspect of PD is not a significant contributor to delays of projects in Libyan construction companies. Although through correlation analysis, the PD is found to have a significant relationship with the hierarchical culture of the organisation, such PD aspect of National Culture is not found to have a significant influence on project delays in Libyan construction companies, neither individually nor in the presence of hierarchy culture. The major reason for this insignificant relationship is that Libyan society is based on high PD culture, where people understand the PD and accept these as they have the same culture and mind-set followed by employees in the organisation. Hence, project delays are found to have a significant relationship with other national cultural aspects but not with PD in Libya.

The PD aspect of National Culture basically indicates the acceptance of distances in the hierarchy of power by individuals of the society or in a nation as a whole. The PD creates problems in places, either societies or at organisational levels, where people do not accept such differences and challenge the distribution of power among authorities. But when people are aware of the presence of power differences and accept such distances as well, no issues are created, and everything works smoothly. The same is the case with Libyan construction companies because the Libyan local community is under the influence of PD to such an extent that now people will recognise and accept such PD in their society so the same culture prevails in organisations as well. Individuals accept the PD among low-level employees and higher authorities in such an effective way that they never challenge such differences, so such PD never contribute towards the performance of projects either positively or negatively. Hence, the findings suggest that the national cultural aspect of PD, has a significant relationship with the Organisational Culture (hierarchy culture) of Libyan construction companies, but it is

so embedded and accepted by the individuals that it is not thought to be the significant cause of delays of projects in Libyan construction companies.

In order to find out the impact of National Culture on project delays the relationship is investigated more critically by investigating the impact of significant national cultural aspects; UA, IND and PD (in the case of Libyan construction companies) on PM if these companies highlight the fact that these national cultural aspects either only become part of Organisational Culture and contribute in the delays of the project or along with being part of Organisational Culture also influence the PM of these construction companies. So, the relationships of these three aspects are also investigated with PM.

- **The Impact of Uncertainty Avoidance on Project Management**

The impact of UA on PM in Libyan construction companies is investigated through regression analysis and findings indicate a highly significant negative relationship between UA and PM where was the value of p = **0.001** as revealed in 4.6 the results of linear regression test see table 18 in the Appendix. The significant negative relationship indicates that the national cultural aspect of UA, negatively influences the PM of Libyan construction companies. So, the findings indicate that PM practices of Libyan construction companies lack effectiveness and efficiency due to the risk aversion behaviour and attitude of construction companies' management, which is due to the influence of their National Culture on their personalities. PM practices, even in any field, require adoption to change and innovate to move with the changing trends of the market which is only possible in the presence of risk-taking attitudes of the management of a company. Management who is willing to take risks and open to novel ideas are the ones who can implement their PM practices more impressively and found positive impacts on the accomplishment of projects. Because change and innovation do not always result in positive outcomes, rather the risk of failure is always embedded, but once failed change can be made to move towards success as well, so risk-taking is critically important. Organisations working on projects require risk-taking environments more significantly as compared to the ones working on regular operations, so the same is the case with Libyan construction companies. The UA attitudes of management of these companies result in negatively impacting the PM of the company which affects the overall performance of the project and cause delays in the accomplishment of projects. The significant negative coefficients from the regression analysis also indicate that the extent of UA defines the inefficiency of PM in construction companies in Libya, which significantly influences not only the decision making about the projects but also

the implementation of decisions and policies. Such inefficiency in PM results in the delay of accomplishment in project.

- **The Impact of Individualism on Project Management**

In order to investigate the fact that whether the national cultural aspect of IND also influences the PM of Libyan construction companies, the relationship is studied through regression analysis. The findings indicate the significant negative impact of IND on PM where the value of p = **0.005** as shown in 4.6 the results of the linear regression test see table 18 in the Appendix. So, it is indicated that the individualistic attitude of management in Libyan construction companies causes a negative influence on the PM practices of the organisation i.e. the negative impact on PM is in the form of inefficiency in decision-making related to projects as well as inefficiencies about the implementation of the plans and policies or even poor planning for the project which all cause delays in the accomplishment of the project. As discussed earlier, management under the influence of IND only focuses on their personal priorities, goals and achievements so plan and implement project-related policies in a similar pattern as well. Organisations working on projects always align the objectives and goals of the project with organisational goals, but as Libyan organisations are under their National Culture influence so thinking about their personal priorities and goals, management of Libyan construction companies makes ineffective plans and policies revolving around their personal objectives. So such a negative impact of an individualistic attitude of Libyan construction managers on their PM practices causes inefficiencies at various stages of the project. Ultimately, causing delays in the accomplishment of these project stages as well as the delay of the whole project. The significant negative coefficient of regression analysis also indicates that the more Libyan managers behave individualistically, the more would be inefficiencies in the PM of these firms. So in order to avoid delays in projects in construction companies in Libya, Libyan construction companies' management should focus on changing their individualistic behaviour, rather they should focus on the overall objectives of the organisation so that they can practice PM effectively and efficiently which rather causing delays but would result in efficient accomplishment of construction projects.

- **The Impact of Power Distance on Project Management**

The impact of PD on PM is investigated through regression analysis to highlight the fact that either PD only contributes to Organisational Culture or it also influences the PM of Libyan construction companies. The findings indicate that the national cultural aspect of PD has a negative impact on the PM of these organisations where was the value of p = **0.032** as shown in 4.6 the results of the linear regression test see table 18 in the Appendix. Being part of the hierarchical culture of Libyan construction companies, the existence of PD creates huge communication gaps among employees and management of these companies which results in the ineffective and inefficient implementation of the plans and policies imposed by management. Most importantly the huge communication gaps cause delayed decisions and delayed implementation of these decisions due to longer hierarchies and huge PD among these hierarchies. Moreover, the rigid culture that does not supports employee feedback and input in the decision-making processes causes inefficiencies in the implementation of plans and policies made by management because neither they are part of this process to understand its various aspects, nor they are elaborated in detail by the management, rather they are only ordered to do as per managements' guidelines which cause huge inefficiencies in PM practices and their outcomes leading delays in projects. In order to reduce the magnitude of delays of projects in construction companies in Libya, the management should focus on reducing the PD among employees and management so that PM could be practised more efficiently resulting in the timely accomplishment of construction projects.

The above-discussed relationships of variables and their significant influences on Libyan construction companies are further confirmed by the analysis of qualitative data. Interviews conducted by the management of construction companies in Libya also focused on the same aspects, covered by the questionnaires so that valid findings are gathered from current research. Hence, the analysis of qualitative data also confirmed the significance of relationships found through quantitative data. The interviewees further confirmed that Organisational Culture in Libyan construction companies is under the influence of Libyan National Culture because the individuals setting the culture in these organisations are the ones, who are under the influence of their National Culture for decades so national cultural aspects dominate their personalities, which are further reflected in their behaviours, attitudes and preferences at work environments. So, the attitudes and behaviours of these individuals set the culture of the organisation as well based on similar cultural aspects. Moreover, the information collected through interviews also confirmed that the cultural aspects have significant contribution towards delays of projects

in Libyan construction companies, because hierarchal culture with rigid working environment, lack of innovation and creativity and avoidance for risk contribute significantly towards delays of projects in Libyan construction companies.

Summarising the whole findings of the study indicate that among the four dominating organisational cultural types i.e. Clan culture; focusing on collaborative work environment with high priority towards communication, Market culture; focusing on commonality of goals, and adhocracy culture; focusing on innovation, creativity and risk-taking attitudes, Libyan construction companies are found to have the dominancy of Hierarchical culture that is based on longer hierarchies. Such hierarchies are also influenced by UA and PD. It is found that the Organisational Culture in Libyan construction companies is under the influence of Libyan National Culture. Among the major four aspects of National Culture; masculinity/ femininity, IND, UA and PD, Organisational Culture is found to be under the significant influence of IND, UA and PD. However, masculinity/femininity is not found to have a significant relationship with Organisational Culture or ultimately with project delays. On the other hand, although PD is found to have a significant relationship with the hierarchical culture of the organisation, PD does not contribute to the delays of projects in Libyan construction companies. Moreover, it is found that UA and IND aspects of the National Culture of Libya not only significantly influence the Organisational Culture of Libyan construction companies but also contribute significantly to the delays of projects in construction companies. Basically, the impact of the Libyan local community, having long hierarchies based on family ownership is dominant in Organisational Culture and significantly influences the performance of projects in Libyan construction companies. The individualistic behaviour dominating in management of the companies, under the influence of their National Culture, makes them prioritise their own goals and preferences which ultimately becomes a hurdle towards the efficient performance of the projects. The UA behaviour of companies' management and higher authorities significantly contributes to the delays of projects because they do not prefer taking a risk or experiencing new things, while construction projects most of the time face uncertainties at different stages of the project so failure to cope with the uncertain situations, due to their UA behaviour results in huge delays in the accomplishment of projects at targeted times so results in delayed projects. Hence, the findings showed that in terms of Libyan construction companies, National Culture Influences Organisational Culture, which eventually contributes in projects' delays. So the findings indicate the impact of both cultures, i.e. National Culture and Organisational Culture on project delays in Libyan construction companies in a way that Organisational Culture mediates the relationship between National Culture and project delays. Findings of current research indicate

that Libyan construction companies require huge modifications in their cultures at an organisational level which should not be under the influence of their National Culture to such a large extent. Organisations across the globe are now moving towards the adoption of innovation and change according to the changing requirements of a globalised world, but nations like Libya are still implementing rigid work cultures and are surviving for their survival. LCI require huge modifications at organisational and project levels, for this purpose it must focus on the cultural aspects of developed nations that how they adopt change according to the changing requirements of the era and enjoy success. If such changes are not adopted by LCI, it would not only face the problems of project delays, but rather it would struggle for its survival as well. So, the policymakers in the Libyan economy must focus on such aspects. However, since the previous chapter focused on discussing the achieved results of this research, the coming chapter concentrates on providing the study's conclusion, recommendations, limitations as well as future research.

