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The Implementation of Quality Culture in Iran's Oil and Gas Industry

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Abstract

Iran is an energy superpower and the Petroleum industry in Iran plays an important part in it. Iran holds world's 4th largest crude oil and 1st gas reserves and is ranked as the second largest economy in the Middle East and North Africa in terms of GDP of about US\$463 billion. Quality plays a crucial role in this industry. Quality is an approved management concept in the twentieth first century and an intense catalyst for driving organisational competitiveness and effectiveness. The cornerstone of any type of quality enhancement includes cultivating a 'quality culture' in the target organisation and incorporating it all through the organisation. A recent study showed that 1129 accidents have been recorded in 5 studied years through monitoring of only 9 refineries in Iran which five times higher than 217 incidents in the UK's oil and gas industry in 2017 referring to energy voice report. The oil and gas industry is definitely a fundamental element of economic activity in every oil-producing country. Not only it is a key provider of employment opportunities, but it pulls together different sectors and stimulates value creation.

The aim of this study was to investigate challenges that the Iranian oil and gas industry face as they embrace the quality management guidelines and in creating the operational quality cultures. The study further explores the definitions of culture and how it is generated in the oil and gas organisations as well as the effectiveness of the quality culture. With the growth in the global energy industry is becomes critical to assess the challenges that affect Iran and the Middle East region to establish factors that might impede the growth. In this regard, the study sought to identify the drivers, barriers and success factors when implementing or adopting a quality culture, and the implications and impacts of Iran's culture on quality for organisations in the oil and gas industry.

To achieve this aim, the study uses a mixed research approach and adopting a multiple case study strategy by triangulating the data collected through semi-structured interviews, questionnaire survey and literature review. Data was collected from two Iranian oil and gas organisations and descriptive and inferential statistical analysis in addition to content analysis methods were used to analyse the data. To the best of the researcher's knowledge, this study will be the first of its kind to be undertaken in Iranian oil and gas oil industry. Therefore, the findings will enrich the existing literature on the quality culture implementation in the oil industry and fill the gaps in knowledge of studies on Iran.

The finding shows that the soft and hard cultural skills majorly determine the quality of the culture in the organisations in the oil and gas industry. Based on the findings of this study, there is an apt need for improvement in the leadership of the organisations. The nature of the leadership within an organisation is of particular importance in determining whether TQM is likely to be successful. The success of an organisation is highly dependent on the ability of the leaders and the people involved in the management of the organisation to direct the firm, regularly to generate or develop a cultural agenda that reflects their mission. The companies must add value to its products, services and its operations. Otherwise, the companies risk losing its esteemed customers and failing to gain new ones. Leaders must be strong and committed to successfully endure the quality programs needed in the organisation. Managers should play a significant role in improving the quality of the entire organisation.

The contribution to knowledge is highlighting the importance of critical factors of quality in the oil and gas sector. Moreover, numerous updates from earlier researches were provided through this study and in more significant manner new considerations were added. By focusing on the five main critical success factor areas, this study added school of thought related to people, resource, strategy, process and performance management and finally this research unified the perception of stakeholder orientation by adding the performance management fundamentals in relation to sustainability and corporate social responsibility. The study provided a deep insight into the complexity of implementing quality management for a quality culture, and the various challenges and obstacles highlighted through other studies. The outcome of this study provided an empirical evidence that contributes to the importance of total quality management practice as a strategic tool helping oil and gas companies to optimise performance and operate efficiently and effectively in the industry.

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Abbreviations

BPR	Business Process Reengineering
CAQDAS	Computer Assisted Qualitative Data Analysis
CI	Continuous Improvement
CVF	Competing Values Framework
DTI	Department of Trade and Industry
EFQM	European Foundation for Quality Management
IBM	International Business Machines
E&P	Exploration and Production
EPC	Engineering, Procurement, and Construction
GDP	Gross Domestic Product
HSEQ	Health, Safety, Environmental Protection, and Quality
IMI	Industrial Management Institution
IOCs	International Oil Companies
IPC	Iran Petroleum Contract
IT	Information Technology
NHS	National Health Service
NIOC	National Iranian Oil Company
O&G	Oil and Gas
OIEC	Oil Industries Engineering and Construction
OPEC	Organisation of the Petroleum Exporting Countries
QDA	Qualitative Data Analysis
SGS	Societs Generale de Surveillance
SMEs	Small and Medium-Sized Enterprises
SPSS	Statistical Package for the Social Science
TQ	Total Quality
TQM	Total Quality Management

Declaration

I declare that this copy of my thesis, which I have presented for consideration for my PhD degree by research:

Embodies the results of my own course of study and research Has been composed by myself

Has been seen by my supervisor before presentations.

Signed _____


Date 20/10/2020

CHAPTER ONE: INTRODUCTION

1.1 Background

Quality is considered as an accepted management notion in the 21st century and a very powerful facilitator for driving competition and efficacy in organisations (Butler, 2009). Recently, there has been a shift in research interests from the operational aspects of quality and thus the creation of organisational and local culture that motivate quality through steady adjustment and optimisation, towards the developing notion of organisational excellence that can be sustained. Quality is important in everyday operations and more than a process or a matrix; it is fundamentally a culture. Quality is a timeless concept; however, people can be sure that human endeavours have always taken the challenge of finding solutions to problems seriously and have developed innovative solutions that serve the purpose.

In the human societies, culture has been known as a social norm and behaviour as well as a central concept in anthropology including a variety of phenomena which is conducted via social learning. In any human society, cultural universals can be found which include expressive forms such as religion, music, art, ritual, and technologies like cooking, shelter, clothing, and use of tools. Culture has two aspects: immaterial and material. The principal of social organisation, philosophy, literature, mythology, and finally science is regarded as immaterial aspects of culture, while material aspect of culture covers the physical expression such as, art, technology, and architecture (Macionis & Gerber, 2011).

Within any social group or society, culture is described as a group of patterns of human activities. It is actually how we think, behave, and act based on shared values of our society. In addition, understanding symbols from language to hand gestures is also considered as part of culture. On a daily basis, we are continuously developing and defining culture all over the world.

Training Management Corporation (TMC) group characterises culture as a multifaceted form of ideas, feelings, and noticeable/ symbolic manifestations that will in general be normal, strengthened, and compensated by and within a group.

Culture comes into the picture when individuals unify and communicate, yet this happens subconsciously for the most part and based on their desires, experiences, and opinions about self, others, and the shared environment. The cultural orientations approach can be connected to every one of the six dimensions of human organisation and cooperation at which culture works.

To support business leaders, the six levels of culture model are helpful in terms of constant consciousness of their team’s diversity (“Six levels of culture,” 2014). Indeed, they help the leaders to develop a better communication and improve productivity among team members.

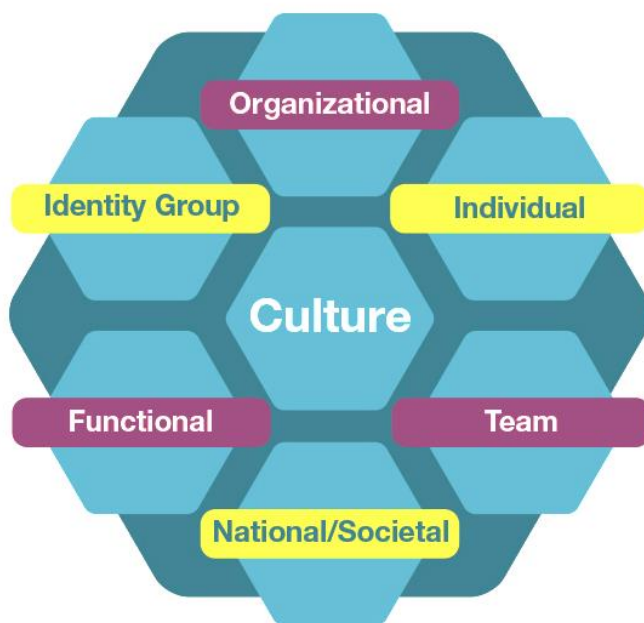


Figure1. 1: The Six Levels of Culture (Tarter, 2014)

Organisational Culture: This level concentrates on cultural dynamics in an organisation specifically international businesses and those involved in mergers and acquisitions.

Identity Group Culture: The level takes account of ethnicity, generation, gender, religious membership or affiliation to different social groups and is predominantly related to talent management concerns and workforce diversity.

Individual Culture: The building blocks of culture are present at this level including interpersonal and intrapersonal dynamics together. In order to take account of any concerns at other levels of culture effectively, it is essential to have a clear view of this dimension.

Functional Culture: Cross-functional efficacy is the matter of concern for this level which concentrates on the cultures formed by particular corporate units or sectors. For instance, cultural preferences of Sales Department and IT are different from those of the Finance Departments or Research and Development. Therefore, any functional department possesses distinct cultural preferences from other departments.

Team Culture: As soon as teams generate a distinctive culture, this level comes into the picture. It is of paramount significance to create effective teams in a matrixed and international organisation which calls for a deep knowledge of how to cooperate in a multifaceted and dynamic environment.

National/Societal Culture: An awareness of cultural patterns and dynamics based on nationality is what this level addresses. This level is mostly concerned with (a) cross-border division of labour (b) global outsourcing connections and (c) getting into a new business whether it is product, service, and/or talent.

Although a large number of leaders understand the notion of diversity in their team, they need to be reminded of the huge effect of this diversity on particular projects or the business in general. In line with this, the model (Six Levels of Culture) illustrated in Figure 1.1 can be beneficial to these leaders as it accentuates the different dimensions of culture and their effect on diverse groups (Navigating Culture, 2016).

Goetsch and Davis (2014) define quality as a dynamic state associated with products, techniques, services, settings, and individuals that meets customers' needs and desires and contributes to the creation of greater value. These researchers also suggest that by continuous development of the aforementioned elements, Total Quality (TQ) methods can be differentiated

to a great extent from conventional business methods. Total quality culture refers to the culture to which we belong, what we perform, and the manner by which we do it.

In order to comprehend the notion of Quality Culture, the concept of organisational culture must be made clear. Organisational culture is viewed as the combination of customs and behaviours from the past, common beliefs and values, shared mindsets, and typical symbols. This is why corporate culture ought to be implemented in organisational procedures targeting the management of strategic transformation. To define it, organisational culture refers to the manners by which things function routinely, what individuals presuppose about their organisational life and how these individuals anticipate to be treated. An organisational culture is comprised of a combination of business settings, cultural role models, organisational values and rites, customs and last but not least transmitters of culture. Superior quality is a sign of united organisational culture, in which individuals' activities, views, and experiences match with the requirements (Goetsch & Davis, 2014).

A quality culture (Goetsch & Davis, 2012) is seen as a system of organisational values that leads to an atmosphere contributing to the formation and constant development of quality. Viljoen and Waveren (2008) provide another definition of quality culture which includes practices of an organisation, fundamental values and viewpoints and can be characterised as the attention of all individuals and resources in a continuous search for better quality and service in every part of the firm. Thus, quality culture alludes to a particular segment of the organisational culture concerned with an organisation's initiatives in quality, while organisational culture encompasses the whole culture of a firm.

Oakland (2014) suggests that Total Quality Management (TQM) as an administration method started in the 1950's with a continuous progression until it became so widespread in the early 80's. TQM is regarded as a development in comparison with the conservative commercial methods which were concerned with direction and control. Managers mostly sit in their offices and do not take any responsibilities of the floor. Management only gives ideas, controls others, asks juniors how they perform, and takes updates. That is why the relationship between management and other personnel is very poor. As a recognised approach, TQM safeguards survival in the global competition (Oakland, 2014). The philosophy and accomplishments of a firm can be changed by renovating the management's undertakings. Oakland (2014) also suggests that TQM is a wide-ranging and systematised way to take care of organisational

management that makes an attempt to improve the quality of services and products through continuing development based on continuous feedback. The three words comprising TQM are analysed as:

- Total: creation of a whole;
- Quality: extent of superiority of a product or service; and
- Management: accomplishment, expertise, or technique of managing, monitoring, directing, and etc. (Oakland, 2014).

Therefore, TQM refers to the expertise of dealing with the total sum to obtain dominance. Oakland (2014) also characterises TQM as a viewpoint and a group of principles that represent the creation of a continuously developing organisation. Through utilisation of quantitative approaches and human resources, TQM makes an attempt to improve the entire process in a firm and to exceed customers' desires both at the time being and in the future. TQM integrates indispensable techniques of management, recent attempts for improvement, and specialised tools based on an organised methodology.

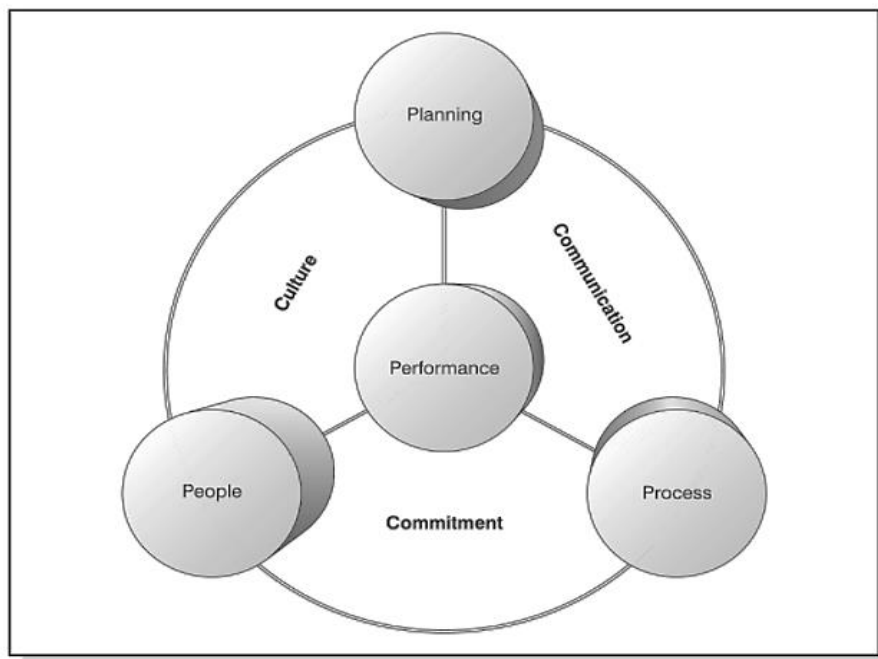


Figure1. 2: The Framework of Total Quality Management (Oakland, 2014)

TQM includes the procedures, guidelines, and policies of the firm or business. All these elements are reflected in a straightforward framework referred to as the TQM model (see Figure 1.2) and was broadly improved upon in the UK by means of ‘Quality Campaign’ and ‘Managing into the 1990s’ programmes performed by the Department of Trade and Industry (DTI). These programmes combined a number of constituents of quality for instance quality circles (teams), problem solving and statistical process control (tools) and quality systems, such as BS 5750 and ISO 9000. At this point, it was acknowledged by DTI that *culture* assumed a significant part in success or failure of the organisations based on their TQM tactics. Effective *communications*, evidently, were fundamental for the success of the team; however, the most substantial factor was regarded to be *commitment*, including the senior management and also every single person in the firm, principally those dealing with customers directly. Indeed, the essence of this TQM model includes customer/supplier or ‘quality chains’ and the procedures within them.

A large number of companies from different industries have indicated benefits of TQM such as Toyota, Ford, Xerox, Motorola, and ExxonMobil. AtlantiCare from healthcare sector (recruiting 5000 employees) increased its revenues from \$280m to \$650m after implementing the total quality management strategy. TQM is implemented in such top companies since it concentrates on the customer and thus develops or expands customer loyalty to the target organisation. Since it is cheaper to keep an old customer than to attract a new one, an increase in the profits will be the result. Indeed, customers feel appreciated when the organisation values their feedback and responds to their opinions which will in turn result in more valuation of the target organisation. According to the European CEO (2012), higher-quality products and services with fewer defects can be delivered with the help of TQM which will also decrease customer contacts for resolution.

The oil and gas (O&G) industry is definitely a fundamental element of economic activity in every oil-producing country. Not only is it a key provider of employment opportunities, but it pulls together different sectors and stimulates value creation. In the Middle East, the sustained development is clearly revealed by the quantity of substantial projects, both offshore and onshore, which are developing across the target area. This is further indicated by the developing quantity of indispensable infrastructure projects in progress and also those in the planning stages. In the Middle East, the oil and gas industry has turned into a more complex and multifaceted business in comparison with the past.

The present research study particularly investigates the challenges faced by the Iranian oil and gas industry in the procedure of employing quality management guidelines and in the creation of operational quality cultures that could provide organisational distinction and performance effects continuously. This study closely scrutinises how quality cultures are defined and generated in different oil and gas organisations and tries to assess the effectiveness of quality culture both internally and externally. In recent years, the global energy industry has experienced considerable growth; therefore, Iran and Middle East are no exceptions to this development.

1.2 Research Justification and Challenges in Oil and Gas Industry of Iran

The National Iranian Oil Company (NIOC) is ranked 1st for its oil and gas reservoirs. This company is also responsible for investigating, designing, and carrying out hundreds of projects each year. In order to run these projects, high levels of reliability and efficacy are required; otherwise, money, time and other resources will be inevitably lost on large scales (Brumberg & Ahram, 2007). Consequently, establishing an appropriate project management process in NIOC is vital. Additionally, the top management approves any new and appropriate solutions considering this issue. Nevertheless, inappropriate management has resulted in failure in timely attainment of objectives in many NIOC projects. In addition, no official, unified, or all-inclusive system exists for collecting and using learned lessons from former or similar present projects. A large number of project managers are not professionally familiar with the necessary tools, techniques, and methodologies. Therefore, tremendous amount of time and efforts are spent for solving problems that were already resolved in former projects, or could have been avoided through simply using previous lessons learned or existing technical tools. This in turn, results in more delays and cost overrun in the projects. A 1-month delay in a common oil production plant, for example, with a rate of 50,000 bpd, which is not a large one in NIOC, will result in about \$100 million loss. On the other hand, there are many problems and conflicts in the organisations which are faced while managing multiple projects at a same time (Kerzner, 2013). The situation exacerbates when experiences from previously failed projects are not gathered and applied as an official, integrated, and inclusive programme.

Understanding of necessary devices, strategies, and methods is a vital expertise for project managers; however, a large number of them are not aware of these elements professionally. Therefore, as Umble, Haft, and Umble (2003) suggest, time and energy are wasted to resolve issues previously solved in other tasks or those that could have been effortlessly avoided. As Moghaddasi (2013) clarifies, an ordinary and medium-sized oil production plant in NIOC (50,000 bpd) will result in \$100 million loss for a 30-day delay.