# Chapter Eight: Conclusion and Recommendations

## 8.1 Research Conclusion

Industrial development is one of the major indicators of any country's economic development, so governments focus on major sectors that contribute significantly to economic growth and development. Among such major sectors, the construction industry is a significant contributor to economic development in developing and developed nations; the same is the case with the construction industry in Libya. LCI contributes to almost 5.2% of the Libyan GDP, employing 3.2% of the total workforce in Libya. But, unfortunately, Libyan construction projects are constantly facing delays leading to the failure of projects in most cases and the magnitude of such delays is increasing with the passage of time. The Libyan government also focuses on the development of construction industry but still the stakeholders and policy makers are unaware of the critical factors that cause delays in these construction projects. Previous studies focused on various performance-based factors in highlighting the cause of delays in construction projects in Libya, but no one investigated the influence of national and Organisational Culture on project delays. As cultural factors are found to be the major contributors in influencing the overall performance of organisations in some other industries and other jurisdictions; the current research assumes that Libyan National Culture and Organisational Culture of Libyan construction firms may be the contributing factors causing delays in construction projects. So, the study proposed three main research questions; to what extent does the Libyan National Culture contribute to delays of Libyan construction projects? What Organisational Culture type is currently predominant in Libyan construction companies? And to what extent does the Organisational Culture of Libyan construction companies contribute to delays of Libyan construction projects? To find the answers to these research questions, current research adopted to use both method approach (quantitative and qualitative) through which a questionnaire is designed and distributed to the employees of construction companies in Libya asking about various national and organisational cultural aspects influencing the construction projects, while they were also asked to identify the currently prevailing organisational cultural type in Libya. For a qualitative analysis of the underlying issue, interviews were also conducted with the managers of construction companies in Libya. Quantitative data collected through questionnaires are analysed using SPSS to extract the required information while qualitative data is analysed using NVIVO.

The target population of the current research is employees from construction companies in the city of Misurata, Libya. This city is selected due to the huge population, safety and more importantly a large number of construction companies i.e., 42 construction companies operating in the city. 140 questionnaires were distributed to the employees of these construction companies while 103 individuals responded among which 80 are males and 23 are females. Gender is important in studying organisational creativity because creativity requires different behavioural patterns while men and women differ. The descriptive analysis of the sample under study indicates that most of the participants are engineers having university-level education and some even have post-graduate level education. Moreover, almost 73% of the participants have more than 5 years of experience hence indicating that Libyan construction companies are occupied by senior professionals while it is found that older employees dislike change and indicate greater adherence to the norms of organisations. The sample incorporates both private and public firms. The four organisational cultural types being studied in current research are Clan culture, Adhocracy culture, Market culture and Hierarchy culture. In response to the question that which Organisational Culture is currently predominant in Libyan construction companies, most of the participants indicated that hierarchy culture is dominating in Libyan construction companies. Findings indicate that although the three other cultural types i.e. Clan culture, Adhocracy culture and Market culture also prevail in Libyan construction companies' hierarchy culture is the most dominating one. In contrast to the clan culture that focuses on a collaborative working environment through giving value to individuals and promoting a healthy communication relationship between employees and management, the hierarchical culture emphasises a traditional corporate structure having a well-defined chain of command with multiple tiers separating the management from other employees of the organisation. It is also found that Libyan construction companies are rigid in their cultural norms and risk-averse. The rigid culture of Libyan construction companies forbids creativity and does not encourage adopting change immediately. Having rigid hierarchical culture, the Libyan construction companies are found to have clearly defined roles and duties where employees are not allowed and not encouraged to provide feedback in any organisational matter rather employees, have to follow the rules and regulations being set by higher management without any question. Such hierarchical culture of Libyan construction companies is contributing significantly to causing delays of construction projects in Libya because most significantly the decision-making process in these companies takes so much time due to the presence of longer hierarchies. Decisions are made in a very rigid and formal way passing through various hierarchical levels and gaining approvals of different stakeholders at these different hierarchical levels, which causes delays

in the decision-making process which ultimately, contributes to the delays of construction projects. Because construction projects are never liberated from any uncertain circumstances which require immediate decisions sometimes even at site level by the project manager. But in Libyan construction companies, neither the project manager nor the lower-level employees are allowed to take any immediate decision according to any uncertain situation without the permission of higher authorities. Hence, such situations cause huge delays in construction projects, because of the waiting time for the response and decision of higher management. So the presence of longer hierarchies takes too much time to get any issue resolved which ultimately affects the overall timeline of the accomplishment of the construction project which faces delays at various levels and in the end as well.

Moreover, the construction industry in the recent advanced era requires innovation and creativity not only in the designs of the construction projects rather in the construction practices to avoid delays, control costs and efficient and smooth working of the procedures being incorporated in the accomplishment of the projects. But the rigid hierarchical culture of construction companies in Libya does not provide flexibility to the employees to experiment with creativity and brainstorm novel ideas. That's why the old construction procedures being followed by the Libyan construction companies are among the significant factors contributing towards project delays due to the requirement of a comparatively huge amount of time to complete any task. Moreover, the lack of communication among management and employees in these longer hierarchies of the hierarchical culture of Libyan construction companies also contributes towards the delays of projects in Libya because it's the common practice that construction projects face many constraints till their accomplishment which require immediate and direct communication among higher management and lower level employees but these longer hierarchies take too much time to get the issue resolved that the overall timeline of the projects is disturbed. The major reason for the presence of hierarchical culture in construction companies is the presence of family-owned businesses having major positions being occupied by the members of same family at various levels of the hierarchies, so the decision-making process is accomplished while passing through various hierarchical levels which takes time and causes delays in the overall performance of the project in particular and of the organisation in general.

Further, the impact of National Culture is investigated on the delays of construction projects in Libya, so the four major cultural aspects of National Culture are investigated including (PD), uncertainty avoidance (UA), masculinity/femininity (MAS) and (IND). Among these four national cultural aspects only masculinity/femininity (MAS) is not found to be significant in

Libyan construction companies while the PD, IND and UA are found to be significant.

The significance of these national cultural aspects indicates that Libyan National Culture not only influences the individual's behaviour in society but also has a significant influence on the working attitudes of employees in Libyan construction companies. Hence IND is found to be the dominating aspect of Libyan construction companies' management, so they prefer on focusing their individual needs instead of focusing on the needs of their employees. The management in Libyan construction companies emphasises their self-expressions, personal goals, own rights, financial stability and freedom and autonomy. While this individualistic behaviour causes anxiety, stress, and insecurities among employees of these companies ultimately hampering the performance of projects. In order to achieve their personal goals, the Libyan construction managers align the construction project objectives, not with the overall objectives of the organisations but rather with their personal objectives and achievements. So, ignoring the achievement of organisational goals contributes to delays in construction projects in a way that the quality of the project in terms of budget and timely accomplishment is compromised according to their personal goals and achievements.

On the other hand, the national cultural aspect of UA is also found to be the dominating cultural aspect in Libyan construction companies and significantly contributes towards the delays of the project. Libyan National Culture promotes risk-adverse culture, so the same is the case with construction companies in Libya. The management avoids risks and uncertainties so innovation and creativity are not allowed in these construction companies rather employees have to strictly follow the predefined guidelines, rules and regulations. As indicated by the descriptive analysis of the current research that Libyan construction companies are occupied with senior employees working for more than 5 to 15 years in these companies so this senior management under the influence of their National Culture strictly avoids uncertainty. Although a sufficient portion of the project's budget is allocated under the head of risk management budget to cope with any uncertain situation, still the project manager, site manager and other employees are not allowed to deal with the uncertainty in their own capacity. Rather they have to wait for the decision and instructions of the higher management who for the most of the time waits for avoiding such uncertain situation and not taking any sudden action. While after a certain amount of time is taken by the management to take the required action the project managers and other stakeholders are allowed to deal with the situation according to the said guidelines. Such circumstances result in long delays at different levels of projects and affect the overall accomplishment of the project at the targeted timeline. Business practices and operations are changing across the globe incorporating various types of uncertainties that require immediate

response and effective action while the ones who are late responders are always striving for their survival and same is the case with LCI. The UA culture of Libyan and its dominance in Libyan construction companies have made it among the late responders who are striving for their survival because of frequent project delays and failures due to managements' UA behaviour.

Unlike the national cultural aspects of IND and UA which after becoming part of Organisational Culture contributed significantly to delays of construction projects in Libya, the national cultural aspect of PD is found to be a significantly related to the hierarchical culture but is not found to contribute in delays of projects directly. Rather PD is found to have significant impact on the PM practices of the firm which ultimately leads towards project delays. Hence, it is found that PD exists in the long hierarchies existing in construction companies in Libya because there is a huge gap between companies' management and lower-level employees working on such construction projects. But at the same time, it is found that PD and hierarchies are the dominating cultural aspects of Libyan National Culture, so the employees are well aware of this fact and accept it wholeheartedly. They are never found complaining about these PD among various levels of hierarchies because they accept the fact that each individual in the hierarchy has their own roles, everyone performs their own role and no one has a concern with the role of others, that's why such culture is highly acceptable in Libyan construction companies as well. But on the other hand, this PD is found to have a negative impact on the PM practices of construction firms. In fact, the existence of PD among various hierarchical levels results in huge communication gaps between employees and management whether it's their opinion, their feedback or the discussion about any uncertain situation and the possible solution, employees are not allowed to have direct contact with the management. So, such huge gaps due to large PD at various hierarchical levels result in inefficiencies in the implementation of policies and plans made by management because employees are never part of these processes rather they are just ordered to follow the given guidelines and orders. Such culture creates a lack of understanding of the various aspects of construction project plans and results in poor implementation which affects the PM of the firm and ultimately causes delays in the accomplishment of the projects. Hence, the findings of current research indicate that Libyan National Culture and Organisational Culture in Libya are the major factors causing delays in construction projects because these cultural aspects affect the overall performance of projects in different ways ultimately causing delays at various levels of the project and a huge delay in the overall accomplishment of the project. It is indicated that the Libyan National Culture affects the Organisational Culture and PM practices of construction companies in Libya which

ultimately cause delays in construction projects.

## 8.2 Output of study

Based on the full discussion in chapter six, the research framework produced provided the foundation for the interrelationships of the variables of the study, as well as why and how they are associated with each other, as shown in figure (6.2). The research framework shows that the IND, UA, and PD dimensions of Libyan national culture have an effect on the LCI, which makes the "Hierarchical" culture the most common in the LCI. So, National Culture doesn't directly cause project delays. Instead, National Culture contributes to project delays in Libya by making the PM practices of the organisation worse by affecting the Organisational Culture of Libyan construction companies. So, the most important parts of Libya's national culture are IND, UA, and PD, which affect PM and "Organisational Culture" and cause projects to take longer than expected. So, it's important to know how these cultural dimensions affect not only an industry but also a whole country. In addition, the theoretical framework of the study explained that the efficiency of the PM practices depends on the role of management and the organisational internal and external factors (Project Management Theory); while the mental programming of management is always under the influence of their National Culture, because although individuals possess unique mental programming but the part of it is under the influence of national setting (Hofstede's cultural dimension theory) which sets the foundation of organisational culture that should be investigated in terms of the beliefs, values and the underlying assumptions (Schein's theory of organisational culture) so each project in every industry is always under the influence of the National Culture in which the industry is operating and the performance of the project is influenced by the cultural dimensions dominating in that country. And if it's not possible to make changes at the national level, then at least the organisational settings should be shielded from the effects of national cultural dimensions. This can be done by giving professional training to the management and higher authorities who set the foundations of organisational culture.

## 8.3 The Contribution of study

By highlighting the fact that Libyan National Culture and Organisational Culture are among the major reasons for project delays in Libyan construction companies, current research not only significantly contributes to the construction management literature but also contributes well to the knowledge and awareness of Libyan nationals, the construction companies' owners, the higher management, the board of directors and the key decision makers of these companies

that there is a need to work on the cultural aspects at national as well as organisational level. It also significantly contributes to the knowledge and awareness of policymakers at the national level that instead of making and implementing policies that only focus on the economic aspects of the construction industry in Libya; they must also focus on the cultural aspects at the national level which have a significant negative impact on the accomplishment of projects.

Policymakers at national and organisational levels must work on a common cause to flourish the construction industry to make it a productive part of the Libyan economy, so these policymakers could tackle the key issues in light of the findings of current research. Current research has highlighted the national cultural aspects that influence the Organisational Culture and lead to project delays, so the key stakeholders including the policymakers could focus on these cultural aspects specially to eliminate project delays in Libyan construction companies. Current research also highlights the facts that how Organisational Culture in Libyan construction companies under the influence of National Culture hinders the working activities at different levels of projects, so in light of the findings of current research, by focusing on these key areas the owners and management of these companies could focus on the ways that how Organisational Culture could be liberated from the influence of National Culture. Current research also contributes to the knowledge of project managers not only in Libya but across the globe that they must keep themselves and their working activities free from the influence of their National Culture while working on projects so that their work could not be under the influence of their national cultural aspects.

It also contributes to the knowledge of all levels of management in construction organisations that due to rigid Organisational Culture, how minor delays at different levels of projects i.e., at the planning stage, at the decision-making stage, at the implementation stage etc. accumulate to cause a major delay in the accomplishment of projects so there is a need to focus on the reasons of these minor delays so that major delays could be eliminated. Hence, current research suggests that all the key stakeholders including all levels of employees as well as the policymakers at higher levels must focus on the key areas, issues and aspects highlighted by current research in their individual capacities as well as must work together on bringing some positive change in culture at a national and organisational level as a common cause for the growth and development of construction industry in Libya. The findings of current research would be a great contribution in this regard.

Current research contributes to the knowledge in different ways. It contributes significantly to the knowledge of researchers that how different variables could be studied in different perspectives i.e. the variables individually contributing to any phenomenon may be interlinked with each other and may have their joint effect to the process/phenomenon. It also contributes significantly to the knowledge of the individuals in construction industries i.e. all the stakeholders that how they could eliminate the effects of negatively contributing factors so that the delays could be eliminated as well.

### 8.4 Recommendations

Some key factors identified by current research, which are significantly causing delays in construction projects in Libya are three national cultural aspects including (PD), UA (UA) and (IND) and the currently prevailing Organisational Culture of Libyan construction companies which is the hierarchy culture, so these are the key factors to be focused to eliminate the delays in construction projects.

The findings of current research have clearly indicated how these cultural aspects are affecting the timely accomplishment of the projects, so the LCI, the stakeholders including company owners and management and the policymakers in Libya must focus on these aspects and should take sufficient actions to mitigate the negative impacts of these cultural aspects. Current research suggests major changes in the cultural aspects at the national as well as organisational levels.

Initially and most importantly the Organisational Culture of construction companies must be transformed from hierarchical culture to the Clan culture because clan culture promotes a collaborative working environment where open communication is encouraged. The gap

between employees and management should be reduced or even eliminated so that effective and quick decisions could be made with the involvement of employees who have to implement these decisions. When employees would be part of these decisions and the overall plan of the project, they could not only provide their feedback on different aspects of the implementation of the plans where they feel any difficulty but would be able to better understand the critical aspects of projects. When plans are implemented effectively and efficiently, then issues are raised less frequently, and employees are able to handle the unpredictable situation more effectively so eliminating delays in the accomplishment of projects.

Moreover, the impact of National Culture on Organisational Culture should be eliminated because the PD, UA and IND aspects of National Culture are causing a negative impact on the accomplishment of the projects. These cultural aspects cause delays in the decision-making process either at the initial levels of projects, during any other stage or even during uncertain situations. Hence, leading to the overall delay of the projects. In the recent dynamic era, markets are facing frequent changes in all aspects of business activities and each industry has to face and adopt such changes so no one can survive in the market while avoiding changes and uncertainties. So the UA culture also needs to be changed because instead of avoiding uncertainties, the construction companies must be prepared for uncertainties and should be open to adopting changes according to the needs of the era.

So the study suggests major cultural transformations at national as well as organisational levels to cope with the problem of project delays, but because such cultural transformations are not possible at a national level so the study suggests eliminating the influence of National Culture on Organisational Culture. The most significant transformation would be the adoption of Clan culture which could significantly contribute to eliminating the delays in Libyan construction companies.

### 8.5 Limitations

One of the major limitations of the current research is the data collection took place during the COVID-19 lockdown because due to the lockdown in the country, most of the construction companies in Misurata city were closed and the researcher could access only 25 companies out of a total of

40 construction companies operating in Misurata city. Another limitation is the limited knowledge of most of the workers working in these construction companies, especially about the different aspects of National Culture prevailing in other countries, so their limited knowledge restricted their response to some specific aspects only. They indicated a willingness to have a change in their culture at the national as well as organisational level but they were

unable to identify the exact cultural aspects that they want to be adopted by their organisations. Moreover, the current research is limited to the responses of lower-level employees and middle-level managers, while it must also incorporate the higher-level management, the owners, the decision makers and the policymakers of these firms to know their perspective about the impact of culture on project delays, so it could be incorporated in any similar research in future.

### 8.6 Future Research

As discussed above, the current study has accumulated the perspective of employees and middle-level management while the perspective of owners, higher-level management, the policymakers and the decision makers of such firms must be incorporated in future in similar research to highlight the impact of cultural aspects at the national and organisational level on project delays, because unless these key stakeholders would not understand the importance of change in these aspects implementation is not possible.

Moreover, as current research has found out the impact of organisational and National Culture on project delays, other research must be conducted on different organisational cultural values to investigate their impact and find out the mitigating measures that which of the cultural values require change critically so that project delays could be eliminated. Some other research in a similar context must be conducted in future to highlight the ways how the Organisational Culture in Libyan construction companies could be liberated from the impact of Libyan National Culture. The current research has highlighted the major issue that National Culture and organisational culture are the key contributors towards project delays, so in future, action research could be conducted through the implementation of the suggestions and recommendations of current research in a few construction companies and then evaluating their outcomes and then expanding the implementation. In this way, future research could further contribute to exploring different cultural aspects that must be adopted by Libyan construction companies.

## References


Abd El-Razek, M., Bassioni, H. and Mobarak, A., 2008. Causes of Delay in Building Construction Projects in Egypt. *Journal of Construction Engineering and Management*, 134 (11), 831-841.http://dx.doi.org/10.1061/(ASCE)0733-9364(2008)134:11(831)

Abdul Nifa, F., & Ahmed, V. 2010. The role of organisational culture in construction partnering to produce innovation. In: Association of Researchers in Construction Management. Leeds: Annual ARCOM, 725 - 734.

Abridah, A., 2012. The influence of national and organisational culture on creativity in Libyan work environment. PhD. The University of Huddersfield.

Abu-Jarad, I., Yusof, A., and Nikbin, D. (2010). A Review Paper on organisational culture and performance. *International Journal of Business and Social Science*, 1(3), 26 - 46.

Adam, A., Josephson, P.E.B. and Lindahl, G., 2017. Aggregation of factors causing cost overruns and time delays in large public construction projects: *Trends and implications. Engineering, construction, and architectural management*. 24 (3), 393-406.

Ajmal, M.M. and Koskinen, K.U., 2008. Knowledge transfer in project-based organisations: *an organisational culture perspective. Project management journal*, 39(1), pp.7-15.

Ali, A., 1995. Cultural discontinuity and Arab management thought. International Studies of Management and Organization 25 (3), 7-30.

Ali, A. J., Wahabi, R., 1995. Managerial value systems in Morocco. International Studies of Management & Organization 25 (3), 87-96.

Al-Rasheed, A., 2001. Features of traditional Arab management and organization in the Jordan business environment. Journal of Translational Management Development 6 (1-2), 27-53.

Al-Kharashi, A. and Skitmore, M., 2009. Causes of delays in Saudi Arabian public sector construction projects. *Construction Management and Economics*, 27(1), pp.3-23. http://dx.doi.org/10.1080/01446190802541457.