Based on Karimi and Kadir (2012), NIOC is considered as the largest organisation in the Middle East and one of the major members in the international oil family. Furthermore, NIOC plays a significant part in the economy of the country as a leading business firm. It has achieved great success in the quality management domain which has resulted in higher quality of productions and economy development in recent decades. A large number of the oil companies and petro-chemistry businesses have successfully obtained the ISO standard. In addition, the European Foundation for Quality Management (EFQM) has officially endorsed several companies. A number of committees have been founded to improve the TQM procedures with customers' satisfaction as the most significant objective. These activities have been performed for several decades while the major question to be answered is how the firm meets its objectives with pre-planned quality agendas. Oil and gas companies are committed to quality by using different quality management systems such as ISO 9001 by SGS (Société Générale de Surveillance (French for General Society of Surveillance) but quality is still far to become part of an organisational culture in this sector. Organisations in Iran legitimise themselves to quality, but the commitment is not a culture yet.

Unfortunately, no research has been performed in this domain to address the aforementioned issue. Therefore, the present research study takes significance in this regard as it tries to bridge this gap. Indeed, this can be considered a step forward to identify weaknesses and shortcomings of quality culture in this setting.

Based on Sharafedin's (2016) study, shortage of quality management in the oil and gas sector of Iran has led to fire incidents in large petrochemical plants or oil rig collapse into the sea. For instance, in 2016, a fire accident at Mobin Petrochemical refinery complex in Assaluyeh (Iran) left 4 workers injured along with \$66 Million damage to the plant. In February 2017, as reported by Mehr News Agency (2017), another gas pipeline incident in the south-eastern Sistan-Baluchistan Province killed two pipeline workers. During a kind of practice called pigging

(cleaning the pipelines) the incident happened while the exact time of the incident could not be identified. According to a local official in the oil and gas industry, no gas was in the pipeline or the incident could lead to more destruction and fatality. It was determined that an instrument known as pig (ball), which is utilised to clean the wastes accumulated in the pipes, ruptured the pipes and hit the operational staff. Another similar situation was reported in Bushehr Province, Iran, in August 2016. The gas flowing through the pipeline led to an explosion and a fireball that took about 5 hours to extinguish.

As a result, more explorations are required to view the effect of TQM on quality level, improvement of productions along with performance of oil industry particularly with regards to project and operational performances. On the contrary, handling several projects simultaneously poses major issues and various conflicts to organisations (Kerzner, 2013). Inspecting and scrutinising, the top management of NIOC has set about to find an administrative and organised approach to address the aforementioned issues.

Studies comparable to Iran in the oil and gas industry also indicate the necessity for more study to successfully and effectively implement a quality culture. According to Al-Damen (2017), in order to increase product quality and achieve customer satisfactions and loyalty, recently several organisations and corporations in Jourdan have implemented quality culture concepts. While Jourdan has begun to apply high-quality concepts of culture, but implementation of the plan has been weak, the influence of quality culture remains restricted, mainly within the oil and gas organisations. As Mokbel (2019) suggest, the Greek organisations have shown that soft and hard components of quality culture play a vital role in achieving customer satisfaction advantages from the quality management system both within, and outside of the organisations. A lack of clear implementation guidelines has impeded the efficient adoption and performance of quality culture, particularly for organisations in locations where conventional business practices are generally very different from those in which quality culture emerged and is widely followed.

In turkey according to Sadikoglu and Olcay (2014), there are Turkish Quality Association established in the Kocaeli-Gebze Industrial Zone. The members of the Quality Association were more likely to succeed in the implementation of quality culture and to be certified ISO. Turkish organisations utilise training to establish an outstanding quality culture. Any organization's environment is about treating workers as a valuable asset that strengthens their

commitment to the organisation, motivating and making them proud of their work, improving their working performance, increasing productivity and decreasing their desire to leave.

Ahmad and Elhuni (2014) stated that, several obstacles made it difficult for Libyan oil and gas organisations to build and maintain management and management systems. During Gaddafi's leadership, Libya's political status remained uncertain, and the country was subjected to international sanctions for a long period specially in oil and gas sector. This political volatility has a detrimental impact on the implementation in the country for quality culture initiatives. However, Libyan organisations are seen to be in the early phases of their journey for quality excellence, and a quality culture framework tailored to Libya's culture is necessary for quality culture implementation to be effective. Previous studies show that not just Iran, but also other oil and gas producing countries, require development in this area. In terms of quality culture initiatives and techniques, organisations in the Middle East area are still lagging behind.

1.3 Research Aims and Objectives

The present research study aims to propose a guideline for the effective implementation of a quality culture within the oil and gas industry in Iran. The following include the objectives of the study:

1. Determine quality and its management within oil and gas industry;
2. Identify the implications and impacts of Iran's culture on quality cultures for organisations in the oil and gas industry;
3. Identify the critical success factors of quality culture within the oil and gas industry in Iran;
4. Identify the drivers and barriers of culture development among oil and gas organisations; and
5. Develop a guideline to improve the role of quality culture in oil and gas companies.

1.4 Research Questions

The aforementioned objectives can be converted into a number of research questions which the study is designed to answer:

1. What is a quality culture?
2. What are the drivers, barriers, and success factors when implementing or adopting a quality culture?
3. What are the implications and impacts of Iran's culture on quality cultures for organisations in the oil and gas industry?

1.5 Research Methodology

The present research study makes an attempt to shed more light on quality culture by detecting the drivers, variables, and obstacles to its employment. To fully comprehend the application of quality culture, it is essential to measure 'what', 'why', and 'how'. Quantitative methods are required to determine the 'what' characteristics of investigation, while qualitative methods are the right tools to measure 'why' and 'how' aspects.

This investigation adopted a methodological triangulation approach which made use of both quantitative and qualitative methods through utilisation of secondary data, questionnaire survey, as well as case studies.

A pilot questionnaire was created based on the significant variables discovered from an extensive review of the literature and was administered to global quality practitioners and academics in order to validate, improve, and modify the target instrument. The feedback provided by these respondents led to the development of a standardised questionnaire in order to gather the target data from a large sample of organisations in Iran. This was performed to measure the respondents' awareness and levels of quality implementation along with their experience with respect to these components and essential elements in holistic implementation of quality culture.

The purpose behind utilisation of case studies in the present research was to offer a clear insight into the implementation of quality culture in the target organisations. Moreover, these case studies provided a bigger picture of the similarities and differences in implementation of quality culture among the target organisations.

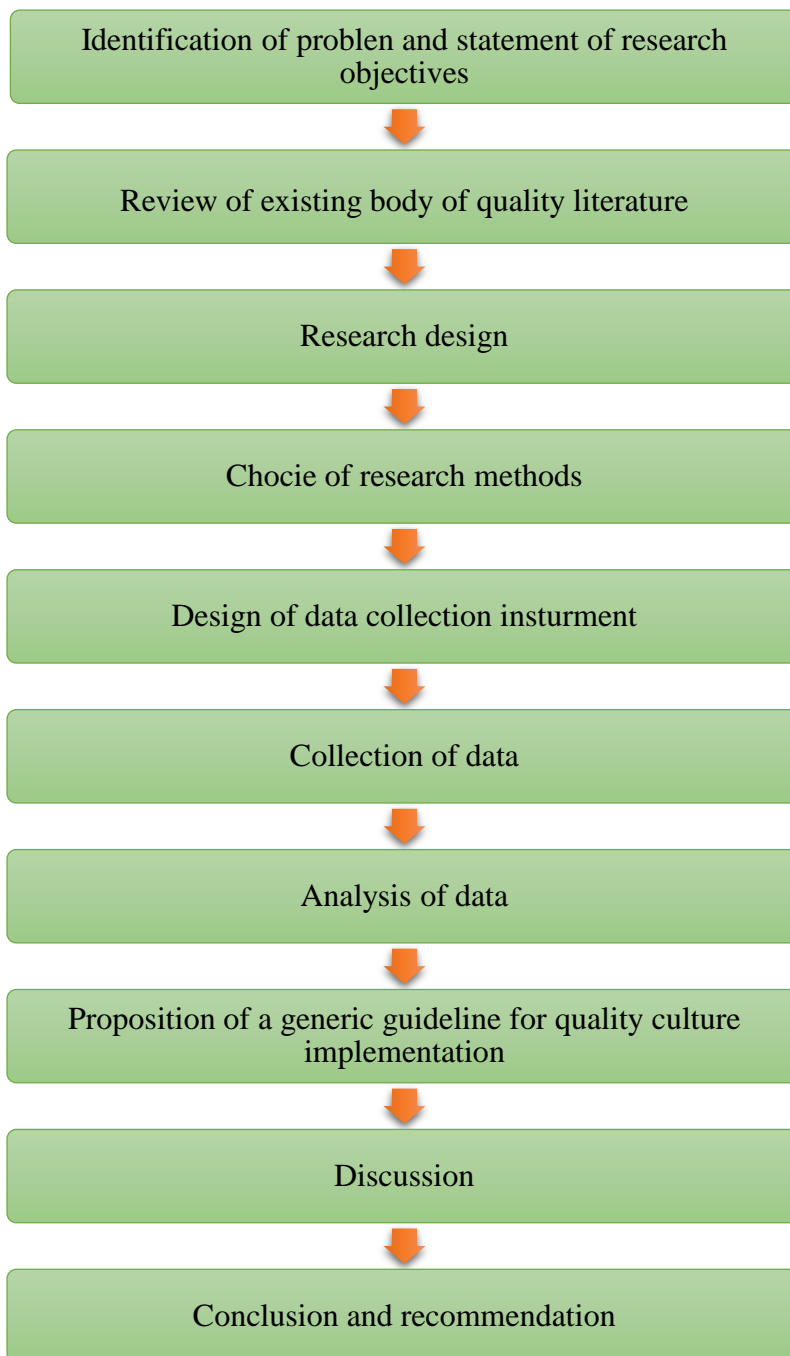


Figure1. 3: The Major Steps of the Research Process

Analysis of the obtained data was performed after the data collection phase. In light of the discussion and interpretation of the gathered information, a generic framework for the implementation of quality culture was proposed. In Figure 1.3, the major steps of the research process are outlined.

1.6 Research Scope and Limitation

This research will be conducted specifically on implementation of quality culture within oil and gas industry of Iran. Quality culture within oil and gas projects is the strategic focus of this research along with identifying the major success factors particularly in the Iranian oil and gas sector. Three sectors make up the oil and gas industry namely upstream, midstream, and downstream. The underground resource and its extraction as well as the instruments at the resource site are categorised under the upstream sector. The upstream and downstream sectors are connected by the midstream subdivision which is concerned with the transportation and storage of the target resource between the upstream production division and downstream processing and refining. If a system includes only two divisions, the midstream sector is considered as part of the downstream subdivision.

Nevertheless, this research will merely focus on a specific area in the upstream section of oil and gas industry in Iran. The reason for focusing on upstream sector is that most oil and gas projects in Iran are performed on upstream section and future plans which focus on increasing the volume of production are ambitious as they require a great amount of knowledge, technology, and international capital. The development of Azadegan, Yadavaran, Yaran, and South Pars oil layer as well as the Caspian Sea oil resource is the centre of attention in these plans. Signing new upstream contracts under IPC (Iran Petroleum Contract) is one of the goals of NIOC in 2019 which will expand Azadegan, Yadavaran, Yaran, and South Pars oil layer production. In 2017, less than 0.2 million b/d was extracted by Azadegan; nevertheless, an extraction of 0.75 b/d is anticipated from both North and South Azadegan oil layers.

According to Overview of Iran (2018), the fourth quarter of 2017 experienced 0.1 million b/d production of crude oil in Yadaravan oil layer, a number which is anticipated to increase to more than 0.3 million b/d in the near future.

Based on these fundamental criteria, this research will eventually develop a framework for oil and gas industry in Iran that is capable of reducing challenges and helping to improve organisational performance.

Based on the point of view of the oil and gas industry and also on what Sobotzki and Sharma (2016) state, if international sanctions are lifted on Iran, IOCs (International Oil Companies) will experience a sharp and unprecedented decrease in their profits. It is also possible for the prices to rebound; however, this probably will not be the case based on what drivers of demand and supply designate. The Iranian government seems concerned and plans to renovate its old oil and gas infrastructures to expand production and earn more capital. All these plans and predications have been under influence of new American withdrawal from the deal which will limit the accessibility of data collection.

As Shields and Rangarajan (2013) argue, an exploratory research study is done in order to address a problem that has not been investigated deeply. Indeed, this improves the final research design which intends to determine priorities and provide working definitions. Implementing exploratory research study assists in selecting the most appropriate research design, the best data gathering method, as well as selection of target subjects. This research type tries to discuss final conclusions with extreme caution and also makes use of a number of techniques such as:

- formal qualitative research performed through case studies or pilot studies, projective methods, in-depth interviews, and focus groups;
- informal qualitative research studies conducted through discussions with managers, clients, and staff; and
- secondary research studies such as reviewing existing related literature and/or data

Similar to other research, this exploratory study is expected to suffer from a number of limitations. In order to widen the empirical examination and the data collection, access to information resources is required which is difficult in the context of the present research - Iran. In addition, the major limitation is the generalisability of the outcomes as only two companies could be considered regarding the time constraints.

1.7 Contribution to Knowledge

The present research study is an attempt to contribute to the existing body of literature by providing an inclusive picture of quality culture to top level management in oil and gas sector. The target managers will also gain the ability to recognise the role of various quality culture

elements in accomplishing oil and gas projects. Accordingly, a broader and multi-dimensional picture of quality culture in project management can be shaped which will improve quality culture performance and effectiveness of the target project managers. This can indeed provide the target business with the required boost.

This research looks at the different stages of oil and gas projects with a specific focus on quality culture. The main goals and objectives of this research are identifying the best way of selecting, performing, and implementing quality culture in the aforementioned industry in Iran in order for this industry to be more profitable and less costly.

The present research study contributes to knowledge in the following ways:

- It analyses the literature on international quality cultures critically.
- It carefully analyses the literature on quality cultures and in particular focuses on theoretical contributions through empirical research of organisations in the oil and gas sector in Iran.
- It extracts generic lists of critical factors that are identified as significantly impacting the successful implementation of quality in oil and gas projects.
- It explores the relevance and applicability of generic critical success factors with specific relevance to the oil and gas industry in Iran.
- It documents how various drivers and barriers for implementing a quality culture are being implemented in Iran's oil and gas industry through a case study approach.
- It develops a guideline for the adoption of a quality culture that is suitable for the oil and gas industry in Iran.

Iranian project managers in the oil and gas sector can benefit from the results of the present research as it makes them aware of the required activities for enhanced teamwork. Indeed, this study will bring about superior team performance as well as individual learning by understanding the impact of quality culture within organisations.

1.8 Ethical Considerations

All parts of the present research study adhere to the rules and regulations established by the University of Salford as Ethics Guidelines. The gathered data is solely used for research purposes and will not be disclosed to the public. Following the measures specified in the process of ethical approval, the identity and confidentiality of the research participants will be preserved.

1.9 Outline of the Thesis

The present thesis is divided into 7 chapters as indicated in Figure 1.4. A brief summary is provided in the following part outlining the content of each chapter.

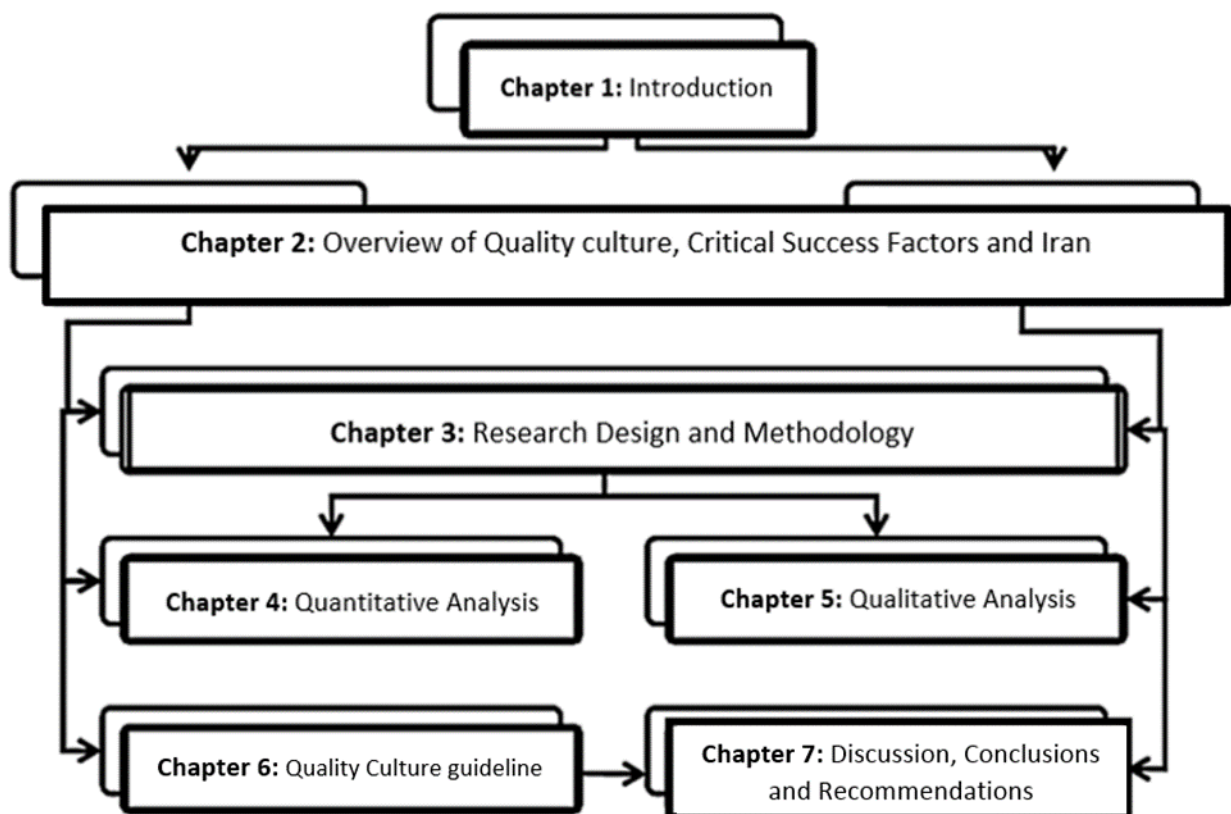


Figure1. 4: Outline of the Thesis

Chapter One offers an overview of the research, the justification for performing the study, research aims and objectives, and provides background to the succeeding chapters in the thesis.

Chapter Two is designated to a review of literature taken from a number of different sources. This chapter has two part of literature review, the first part is concerned with a generic review of the quality literature, implementation of quality, as well as the organisational culture. Additionally, this chapter encompasses an overview of the Iranian oil and gas industry. The second part of this chapter includes the literature review with specific details of implementation of quality. More specifically, critical success factors (CSFs) are identified and discussed in detail.

Chapter Three provides a detailed discussion of the research design and also the research methodology. In addition, the chapter discusses the issues the researcher had to deal with. The justifications for selecting specific data collection methods are discussed and the exact data collection instruments are discussed and justified.

Chapter Four is the first chapter to discuss the findings of the research. This chapter discusses and analyses the survey results obtained from the participating organisations. The quantitative analysis consists of the initial descriptive statistics which look at the frequencies, means and percentages, and also the demographics of the respondents. The reliability of the data is also tested to ensure the data is fit for use.

Chapter Five: is the second chapter to discuss the findings form semi structured interviews. This chapter will provide a qualitative perspective of data collected by means of interviews and case studies and the data analysed qualitatively employing content and thematic analysis.

Chapter Six: at this chapter the researcher develops a guideline for implementation of the quality culture for Iranian oil and gas organisations.

Chapter Seven: this chapter provides an in-depth discussion of the results of the previous chapters and, using a triangulation approach and also this chapter is concerned with a discussion of the conclusions drawn from both quantitative and qualitative studies as well as, contributions of the research to the literature are discussed. The chapter comes to an end with suggestions made for performing further research in the future.

CHAPTER TWO: QUALITY CULTURE AND THE IRANIAN OIL AND GAS INDUSTRY

2.1 Quality

As Spacey (2017) suggests, quality is the merit of something. This includes tangible properties such as durability and intangible attributes such as aesthetics. The pursuit of quality is a fundamental business activity that gives value to products in the eyes of customers. Quality is concerned with products, services, experiences, designs, information, and the setting. Common elements of quality are: durability, ease of use, reliability, resilience, reusability, and etc. Quality can fail due to factors such as design, process controls, and measuring the wrong thing.

The pragmatic interpretation of quality in the domain of business conveys the idea of superiority and being appropriate for the anticipated purpose along with satisfying the target customers. According to Nanda (2016), the concept of quality is subjective and perceptual; thus, it might be perceived in a different manner by each individual. The quality of a product or service in comparison with other competitors might be the centre of attention for the customers. According to Okerekehe (2014) “producers might measure the conformance quality or degree to which the product/service was produced correctly. Support personnel may measure quality in the degree that a product is reliable, maintainable or sustainable” (p. 3885).

Based on Hofstede (1991), “culture is the collective programming of the mind which distinguishes the members of one group or category of people from another” (p. 5). It is not inherited; it is learned. It originates from each person’s social environment and has nothing to do with genetics. Culture is actually different from the human nature and also each person’s individual personality (see Figure 2.1), though it is not apparent where to exactly mark the

borders between the human nature and culture and also between personality and culture. This has indeed been a matter of debate among researchers in the social sciences.

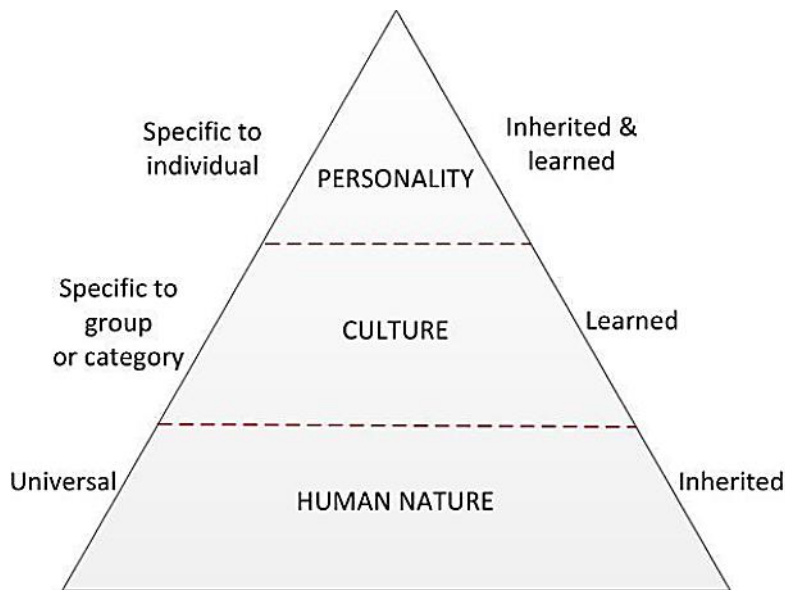


Figure 2. 1: Three Levels of Uniqueness in Human Mental Programming (Hofstede, 1991, p. 6)

Human nature is the thing that every single individual, from the Russian professor to the Australian native, share; it characterises the worldwide level in someone’s mental programming. Genes and inheritance have a part to play; regarding the computer jargon, it is considered as the ‘operating system’ which controls an individual’s physical and mental performance. The capacity of human beings to feel fear, outrage, love, delight, grief, the necessity to connect with others, to play and exercise, the capability to monitor the surrounding and discuss it with other people all have a place in this level of mental programming (Abramson & Bronstein, 2004). Nevertheless, how an individual expresses these feelings, how one communicates fear, delight, perceptions, etc. is defined by culture. Furthermore, in light of the fact that specific features of human nature are similar to those of animals to some extent, they cannot be considered as ‘human’ as the word suggests.

Alternatively, an individual’s *personality* is an exclusive and particular group of mental programmes which are not shared with other humans. These are attributes which are acquired by an individual’s exclusive genes partially and also learned halfway (Reagan, 2004). ‘Learned’ means: reformed by the impact of aggregate programming (culture) *and also* exceptional individual experiences.

Cultural attributes have regularly been connected to inheritance, since philosophers and different researchers in the past were not able to clarify striking steadiness of dissimilarities in cultural patterns among groups of humans (Hofstede, 1991). They undervalued the effect of learning from the preceding generation and teaching the learned material to the new generation. As Hofstede (1991) puts it, the part of heredity is overstated in the pseudo-theories connected to race, which are blameable, in addition to other factors, for the Holocaust planned by the Nazis within World War II. Racial and ethnic conflicts are frequently supported by unwarranted contentions of social predominance of some human races over the others.

Quality culture is an important concept in managing oil and gas projects and has a considerable impact on every successful project and thus will be discussed in the next sections.

2.2 Hard and Soft Quality Culture

Throughout the literature, it has been suggested that a mixture of ‘soft’ and ‘hard’ quality components affects implementation of TQM. According to Kaynak (2003), soft quality is not physical and thus not easily quantifiable; it is chiefly connected to employee engagement. On the other hand, hard quality includes frameworks, devices, and procedures that affect both internal efficacy (e.g., quality control systems, quality expenses, and statistical process control) and external efficacy (e.g., reviews on customer satisfaction and benchmarking).

Categorising elements along the soft-hard criteria has been reported as difficult to accomplish (Black & Porter, 1996). However, Wilkinson (1992) accentuates the significance of this categorisation system making reference to Co-operative Bank Plc. and Black and Decker. Lau and Idris (2011) performed an investigation on several Malaysian industries with the specific target to detect soft components which might affect TQM tangible impacts. These soft components included culture, continuity of occupation, collaboration, instruction and training, leadership of top managers for professional development, employee involvement and last but not least customer satisfaction. These researchers discovered a connection between the target soft components and TQM tangible impacts. They also uncovered a group of the soft components that significantly affect tangible TQM.

The present chapter discusses the soft-quality components based on three major constructs: policy, leadership, and management of internal stakeholders. These soft components allude to elements that influence the development of the target organisation such as extensive support and participation so as to achieve the quality goals of the business. As Wilkinson (1992) suggests, these components are best characterised as internal marketing factors which comprise of senior administrators' dedication and participation, extensive policy advancement and efficient arrangement of objectives, complete staff commitment to quality objectives of the organisation, strengthening, efficient correspondence, teamwork spirit, framework for acknowledgment of and gratitude for staff quality endeavours, and instruction and training.

It is established that soft quality components must be given primary concern and attended to as long-term issues. As Wilkinson (1992) suggests, these elements are vital to the success of the TQM plan; thus, ignoring them can result in the failure of the application plan. As mentioned before, the frameworks and tools that assist in achieving the project goals are referred to as hard quality components. These elements include benchmarking, performance measurement, factual administration, process supervision, quality control tools, quality cost, supplier supervision, self-evaluation, and customer management.

In sum, the TQM model (Oakland, 2000) was proposed on the basis of both soft and hard quality components. As Pegels (1993) puts it, soft quality elements are likely to attain higher rates concerning their vitality and prominence in the TQM deployment procedure while hard quality elements are typically viewed as tactics instead of strategies.

2.3 Quality Culture

Owners of organisations or managers responsible for directing the firm regularly generate or develop a cultural agenda for the organisation whose logic reflects their own. The success or failure of the organisation is highly dependent on the relevance of these attitudes to the current prospects and limitations faced by the organisation (Bass & Avolio, 1993; Dellana & Hauser, 1999). Thus, the culture or philosophy of the firm is the fundamental source of business vision and value, and calls for the policies, processes, and practices of the organisation to be based on these attitudes (Batten, 1994; Dellana & Hauser, 1999).

A border which is not vividly marked is the one between TQM as a management programme and TQM as an organisational culture. At the present time, the notion of organisational culture is the topic of substantial interest on quality management related literature. Since the beginning of the 1990's, the relationship and effect of culture on quality management has been discussed. The organisational culture and total quality management are interconnected (Lukášová, Nový et al. 2004 as cited in Jancikova & Brychta, 2009). A successfully applied quality management system has an effect in the content of organisational culture; however, the quality system execution and its functionality are under the influence of organisational culture (ibid). TQM is not considered to be purely an employment of tools, techniques, or methods but a multifaceted cultural transformation from the old-fashioned management to modern management concentrating on total quality establishment (ibid). Employment of TQM needs modifications to frameworks, shared assumptions, and understanding that organisations have developed within their environment through interaction. The employee's values and beliefs about the work will be influenced by these changes (Ngowi, 2000, as cited in Irani, Beskese, & Love, 2004). Most organisations recognised the significance of diagnosing organisational culture prior to employment of TQM so that they may disclose usual content components of organisational culture to either constrain or support cultural change (Maull, Brown, & Cliffe, 2001).

Individual features or constituents are a vital part of many TQM models; thus, these features can play a major role in the culture or climate of the target organisation. As Flood (1993) and Zeitz, Johannesson, and Ritchie (1997) suggest, culture transformation is the key objective of TQM and thus TQM practices are exclusive instruments for this change. The solution to this riddle relies on what is implied by organisational culture. Indeed, culture comprises of the views, values, and major suppositions that support patterns of behaviour and items. It is presumed that culture is different from TQM projects and practices despite the fact that the two frequently cover by and by in practice. TQM practices are official, methodological, and behavioural, while culture points to dispositions, solidly held views, and situational (and frequently not formally endorsed) communications. As a major functional difference between the two notions, cultural aspects can be promptly perceived without a TQM programme (Montes, Jover, & Fernandez, 2003).

Distinctive aspects of organisational culture have not received enough attention from researchers. Reichers and Schneider (1990) and Zeitz et al. (1997) contend that anthropological

underlying foundations of cultural studies are where this hatred for such broad dimensions stems from. Thus, these studies prefer to lean towards idiographic (emic) approaches to nomothetic (etic), on which Denison (1996) and Zeitz et al. (1997) expand. Supporters of the idiographic convention utilise comprehensive observation and investigation to catch the exclusive rationale or gestalt of every organisation's culture. They see nomothetic approaches, utilising ordinal aspects collectively pertinent to all cultures, as liable to negligence or even contorting vital cultural elements. Approving Reichers and Schneider (1990), Denison (1996) and Zeitz et al. (1997) state that culture can be analysed utilising such nomothetic methods. Actually, a number of authors propose quantifiable aspects of culture in light of theory. O'Reilly, Chatman, and Caldwell (1991) and Zeitz et al. (1997) performed a questionnaire assessment of culture and uncovered seven aspects originated from factor analysis: innovation, stability, respect for people, outcome orientation, attention to detail, team orientation, and aggressiveness. Moreover, organisational climate shares a remarkable similarity with culture (Denison, 1996; Reichers & Schneider, 1990; Zeitz et al., 1997), and has frequently been measured quantitatively.

2.3.1 Quality Culture: Organisational Climate

The manner of internal working of the organisation is a vital element which has the ability to control the accessible intellectual capital. Wallace, Hunt, and Richards (1999) analysed the connection between organisational culture, organisational climate, and managerial values considering the Victorian police sector in Australia. The results demonstrated a direct association between particular organisational climate factors and several managerial values. Further connections between specific elements of culture, climate, and managerial values were revealed as well. They started with a thorough review of the literature on culture and management, and indicated similarities with previous research and literature on organisational culture, climate, and managerial values of an expansive Australian public sector agency. Hofstede's (1984) instrument was utilised to assess the comparative strength of four dimensions of culture in this association.

Organisational climate and its impact on corporate performance have attracted the attention of scholars such as Kangis, Gordon, and Williams (2000) who investigated the connection between the two constructs. They made an attempt to contribute to the literature in this domain

by exploring the probable connections between above-average and below-average performing organisations and their climate status. The study made use of a questionnaire administered to electronic industry manufacturers experiencing growth and also sunset hosiery and knitwear sector. In addition, for each of the sectors under investigation, sub-samples performing above and below average were also selected. Results of data analysis indicated a positive relationship between the two variables of interest. Organisations that reported above-average performance attached greater values to organisational climate in comparison with below-average performers.

Lee and Howard (1994) were interested to evaluate the quality level of the service sector by administering an internal climate questionnaire. They proposed that by investigating a cross-section of the target organisation, the internal climate can be identified. The study focused on middle managers and personnel of 2 public mental health and mental retardation organisations. In comparison with line workers, middle managers were initially assumed to resist the procedure of quality improvement. The study made an attempt to test two hypotheses concerning internal climate while it targeted various levels of staff. Results of data analysis offered implications to top managers of both organisations to assist implementation of TQM procedures.

2.3.2 Quality Culture: Continuous Improvement

Lately, the notion of Continuous Improvement (CI) has been underlined by an expanding number of organisations. CI includes activities that lead to organisational objectives through the constant enhancement of work procedures, work environments, and work interactions. As an essential part of CI, small group activities and involvement of all personnel can be suggested. According to Berling (2000), most definitions of CI entail the utilisation of particular techniques/devices and established methodology for using them.

Conducting the improvement job is regularly the duty of groups or project teams (Berling, 2000; Cole, 1989). Problem solving and detecting potential techniques for idea development have received most of the attention. These potential developments are not always noticeable when someone has performed the same job for some time. In Japanese administration practices, particularly the Toyota Production System (e.g., Ohno, 1988), organised techniques are accessible to help workers to view the condition from various perspectives. The major purposes

behind taking part in enhancements incorporate both enhancing operational performance indicators like productivity, quality, cost and transportation, and hierarchical abilities such as employee commitment, skill and cooperation (Berling, 2000).

In order to attain excellence, commitment to continuing development is essential (Scheuing, 1999). Indeed, this objective can be attained through implementation of quality improvement within the target organisation and every single task which will in turn be exhibited in core and shared beliefs in customer satisfaction and loyalty (Huq & Martin, 2000).

Every organisation possesses an exclusive governing culture along with dominant subcultures that are the basis for all the activities, performances, and connections in that organisation. Schein (1992) and Huq and Martin (2000) have classified culture of organisations into three major levels as objects, beliefs and values, and underlying assumptions. The present study adopts the third level of classification as it is the major definition of culture related to this research. The underlying assumptions held by staff regarding acceptance of CI initiatives will lead to effective or ineffective implementation of TQM (Huq & Martin, 2000; Thompson & Luthans, 1990).

Commitment to sustained development is regarded as the fundamental axiom of CI. Continuing development is definitely dependent on sense of responsibility and involvement of the whole workforce. For instance, remaining competitive in healthcare business requires providing superior care along with more cooperation and commitment while costs are kept down. According to Huq and Martin (2000), this axiom suggests unlimited improvement of all procedures and outputs. Moreover, they assert that the cultural values of staff regarding CI heighten equality and cooperation, continuing development, devotion to quality, and eventually customer satisfaction. Application of culture change within an organisation presents novel forms of teamwork along with superior practice frameworks. Based on Sommerville, Stocks, and Robertson (1999), teamwork provides the opportunity for organisations to cooperate, share experiences and remain competitive while substantial TQM gains can be attained.

As the shared programming of the mind, Hofstede (2010) contends that culture can differentiate among human subgroups. Within an organisation, a cultural change is required for full employment of a TQM attitude. Besides, modification in culture and attitude requires a change in the behaviour of the workforce. Individual changes are connected to and influenced by organisational change. Since organisations are considered as cultures, cultural change is

synonymous to organisational change (Bate, 1994; Sommerville et al., 1999). The prime target of TQM is to make modifications to culture of an organisation in order to prevent failures and ensure success on the first try. Enhancement of the quality culture, encouragement of staff, and improvement of procedures turn quality into an endless competition (Richbell & Ratsiatou, 1999).

In order to change the vision of an organisation regarding total quality to reality, a comprehensive modification to the dominant culture and philosophy within that organisation is required. This modification needs to be enduring, regular, and noticeable affecting all the segments in the target organisation. Nevertheless, the bias towards old behaviours and attitudes, which is observed in every organisation, is more perceptible in larger organisations due to their perception of success. Multinational organisations are typical examples of this case as they have experienced remarkable achievements in the market. Issues are raised while implementing change within organisations. For instance, application of TQM may be difficult as a result of the ingrained attitudes of the personnel regarding the business nature and their unwillingness to conform to new philosophies. A more serious issue might be that managers need to acknowledge their personnel require continuing development to enhance their skills and also develop the knowledge base of the organisation (Richbell & Ratsiatou, 1999).

Nevertheless, the greatest challenge for managers is how to maintain the required development to remain competitive in the market. They eventually realise the value of every single meeting with staff as an opportunity to share knowledge and underline the significance of implementing CI.

2.3.3 Quality Culture: Innovation Culture

Innovation is fundamental to the idea of constant change, and to the suggestion that visionary initiative empowers the synchronous production of a cooperative and learning association (Deming, 1986). As Deming (1986) suggests, organisational learning produces and includes two sorts of knowledge – the process task knowledge similar to the ‘science of the process’, thorough which the comprehension of technology, human and task requirement as elucidated with exact operational definitions that guide action and the estimation of quality.