Alaghbari, W., Razali A. Kadir, M., Salim, A. and Ernawati., 2007. The significant factors causing delay of building construction projects in Malaysia, *Engineering, Construction and Architectural Management,* Vol. 14 No. 2, pp. 192- 206.

https://doi.org/10.1108/09699980710731308

Alias, Z., Zawawi, E.M.A., Yusof, K. and Aris, N.M., 2014. Determining critical success factors of project management practice: *A conceptual framework. Procedia-Social and Behavioral Sciences*, 153, pp.61-69.

Andersen, E.S., 2006. Toward a project management theory for renewal projects. *Project Management Journal*, 37(4), pp.15-30.

Ankra, N. A. 2007 An Investigation into the impact of culture on construction project performance. Research Thesis. Unpublished PhD Thesis, University of Wolverhampton. https://core.ac.uk/download/pdf/1931942.pdf

Ansah, O, M. and Louw, L., 2019. The influence of national culture on organisational culture of multinational companies. Cogent Social Sciences, 5(1), p.1623648.

Arditi, D., Nayak, S. and Damci, A. 2017. Effect of organisational culture on delay in construction. International Journal of Project Management. 35(2), 136-147.

Arditi, D., Pattanakitchamroon, T., 2006. Selecting a delay analysis method in resolving construction claims. Int. J. Proj. Manag. 24 (2):145 155.http://dx.doi.org/10.1016/j.ijproman.2005.08.005.

Ashkanasy, N.M., Broadfoot, L.E. and Falkus, S. (2000) 'Questionnaire measures of organisational culture'. In N.M. Ashkanasy, C.P.M. Wilderom and M.F. Peterson (Eds), Handbook of Organisational Culture and Climate. California: Sage Publications, pp. 131–145.

Bailey, B.M. and Bruner, M.W., 2017. Investigating the organisational culture of CrossFit. Journal of Exercise, Movement, and Sport (SCAPPS refereed abstracts repository), 47(1), pp.149-149.https://doi.org/10.1080/1612197X.2017.1329223

Baumann, L., 2013. The impact of national culture on project management in the Middle East (Doctoral dissertation, Loughborough University).

Bony, J., 2010. Project management and national culture: A Dutch–French case study. International Journal of Project Management, 28(2), pp.173-182.

Braun, V. and Clarke, V., 2006. Using thematic analysis in psychology. Qualitative research in psychology, 3(2), pp.77-101.

Bryman, A., 2012. Social Research Methods. 5th Ed. Oxford University Press.

Burns, R. (2000) Introduction to Research Methods. London: Sage.

Burrel, G. and Morgan, G. (1985) Sociological Paradigms and Organisational Analysis: Elements of the sociology of corporate life. Aldershot: Gower.

Bredillet, C., Yatim, F. and Ruiz, P., 2010. Project management deployment: The role of cultural factors. International journal of project management, 28(2), pp.183-193.

Biesta, G.J.J. (2010) 'Pragmatism and the philosophical foundations of mixed methods research'. In A. Tashakkori and C. Teddlie (Eds), Sage Handbook of Mixed Methods in Social and Behavioral Research, 2nd edn (pp. 95–118). Thousand Oaks, CA: Sage

Caldwell, K. R. and Pinnington, A. H., 2013. National Cultural Differences in Project Management: Comparing British and Arab Project Managers' Perceptions of Different Planning Areas. International Journal of Project Management. 31(2), 212-227.

Cameron, K. and Quinn, R., 1999. In OCAI 2011. Organisational culture assessment instrument (OCAI) https://www.ocai-online.com/about-the-organisational -culture-assessment-instrument-ocai

Cerovic, Z., Kvasic, S.G. and Cerovic, M., 2011. The impact of national culture on the hotel organisational culture. In *MIC 2011: Managing Sustainability? Proceedings of the 12th International Conference, Portorož, 23–26 November 2011 [Selected Papers] (pp. 1185-1198). University of Primorska, Faculty of Management Koper.*

*Chan, A. P. C., Scott, D. And Chan, A. P.L., 2004. Factors affecting the success of a construction project. Journal of Construction Engineering and Management. 130(1), 72-83.*

*Cheung, S.O., Wong, P.S. and Wu, A.W., 2011. Towards an organisational culture framework in construction. International Journal of Project Management, 29(1), pp.33-44.*

*Chipulu, M., Ojiako, U., Marshall, A., Williams, T., Neoh, J.G., Mota, C. and Shou, Y., 2016. Building cultural intelligence: insights from project management job advertisements. Production Planning & Control, 27(3), pp.133-147.*

*Chong, H.Y., 1994. Abduction? Deduction? Induction? Is There a Logic of Exploratory Data Analysis? 28p.Paper presented at the Annual Meeting of the American Educational Research Association (New Orleans, LA, April 4-8).*

*Collis, J. and Hussey, R. (2003) Business Research: A practical guide for undergraduate and postgraduate students, 2nd edn. New York, NY: Palgrave Macmillan.*

*Creswell, J. W., 2014 Research Design: Qualitative, Quantitative and Mixed Methods Approaches. Thousand Oaks, CA: SAGE Publications.*

Cridland, J., 2009. Construction in the UK economy, the benefits of investment. UK [Online]. http://www.nscc.org.uk/documents/UKCGreport-ConstructionintheUKEconomy- Qctober2009.pdf.

Crowther, D. & Lancaster, G., 2008. Research Methods. 2nd Ed. Routledge. Hungary

Edum-Fotwe, F. T. and McCaffer, R., 2000. Developing project management competency: perspectives from the construction industry. International Journal

of Project Management, 18(2), 111-124.

Eldabi, T., Irani, Z., Paul, R.J., Love, P.E.D. (2002) 'Quantitative and qualitative decision-making methods in simulation modelling', Management Decision, 40(1), 64–73.

El-Hasia, A.M., 2005. The effects of state's construction procurement policy implementation on the outcome of local construction projects: the Libyan case.http://usir.salford.ac.uk/14874/1/419129.pdf

Enshassi, A., Arain, F., Al-Raee, S., 2010. Causes of variation orders in construction projects in the Gaza Strip. J. Civ. Eng. Manag. 16 (4):540–551. http://dx.doi.org/10.3846/jcem.2010.60.

Esmaeili, B., Pellicer, E. and Molenaar, K.R., 2014. Critical success factors for construction projects. *In Project Management and Engineering Research, 2014* (pp. 3-14). Springer, Cham.

Essabra-Mensah, E., 2014. Govt concerned about construction industry challenges. http://thebftonline.com/content/gov%E2%80%99t-concerned-about-construction- industry-challenges Fackroon, M.E.H., Pakir, A.H.K. and Omran, A., 2008. Causes of Construction Delay: A Case Study in LIBYA. In 2nd International Conference on Built Environment in Developing Countries (ICBEDC 2008) (pp. 877-887).

Fallahnejad, M.H., 2013. Delay causes in Iran gas pipeline projects. International Journal of Project Management, 31 (1):136–146. http://dx.doi.org/10.1016/j.ijproman.2012.06.003.

Fellows, R. F. & Liu, A. M., 2015. Research Methods for Construction. 4th Ed. John Wiley & Sons.

Fink, A., 1995. How to Sample in Surveys. Thousand Oaks, CA: Sage Publications, Inc.

Fink, G., Dauber, D. and Yolles, M., 2012. Understanding organisational culture as a trait theory. European Journal of International Management, 6(2), pp.199-220.

Frimpong, Y., Oluyowe, J., 2003. Significant factors causing delay and cost overruns in construction of ground water projects in Ghana. J. Constr. Res. 4 (2), 175–187.

Fraenkel, J.R., and Wallen, N.E. (2006) How to Design and EVALUATE RESEARCH in Education. NewYork: McGraw-Hill.

Fraenkel J.R. and Wallen, N. E. (2008) How to Design and Evaluate Research in Education (7th edn). New York: McGraw-Hill.

Gajare, Y., Attarde, P. and Parbat, D. K., 2014. Assessment of significant causes and effects of delays on the project's completion period. International Journal of Modern Trends in Engineering and Research. 17(1), 88-97.

Gammack, J.M., Twati J.G., 2006. The impact of organisational culture innovation on the adoption of IS/IT: the case of Libya. Journal of Enterprise Information Management, 19(2), 175 - 191 https://doi.org/10.1108/17410390610645076

Garbharran, H., Govender, J. and Msani, T., 2012. Critical success factors influencing project success in the construction industry. *Acta structilia*, 19(2), pp.90-108.

Gerhart, B., 2009. How much does national culture constrain organisational culture?. Management and Organisation Review, 5(2), pp.241-259.

Gunduz, M. and Almuajebh, M., 2020. Critical success factors for sustainable construction project management. Sustainability. 2020(12), 1990.

Gunduz, M., Nielsen, Y. and Özdemir, M., 2013. Quantification of delay factors using the relative importance index method for construction projects in Turkey. Journal of management in engineering, 29(2), pp.133-139.

Hancher, D.E. and Rowings, J.E., 1981. Setting highway construction contract duration. Journal of the Construction Division, 107(2), pp.169-179.

Hegazy, T. and Menesi, W., 2008. Delay analysis under multiple baseline updates. Journal of Construction Engineering and Management, 134(8), pp.575- 582. https://doi.org/10.1061/(ASCE)0733-9364(2008)134:8(575)

Higham, A.P. and Troug, M.A., 2018, September. Exploration of time delay and cost overrun in Libyan public housing projects. In ARCOM Conferences Archive of

Working Papers 2018 (pp. 350-359). ARCOM.

Hofstede, G. and Bond, M.H., 1988. The Confucius connection: From cultural roots to economic growth. Organisational dynamics, 16(4), pp.5-21.

Hofstede, G., 1993. Inter-Cultural conflict and synergy in Europe. In D. Hickson (Ed.) Management In Western Europe: Society, Culture And Organisation In Twelve Nations. Berlin: De Guyter.

Hofstede, G., 2001. Culture's Consequences: Comparing Values, Behaviors, Institutions, and Organisations Across Nations, 2nd ed. Sage, Thousand Oaks, CA.