Caraballo and McLaughlin (2012), and Zhuang, Williamson, and Carter (1999) believe that skills required for innovation are extremely significant in order to survive in this ever-changing world. These researchers investigated managers' comprehension of innovation issues and their capability to put this knowledge into practice. They discovered that a large number of organisations understand the significance of innovation and are willing to encourage their managers to participate in innovative projects; nevertheless, several organisations have been unable to construct an innovative culture and efficient policies to support innovation within the wider setting of their firms. These researchers also voiced concerns about little understanding of most common innovation practices within the organisations and the fact that the workforce does not appreciate the significance of creativity training delivered in their organisations. This will in turn lead to the failure of such training programmes.

Macedo-Soares and Lucas (1996) noticed that TQM practices implemented by pioneering organisations have been used as yardsticks by other companies in an attempt to discover effective competitive innovations. They referred to social and cultural issues as major sources of difficulties encountered in effective implementation of these practices in Brazil. These researchers stressed the significance of developing innovative practices and cultural collaborations with foreign organisations in order to overcome a number of the reported difficulties.

In line with the rising pressure and fragmentation in the market, McAdam, Stevenson, and Armstrong (2000) recommend that small and medium-sized enterprises (SMEs) need to build an innovative culture well beyond the philosophy of change put forward by CI. McAdam et al. performed a literature survey as well as a research survey on 15 SMEs to discover whether these enterprises could exceed CI and attain efficient innovation in their businesses. Results of the data analysis indicated that SMEs demonstrated a number of CI and innovation features; however, not all enterprises had adopted a culture of CI. Those SMEs who had embraced a CI culture realised the fact that they could offer a firm foundation on which to construct an efficient business innovation culture. Indeed, these enterprises were reported to implement various constituents of innovation more willingly in comparison with SMEs with no CI culture.

2.4 The Central Role of Culture and Its Impact on Quality

An essential factor identified in the literature includes the failure of a large number of organisations to implement a TQM which is appropriate to the target cultural context. Indeed, this is a controversial issue in the TQM literature. Furthermore, it has been suggested that ‘soft’ aspects of culture and behaviour in TQM are as significant as ‘hard’ facets such as specific tools (e.g., Dale & Cooper, 1992; Katz, 1993).

Specifically, a number of authors (e.g., Mak, 1999) have contended that it is because of an absence of regard for cultural factors that TQM has been moderately unsuccessful in Western societies in comparison with Japan. Other specialists, who have carried out research in various countries, noticed the need to adjust TQM to local cultures as well (e.g., Manz & Stewart, 1997), and stressed the propensity for TQM initiatives to fail if ‘soft’ or socio-cultural factors are not considered (e.g., Stone, 1996).

Adam et al. (1997), in their empirical investigation, proved that although universal success factors lead to the quality enhancement at national level, local factors can also have significant impacts. Nwabueze and Kanji (1997) performed a cross-analysis of the application of TQM in the UK National Health Service (NHS) and came to the conclusion that the failure of such programme was attributed to the absence of a context-specific framework for TQM application.

Culture can affect people’s point of view as well as their performance indirectly. The social and cultural setting of an organisation affects the organisational culture and performance of the firm (Siakas, Georgiadou, & Balstrup, 2010). As Tata and Prasad (1998) note, national culture is an additional driving force that could have an impact on the implementation of TQM practices as well. In a similar vein, Noronha (2002, 2003) suggested that TQM programmes are required to be culture-specific and the successful implementation of TQM needs an acknowledgement of basic national culture elements. As Adebajo and Kehoe (1998) suggest, cultural transformation is understood as an essential part of total quality enhancement.

The notion of culture based on its influence on organisations and TQM implementation has been categorised into two major groups: national culture and organisational culture. These two categories of culture indicate generally overlapping meanings but are not necessarily the same.

2.4.1 National Culture

A basic definition of culture refers to a shared mind programming which differentiates among various subgroups of people and also as a group of beliefs, perspectives, knowledge, and traditions people experience throughout their social conditioning (Herguner & Reeves, 2000; Hofstede, 1984). The fact accentuated in this definition explains why people grown up in different settings possess different cultures. These distinctions are suggested to be associated with self-perception, relationship with the society, masculinity or femininity conception of individuals, and conflict management such as anger management and expression of emotions. In line with these ideas, Mak (1999) states that national cultures are distinguished based on how individuals see the world, manage their uncertainty, integrate into groups, process information, understand the notion of time, and establish connections with other people.

2.4.2 Types of National Cultures

Hofstede (1980, 1991) as well as other researchers (e.g., Lagrosen, 2004) have put forward typologies concerning national culture perspectives reflected in empirical investigations. These typologies have made an attempt to form organisational cultures and structures and thus affect TQM. The typology of national cultures proposed by Hofstede (1980, 1991) has been used to a great extent by researchers (e.g., Chow, Shields, & Wu, 1999) in the domain of TQM in order to scrutinise the influence of national culture on behaviours and practices of organisations in various countries. Hofstede (1980) administered an international questionnaire of International Business Machines (IBM) to employees from more than seventy countries over a period of six years to investigate the association between national and organisational cultures. With regards to the national culture, he initially detected 4 major dimensions which were reported to affect organisational behaviour.

Subsequently, two other dimensions were identified. While these six dimensions are represented in a dichotomous manner, it is highlighted that they are continuums (Hofstede, 1991) and each country is located at a different place in this continuum based on its dominant culture as referred to as part of the dimensions. In Hofstede (2011), these six

dimensions are referred to as: “power distance, uncertainty avoidance, individualism/collectivism, masculinity/femininity, long/short term orientation, and indulgence/restraint” (para. 1). Table 2.1 describes each dimension briefly.

The model proposed by Hofstede encompasses many aspects of the national culture; nevertheless, it has been strongly criticised for its limitations and validity issues from practical, theoretical, and statistical point of views.

For instance, this model includes only six dimensions; thus, many other aspects of culture are ignored. In addition, the nature of these six dimensions and their structure has not received the due attention it deserves. As Moulettes (2007) notes, the survey is not authoritative due to the inconsistency in the sampling procedure; only engineering and sales personnel with a small number of women and even fewer social minorities were included in the interview. Thus, even if such national factors as wealth, density and growth, latitude, and population size were taken into account, only male personnel in the sales and engineering departments of one of the most famous companies in the world working on a pioneering multinational project are not the best sample to represent the target population.

Schwartz (1994) has also proposed a national culture taxonomy in which he has identified ten dimensions based on the significance attached to “power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition conformity, and security” (p. 22). Different countries are placed within this taxonomy according to their level of opposition vs. willingness to change, and “self-enhancement and self-transcendence” (Schwartz, 1994, p. 25).

Table 2. 1: The Six Dimensions of Culture (Hofstede, 2011)

Hofstede's Six Dimensions of Culture	
Power Distance Index (high versus low)	<p>This refers to the degree of inequality that exists and is accepted between people with and without power.</p> <p>A high PDI score indicates that a society accepts an unequal, hierarchical distribution of power, and that people understand "their place" in the system. A low PDI score means that power is shared and is widely dispersed, and that society members do not accept situations where power is distributed unequally.</p>
Individualism Versus Collectivism	<p>This refers to the strength of the ties that people have to others within their community.</p> <p>A high IDV score indicates weak interpersonal connection among those who are not part of a core "family." Here, people take less responsibility for others' actions and outcomes.</p> <p>In a collectivist society, however, people are supposed to be loyal to the group to which they belong, and, in exchange, the group will defend their interests.</p>
Masculinity Versus Femininity	<p>This refers to the distribution of roles between men and women. In masculine societies, the roles of men and women overlap less, and men are expected to behave assertively. Demonstrating your success, and being strong and fast, are seen as positive characteristics.</p> <p>In feminine societies, however, there is a great deal of overlap between male and female roles, and modesty is perceived as a virtue. Greater importance is placed on good relationships with your direct supervisors, or working with people who cooperate well with one another.</p>
Uncertainty Avoidance Index (high versus low)	<p>This dimension describes how well people can cope with anxiety.</p> <p>In societies that score highly for Uncertainty Avoidance, people attempt to make life as predictable and controllable as possible. If they find that they can't control their own lives, they may be tempted to stop trying. People in low UAI-scoring countries are more relaxed, open or inclusive.</p>
Long- Versus Short-Term Orientation	<p>This dimension was originally described as "Pragmatic Versus Normative (PRA)." It refers to the time horizon people in a society display. Countries with a long-term orientation tend to be pragmatic, modest, and thrifter. In short-term oriented countries, people tend to place more emphasis on <u>principles, consistency and truth, and are typically religious and nationalistic.</u></p>
Indulgence Versus Restraint	<p>Hofstede's sixth dimension, discovered and described together with Michael Minkov, is also relatively new, and is therefore accompanied by less data.</p> <p>Countries with a high IVR score allow or encourage relatively free gratification of people's own drives and emotions, such as enjoying life and having fun. In a society with a low IVR score, there is more emphasis on suppressing gratification and more regulation of people's conduct and behavior, and there are stricter social norms.</p>

In a similar vein, Trompenaars (1993) tried to classify cultural behaviour into five major groups: universalism vs. particularism, individualism vs. collectivism, neutral vs. emotional, specific vs. diffuse, and achievement vs. ascription. Attitudes regarding time and environment were also recognised as two additional significant dimensions of culture in this classification.

The business structures as well as the internal cultures of organisations are shaped by different national cultures proposed by theoreticians such as Hofstede (1980, 1991). Several scholars have employed these taxonomies of national culture to make a comparison between cultural features of Western (e.g., The US and UK) and Eastern societies (e.g., China and Japan) in order to clarify the dissimilarities observed between these societies with regards to business practice and organisational behaviour. For instance, it came to Pun's (2001) attention that Chinese culture is the major reason why many organisations in this society indicate huge power distance and paternalistic management styles as well as hierarchical structures and centralised power with a large number of firms being run by family members. As the result of different cultural features, Pun (2001) refers to the fact that Chinese managers show more flexibility when implementing specific organisational or management philosophies while Western managers take a different path and create a model beforehand and stick to it in an attempt to maintain control over different facets of the business.

Oden (1997) similarly observed that societies dominated by 'masculine' values tend to be characterised by authoritative and hierarchical organisational structures in which staff are expected to obey orders and there is little or no employee participation in the form of teamwork or quality circles. On the other hand, a dominance of individualist values in a society may also present an obstacle to the development of effective team working since businesses in these societies tend to encourage and reward high levels of individual performance rather than collaboration. Chow, Shields, and Wu (1999), in their study of Japanese-, Taiwanese-, and US-owned electronics organisations in Taiwan, confirmed that aspects of national culture, based on Hofstede's taxonomy, had an impact on the design of different forms of management controls as well as employee preferences.

2.4.3 The Impact of National Culture on Quality

The significant part of national culture in business practices in general, and TQM in particular, is related to the behaviour and attitudes of individuals within an organisation which are largely influenced by the culture of the country in which they reside. In addition, culture is a factor which, compared with many other environmental factors, can be very resistant to change.

It can be expected, therefore, that cultural differences might account for the wide variations in the observed practice and success rates of TQM between countries and geographical regions. Highlighting the important role of culture, Anwar and Jabnoun (2006), considered the likely direction of TQM implementation in the context of globalisation and noted that although some barriers to business competitiveness have been reduced by globalisation recently, culture- and context-specific practices of organisations continues to date.

Evidence of cultural impacts on TQM was provided by an empirical study performed by Schniederjans et al. (2006) on organisations implementing TQM in India, the US, and Mexico. These researchers found TQM practices in India as significantly different from the performance of the counterparts in the US or Mexico; however, they discovered that practices were very similar between Mexico and the US. They attributed this to the fact that India is in a different geographical region and thus has a different business culture, and that there has been a greater direct transition of management practices from the US to Mexico, due to geographical proximity. Another study which compared TQM implementation in Mexico and the US (Parast et al., 2006) found that although there was no overall difference in quality management practices between the two countries, there was a significant difference between them with regards to the understanding of social responsibility, which influenced quality management practices.

Not only does national or regional culture heavily influence ways of thinking and behaving within organisations by giving people their fundamental suppositions and beliefs, i.e., the ways they see the world (Hoecklin, 1995), it also largely determines the very way in which business excellence is defined within a country and determines what factors are important in achieving it. For this reason, cultural differences between countries can be expected to be fundamental in determining which factors are relevant to the effective application of TQM in different national and cultural settings.

It is evident that implementation of quality in one culture will not necessarily mean that adoption by another will lead to success (Reed, Lemak & Montgomery, 1996; Shiba, Graham, & Walden, 1993; Westphal, Gulati, & Shortell, 1997). The successful cross-cultural implementation of a quality culture is driven and predicated by a process of adaptation, rather than adoption (Flood, 1993).

Furthermore, it is quite obvious that quality structures are implemented differently in different countries. In various facets of quality management, a material distinction is observed ranging from those reasons that trigger TQM to the difficulties encountered (Ngowi, 2000). Indeed, the many differences reported can be explained through national culture specifically those aspects of power distance, uncertainty avoidance, affective/neutral, and diffuse/specific. Douglas and Judge (2001) suggest that TQM approaches are the reflection of the culture in which they were formed. Those cultures that meet the requirements of quality management create frameworks that will endorse the underlying values of TQM. Other cultures experiencing variations may implement only methods and tools and not the required philosophy for effective application of TQM. Based on Mathews et al. (2001), avoidance of uncertainty seems to bring about a higher level of implementation of quality techniques and tools connected with TQM and thus the general outcome with regards to competition in the market and concentration on the customer might resemble that of other countries where other cultural values are prevalent (Mathews et al., 2001).

2.4.4 Evidence of Impact on Quality

Lagrosen (2003) conducted a questionnaire survey of quality managers from 30 countries, who worked for a single multi-national organisation, to investigate the effect of national cultural features on application of TQM. His study revealed that it can be more difficult to implement the TQM values of business process focus and continuous improvement in cultures characterised by high scores on the uncertainty avoidance scale, than in those characterised by low uncertainty avoidance measures.

Customer orientation also varies significantly, the survey results indicated, depending on cultural factors. Countries which possess a lower inclination towards uncertainty avoidance, for instance, concentrate on a small number of important customers, whereas companies in

collectivist value-based countries are more willing to pay greater attention to the customers with whom they have already established good connections. In countries where individualistic values and great uncertainty avoidance are observed, organisations prefer to pay equal attention to all customers.

Considering the overall attitudes of people towards TQM, within different cultures, Rodrigues (1994) noted that large power distance and/or strong uncertainty avoidance leads to reluctance to take on the responsibility for a TQM programme. On the other hand, where extreme individualist values prevail, there may be a resistance to the ‘group-orientation aspects’ of TQM (Rodrigues, 1994).

To illustrate how national culture can influence business behaviour, other researchers (e.g., Amirshahi, 1997; Dedoussis, 2004) investigated the defining cultural characteristics of Middle Eastern societies. These hierarchical and paternalistic societies were identified by these scholars as being predominantly collectivist rather than individualist, male-dominated and as exhibiting a high degree of power distance.

Dedoussis (2004) examined these societies and uncovered that significant success variables accentuated by TQM researchers were endorsed in their cultures; nevertheless, their cultures could not positively affect the development of other variables. Cultures in Middle Eastern countries, for instance, are greatly interested in teamwork, encourage trust and reliability among the organisation departments and personnel, and are inclined to produce very strong leaders. Nevertheless, participatory management and leadership are not fortified as part of these cultures and the decision-making process does not naturally make use of employees’ opinions. Furthermore, these cultures avoid uncertainty to a great degree and are heavily inclined to customs and traditions in determining behaviour as opposed to training staff to think critically or promoting innovative practices.

Mathews et al. (2001) tried to prove the influence of national culture on TQM implementation by administering a questionnaire survey which investigated the TQM processes and tools utilised by 450 companies across Finland, Portugal, and the UK. The survey examined these processes and tools in relation to national culture models proposed by Hofstede (1980) and Trompenaars (1993). Mathews et al. concluded that these models are very helpful in explaining much of the variation in TQM practices observed and the differences in approaches among the three countries.

In terms of Hofstede's taxonomy of national culture, the UK was categorised (on the basis of the survey findings) as a country with small power distance as well as low uncertainty avoidance, Finland indicated a small power distance while its uncertainty avoidance was reported as strong. In addition, in Portugal, the power distance was demonstrated to be large and uncertainty avoidance as strong. The researchers found that a major consequence for TQM being implemented in an environment of high uncertainty avoidance is that it tends to develop in a 'rule-based' rather than a 'dispersed responsibility' form, which may not be conducive to the true values of TQM. However, the survey findings also revealed the complexity of cultural influences on TQM. It was found that high avoidance of uncertainty seems to bring about a wider implementation of quality procedures and tools as part of TQM (Mathews et al., 2001).

Kindlarski's (1996) study of TQM in Poland demonstrated how the deeply ingrained cultural values of employees can hinder the implementation of TQM despite top management efforts. Kindlarski examined the reasons for difficulties in implementing TQM experienced by Poland, a country switching its focus from a centrally-controlled economy to a market-based one, and showed how historical, political, and religious factors have resulted in particular mindsets among Polish workers, which are directly opposed to authorisation, collaboration, visionary leadership, and continuing quality enhancement as TQM objectives. Kindlarski concluded that uncertainty and insecurity, mistrust, unwillingness to accept responsibility and a conflict between individualism and collectivism lead to failure in application of TQM. He observed that team goals were often counter-productive to organisational goals, that leadership was generally autocratic in nature and that efforts to improve quality were not sustained.

2.4.5 National Culture as a TQM Asset

Kindlarski's (1996) study of TQM implementation in Poland also demonstrates how national cultures which seem to be disposed to quality improvement initiatives often have strengths which are beneficial to TQM, even though these national cultures might be different from those in countries which have a strong tradition of using TQM, such as Japan and the US. The crucial point is that, as Greene (1993) noted, countries adopting TQM practices should adapt their national cultures to take advantage of their unique competitive

advantages. If these TQM models are not appropriately adapted to the cultural context in which they are being applied, implementation may fail.

Kindlarski (1996) argued that the national characteristics of the Polish people, which include a craving for freedom, a hatred of authority, an aspiration for quick achievement, and a habit of attaining objectives by unconventional methods are directly opposed to those of the Japanese, who successfully implemented TQM based primarily on a quality-circles approach. They also differ significantly from the formal European quality approach, which includes a large amount of tradition but low risk taking, rigidity, less action, and a lot of talking. According to Kindlarski (1996), the cultural traits of the Poles can, however, offer benefits in terms of TQM implementation. These people possess an individualistic point of view and high levels of ambitions and indicate flexibility and innovation. They are also fast learners and very talented when it comes to improvising. The Polish impatience can be viewed as a valuable means for gaining quality when it is combined with their inclination to enhance everything and disapprove others. However, the benefits of these cultural traits for TQM are only likely to be realised if TQM is appropriately adapted to the Polish culture; a common approach to TQM across countries is not feasible unless the target countries have a similar cultural and historical background.

The complex interaction of cultural factors and their impact on TQM was also demonstrated in a study by Kumar and Sankaran (2007), who showed how TQM can thrive in countries such as India where there is a combination of hierarchical and collectivist cultural values, unlike in Western individualist societies where the existence of hierarchy generally hinders TQM implementation. These researchers explained that in the Indian context, and in other collectivist societies such as Japan, hierarchy is defined through the teacher-student (*guru-shishya*) relationship between the manager and the subordinate, and that this promotes a focus on learning – which effectively facilitates TQM implementation. It is, therefore, the nurturing and the personalised elements of this type of hierarchical relationship, grounded in collectivist values, which are often the key to successful quality implementation.

Thus, it can be seen that countries often have specific traits or concepts inherent in their cultures which might be used to support the implementation and outcomes of TQM, but only if the programme is suitably modified to capitalise on these traits. At the same time, programmes must be designed to modify or to mitigate the possibly negative effects of

cultural characteristics which are likely to hinder the successful development of a quality programme. In practice, this takes place within the context of organisational, as well as national culture. The essence of organisational culture and its connection with TQM are presented in the following sections.

2.4.6 Organisational Culture

As referred to in the previous sections of this chapter, the term culture has been variously defined. To the researcher, it represents a combination of such things as standards, values, emotions, philosophy, characters, guidelines, behaviour, attitudes, anticipations, and meanings. From another perspective, culture is recognised by what is not included in it, i.e., economics, law, politics, language, education, religion, industry, society, technology, or the market. Fullinwider and Maclean (1996) define culture as the collective attitudes, motivations, and values that guide the way employees interact with one another to accomplish tasks or attain objectives.

As one of the most substantial dimensions of culture, organisational culture has recently been extensively examined. In their attempt to define it, Brown (1995) referred to it as patterns of philosophies, values, and methods of dealing with different experiences that have emerged out of the history of an organisation demonstrated in its different segments including members' behaviours. Simmons et al. (1995) identified elements of organisational culture as follows: a) charisma and leadership at the top; b) the vision, approach, and target of the organisation; c) the performance features that are considered important; d) how staff treatment is in line with the stage set by the leader, and; e) how individuals interact in performing their job.

As a strategic instrument in the hands of managers, organisational culture assumes a significant part in dealing with the competitive and continuous change experienced by organisations. Organisational cultures are also argued to be dynamic, multi-dimensional, and multi-determined. They are viewed as dynamic due to the financial, societal, and political pressures as well as organisational leadership. They are multidimensional in terms of different subcultures that are present in a principal organisational culture (Sinclair, 1993). Reeves-Ellington (1998) points out organisational cultures are multi-determined due to the

role played by different factors such as extremely complicated combination of individual participants, the leaders' style of decision making, and organisation size.

Quality programmes are influenced by the internal cultures of organisations, which usually reflect national cultures, but may also exhibit their own distinct characteristics. Organisational cultures are formed by the inferences of the national culture of a country where they operate (Lindholm, 2000). As Hofstede and Hofstede (2005) suggest, national culture is quite distinctive not only with regards to race, religion, and language but also in terms of behaviours, perceptions, and shared values of the people. Robbins (2003) also comes to the conclusion that organisational culture within any business is shaped by the philosophy of the founders which reflects the values and assumptions of these business owners.

Frost et al. (1985) sees organisational culture as a set of shared points of view, values, and philosophies which direct the behaviour of personnel in an organisation. Galpin (1997) defined organisational culture in terms of ten different elements: rules and policies; goals and measurement; customs and norms; training; ceremonies and events; management behaviours; rewards and recognition; communication; physical environment; and organisational structure.

However organisational culture is defined, it has been recognised to be a significant element leading to the success of an organisation. By the same token, it has been extensively acknowledged that application of quality management necessitates a change of culture in the firm (Kekäle & Kekäle, 1995). Although a considerable body of literature is allocated to the effects of culture change on TQM, Krasachol, Willey, and Tannock (1998) point out that the absence of an approved theoretical model has led to an imprecise and subjective debate over the essence and efficacy of various methodologies. Gore (1999) contended that quality management offers a theoretical structure for creating an organisational culture which will lead to continuous learning and progress. He came to the conclusion that quality management concentrates on all facets of the organisation such as a complete view of the staff and thus offers a methodology for developing a culture leading to success. In a similar vein, it is claimed that cultural transformation is a vital part of TQM and thus quality management practices pave the way towards cultural change (Zeitz et al., 1997).

As Lorsch (1986) contends, when organisational culture is not in line with the innovative practices the firm adopts, it will turn into an obstacle to cultural change. As a solution, Deshpande and Parasuraman (1986) contended that companies are required to carefully consider their culture and try to match it with their policy in order to attain the anticipated outcomes. Indeed, a change of culture should make an attempt to satisfy customer needs, apply a philosophy of management that embraces this emphasis, boost staff involvement, and endorse the ethic of continuing development (Batten, 1994). Regarding TQM and organisational culture, Deming (1986) views the change in the US management style as necessary and Feigenbaum (1989) recommends an all-inclusive enhancement throughout the target firm.

The fundamental tool for implementing an organisational culture is an instructional procedure in which preferred activities are acquired by means of clear behaviours, experiences, and symbols (Ross & Perry, 1999). Management is required to acknowledge that organisational change is extremely significant when applying TQM, since a 'piecemeal' approach is likely to get bogged down in internal politics, resistance and organisational 'inertia' (Ross, 1993).

As Batten (1994) suggests, the degree of quality improvement in an organisation is a feature to consider when a choice has to be made with regards to methods of TQM implementation. Batten referred to two variables of 'quality activity' and 'quality critical organisational characteristics' to pinpoint organisational features that can have an impact on TQM implementation.

Gore (1999) classifies several strategies which are considered as part of TQM and can directly bring about a positive culture that encourages transformation and development.

These strategies, as referred to in the Baldrige Criteria, are as follows:

- Management in a participatory and open manner (boosting staff involvement, empowerment, encouragement of teamwork, instruction and training, and broad communication)
- Adoption of a rational attitude (making decisions based on facts, unambiguous missions, goals, cycles of assessment and enhancement, etc.)

- Focusing on flexibility (focus on customers, continuing development)
- Concentrating on integrity (prominence attached to ethics and public responsibility).

Although it seems more difficult to perform, Anjard (1998) believes that deployment of cultural transformation looks like any other type of change in a firm. To start with, a number of elements need to be present. A clear plan is required which consists of the transformation details and an arrangement of these transformations along with a buyout package due to the difficulties reported in complying with these new behaviours or adjusting to them. When these behaviours are embraced and implemented fully, TQM is considered as a visionary and cultural transformation that signifies a final acknowledgment of an administration philosophy that persuades staff to be accountable for performing high-quality services.

By the mid-1990s, many organisations made an attempt to apply TQM effectively but were not successful. As Jacob (1993) reported, investigations performed in the US consistently indicated that two-thirds of managers believed that TQM had experienced failure in their organisations. Nevertheless, Mair, Florida, and Kenney (1988) pointed out that transplant organisations in Japan, particularly in the automotive businesses of the US and the UK, reproduced the success of the originator. According to Brooks and Zeitz (1996), an appropriate culture that provides rewards is a vital element which mediates the effect of a quality management programme on employee satisfaction and commitment.

2.4.7 The Nature of Organisational Culture

Various writers have highlighted the all-pervasive nature of organisational or corporate culture in virtually influencing every aspect of business or organisational activity. For example, Burrill and Ledolter (1999) noted that it forms the structure of the organisation, availability of information, behaviour patterns, systems of reward, and other facets of the firm that enables it to help consumers. The diverse aspects of national and organisational culture can both help to promote the achievement of business excellence or can hinder progress towards it.

National and organisational cultures are usually very similar largely because the behaviours and attitudes of the indigenous leaders, managers, and employees of an organisation generally reflect the culture in which they have grown up. However, within the same country, organisations are shaped by a range of different factors and, therefore, develop their own distinct cultural characteristics. Although national culture taxonomies are useful for comparing typical organisational culture between countries, they are less appropriate for comparing specific examples of organisational culture within countries.

According to Hofstede (2010), organisational cultures are different at practice level, whereas national cultures vary at value level. Values largely reflect national culture and determine, for example, what is seen as appropriate or rational behaviour, or how to prioritise actions, while practices are viewed as a means to adapt to transformational demands created by the environment and include 'symbols' and 'rituals' which are meaningful to organisation members. As a result, Hofstede (2010) argued that organisational cultures are to some extent controllable whereas national cultures are viewed as given facts.

The ability that organisations have to influence and control their internal culture is frequently the major determinant of the success or failure of TQM programmes. Nevertheless, a number of scholars (e.g., Bright & Cooper, 1993) claim that organisational culture is a fixed precedent to quality management implementation and thus cannot be altered by it. For example, TQM within organisations always takes place in the setting of dominant shared values, philosophies, and suppositions.

2.4.8 Types of Organisational Cultures

An organisational model that has been widely used in research to describe various types of organisational culture is Denison and Spreitzer's (1991) Competing Values Framework (CVF) which helps clarify the effect of organisational culture on business practices and products. This places organisations into one of four quadrants, depending on where they fall in relation to two dichotomous cultural scopes: control vs. flexibility and internal focus vs. external focus. In this model, the first dimension, the flexibility-control axis, illustrates the level of stability or change in the target organisation. An orientation towards control indicates order and stability whereas the orientation towards flexibility reveals spontaneity

and flexibility. The second dimension is concerned with the internal and external axis. This dimension addresses the choices of the organisation whether to concentrate on actions happening within the organisation (internal) or on those activities occurring outside (external). An external-orientated culture accentuates adaption, interaction, and competition with the external environment; however, an internal-orientated culture is concerned with the improvement and maintenance of the existing organisation.

The four quadrants derived from the interaction of these cultural factors are associated with four main categories of organisational culture. Group culture, which is characterised by a flexible but inward-looking approach, is associated with such practices as team-working, the empowerment of individuals, and various forms of employee participation. Developmental culture similarly empowers individuals and encourages creative ideas and innovation but is more outward-focused and is often associated with rapid business growth. The two types of culture in organisations identified by Denison and Spreitzer (1991) associated with control, rather than flexibility, are hierarchical and rational cultures. Like developmental cultures, rational cultures are outward looking, but the emphasis on control in this type of organisational culture leads to a greater concentration on the setting and attainment of clear objectives, on the specific tasks needed to achieve these goals and, especially, on increasing productivity. In contrast, hierarchical cultures have a focus on authority and on the use of many rules and procedures. As a result, businesses with hierarchical cultures tend to be characterised by stability rather than growth (see Figure 2.2).

In practice, Denison and Spreitzer (1991) contend that it is important for organisations to achieve balance with regard to the different forms of culture since an overemphasis on one type of culture is likely to represent a weakness and thus the organisation may fail to succeed.

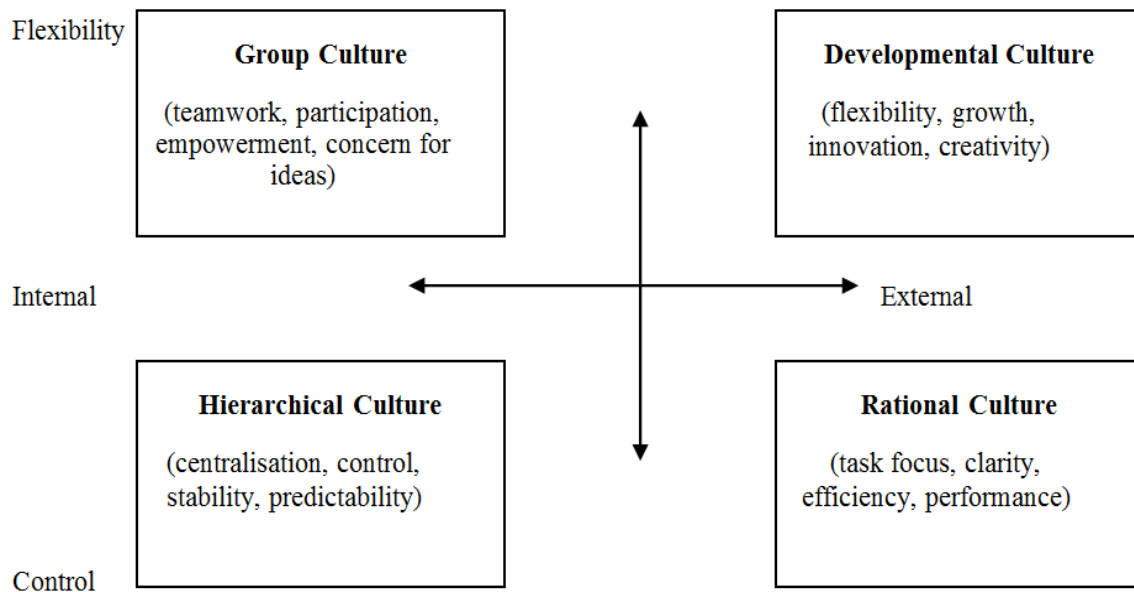


Figure 2. 2: Competing Values Framework (adapted from Denison & Spreitzer, 1991)

2.4.9 Evidence of Impact on Quality

Drawing on Denison and Spreitzer (1991), Dellana and Hausser (1999) also suggested a similar classification of organisational culture and stated that cultures described by flexibility have greater capability to apply TQM effectively. Specifically, these researchers emphasised group culture, which is identified by teamwork spirit, staff involvement, supporting leadership, inventiveness, and risk taking as the most advantageous factors for quality management. Similarly, Tata and Prasad (1998) argued that TQM can best flourish in flexible organisational cultures in which people are respected and practices are in line with quality management. These practices include teamwork spirit, employee participation, focus on customers, and leadership.

For similar reasons, Al-Khalifa and Aspinwall (2001) investigated national culture in Qatar and came to the conclusion that organisations in this country experienced difficulties in implementing quality management due to their inclination to dominant hierarchical and rational cultures.

Yong and Pheng (2008) used the CVF to investigate TQM implementation among contracting firms in Singapore. They pinpointed four types of organisational culture: strong comprehensive, clan-driven, hierarchy-driven, and weak comprehensive. These researchers

came to the conclusion that only those businesses with strong comprehensive cultures significantly applied a range of TQM elements, for example leadership of top management, individuals, procedure, and supplier and consumer management. The researchers concluded that there is a need for a culture-based strategy for the application of TQM.

The nature of the leadership within an organisation's is of particular importance in determining whether TQM is likely to be successful. This is partly because, as Saaty (1988) noted, organisations usually derive their main intra-cultural characteristics from their leadership, and also because leaders play a vital role in building consensus among organisational members in order to reach the common goal of quality improvement (Prajogo & McDermott, 2005). The style of leadership is crucial in this respect, with autocratic and non-participative leadership styles likely to be an obstacle to the success of TQM implementation.

In their case study targeting the application of TQM in an English Language Centre within a Turkish University, Herguner and Reeves (2000) stressed the need for ongoing leadership and management commitment. Without this there is likely to be a reversion from TQM to the previous organisational culture, which is often typical of the national pattern and may not be supportive of TQM.

The importance of taking organisational culture factors into account when implementing TQM was clearly illustrated by the results of a study by Chin and Pun (2002), based on a series of year-long case studies of six Chinese companies in Hong Kong that were implementing TQM. Chin and Pun identified significant variations among these companies in terms of their success and progress in TQM implementation. They concluded that in the case of those companies that had not made good progress, this was largely due to an overemphasis on the technical details of TQM, and also an ignorance of organisational culture. Other weaknesses as absence of management leadership, poor training, and a lack of sufficient time and money were attributed to this failure to address organisational culture as a whole. Chin and Pun argued that in order to tackle the weaknesses, visionary approach and reform must be followed by the commitment of the organisation to a cultural transformation. The results of their research indicated that of particular importance in ensuring the success of TQM are:

- visual management concentrating on anticipated behaviour;

- persistent fortification and support;
- cross-training and establishing new business connections;
- providing the learning opportunity for the entire personnel to enhance their performance; and
- planning and offering organisation-wide training programmes to heighten awareness of TQM practices

Similarly, Lipovatz (1998) found that many Greek organisations were failing in their TQM implementation efforts because the initiatives were often a top-down directive from the parent organisation, and organisational leadership had not really embraced the principles of quality.

In contrast, Mitki and Shani's (1995) case study of an Israeli paper mill found that the gradual assimilation of TQM values prior to implementation of a full programme, including the 'centrality of the client, product quality, and worker involvement' helped the organisation to overcome the prevailing Israeli management mentality of fire-fighting and short-term perspective.

The implementation and outcomes of TQM are also likely to vary between different countries because of the presence of cultural concepts or organisational practices that are specific to particular cultures and have no equivalent in other countries.

2.4.10 The Organisational Culture Audit

The preceding discussion suggests that it is possible to successfully apply a quality programme even in developing countries whose cultures appear to conflict with the fundamental principles, and to provide support for the idea that there are certain 'adaptive' or 'foundation' factors which must be addressed before implementation proceeds. A number of researchers (e.g., Kekäle, 1998) have argued for the need to ensure that a TQM approach is used which fits the existing organisational culture, or that management systematically carries out an organisational culture change to prepare for TQM (Kekäle, 1998).

Whichever approach is adopted, a necessary first step in this process, as argued by Maull, Brown, and Smith (2005), is to conduct a 'cultural analysis' of an organisation prior to embarking on a TQM programme. The analysis should seek not only to understand and measure an organisational culture, but also to measure its impact on day-to-day operations, such as relationships with customers and the treatment of employees (Maull, et al., 2005) so that the possible benefits in practice of modifying the culture can be anticipated. Vermeulen (1997) notes that the quality audit or climate survey should include two parts, one of which measures employee attitudes and satisfaction with their work and terms and conditions of employment, and the other assesses the organisation culture, or the ways in which employees behave in response to signals sent out by an organisation regarding what is significant and appropriate. According to Vermeulen, there are two main methods of conducting this analysis: the circulation of a questionnaire, or personal interviews. The organisation culture assessment is then used to determine what changes are needed within the organisation to support TQM.