Hofstede, G., Hofstede, G.J. and Minkov, M., 1991. Cultures and Organisations. Software of the Mind. London: McGraw Hili. Culture's Consequences. Comparing Values, Behaviors, Institutions, and Organisations Across Nations. https://www.tandfonline.com/doi/full/10.1080/23311886.2019.1623648?src=recsys

Jha, K.N., 2011. Construction project management: Theory and practice. Pearson

Johnson, R.B. and Onwuegbuzie, A.J. (2004) 'Mixed methods research: A research paradigm whose time has come', Educational Research, 33(7), 14–26.

Johnson, R.B., Onwuegbuzie, A.J. & Turner, L.A. (2007) 'Toward a definition of mixed methods research', Journal of Mixed Methods Research, 1(2), 112–133.

Kattman, B. R., 2014. In today's global environment organisational culture dominates national culture. Benchmarking: An International Journal, 21(4), pp 651-664.

Kazaz, A., Ulubeyli, S. and Tuncbilekli, N.A., 2012. Causes of delays in construction projects in Turkey. Journal of civil Engineering and Management, 18(3), pp.426-435. http://dx.doi.org/10.3846/13923730.2012.698913.

Khan, A.U., 2014. Effects of cultural assimilation on the performance of a construction project–evidence from UAE. Benchmarking: an international journal. 21(3), pp.13-27.

Khan, F. R. and Ahmed, R., 2017. Empirical study on causes of project delays. *World Academy of Science, Engineering and Technology International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering,* 11(1), pp.166-174.

Khan, M.A. and Law, L.S., 2018. The role of national cultures in shaping the corporate management cultures: A three-country theoretical analysis. In Organisational

Culture. IntechOpen.https://www.intechopen.com/books/organisational - culture/the-role-of-national-cultures-in-shaping-the-corporate-management-cultures-a-three-country-theoretic

Kheni, N., Dainty, A., and Gibb, A., 2007. Influence of political and socio-cultural environments on health and safety management within SMEs: a Ghana case study. In D. Boyd (Ed.), 23rd ARCOM Conference (pp. 159 - 168). Belfast, UK: Association of Researches in Construction Management.

Koskela, L. and Howell, G., 2002b, August. The theory of project management: Explanation to novel methods. In Proceedings IGLC (Vol. 10, No. 1, pp. 1-11).

Koskela, L.J. and Howell, G., 2002a. The underlying theory of project management is obsolete. In Proceedings of the PMI research conference (pp. 293-302). PMI.

Kusakci, A.O., Ayvaz, B. and Bejtagic, E., 2017. An Analysis of causes and effects of delays in construction projects in Libyan oil industry. Karaelmas Fen ve Mühendislik Dergisi, 7(1), pp.274-282.

Lehmberg, D. and Davison, M., 2018. The impact of power distance and uncertainty avoidance on real options exercise: Potential for suboptimal time delays and value destruction. *Journal of Behavioral Finance*, 19(1), pp.62-72.

Lewis, R., 2005. When cultures collide: Leading across Cultures. Nicholas Brealey Publishing, USA.

Libya, GCP (General Council for Planning).,2002. Housing polices: An assessment of the past and present conditions, and suggestions for the future, Government Printer, Tripoli, Libya.

Libya, GCP (General Council for Planning).,2003. The follow-up report on the implementation of the development budget for the financial year 2002, Government Printer, Tripoli, Libya.

Liu, J., Meng, F. and Fellows, R., 2015. An exploratory study of understanding project risk management from the perspective of national culture. *International Journal of Project Management,* 33(3), pp.564-575.

Lousberg, L. H. M. J., 2006. Towards the theory of project management. Delft University Of Technology, Delft. Netherlands. http://www.irbnet.de/daten/iconda/CIB_DC10173.pdf

Luckmann, P. and Färber, K., 2016. The impact of cultural differences on project stakeholder engagement: *A review of case study research in international project management. Procedia Computer Science*, 100, pp.85-94.

Mabsout, R., 2015. Abduction and Economics: The Contributions of Charles Peirce and Herbert Simon. Journal of Economic Methodology 22 (4), pp.491-516.

Mahamid, I., Bruland, A. and Dmaidi, N., 2012. Causes of delay in road construction projects. Journal of management in engineering, 28(3), pp.300-310.http://dx.doi.org/10.1061/(ASCE)me.1943-5479.0000096

Mansfield, N.R., Ugwu, O.O. and Doran, T., 1994. Causes of delay and cost overruns in Nigerian construction projects. International journal of project Management, 12(4), pp.254-260.

Mbugua, L.M., Harris, P., Holt, G.D. and Olomolaiye, P.O., 1999, September. A framework for determining critical success factors influencing construction business performance. In Proceedings of the Association of Researchers in Construction Management 15th Annual Conference (Vol. 1, pp. 255-64).

McKenna, E., & Beech, N., 2002. Human resource management: a concise analysis. Harlow, England: Pearson Education Limited.

McSweeney, B. (2002). Hofstede's model of national cultural differences and their consequences: A triumph of faith – a failure of analysis. Human Relations, 55(1), 89-118. doi:10.1177/0018726702551004

Mead, R., 1998. International Management, 2nd edition, Blackwell Publishers Ltd, Oxford.

Melnikovas, A. (2018). Towards an explicit research methodology: Adapting research onion model for futures studies. Journal of futures Studies, 23(2), 29-44.

Mitchell, A.J., 2018. A review of mixed methods, pragmatism and abduction techniques. 17th European Conference on Research Methodology for Business and Management Studies (ECRM 2018) University of Roma Tre, Italy 12-13 July 2018.

Morrison, J.M., Brown, C.J. and Smit, E.V.D.M., 2008. The impact of organisational culture on project management in matrix organisations. *South African Journal of Business Management,* 39(4), pp.27-36.

Naoum, S.G., Alyousif, A.R.T. and Atkinson, A.R., 2015. Impact of national culture on the management practices of construction projects in the United Arab Emirates. Journal of Management in Engineering, 31(4), p.04014057.

http://dx.doi.org/10.1061/(ASCE)ME.1943-5479.0000265

Nasif, E.G. Al-Daeaj, H., Ebrahimi, B. and Thibodeaux, M.S. (1991) 'Methodological problems in cross-cultural research: An updated review,' Management International Review, 31(1), 79–91.

Nazarian, A., Atkinson, P. and Foroudi, P., 2017. Influence of national culture and balanced organisational culture on the hotel industry's performance. International Journal of Hospitality Management, 63, pp.22-32.

Newby, P., 2014. Research methods for education. Routledge.London

Ngab, A.S., 2008, December. Libya—The construction industry—An overview.

In International Workshop-Cements based Materials and Civil Infrastructure.

Nguyen, L.H. and Watanabe, T., 2017. The impact of project organisational culture on the performance of construction projects. Sustainability, 9(5), p.781.

Nixon, P., Harrington, M. and Parker, D., 2012. Leadership performance is significant to project success or failure: A critical analysis. International Journal of productivity and performance management.61(2), pp. 34-48.

Novikov, A.M. and Novikov, D.A., 2019. Research methodology: From philosophy of science to research design. CRC Press.

OCAI., 2019. Organisational Culture Assessment Instrument: Theory and Tool. [online] Available at: https://www.ocai-online.com/sites/default/files/node/files/2019-12/ocai_leaflet.pdf . [Accessed 3 March 2020].

Olawale, Y.A. and Sun, M., 2010. Cost and time control of construction projects: inhibiting factors and mitigating measures in practice. *Construction management and economics,* 28(5), pp.509-526.

Pandey, P. and Pandey, M.M., 2015. Research Methodology: Tools and Techniques (First publ, p. 84). *Romania, European Union: BRIDGE CENTER Buzau, Al. Marghiloman, 245.*

Patten, M.L. and Newhart, M., 2017. Understanding research methods: *An overview of the essentials*. Routledge.

Peters, Thomas J. And Waterman Jr., Robert H., 2004. In search of excellence: *Lessons from America's best-run companies*. London: Profile Books.

Peterson, M. F., 2001. Culture dimension tool book. www.collegeofbusiness.fau.edu/mgt/intbusns/peterson/culture

Pickard, A.J., 2013. Research methods in information. Facet publishing.

PMI Standards Committee and Project Management Institute, 1996. A guide to the project management body of knowledge. *Project Management Institute*.

Punch, K. F. & Oancea, A., 2014. Introduction to Research Methods in Education. 5th Ed. SAGE Publications Ltd. London

Ramee, N., Tammy, N. J., Noor, R. M., R. N. H., Musir, A., Karim, N., Chan, H. B. and Nasir, S. R., 2016 Critical success factors for construction projects. *AIP Conference Proceedings* 1774, 030011(2016) https://doi.org/10.1063/1.4965067

Rameezdeen, R. and Gunarathna, N., 2003. Organisational culture in construction: an employee perspective. *Australasian Journal of Construction Economics and Building*, 3(1), pp.19-30.

Ramos, D., 2015. Construction Project Management. Smart Sheet.

Salifu-Asubay, E.K. and Mensah, C.A., 2015. Improving delivery of construction https://www.smartsheet.com/construction-project-management-101

Raithatha, Y. (2017). Understanding the economic impact terrorism has on the destination decision making: Northern Irish tourists. Doctoral dissertation. Dublin Business School.

Reichertz, J., 2010. Abduction: The Logic of Discovery of Grounded Theory Forum for Qualitative Social Research. Vol.11 No.1

Richardson, G.L. and Jackson, B.M., 2018. Project management theory and practice.

Auerbach Publications. https://doi.org/10.1201/9780429464140

Richey, R.C. and Klein, J.D., 2014. Design and development research: Methods, strategies, and issues. Routledge. projects in Ghana's cities: a lean construction approach. *International Journal of Sustainable Construction Engineering and Technology*, 6(1), pp.1-15.

Salleh, R., 2009. Critical success factors of project management for Brunei construction projects: *improving project performance (Doctoral dissertation, Queensland University of Technology).*

Saunders, M., Lewis, P. & Thronhill, A., 2012. Research Methods for Business Students. 6th Ed. Pearson Education Limited

Schein, E.H., 2004. Organisational Culture and Leadership. John Willey & Sons. Inc.: USA.http://www.untag-smd.ac.id/files/Perpustakaan_Digital_2/ORGANISATIONAL

%20CULTURE%20Organisational%20Culture%20and%20Leadership,%203rd%20Edition.pdf

Sekaran, U. (2003) Research Methods for Business: A skill-building approach (4th edn). New York, NY: John Wiley & Sons.