2.4.11 Social, Cultural and Economical Dynamics

Implementation of TQM in organisations requires significant change (Crosby, 1984; Deming, 1986; Juran, 1989). Implementation is made complicated by the extraordinary array of complex variables that must be addressed and harmonised, whether the change process is evolutionary, revolutionary, or a combination of the two. The variables affecting implementation themselves change with circumstances and conditions. Even though a universally applicable framework, paradigm, or system of TQM is envisioned (Juran, 1989), adjustment to influential, perceived variables that confront the paradigm is needed. These variables may derive from unique systems or adaptations that have arisen through local interpretation of more universally agreed principles (Deming, 1986). Many of these adaptations may in themselves be both necessary and desirable.

Based on Khan (2000), the cultural setting indicates interrelationships with a large number of other potential elements such as organisational culture, effect of technology, market concerns, essence of the business, and managers' attitudes towards transformation. Taking these elements and the potential effects of any transformations into account needs a proper feedback from the adopted TQM strategy. Administration of organisational culture is

affected by the dynamics of economic, social, and cultural setting. This is particularly significant in the context of the Middle East where economic change is happening, the employees are culturally diverse, and the socio-political structure is distinctive. Khan (2000) concludes that the issue cannot be universalised as unique groundwork is needed to be performed on the Middle East.

Attention to culture and related environmental elements refer to the increasing awareness about implementation of TQM. Frameworks and systems are becoming more complex and understanding more sophisticated; thus, TQM challenges at organisational levels are recognised based on settings rather than theory level. As Al-Shammari (2000) notes, challenges are to a great extent attributable to strategies and methodologies used for TQM application and thus not solely related to TQM principles.

How quality management is associated with contextual, cultural, and environmental elements can be obviously seen in the post-war state of success in Japan. Jarrar and Aspinwall (1999) referred to dominant suppositions in management suggesting that Japan's success which was associated with TQM per se is now attributed to awareness of cultural differences as well.

These cultural elements consist of an indigenous determined ethic in the work setting, respectful attitudes towards the authority, focusing on the mission, calmness, and reward postponement. These elements, whether alone or together, must be taken into account when an assessment of TQM implementation in Japan is made. Jarrar and Aspinwall (1999) state that employees in Japanese companies are eager to work even for very long hours and dedicate themselves to the organisation as a subordinate which indicates the fact that TQM is part of the Japanese culture rather than an isolated organisational practice.

Nevertheless, Jarrar and Aspinwall (1999) attempt to minimise the influence of Japanese culture on its success with TQM. They feel that such consideration might amount to little more than stereotyping and thus might be misleading.

2.4.12 Information Technology (IT)

ByeoungGone (1997) believes that information sharing and application of information systems in decision making throughout an organisation are critical elements. Provision of regular, correct, and timely data facilitates a better organisational response to the changes in the environment. In this respect, it is often contended that Information Technology (IT) is gaining attention as the most significant variable in productivity enhancement and reduction of costs (Kagan, 1994; McFarlan, 1984; Weston, 1993). Nevertheless, contradictory results have been reported in the existing literature (e.g., Powell & Dent-Micallef, 1997). Some researchers reported that IT is not able to have a substantial impact on enhancement of productivity or competition (Mahmood & Mann, 1993; Willcocks & Lester, 1997). On the other hand, Kelley (1994) reported a positive association between IT and improvement in productivity.

Different tools are searched for and applied by companies in order to maintain continuing development, reduce costs, and enhance productivity. These tools include TQM, maintenance of productivity, management and reengineering of business procedures, planning of resources, and working as a team member in a self-directed manner (Dewhurst, Martínez Lorente, & Dale, 1999).

As Kauffman and Weill (1990) state, the cost of IT hardware experienced a decline in the 1980s which led to its use in every aspect of organisations as well as individual uses. According to Reich (1993), the dominant part of IT was expanded in the 90s by the continuing dependence of society on IT systems which resulted in segmentation of the workforce into three subcategories: 'routine production servers', 'in-person servers' and 'symbolic analysts'.

The implementation of IT also indicates an influential cultural capacity which is able to encompass all actors in firms in its usage. Being introduced into organisational life in material as well as discursive manners, IT has also been utilised as a tool for comprehension of other cultures and using their creative collaboration (Korac-Boisvert, 1992). As Forester (1989) and Webster and Robins (1986) suggest, the discursive presence of IT is mostly apparent in a cultural context in which the work future and organisations' prospects matter.

A number of researchers view IT as an activator of TQM. In line with this, Zadrozny and Ferrazzi (1992) contend that IT plays a significant part in the quality management creativity

by means of human resources, technology, and strategic domains. According to Murray (1991), to assess, acknowledge, and enhance the level of maintainable quality of an organisation, IT is being utilised expansively. Dewhurst et al. (1999) affirm that IT can assist in the process control implementation, experiment designs, investigation of failure, implementation of quality function, and assessment of self against an excellence model in business. Furthermore, it is also being claimed that IT can be viewed as a significant tool in real-time data gathering with regards to customer satisfaction, control of internal processes, critical business systems, and other systems of assessment all essential to facilitate quality management.

Konstadt (1990) points out that IT can activate the motivation for success of TQM and continuing development even when the relationships among workers and managers and also the basic processes are traditional. Dewhurst et al. (1999) conclude that IT has a significant part in the procedure of implementing TQM in an organisation, and referred to the following ten TQM dimensions influenced by IT:

1. support for top management;
2. relationship with customer;
3. relationship with supplier;
4. management of staff;
5. behaviours and attitudes of staff;
6. process of product design;
7. management of process flow;
8. quality information and quality reporting;
9. the role of the quality department; and
10. benchmarking

2.4.13 Business Process Reengineering (BPR)

In their definition of BPR, Hammer and Champy (1993) refer to “the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality service, and speed” (p. 32). Sohmen (1998) provides a more refined definition of BPR with regards to pre-project planning. He believes that a proactive, drastic, and inclusive change in project performance is the direct result of implementing BPR in a development project. The basic principle of BPR states that continuous incremental improvement, which is the major goal of TQM, cannot help organisations to overcome the marketplace challenges. As a result, major advances are required to leapfrog the competition in the target business.

Ho (1999) points out that a large number of brilliant organisations have been able to attain and sustain their leadership through BPR and that organisations implementing these procedures have reported noteworthy outcomes such as superior relationships with customers, cycle time reductions to distribute goods in the market, productivity enhancement, fewer errors, and profitability improvement.

Managers should resort to advanced approaches of management that are dependent on fundamental principles. Harrington (1999) proposes the following principles that must be mastered by managers:

- Delegation: managers must delegate a number of assignments to subordinates.
- Appraisal: managers must have the ability to create individual performance objectives in collaboration with the staff, and provide authentic, constant feedback on performance based on these objectives.
- Disagreement: differences in opinions between managers and staff can be healthy. Managers are required to see both sides of the issue to make the most appropriate decision.
- Decisiveness: managers must not be reluctant in their decision-making process. Frequently, intuition is an enormously significant part of managers’ job in the organisation.

Management must embrace the improvement process before employees are exposed to it. Evans and Lindsay (2001) argue that effective reengineering needs essential acknowledgement of procedures, operational usage of IT, and creative thinking to leave behind old assumptions and traditions.

2.5 Background to the Oil and Gas Sector in Iran

Iran holds the largest combined oil and natural gas reserves in the world. Iran a key player in global energy supply due to its proximity and access to major energy demand centres. Nevertheless, the country's isolation and lack of investment by foreign companies in its oil and gas industry have hampered development and resulted to a lack of understanding of Iran's full potential. From a geological point of view, Iran has prime development opportunities and the government has ambitious development plans for its industry (Chow, Ashayeri & Stanley 2018). Iran’s proven reserves is more than 361 billion barrels of oil, this is equivalent in proved reserves of oil and gas, which positions the country as the top reserve holder in the Organization for Petroleum Exporting Countries (OPEC) and the world. This includes 9.3 percent and 17.2 percent of global oil and natural gas reserves respectively (BP Review 2018). Figure 1 shows Iran’s position among major OPEC members.

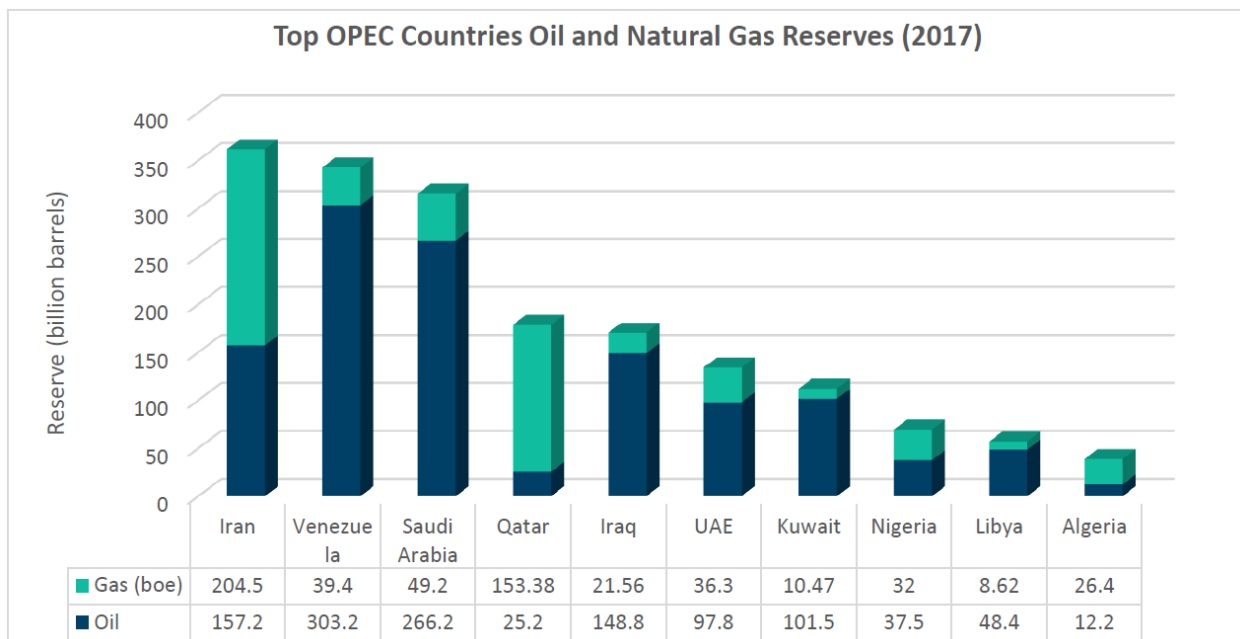


Figure 2. 3 OPEC Countries Oil and Natural Gas Reserves (2017)

In 1908, the Anglo-Persian oil company was able to discover oil at Masjid-i-Suleiman which is located in the southwest modern-day Iran. According to Kent (2015), this event put an end to the increasing debts due to dry holes. This discovery established the frameworks for British Petroleum (BPPLC) and the mounting of a very famous and strong oil power in the world.

Throughout the preceding century, Iran has turned out to be one of the biggest oil producers in the world and a tough hawk among oil exporting countries. According to Kent (2015), Iran is famous for its recurrent difficulties with Saudi Arabia's oil lobby. Nowadays, the agenda of contract (lifting sanctions on Iran) has been implemented and the isolated nation could open up over shortly.

Before the start of the 21st century, Iran tried to open up and search for the expertise of oil organisations around the world to enhance its production. Oil organisations in Europe enthusiastically invested billions of dollars in this country to access the abundant resources irrespective of tough conditions (Raval, 2015). In 10 years, the short bonanza was over. European oil organisations pulled back as the West applied sanctions to the Islamic Republic regarding worries over its nuclear programme. In the course of the most recent years, Iran's oil generation has decreased from about 3.6 million barrels a day in 2011 to 2.8 million barrels a day in 2014.

“Some foreign companies may be eager to return, but Iran still has to overcome its reputation, retool contracts and convince the world they are and will remain open for business,” said Matthew Reed, an analyst at Washington-based consultancy Foreign Reports. According to Stevens (2015):

- The oil and gas sector is indispensable for the business future of Iran. This future is contingent on whether and how rapidly embargoes are revoked and, on the terms and conditions that Iran has put forward for the international oil companies (IOCs).
- The country has made an attempt to attract investors. These endeavours were unsuccessful in the 1990s due to the undesirable terms put forward for IOCs and the implementation issues that emerged (politicised and less structured essence of the sector).

- Iran requires to upgrade its old facilities in order to improve quality and efficiency and also need to focus on innovations within the oil and gas sector which will not come true without the investment of IOCs. Indeed, these IOCs will only be attracted to profitable terms.
- Since Europe is highly dependent on Russian gas, Iran has offered help by proposing the trade of natural gas through various pipeline passages (Stevens, 2015).

For its oil and gas sector, Iran urgently requires quality improvement via the innovation and investment that IOCs can only provide. A large amount of publicity from the Iranian side regarding the high state of enthusiasm from IOCs has been reported. In addition, numerous informal side meetings have been arranged between oil ministry officials and the IOCs since Rouhani was elected. These meetings were held in New York in September 2013 when Rouhani visited the UN General Assembly and also in Vienna in December 2013 (Stevens, 2015). The IOCs are obviously keen on accessing hydrocarbons of Iran but not at any cost.

In 2014, Zanganeh (Oil Minister of Iran) expressed Iran's willingness to help Europe overcome its extreme dependence on Russia by exporting liquefied gas to Europe. The Iranian representative oil minister for international and trade affairs, Ali Majedi, suggested this gas could be imported in volumes of between 4 million cu m and 50 million cu m per day through Turkey. According to Stevens (2015), other pipelines could run through Lebanon Syria, Iraq, Armenia, Georgia, and the Black Sea.

Crude oil production stagnated and even declined between 2012 and 2016, despite Iran's large reserves, as nuclear-related multinational sanctions targeting Iran's oil exports hampered development in the Iranian oil and gas industry, impacting upstream investment in both oil and gas projects. The United States and the European Union (EU) imposed sanctions at the end of 2011 as a consequence of Iran's nuclear activities, which came into force in mid-2012. The main goal of these sanctions was targeting Iran's energy sector and reducing Iran's capability to sell oil, resulting in an almost 1.0 drop in crude oil and condensate exports in 2012 compared with the previous year. Following the lifting of oil and banking sanctions, as outlined in the Joint Comprehensive Action Plan (JCPOA) in January 2016, Iran's crude oil and condensate production and exports rose to pre-2012 levels. Yet again, in May 2018 Iran's crude oil exports

and production declined following the announcement that the United States solely would withdraw from the JCPOA and reinstate sanctions against Iran. (EIA 2019).

These sanctions offer an incentive to promote greater Russian participation in Iran and may also result in increased Chinese presence by pushing the departure of Total and other European companies. Chinese and Russian activities will continue to expand as Iran may be prepared to give more favourable terms due to decreased interest from Western companies. Both China and Russia are aggressively pursuing ways to reduce their exposure to US sanctions. This proves to be the situation with Iran, where Chinese players have set up financial networks that are segregated from US sanctions to purchase Iranian oil and gas.

2.5.1 Management of Oil and Gas Industry in Iran

The National Iranian Oil Company is the state-owned organisation responsible all oil and gas projects. International or private ownership of natural resources is forbidden by the Iranian constitution. Nevertheless, through the Iranian petroleum contract, a relatively new model for its oil and natural gas fiscal system, foreign oil companies have the opportunity to participate in the exploration and development stages. The energy sector is overseen by the Supreme Energy Council, which was formed in July 2001 and is chaired by the President of Iran. The council consists, of the Ministers of Petroleum, Finance, Commerce, Agriculture, Mines and Industry. State-owned entities, under the supervision and control of the Ministry of Petroleum, dominate operations in the upstream and downstream oil and gas industries, including the Iran's petrochemical industry.

The figure 2.4 shows the organisational structure of NIOC and its affiliated production and service entities and the governmental structure responsible for monitoring the Ministry of Petroleum.

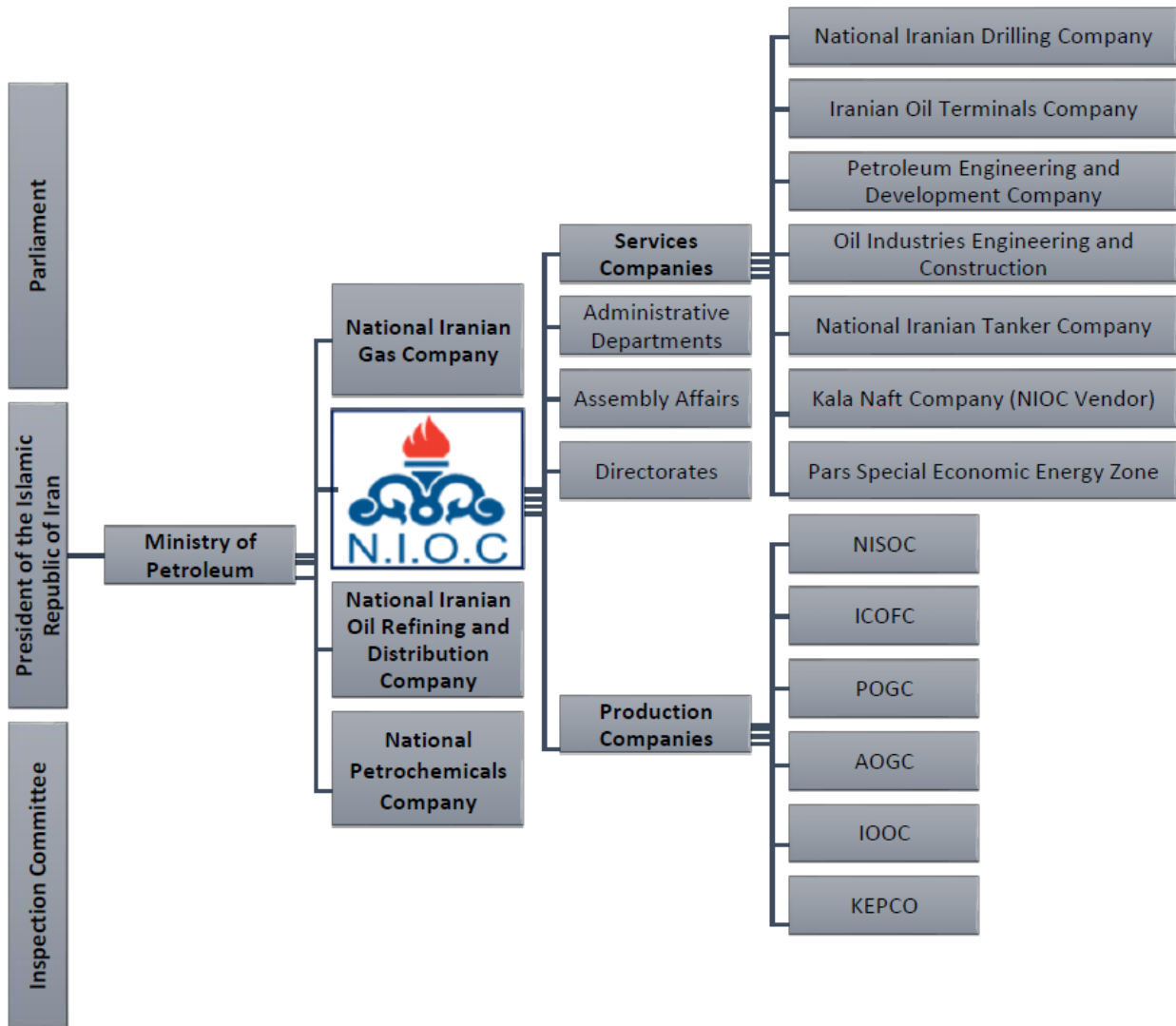


Figure 2. 4 The Organisational Structure of NIOC

2.5.2 Quality Management in Iran's Oil and Gas Industry

Iran's national oil company is the largest organisation in the Middle East and is also a core member of the oil company 's family around the world. This organisation plays a central role in the economy of the country as a leading organisation. It has introduced several useful and helpful programmes in the field of quality control, quality production growth and economic development in recent decades. Some of the oil and petrochemical companies have an ISO standard and some others have received an EFQM certificate. Some committees have been set up as recommendation mechanisms to improve TQM procedures, with the most critical purpose being to ensure the highest customer satisfaction (Karimi and Kadir 2012).