Shaikh, A.W., Muree, M.R. and Soomro, A.S., 2010. Identification of critical delay factors in construction. *Sindh University Research Journal-SURJ (Science Series)*, 42(2).

Shebob, A., Dawood, N., Xu, Q., Egbu, C. and Lou, E., 2011. Analysing construction delay factors: *A case study of building construction project in Libya. Management*, 1005, p.1012.

Shi, J.J., Cheung, S.O. and Arditi, D., 2001. Construction delay computation method. Journal of construction engineering and management, 127(1), pp.60-65.https://doi.org/10.1061/(ASCE)0733-9364(2001)127:1(60)

Smith, P., 1992. Organizational behaviour and national cultures. British Journal of Management 3, 39-51.

Smith, P., 1996. National cultures and the values of organizational employees: Time for another look. In: Joynt, P., Warner, M. (Eds.), Managing Across Cultures: Issues and Perspectives. International Thomson Business Press, London.

Smith, P., Dugan, S., Trompenaars, F., 1996. National culture and the values of organizational employees: A dimensional analysis across 43 nations. Journal of Cross-National Psychology 27, 231-264.

Stare, A., 2012. The impact of a project organisational culture and team rewarding on project performance. *Journal for East European Management Studies*, pp.40-67.

Sondergaard, M., 1994. Research note: Hofstede's consequences: A study of reviews, citations and replications. Organization Studies 15 (3), 447-456.

Tahir, H.A., 2015. A project control framework for the Libyan construction industry. Sheffield Hallam University (United Kingdom).

Tashakkori, A. and Teddlie, C. (1998) Mixed Methodology: Combining qualitative and quantitative approaches. London: sage.

Tin, C., 2016. Project Management from Different Cultural Perspectives. Master Thesis. Department of Civil and Environmental Engineering. Chalmers University of Technology. Gothenburg, Sweden.

Titov, S., Birukov, A. and Vichodtseva, E., 2020. Organisational culture and project

management in India and Russia in the context of binational projects. TEM Journal, 9(2), p.601.

Triandis, H., 1988. Collectivism and individualism: A reconceptualization of a basic concept in cross-cultural psychology. In: Verma, B. K., Bagley, C. (Eds.), Personality, Attitudes and Cognitions. Macmillan, London, pp. 60-95.

Tsui, A.S., Wang, H. and Xin, K.R., 2006. Organisational culture in China: An analysis of culture dimensions and culture types. *Management and Organisation Review*, 2(3), pp.345-376.

Venkatesh, Alladi and Nikhilesh Dholakia (1986) 'Methodological Issues in Macromarketing', Journal of Macromarketing, (Fall), 36–52.

Walker, A., 2015. Project management in construction. 6th Edition. Wiley Blackwell. John Wiley and Sons. United Kingdom. https://assets.thalia.media/images-adb/3d/db/3ddb428c-98c1-4e5b-bd9f-f6e299ff2518.pdf

Walliman, N., 2010. Research Methods: The Basics. 2nd ed. Routledge. London

Warburton, R. D. H. and Cioffi, D. F., 2014. Project management theory: Deriving a project's cost and schedule for its network structure. Paper Presented at Project Management Institute Research and Education Conference, Phoenix, AZ. Newtown Square, PA: Project Management Institute.

Wells, J. 1986. The construction industry in developing countries. A Strategy for Development, *Unpublished PhD thesis, London, University of Wales UK*

Williams, T., 2016. Identifying success factors in construction projects: A case study. *Project Management Journal*, 47(1), pp.97-112.

Yazici, H.J., 2009. The role of project management maturity and organisational culture in perceived performance. *Project management journal*, 40(3), pp.14-33.

Yeganeh, Hamid, Zhan Su and Elie Virgile M. Chrysostome (2004) 'A critical review of epistemological and methodological issues in cross-cultural research', Journal of Comparative International Management, 7(2), 66–86.

Yeh, R., 1988. On Hofstede's treatment of Chinese and Japanese values. Asia Pacific Journal of Management 6 (1), 149–60.

Yeh, R., Lawrence, J., 1995. Individualism and Confucian dynamism: A note on Hofstede's cultural root to economic growth. Journal of International Business Studies 26 (3), 655-669.

Zahari, I.B. and Shurbagi, A.M.A., 2012. The effect of organisational culture and the

relationship between transformational leadership and job satisfaction in petroleum sector of Libya. *International Business Research*, 5(9), p.89.

Zaneldin, E.K., 2006. Construction claims in United Arab Emirates: Types, causes, and frequency. *International journal of project management*, 24(5), pp.453-459.

# Appendix A

This appendix includes both the questionnaire as well as interviews questions, which are developed in order to collect the needed data to attain the study aims and objectives:

**The Questionnaire**

The questionnaire of this research includes four main sections, and they are categorized as shown below:

Each question requires only one response.

Name of Organisation: ……

***Section one*** **-** Personal and Organisation Information This part is general information about you and the organisation that you work for Personal:

1.1- with what gender do you identify?

- ○ Male
- ○ Female
- ○ prefer not to say

1.2. What is your occupation at company?

- ○ Contractor
- ○ Owner(s) of this company also workers in the company
- ○ Engineer

Other please specify _____

1.3. What is your education level?

- ○ Secondary School
- ○ High school

- ○ High Institute Level
- ○ University Level
- ○ Post graduate Level

1.4. What are the organisation being involved?

- ○ Private
- ○ Public
- ○ Both

1.5. How long have you been worked with this organisation?

- ○ <5 years
- ○ 5-10 years
- ○ 10-15 years
- ○ >15 years

***Section two- Organisational culture***

Please, filling and splitting 100 points among the four proclamations for all the six dimensions of organisational culture. You have to fill up how you feel about your company association now as 'Now'.

Table2. The Organisational Culture Assessment Instrument

| ***The Organisational Culture Assessment Instrument*** | |
|---|---|
| ***1. Dominant Characteristics*** | *Now* |
| OC1- The organisation is a quite personal place. It looks like big family. People seem to share a lot of themselves. | |
| OC2- The organisation is an extremely dynamic and entrepreneurial place. People are willing to stick their necks out and take risks. | |
| OC3- The organisation is an extremely results-oriented. A major concern is with getting the job done. People are very competitive and achievement-oriented. | |
| OC4- The organisation is a very controlled and structured place. In general, the formal procedures govern what people do. | |

| Total | 100 |
|---|---|

| | |
|---|---|
| ***2. Organisational Leadership*** | *Now* |
| OC5- The leadership in the organisation is mostly considered to exemplify mentoring, facilitating, or nurturing. | |
| OC6- The leadership in the organisation is generally considered to represent entrepreneurship, innovation, or risk taking. | |
| OC7- The leadership in the organisation is mostly considered to exemplify a results-oriented focus. | |
| OC8- The leadership in the organisation is generally considered to exemplify organizing, coordinating, and smooth-running efficiency. | |
| Total | 100 |
| ***3. Management of Employees*** | *Now* |
| OC9- The administration style in the organisation is mostly characterised by teamwork, unanimity, and sharing. | |
| OC10- The management method in the organisation is mostly characterised by individual risk taking, invention, freedom, and distinction. | |
| OC11- The administration style in the organisation is characterised by hard-driving competitiveness, high demands, and achievement. | |
| OC12- The management manner in the organisation is generally characterised by employment security, accordance, predictability, and stability in relationships. | |
| Total | 100 |
| ***4. Organisation Glue*** | *Now* |
| OC13- The glue that keeps the organisation together is loyalty and mutual trust. Commitment to this organisation runs high. | |
| OC14- The glue that holds the organisation together is commitment to innovation and development. There is an emphasis on being on the cutting edge. | |
| OC15- The glue that keeps the organisation together is the emphasis on achievement and goal fulfilment. | |

| | |
|---|---|
| OC16- The glue that holds the organisation together is formal rules and policies. Maintaining a smooth- work organisation is important. | |
| Total | 100 |
| ***5. Strategic Emphases*** | *Now* |
| OC17- The organisation confirms on the human development. High confidence, openness, and involvement persist. | |
| OC18- The organisation emphasizes gaining new resources and creating new challenges. Trying new things and prospecting for chances are valued. | |
| OC19- The organisation emphasizes competitive actions and achievement. Hitting stretch targets and winning in the marketplace are dominant. | |
| OC20- The organisation emphasizes permanence and stability. Efficiency, control, and smooth processes are important. | |
| **Total** | 100 |
| ***6. Criteria of Success*** | *Now* |
| OC21- The organisation determines success on the basis of the development of human resources, teamwork, labourer commitment, and concern for people. | |
| OC22- The organisation defines success on the basis of having the most unique or newest products. It is a product leader and innovator. | |
| OC23- The organisation determines success on the basis of winning in the marketplace and outpacing the competition. Competitive market leadership is key. | |
| OC24- The organisation defines success on the basis of competence. Dependable delivery, smooth scheduling, and low-cost production are critical. | |
| **Total** | 100 |

***Section three - National Culture***

Listed below are a number of statements. These statements are not about your organisation as such, but rather about general issues. Please indicate the extent to which you personally agree or disagree with each of these statements.

Remember, I would like to know your own opinion (even though it may be different from that of others or your fellow workers in your country). Please answer by writing beside each item a number from the scale below.

(1) Strongly Agree, (2) Agree, (3) Not sure, (4) Disagree, (5) strongly disagree

NC1- The organisation's rules must not be broken, even when the employees think it is in the best interests of the organisation. ( )
NC2- I agree with fellow employees will be better than to voice a diverse opinion. ( )
NC3- Subordinate staff should not enquiry their supervisor's decision. ( )

To what extent do you agree or disagree with the following statements affecting your attitude towards occurrence of delay in construction projects.
Please tick or circle the number on the right against each question that best indicates your opinion.

(1) Strongly Agree, (2) Agree, (3) Not sure, (4) Disagree, (5) strongly disagree

NC4- I think that subordinates are expected to strictly follow the instructions of their bosses when trying to mitigate the occurrence of delay in construction projects ( ).
NC5- Centralisation and intrinsic inequalities affect my reaction when I deal with delays ( ).
NC6- Feelings of a project participant towards delay are influenced by the gender of the participant ( ).
NC7- The distinct separation of roles between men and women affects my thought process in handling delay in construction projects ( ).
NC8- My feelings towards delay in projects are affected by the need to follow traditional codes of beliefs and ideas ( ).
NC9- My thoughts in dealing with delay give great importance to rules, and it does not matter if these rules work or not ( ).

Please answer the following sentences by writing beside each sentence a number from the scale below. In answering the following sentences, think of 'how important it is to you to...' in your ideal function (select one answer for each sentence).
(1) Of utmost importance, (2) Very important, (3) Of moderate importance, (4) Of little importance, (5) Of very little importance.

NC10- There is opportunity for advancement to higher-level jobs. ( )

NC11- There is the security of knowing you will be able to work for your organisation as long as you want to. ( )

NC12- There is considerable freedom to adopt your own approach to the job. ( )

NC13- Have a job which leave me appropriate time for my particular or family life. ( )

NC14- Have work with people who cooperate well with one another. ( )

NC15- there is always the recognition for you deserve when you do a good job. ( )

NC16- gets training opportunities to improve your skills and knowledge or to learn new skills and knowledge. ( )

NC17- it is possible to use your skills and abilities on the job. ( )

NC18- there is an element of variety and adventure in the job. ( )

NC19- it is possible consult your direct superior in his/her decisions. ( )

NC20- Work in an environment where the group's achievements are valued over your individual success. ( )

NC21. How frequently, in your experience, are subordinates afraid to express disagreement with their superiors?

1. Very seldom
2. Seldom
3. Sometimes
4. Frequently
5. Very frequently

***Section Four-Construction project delay***

Please answer to the following questions either by ticking the appropriate box or by writing your answer in the space provided. Please note: The answers should be based on your experience in construction projects.

**Questions related to the performance of projects you have been involved in.**

2.1. How many construction projects have you been involved in?

Please specify _____

2.2. How many of them were delayed?

Please specify _____

2.3. What percentage of your projects delay?

- ○ < 10%
- ○ 10 - 30 %
- ○ 30 - 50
- ○ >50%

Note**: As a part of this study, we will undertake interviews to collect more in-depth data,

- DO you would like to be take part of it?

  - ○ Yes
  - ○ No

If yes, please give us your contact details……..

**2. Interview**

Table3. Organisational Culture Related Questions

This section incorporates the questions, which are used in order to collect the needed data through interviewing the study's respondents:

| **Organisational Culture Related Questions** |
|---|
| 1. What does the term "Organisational Culture" mean to you? |
| 2. What are the most important dimensions of organisational culture that we should consider decreasing the risk of project's delay? |
| 3. Do you think that it is necessary to adjust the current organisational culture in order to satisfy your employees and avoiding project delay? |
| 4. Comparison to competitors, do you think that your organisation is a leader in market share? |
| 5. If the culture of your organisation is dominated by Clan, will it be better for employees in terms of working as a team? If yes, what will be the result on the issue of project's delay? |
| 6. The results of my research showed that Adhocracy culture failed to mediate the relationship between Uncertainty Avoidance and project delay, so why Adhocracy seems to be not important in the case of delivering on time? |
| 7. How do you think the current rules and policies in your organisation can affect project's delay? |
| 8. Does the level of innovation and creativity in your organisation help in avoiding the risks of project's delay? |

Table4 . Interview Questions in a relation to the impact of national and organisational in Project's Delay

| **National Culture Related Questions** |
|---|
| 1. Different countries show different results in the case of project delay, is that due to the different culture? |
| 2. Can we consider the issue of multi-ethnic or multicultural employees as a main reason for project delay? |
| 3. Have you every failed to deliver on time, if yes what were the nationalities of employees who were participating in the project's team? |
| 4. What do you think about the power distance in your organisation? |
| 5. In term of national Masculine (participation of men vs women in the projects) if you failed to deliver on time, what was the number of men and women who were participating in the project's team? |
| 6. How can the project manager support individuals to work as a real team in order to avoid project's delay? |
| 7. In term of uncertainty avoidance do you think your employees are holding positive attitude to risk and improvisation? What will be the impact of this attitude on project's delay? |

# Appendix B

This appendix includes tables and charts from descriptive, normal distribution, Cronbach's Alpha, regression and correlation tests, which are employed in order to analyse the collected for the aim of achieving the study aims and objectives:

**1. Descriptive Tests**

Table 5. Overall gender response rate

| **Gender** | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Male | 80 | 77.7 | 77.7 | 77.7 |
| | Female | 23 | 22.3 | 22.3 | 100.0 |
| | Total | 103 | 100.0 | 100.0 | |

Table 6. Describes the occupation of the study sample

| **Occupation** | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Contractor | 27 | 26.2 | 26.2 | 26.2 |
| | Client | 10 | 9.7 | 9.7 | 35.9 |
| | Engineer | 63 | 61.2 | 61.2 | 97.1 |
| | Others | 3 | 2.9 | 2.9 | 100.0 |
| | Total | 103 | 100.0 | 100.0 | |

Table 7. The education levels of the study's respondents.

| **Education** | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Secondary School | 4 | 3.9 | 3.9 | 3.9 |
| | High Institute Level | 12 | 11.7 | 11.7 | 15.5 |

| | | | | | |
|---|---|---|---|---|---|
| | University Level | 50 | 48.5 | 48.5 | 64.1 |
| | Post graduate Level | 37 | 35.9 | 35.9 | 100.0 |
| | Total | 103 | 100.0 | 100.0 | |

Table 8. The sector of the study's sample

| **Sector** | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Private | 40 | 38.8 | 38.8 | 38.8 |
| | Public | 6 | 5.8 | 5.8 | 44.7 |
| | Both | 57 | 55.3 | 55.3 | 100.0 |
| | Total | 103 | 100.0 | 100.0 | |

Table 9. The experience of the study's sample

| **Experience** | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | <5 years | 28 | 27.2 | 27.2 | 27.2 |
| | 5-10 years | 54 | 52.4 | 52.4 | 79.6 |
| | 10-15 years | 19 | 18.4 | 18.4 | 98.1 |
| | >15 years | 2 | 1.9 | 1.9 | 100.0 |
| | Total | 103 | 100.0 | 100.0 | |

**2. Reliability Test**

Table 10. Cronbach's Alpha test

| **Item-Total Statistics** | |
|---|---|
| | Cronbach's Alpha if Item Deleted |
| Power Distance PD | .693 |
| Uncertainty Avoidance UA | .644 |
| Individual Collectivism ID | .760 |
| Masculinity Femineity MAS | .658 |
| CLAN | .646 |
| ADHOCRACY | .681 |
| HIERARCHY | .751 |
| MARKET | .631 |
| Project Delay | .812 |

Table 11: Average Scores of Dimensions of Organisational Culture (N=103)

| Dimension of organisational Culture | Culture Type | | | |
|---|---|---|---|---|
| | Clan | Adhocracy | Market | Hierarchy |
| Dominant characteristics | 21.7 | 18.92 | 21.7 | 37.3 |
| Organisational Leadership | 20.3 | 20 | 18.9 | 40.9 |
| Management of Employees | 20.4 | 19.2 | 23.2 | 38.2 |
| Organisational Glue | 19.4 | 18.9 | 18.7 | 42.1 |
| Strategic Emphases | 21 | 20.3 | 23.2 | 35.5 |
| Success Criteria | 19.3 | 19.4 | 22.6 | 38 |
| Overall Organisational Culture Profile | 20.3 | 19.4 | 21.4 | 38.7 |

### 3. Pearson Correlation Test

Table 12: The Correlation of National Culture and Project Delay

| **Correlations** | | | | | | |
|---|---|---|---|---|---|---|
| | | PD | UA | ID | MAS | Project Delay |
| PD | Pearson Corr | 1 | .259** | .146 | .181 | -.065- |
| | Sig. (2-tailed) | | .008 | .141 | .068 | .515 |
| | N | 103 | 103 | 103 | 103 | 103 |
| UA | Pearson Corr | .259** | 1 | .549** | .218* | .217* |
| | Sig. (2-tailed) | .008 | | .000 | .027 | .028 |
| | N | 103 | 103 | 103 | 103 | 103 |
| ID | Pearson Corr | .146 | .549** | 1 | .011 | .212* |
| | Sig. (2-tailed) | .141 | .000 | | .909 | .031 |
| | N | 103 | 103 | 103 | 103 | 103 |
| MAS | Pearson Corr | .181 | .218* | .011 | 1 | .007 |
| | Sig. (2-tailed) | .068 | .027 | .909 | | .944 |
| | N | 103 | 103 | 103 | 103 | 103 |
| Project Delay | Pearson Corr | -.065- | .217* | .212* | .007 | 1 |
| | Sig. (2-tailed) | .515 | .028 | .031 | .944 | |
| | N | 103 | 103 | 103 | 103 | 103 |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 13: The Correlation of National Culture and Organisational Culture