After several decades of these operations, the basic question is how effective the organisation is in achieving its objectives with carefully planned quality timetables. The findings indicate that very little research in this field has been conducted in developing countries in the Middle East, and in the context of Iranian oil and gas industry. As Iranian oil and gas industry suffers from lack of quality due to old facilities which needs an upgradation and innovation, this study gathered data from top managers as well as employees to answer related issues in terms of quality and needed culture change.

2.6 Drivers and Barriers of Quality Culture in Iranian Oil and Gas Organisations

The present research study makes an attempt to deliver information regarding the drivers of quality culture success and barriers to its effective application in Iranian oil and gas organisations. Data from interview and surveying as well as other studies shows that the obstacles usually include lack of commitment and involvement of the senior managers, uncertainty of these managers, their failure to transform organisational culture, resistance towards quality transformation, inflexibility of the firm towards transformations in the atmosphere and technologies, inaccurate arrangement, absence of continued training for workforce and managers, insufficient awareness of TQM, insufficient team work and involvement, improper team work assessment, restricted access to information and outcomes, as well as lack of awareness of internal and external customers' needs.

If TQM intends to bring about positive change, a number of requirements must be met:

- commitment and leadership of top managers to the quality drive;
- top managers' contribution to customer satisfaction;
- stability of top managers;
- strategic quality planning (policy development and operational application of objectives);
- establishing quality to guide the firm's journey towards quality;
- using individuals from different parts of the business;
- making best use of workers' commitment;
- awareness of the vision, standards, and quality objectives of the firm;
- creating team work spirit and quality culture;

- focusing on internal and external customers;
- establishing customer-driven quality;
- communication of mission statement;
- responding quickly;
- managing based on facts to solve issues;
- making constant improvement;
- supporting procedure to increase customer satisfaction;
- focusing on partners and suppliers; and
- quality assessment and observation

2.7 Quality Culture in the Context of Iran

As this research is concerned with the implementation of quality culture within the Iranian oil and gas sector, it is substantial to examine levels of quality adoption, as well as to study the existence of quality cultures in the target sector. Quality is the key to the financial development of a country and it is assumed that a solid connection exists between competitiveness approach and quality.

TQM is considered as a profitable approach to management in the context of Middle East. However, transformation of culture in Iran seems to be misinterpreted while in the Western countries, companies have implemented organisational cultures that clearly influence their profitability and economic progress. Middle Eastern organisations are deprived of a long-term outlook towards TQM and organisational objectives generally focus on satisfying immediate social needs of the firm. Therefore, less focus is put on satisfaction of customers as a fundamental part of TQM.

A number of issues have been reported to lead to the poor practice of organisations in Iran which include: great levels of self-satisfaction, mistrust among team members, slight jealousies, discrimination, untruthfulness, passive attitudes, lack of enthusiasm for coordination, 'them and us' syndrome, and etc. Indeed, these issues must be addressed immediately to sustain the quality development programme in the target organisations.

Aly (1997) made an attempt to perform an analysis on TQM application in the Middle East. According to him, investigating TQM as a pressing need is extremely valuable in the target

setting. Results of the analysis indicated a limited number of organisations utilised TQM. In addition, TQM was revealed to be poorly understood as an overall concept. Issues were also reported with regards to the importance of setting goals, making plans, and evaluating outcomes. The researcher concluded that a large number of TQM plans concentrate on product-related and cost-efficiency concerns.

The end of the 1980s marked the beginning of quality management in Iran. The 5-year financial development programme started in 1980 and was viewed as the major reason for focusing on quality. At the beginning, measures were taken to run quality management workshops in the Industrial Management Institution (IMI) which is a governmental organisation. Furthermore, financial relations with specific European countries (for instance, Italy, France, and Germany) were a major motive for the introduction of ISO 9000 standard. The first Iranian organisation could obtain this certificate in 1989, registered by Societs Generale de Surveillance (SGS). As a result, several other organisations were encouraged to implement quality management as well.

In spite of all the attempts to improve quality management practices, a national model does not exist in Iran to refer to as an official model of quality. According to the report published by Asian Productivity Organisation (2002), the Institute of Standards and Industrial Research in Iran is facing a major challenge to develop a TQM model to identify and encourage the progress of operational quality management in Iranian firms. In line with this, Saremi, Mousavi, and Sanayei (2009) state that Iranian researchers and the institute of standard have not devoted full attention to successful TQM application in Iranian organisations.

2.8 Fundamental Components of a Quality Culture

The previous sections examined and analysed the background and nature of quality cultures and the implementation of a quality culture. From this section onward the study examined and identified the fundamental components of a quality culture. The aforementioned core components or critical success factors (CSFs) has been identified in next sections and additionally, added support for and examples of these CSFs and provided academic evidence for their individual components.

2.9 Critical Success Factors

This chapter begins with those elements recognised as critical success factors (CSFs). There are numerous definitions to be found in the literature. According to Stone (2001), a number of significant factors must be addressed in order for a business to succeed. As Butler and Fitzgerald (1999) put it, these factors are the individual constituents of the target business and thus business prosperity is the result of properly addressing them. Another definition of CSFs refers to those activities an organisation should undertake in order to fulfill its objectives (Fryer, Antony, & Douglas, 2007).

According to Brotherton and Shaw (1996), the principle objectives of the business which carry the highest competitive weight are referred to as CSFs. They believe that CSFs include those procedures and activities (not objectives) that can be influenced and controlled by managers to attain organisational objectives. Furthermore, Brotherton and Shaw (1996) suggest that CSFs are dynamic elements that are determined based on the present position of the business and where it wants to be in the future. Boynton and Zmud (1987) provide a more general definition which can be equally applied to any sector (i.e., public or private) or project. They refer to CSFs as those elements that are required to go well to guarantee success. Tübke (2005) supports this definition and calls for careful and considerable attention in order to attain the highest possible performance.

A number of approaches and techniques have been suggested in order to establish CSFs. Leidecker and Bruno (1984) refer to some of them as analysis of competitors, industry, central industrial firm, environment, as well as comprehensive and detailed assessment of the organisation. In a nutshell, CSFs areas require particular attention and support from organisational leaders and managers in order to attain the target business objectives. Thus, success and profitability of any organisation or industry heavily depends on a proper understanding of CSFs and their significance.

2.10 Previous Studies in CSFs for Implementation of Quality

Saraph, Benson, and Schroeder (1989) were the pioneers in performing the first study focusing on a list of CSFs for a quality organisation applying TQM. Carried out in the USA, the study

came to a grouping of seventy-eight factors. In order to evaluate managers' awareness of TQM practices, Saraph et al. (1989) tried to develop a model at organisational level. In a similar vein, a number of levels were identified by Crosby (1979) to improve quality practices in an organisation:

- commitment of top and intermediate managers;
- assessment of quality;
- measurement of quality expenses;
- corrective practice;
- zero-defect philosophy;
- objective environment;
- training; and
- staff recognition

Focusing his description on leadership and awareness of quality improvement, Feigenbaum (1991) summarised TQM in commitment to combine quality in all organisational practices along with employee involvement in order to achieve a reduction in TQM expenses. Research on quality dimensions was expanded by Flynn, Schroeder, and Sakakibara (1994; 1995) as they made an attempt to develop a scale at plant level. Their scale included different job title categories such as quality managers or line workers focusing on seven major quality dimensions:

1. support of the top management;
2. quality information;
3. management of the process;
4. design of the products;
5. management of the staff;
6. supplier involvement; and
7. customer involvement

Reviewing the relevant literature on CSFs enabled the researcher to identify a list of them fundamental to the implementation of a quality culture. From the plethora of articles, a list of 24 factors was identified which are outlined in the table below.

Table 2. 2: Primary CSFs Identified for Quality Culture Implementation

Critical Success Factors for a Quality Culture	
1. Employee Empowerment	13. Process Management
2. Education and Training	14. Work Environment
3. Benchmarking and Self-Assessment	15. Information Technology
4. Total Employee Involvement	16. Customer Satisfaction
5. Team Working	17. Relationship Development
6. Reward and Recognition	18. Relationship Management
7. Leadership and Top Management Commitment	19. Quality Information Analysis
8. Strategies and Policies	20. Continuous Improvement Systems
9. Innovation and Creativity	21. Feedback Management
10. Product / Service Design	22. Effective Communication
11. Quality Assurance of Product / Services	23. Business Results Monitoring
12. Clear Statement of Mission	24. Market and Customer Focus

The following table lists the critical factors identified with supporting citations from the literature.

Table 2. 3: Critical Success Factors for a Quality Culture

Critical Success Factors for a Quality Culture	
<p>1. Employee Empowerment</p> <ul style="list-style-type: none"> • Alias, Nokman, Ismail, Koe, and Othman (2018) • Çakar and Ertürk (2010) • Wu, Zhang, and Schroeder (2011) 	<p>13. Process Management</p> <ul style="list-style-type: none"> • Andreeva, Zhulina, Popova and Yashin (2018) • Seth (2005) • Lewis et al. (2006) • Jeston and Nelis (2008) • Prajogo (2012) • Schmitt and Becker (2013)
<p>2. Education and Training</p> <ul style="list-style-type: none"> • Cyril, Amoge and Nkemdilim (2019) • Lewis et al. (2006) • Ehlers (2009) • Estrada (2012) • Wong and Shojania (2012) 	<p>14. Work Environment</p> <ul style="list-style-type: none"> • Legoabe, Telukdarie and Munsamy (2019) • Al-Najem and Dhakal (2012) • Marria and Naima (2012) • McAdam (2013)
<p>3. Benchmarking and Self-Assessment</p> <ul style="list-style-type: none"> • Mansoor (2018) • Lee, Wong, and Yeung (2011) • O'Mahony and Garavan (2012) • Ossiannilsson and Landgren (2012) 	<p>15. Information Technology</p> <ul style="list-style-type: none"> • Ngobe (2020) • Schein (1999) • Yorke (2000) • Ehlers (2009) • Ma and Vest (2013)
<p>4. Total Employee Involvement</p> <ul style="list-style-type: none"> • Yassin (2018) • Bayazit (2003) • Urhuogo, Vann, and Chandan (2012) • Kaur, Singh, and Ahuja (2013) • Yadav and Divakaran (2013) 	<p>16. Customer Satisfaction</p> <ul style="list-style-type: none"> • Mitrache, Stinga and Severin (2020) • Lewis et al. (2006) • Koilakuntla, Patyal, Modgila, and Ekkuluri (2012) • Kristianto, Ajmal, and Sandhu (2012) • Ahmad (2013)

<p>5. Team Working</p> <ul style="list-style-type: none"> • Sumbal, Tsui and Barendrecht (2017) • Dayton (2001) • Bayazit (2003) • Harrington, Voehl, and Wiggin (2012) • Ng (2012) • Awuor and Kinuthia (2013) 	<p>17. Relationship Development</p> <ul style="list-style-type: none"> • Zhang (2019) • Kalpande, Gupta, and Dandekar (2012) • Askari Sajedi (2013) • Ringrose (2013)
<p>6. Reward and Recognition</p> <ul style="list-style-type: none"> • Nasr, Piya and Al-Wardi (2020) • Mallur, Hiregouder, Sequeira, and Jagadeesh (2012) • Wahid (2012) • Abdullah and Tari (2013) 	<p>18. Relationship Management</p> <ul style="list-style-type: none"> • Gardas, Raut and Narkhede (2019) • Sila and Ebrahimpour (2005) • Drew and Healy (2006) • Jayaram (2012) • Vanichchinchai (2012) • Yu (2012)
<p>7. Leadership and Top Management Commitment</p> <ul style="list-style-type: none"> • Nassef and Albasha (2019) • Motwani (2001) • Bayazit (2003) • Seth (2005) • Gotzamani et al. (2006) • Lewis et al. (2006) • Carmeli, Schaubroeck, and Tishler (2011) • Fitzroy, Hulbert, and Ghobadian (2011) • Mustafa and Bon (2012) 	<p>19. Quality Information Analysis</p> <ul style="list-style-type: none"> • Ngobe (2020) • Bayazit (2003) • Prajogo (2005) • Sila and Ebrahimpour (2005) • Gotzamani et al. (2006) • Gimenez-Espina and Martínez-Costa (2012) • Huang and Garrett (2012) • Lee (2013)
<p>8. Strategies and Policies</p> <ul style="list-style-type: none"> • Mojarad, Atashbari and Tantau (2018) • Seth (2005) • Lewis et al. (2006) • Castells (2010) • Yongsoo, Kelly, and Raja (2010) • Miller, Looze, and Shield (2013) 	<p>20. Continuous Improvement Systems</p> <ul style="list-style-type: none"> • Vargas, and Scott (2017) • Lewis et al. (2006) • Anwari and Moghimi (2011) • Jac, Vile, Mateo, and Santos (2012) • Mohanty (2013)

<p>9. Innovation and Creativity</p> <ul style="list-style-type: none"> • Busaibe (2019) • Lyons, Chatman, and Joyce (2007) • Naranjo-Valencia, Jiménez-Jiménez, and Sanz-Valle (2011) • Valentine, Godkin, Fleischman, and Kidwell (2011) 	<p>21. Feedback Management</p> <ul style="list-style-type: none"> • Zhang, Qin and Wang (2019) • Chen and Chen (2012) • Ooi, Cheah, Li, and Teh (2012) • Rezazadeh, Najafi, Hatami-Shirkouhi, and Miri-Narges (2012)
<p>10. Product / Service Design</p> <ul style="list-style-type: none"> • Srinivas, Swamy and Nanjundeswaraswamy (2020) • Nwabueze (2001) • Cook et al. (2002) • Mitra (2008) • Ali et al. (2010) • Baird, Hu, and Reeve (2011) • Talib, Rahman, and Qureshi (2011) 	<p>22. Effective Communication</p> <ul style="list-style-type: none"> • Hokoma, and Aburas (2018) • Dahlgaard and Dahlgaard-Park (2006) • Brown (2013) • Dalgleish, Maurici, and Williams (2013) • Kanwal Nasima (2013)
<p>11. Quality Assurance of Product / Services</p> <ul style="list-style-type: none"> • Tkachenko, Kazakov and Mershchiev (2017) • Kureshi, Qureshi, and Sajid (2010) • Ooi, Lin, Tan, and Chong (2011) • Lam, Lee, Ooi, and Phusavat (2012) 	<p>23. Business Results Monitoring</p> <ul style="list-style-type: none"> • Dachyar and Sanjiwo (2018) • Drew and Healy (2006) • Hafeez et al. (2006) • Singh and Smith (2006) • Al-Swidi and Mahmood (2012) • Cegarra-Leiva (2012) • Hamid, Mustafa, Suradi, and Abdullah (2012)
<p>12. Clear Statement of Mission</p> <ul style="list-style-type: none"> • Cardoni, Kiseleva and Terzani (2019) • Gotzamani et al. (2006) • Wright (2010) • Hu and Zhang (2012) 	<p>24. Market and Customer Focus</p> <ul style="list-style-type: none"> • Sumbal, Tsui and See-to (2017) • Hoang et al. (2006) • Yang (2006) • Chan and Wang (2012) • Irianaa and Ang (2013) • Peltier and Krishen (2013)

The identified critical success factors grouped into five main factors: 1- Leadership and people 2- Strategy and Performance 3- Process and Value Creation 4- Resource, Knowledge, and Partnership 5- Continuity and Sustainability which covers different area of organisational activities and influences. The mentioned five factors correlated with Lawrimire (2011) success factors explained in detail in the next section.

Total Quality Management is a strategic approach an organisation takes to improve quality and overall performance of the organisation. Lawrimore (2011) after analysis of over 100 popular books and 20 years of research presents 5 strategic factors for the success of business. The below are the five critical success factors:

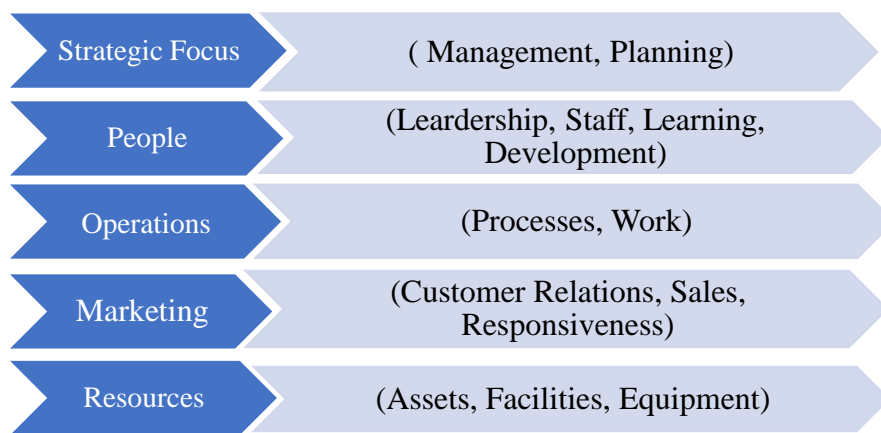


Figure 2.5: TQM Success Factors

Figure 2.5: TQM Success Factors 1

The main success factors are a group of five essential aspects that define an organisation's long-term success.