| **Correlations** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | PD | UA | ID | MAS | CLAN | ADHOCRACY | HIERARCHY | MARKET |
| PD | Pearson Corr | 1 | .259** | .146 | .181 | -.197-* | .116 | .205* | -.211-* |
| | Sig. (2-tailed) | | .008 | .141 | .068 | .046 | .244 | .038 | .032 |
| | N | 103 | 103 | 103 | 103 | 103 | 103 | 103 | 103 |
| UA | Pearson Corr | .259** | 1 | .549** | .218* | -.050- | -.365** | .042 | -.317-** |
| | Sig. (2-tailed) | .008 | | .000 | .027 | .613 | .000 | .673 | .001 |
| | N | 103 | 103 | 103 | 103 | 103 | 103 | 103 | 103 |
| ID | Pearson Corr | .146 | .549** | 1 | .011 | -.054- | .210* | .062 | -.270-** |
| | Sig. (2-tailed) | .141 | .000 | | .909 | .587 | .033 | .535 | .006 |
| | N | 103 | 103 | 103 | 103 | 103 | 103 | 103 | 103 |
| MAS | Pearson Corr | .181 | .218* | .011 | 1 | -.076- | .001 | -.266-** | .166 |
| | Sig. (2-tailed) | .068 | .027 | .909 | | .447 | .992 | .007 | .094 |
| | N | 103 | 103 | 103 | 103 | 103 | 103 | 103 | 103 |
| CLAN | Pearson Corr | .197- | -.050- | -.054- | -.076- | 1 | -.015- | .148 | -.205-* |
| | Sig. (2-tailed) | .046 | .613 | .587 | .447 | | .880 | .136 | .037 |
| | N | 103 | 103 | 103 | 103 | 103 | 103 | 103 | 103 |
| ADHOCRACY | Pearson Corr | .116 | .365** | .210* | .001 | -.015- | 1 | .214* | -.631-** |
| | Sig. (2-tailed) | .244 | .000 | .033 | .992 | .880 | | .030 | .000 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | N | 103 | 103 | 103 | 103 | 103 | 103 | 103 | 103 |
| HIERARCHY | Pearson Corr | .205* | .042 | .062 | -.266-** | .148 | .214* | 1 | -.770-** |
| | Sig. (2-tailed) | .038 | .673 | .535 | .007 | .136 | .030 | | .000 |
| | N | 103 | 103 | 103 | 103 | 103 | 103 | 103 | 103 |
| MARKET | Pearson Corr | .211- | -.317-** | -.270-** | .166 | -.205-* | -.631-** | -.770-** | 1 |
| | Sig. (2-tailed) | .032 | .001 | .006 | .094 | .037 | .000 | .000 | |
| | N | 103 | 103 | 103 | 103 | 103 | 103 | 103 | 103 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | | | | | |
| *. Correlation is significant at the 0.05 level (2-tailed). | | | | | | | | | |

**5. Linear Regression Tests**

Table 14: The Impact of Individualism/Collectivism (ID) in Project Delay

| **Model Summary** | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .212[a] | .045 | .036 | .71026 |
| a. Predictors: (Constant), Individual Collectivism ID | | | | |

**ANOVA[a]**

| **Model** | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| **1** | Regression | 2.408 | 1 | 2.408 | 4.774 | .031[b] |
| | Residual | 50.951 | 101 | .504 | | |
| | Total | 53.359 | 102 | | | |

**a. Dependent Variable: project Delay**

**b. Predictors: (Constant), Individual Collectivism ID**

**Coefficients[a]**

| **Model** | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **1** | (Constant) | 1.338 | .255 | | 5.250 | .000 |
| | Individual Collectivism ID | .047 | .021 | .212 | 2.185 | .031 |
| **a. Dependent Variable: project Delay** | | | | | | |

Table 15: The Impact of Individualism and Clan in Project Delay (Mediator)

| **Model Summary** | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .216[a] | .047 | .028 | .71322 |
| a. Predictors: (Constant), Clan, Individual Collectivism ID | | | | |

| **ANOVA[a]** | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | 2.491 | 2 | 1.245 | 2.448 | .092[b] |
| | Residual | 50.869 | 100 | .509 | | |
| | Total | 53.359 | 102 | | | |
| a. Dependent Variable: project Delay | | | | | | |
| b. Predictors: (Constant), Clan, Individual Collectivism ID | | | | | | |

| **Coefficients[a]** | | | | | | |
|---|---|---|---|---|---|---|
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.088 | .673 | | 1.616 | .109 |
| | Individual Collectivism ID | .052 | .025 | .234 | 2.102 | .038 |
| | Clan | .003 | .009 | .045 | .403 | .688 |
| a. Dependent Variable: project Delay | | | | | | |

Table 16: The Impact of Uncertainty Avoidance in Project Delay

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .217[a] | .047 | .038 | .70957 |

a. Predictors: (Constant), Uncertainty Avoidance UA

**ANOVA[a]**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 2.507 | 1 | 2.507 | 4.979 | .028[b] |
| | Residual | 50.852 | 101 | .503 | | |
| | Total | 53.359 | 102 | | | |

a. Dependent Variable: project Delay

b. Predictors: (Constant), Uncertainty Avoidance UA

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.211 | .305 | | 3.966 | .000 |
| | Uncertainty Avoidance UA | .050 | .022 | .217 | 2.231 | .028 |

a. Dependent Variable: project Delay

Table 17: The Impact of Uncertainty Avoidance and Adhocracy in Project Delay (Mediator)

| **Model Summary** | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .223[a] | .050 | .031 | .71201 |

a. Predictors: (Constant), adhocracy, Uncertainty Avoidance UA

ANOVA[a]

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 2.663 | 2 | 1.332 | 2.627 | .077[b] |
| | Residual | 50.696 | 100 | .507 | | |
| | Total | 53.359 | 102 | | | |

a. Dependent Variable: project Delay

b. Predictors: (Constant), adhocracy, Uncertainty Avoidance UA

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | .830 | .750 | | 1.107 | .271 |
| | Uncertainty Avoidance UA | .058 | .026 | .250 | 2.185 | .028 |
| | Adhocracy | .005 | .009 | .064 | .555 | .580 |

a. Dependent Variable: project Delay

Table 18: The Impact of Masculinity/Femineity (MAS) in Project Delay

| **Model Summary** | | | | | | |
|---|---|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | | |
| 1 | .007[a] | .000 | -.010- | .72683 | | |
| a. Predictors: (Constant), Masculinity/Femineity MAS | | | | | | |
| **ANOVA[a]** | | | | | | |
| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | .003 | 1 | .003 | .005 | .944[b] |
| | Residual | 53.357 | 101 | .528 | | |
| | Total | 53.359 | 102 | | | |
| a. Dependent Variable: Project Delay | | | | | | |
| b. Predictors: (Constant), Masculinity Femineity MAS | | | | | | |
| **Coefficients[a]** | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1.853 | .306 | | 6.060 | .000 |
| | Masculinity Femineity MAS | .004 | .055 | .007 | .070 | .944 |
| a- Dependent Variable: project Delay | | | | | | |

Table 19: The Impact of Masculinity/Femineity and Market in Project Delay (Mediator)

| **Model Summary** | | | | | | |
|---|---|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | | |
| 1 | .068[a] | .005 | -.015- | .72880 | | |
| a. Predictors: (Constant), Market, Masculinity Femineity MAS | | | | | | |
| **ANOVA[a]** | | | | | | |
| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | .244 | 2 | .122 | .230 | .795[b] |
| | Residual | 53.115 | 100 | .531 | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Total | 53.359 | 102 | | | |
| a. Dependent Variable: project Delay | | | | | | |
| c. Predictors: (Constant), Market, Masculinity Femineity MAS | | | | | | |
| **Coefficients[a]** | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 2.189 | .585 | | 3.742 | .000 |
| | Masculinity Femineity MAS | -.003- | .057 | -.005- | -.051- | .960 |
| | Market | -.005- | .008 | -.068- | -.675- | .501 |
| a. Dependent Variable: project Delay | | | | | | |

Table 20: The Impact of Power Distance in Project Delay

| **Model Summary** | | | | | |
|---|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | |
| 1 | .065[a] | .004 | -.006- | .72532 | |
| a. Predictors: (Constant), Power Distance PD | | | | | |
| **ANOVA[a]** | | | | | |
| Model | Sum of Squares | df | Mean Square | F | Sig. |
| 1 Regression | .224 | 1 | .224 | .426 | .515[b] |
| Residual | 53.135 | 101 | .526 | | |
| Total | 53.359 | 102 | | | |
| a. Dependent Variable: project Delay<br>b. Predictors: (Constant), Power Distance PD | | | | | |
| **Coefficients[a]** | | | | | |
| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| | B | Std. Error | Beta | | |
| 1 (Constant) | 2.088 | .336 | | 6.210 | .000 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Power Distance PD | -.019- | .029 | -.065- | -.653- | .515 |
| a. Dependent Variable: project Delay | | | | | | |

Table 21: The Impact of Power Distance and Hierarchy in Project Delay (Mediator)

| **Model Summary** | | | | | | |
|---|---|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | | |
| 1 | .112[a] | .013 | -.007- | .72585 | | |
| a. Predictors: (Constant), Hierarchy, Power Distance PD | | | | | | |
| **ANOVA[a]** | | | | | | |
| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
| 1 | Regression | .673 | 2 | .337 | .639 | .530[b] |
| | Residual | 52.686 | 100 | .527 | | |
| | Total | 53.359 | 102 | | | |
| a. Dependent Variable: project Delay<br>b. Predictors: (Constant), Hierarchy, Power Distance PD | | | | | | |
| **Coefficients[a]** | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 2.608 | .656 | | 3.976 | .000 |
| | Power Distance PD | -.028- | .031 | -.094- | -.904- | .368 |
| | Hierarchy | -.007- | .008 | -.096- | -.923- | .358 |
| a. Dependent Variable: project Delay | | | | | | |

Table 22: The Impact of Uncertainty Avoidance, Individualism and Power Distance on Project Management

| **Model Summary** | | | | |
|---|---|---|---|---|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .599[a] | .358 | .339 | 7.688 |

a. Predictors: (Constant), Power Distance, Individual Collectivism, Uncertainty Avoidance

**ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 3267.795 | 3 | 1089.265 | 18.428 | .000[b] |
| | Residual | 5851.875 | 99 | 59.110 | | |
| | Total | 9119.670 | 102 | | | |

a. Dependent Variable: Project Management

b. Predictors: (Constant), Power Distance, Individual Collectivism, Uncertainty Avoidance

**Coefficients**

| Model | | Un-standardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 87.249 | 4.423 | | 19.726 | .000 |
| | Uncertainty Avoidance | -.987 | .298 | -.326 | -3.310 | .001 |
| | Individual Collectivism | -.793 | .278 | -.274 | -2.850 | .005 |
| | Power Distance | -.693 | .319 | -.181 | -2.176 | .032 |

a. Dependent Variable: Project Management