Strategic focus. The strategic focus part of success suggests that the goals of an organisation and activities are all directed toward a specific purpose. Companies that survive in competitive marketplaces have leaders who clarify their principles and a clear objective.

This aspect is about adhering to the ultimate organisational goal and ensuring that every initiative contributes to it. Making certain that the goal chosen is built from the customer's goals and needs is an important aspect of the strategic focus.

People. The leaders and employees that make up the organisation are the second component for organisational effectiveness. Since an organisation 's personnel is what drives its growth,

it's critical to choose a team that's competent, dependable, and enthusiastic about doing well. This success factor also relates to how pleased an organisation's employees are with their jobs.

Employees are necessary to build the organisation, but the organisation must also give appropriate prospects for success to its workforce that comes from a good and successful leadership. Satisfaction with organisation's work boosts productivity and enhances staff retention.

Operations. An organisation's operations are its day-to-day and long-term activities. The various activities that an organisation undertakes must be focused toward generating value for the organisation and its stakeholders.

For operations to be effective, activities must be documented and have a measurable efficiency in order to identify if procedures need to be modified over time.

The following are some examples of operations elements:

- Processes centred on providing outstanding customer service
- Documentation and tracking of all operational efforts throughout time
- Processes are being examined on a regular basis to verify their efficacy.

Marketing. Marketing serves as the link between an organisation and its customers. Marketing includes several components, such as identifying the appropriate stakeholders and evaluation of their satisfaction for a long-term and sustainable business activities.

Marketing aspects include the following:

- Identifying an organisation's target market.
- Considering stakeholders feedback seriously and using it to improve the business relationship.

Resources. The term "resource" refers to an organisation's total assets, such as human resource, information resources, equipment and capital. The management of resources assists an organisation in increasing sales and profits.

The connection between five main domains introduced by this study and Lawrimore’s factors presented on the below chart which covers the three area of people, products and processes within oil and gas organisations.

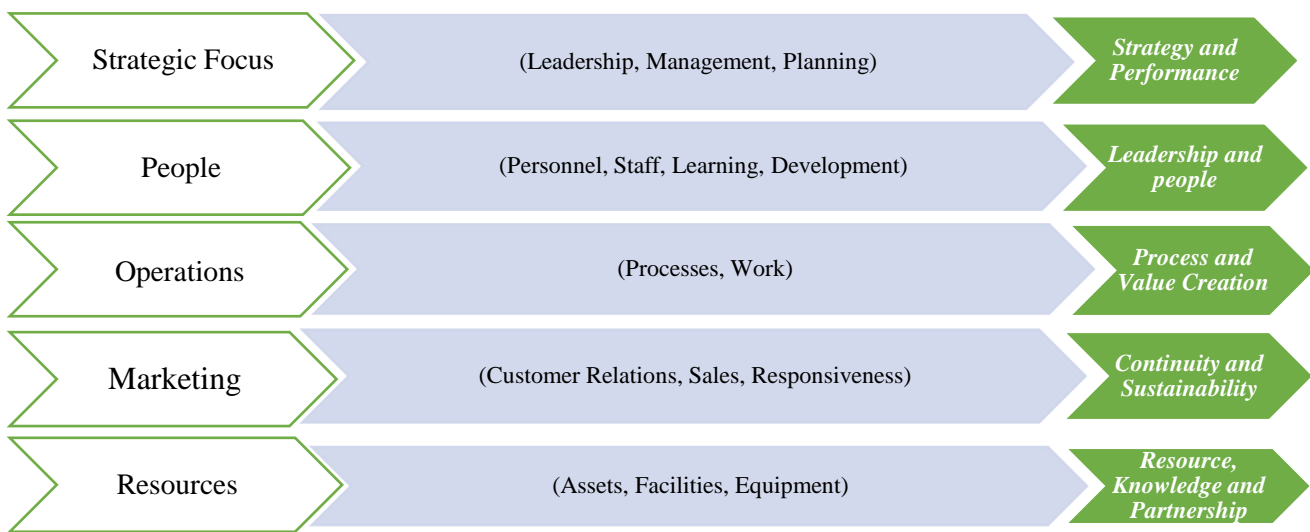


Figure 2.6: Introduced Five Domain Relations with Lawimore’s Factors

2.11 Employee Involvement and Empowerment

Littlefield and Roberts (2012) believe that to remain competitive in the market and to achieve excellence in quality, managers are required to be aware of such significant concepts as employee involvement, democratic and participating management, along with work life quality. Organisations can enhance their performance through major modifications to their management structures in order to increase employee participation and involvement in solving organisational problems and making major decisions. Nevertheless, dictatorial and paternalistic managers will face challenges in sharing the power and responsibility with other employees and thus their business will be doomed to failure. According to Leadership Transformation Group (LLC) (1994), those businesses concerned with employee involvement

are also reported to be committed to total quality. Thus, the absence of either element leads to failure in any TQM practices.

As Collinson, Rees, Edwards, and Inness (1998) put it, the motives behind TQM applications, employees' point of view, style of management, teamwork, and employee participation obstacles are required to be investigated in order to examine employee involvement practices in an organisation. Shin, Holden and Schmidt (2001) also believes that to begin an efficient TQM practice, a strong desire to enhance performance, skills, productivity, and staff motivation is required which Figures 3.1 and 3.2 show the importance of employee's empowerment and involvements. Although employee involvement and empowerment are viewed as TQM foundations, the concept of involvement is not universally accepted. Arumugam, Mojtahedzadeh, and Malarvizhi (2011) state that a number of senior managers and business owners are terrified at the thought of authority delegation and employee empowerment; thus, sharing of information and delegation of power is cancelled. Similarly, Serafimovska and Ristova (2011) affirm that TQM practices are not in line with directions, philosophy, and management style of a large number of organisations.

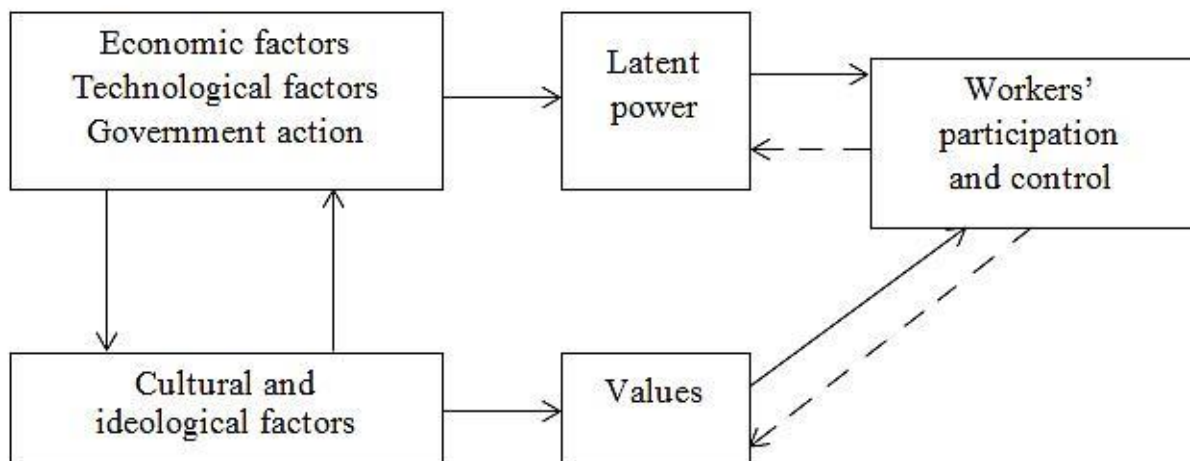


Figure 2.7: Framework for Employee Involvement (Holden, 2001, p. 567)

An alternative issue responsible for the failure of TQM practices is the passive and negative attitude of staff to the organisational management. As Gbadeyan and Adeoti (2003) suggest,

this negativity in attitude is closely connected to cultural features. As mentioned before, senior managers are threatened by delegating more involvement to staff as they think unfavorable consequences might be faced. Conner (2012) believes that weak management commitment along with lack of employee participation lead to failure in organisational teamwork.

In the literature on employee involvement, the notion has also been referred to as 'employee voice' which has been constantly applied in Human Resource Management (HRM) domain over the past few years (Wilkinson & Fay, 2011). In their research on employee voice, Wilkinson and Fay (2011) suggested that involvement of staff in decision-making activities is a clear example of having a voice in organisational practices. A number of parallel terms such as engagement, empowerment, participation, and involvement have also been suggested for voice. Royer et al. (2008) deemed that empowering employees and treating them as stakeholders increases performance, motivation, and commitment.

Lakshman (2006) believes that engagement of employees in organisational decision-making leads to empowerment of the target business without which success rate will be limited. Furthermore, to develop a feeling of ownership in the staff brings about superior customer service since the engaged employees search for different ways to enhance customer service based on their own experience. According to Arumugam and Mojtahedzadeh (2011), this empowerment is mostly about issues at task level and items such as quality enhancement, productivity, work organisation, customer satisfaction, and problem-solving.

Degree	Levels of involvement		
	Local (workplace level)	Both local and distant	Distant (company or organisational level)
<i>Control (by workers or workers and management together)</i>	Worker self-management		Worker self-management of cooperatives
<i>Co-determinational</i>	Union shop steward representation		JCCs; works councils; worker directors; representation union-management negotiations
<i>Consultational (two-way communication)</i>	Quality circles; job enrichment; suggestion scheme; appraisal	Attitude survey; customer care; TQM, e-mail Internet, intranet	Video conferencing, e-mail, Internet, intranet
<i>Communicational</i>	Team briefings; department or group meetings	E-mail, Internet, intranet	Mass meetings, e-mail, Internet, intranet
<i>Informational (top down)</i>	Noticeboards, e-mail, Internet, intranet	Memos; briefs, e-mail, Internet, intranet	Company newspaper/magazine; bulletin

Figure 2.8: Levels of Employee Involvement (Holden, 2001)

Since the management makes final decisions, limited power is given to employees who are allowed to make suggestions for improvement. Nevertheless, decision making remains in the realm of management. A major dichotomy is observed in employee engagement practices regarding the fact that managers limit information access for employees. In addition, the permitted extent of initiatives and responsibilities shifted to staff to make them more autonomous is a matter of debate. Loukkola and Zhang (2010) believe that the core of the argument is concerned with serious limitations imposed on employee engagement that weakens the original managerial intentions in the eyes of the staff. In an investigation performed for the Tavistock institute, Gallie (2013) reports that employee empowerment significantly influences job satisfaction. He stresses the necessity of employee engagement for development and use of acquired skills and knowledge at workplace. Last but not least, this participation can directly affect the mental health of employees in a positive manner.

Collinson, Rees, Edwards, and Inness (1998) assert that empowerment is indeed the collaborationist interpretation of employee engagement referred to previously. Many definitions have been proposed for employee empowerment all of which are placed under the involvement umbrella; thus, attempts have been made to develop a universal definition.

Greebler and Suarez (1989) suggest the notion of employee engagement activities at work could be part of this definition which are also controlled and directed by managers.

Alternatively, Mohan-Ram (2000) suggests that macro-level negotiations which are performed on behalf of staff by means of union channels and are guaranteed by worker participation laws can also be considered as part of this definition. These co-partnership or codetermination laws enable organisational groups to request for negotiations on all employer-employee relations such as daily job supervision and senior-level decision making (Mohan-Ram, 2000). Sharing of information with staff is also necessary; nevertheless, employees have reported that little information and actual decision-making power is provided for them.

According to Shin, Holden and Schmidt (2001), there are different levels of employee involvement. There is not a 'one size fits all' approach to involving employees. This would suggest that individual managers, organisations, or employees may have different trust and involvement levels in the workplace.

Consequently, the notion of employee empowerment and engagement turns out to be paradoxical for the management. Leonard and McAdam (2003) suggest that employee involvement is initially viewed as a motivator; however, managers can use it as a locus of control in their organisations. Managers hope to gain strong commitment from their employees by implementing their employee involvement policies without sharing fully with the workforce. Although the degree of employee participation varies across different nations based on their legal system and industrial activities, the engagement and involvement of staff is usually limited to micro-level domains. On the contrary, as Barclay (1993) puts it, employees view engagement in a broader context and are eager to learn about strategic concerns that can influence them either in short term or in the long run. In sum and as Shin, Holden and Schmidt (2001) concludes, the concept of empowerment along with engagement policy is looked at differently by the workforce and management in different settings.

2.11.1 Empowerment Perspectives

A definition of empowerment provided by Edward (1992) focuses on decentralising the decision-making procedure and delegating further autonomy to the workforce. According to Department of Trade and Industry (DTI) (2007), empowerment is an intrinsic motivation for

performing tasks that indicates staffs' orientations to their jobs. The motivation is indeed a positive experience that an employee gains from his/her occupation which in turn leads to job satisfaction.

2.11.2 Succeeding Through People

Figure 3.3 demonstrates the link between leadership and people. Employee empowerment is illustrated as being important to the success of the organisation, as well as organisational innovation, organisational creativity, and organisational learning. However, it also highlights the need for inspiration and using senior management and organisational leaders as the catalyst.

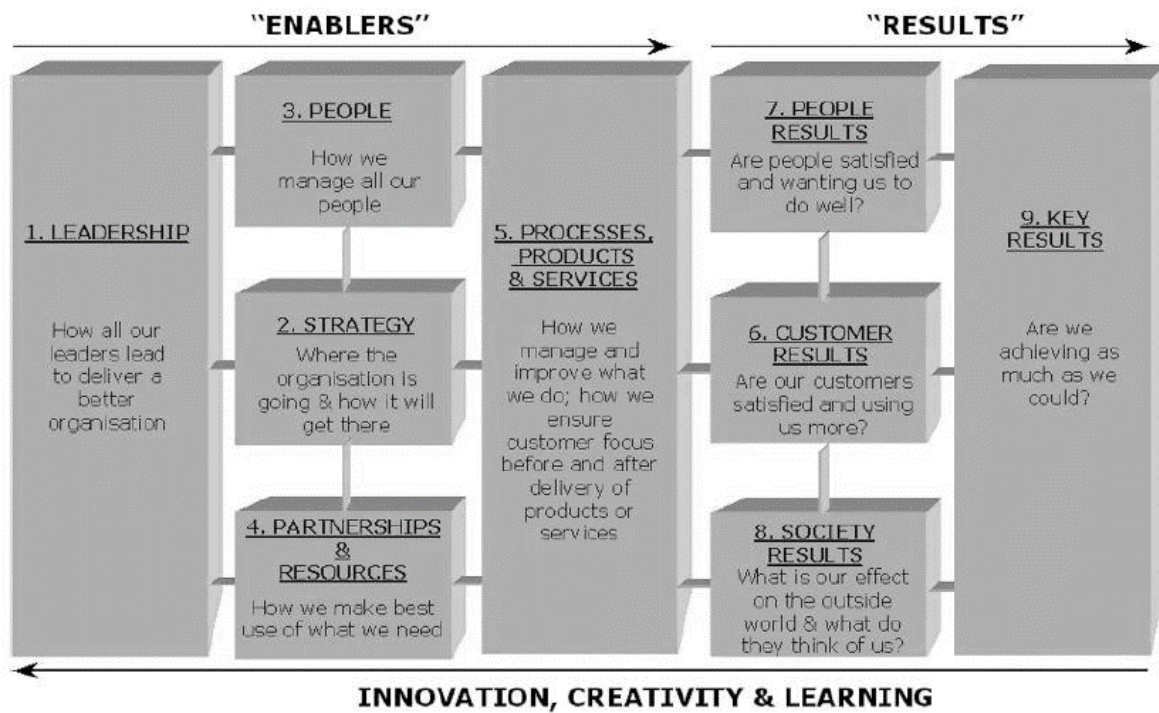


Figure 2. 9: Leadership through People (Employee Empowerment)

2.11.3 Benefits of Employee Empowerment

Barclay (1993) identified the benefits of employee empowerment. According to Barclay, there are benefits for both the employees and the organisation, and based on this it could be suggested

that it is beneficial to implement employee empowerment from both the management and the employee sides of the organisation.

Benefits for organisations	Benefits for employees
<ul style="list-style-type: none"> • Greater awareness of business needs among employees • Cost reduction from delayering and employee ideas • Improved quality, profitability and productivity measures • Organisation able to respond more quickly to market changes • Enhanced loyalty and commitment • Decrease in staff turnover • More effective communication 	<ul style="list-style-type: none"> • Increase in job satisfaction • Increase in day-to-day control over tasks • Ownership of work • Increase in self-confidence • Creation of teamwork • Acquisiton of new knowledge and skills

Figure 2. 10: Benefits of Employee Empowerment (Barclay, 1993)

Another operational and process-based definition of employee empowerment is provided by Ali and Shastri (2010). They base their definition on providing the line workers with information about organisational practices and rewards in order to allow them a voice in the decision-making process as well as to increase employee contribution to the target business. According to Motwani, Prasad, and Tata (2005), empowerment is concerned with applying specific techniques to delegate more power and voice to staff in lower positions and thus make organisational positions more equitable.

2.11.4 Middle Management Role

As Gbadeyan and Adeoti (2003) put it, middle managers also have a significant part in organisational success; nevertheless, they are considered as the primary source of opposition to attempts towards quality enhancement application. Unless approached in the right manner, middle managers view quality enhancement practices as a threat to their position and power. They are frustrated by the thought of losing their job as management levels should be decreased to enhance organisational communications. In addition, they assume that lower-level staff will

seize their responsibilities and power and leave them without any significant contribution to the organisation. However, the middle management is the vital element in successful implementation of quality practices. For one reason, Khoo and Tan (2002) state that middle managers play a key role in converting organisational strategies and structures into comprehensive operational practices. They are also responsible for modifying the general organisational trends to match the real-world issues (e.g., late delivery of supplies, machinery breakdown, and etc.). In addition, middle management is viewed as the role model for line workers. Loukkola and Zhang (2010) suggest that behaviours and practices of the middle management must characterise the service- and people-centred values and cultures of the business. Through the course of their job, these managers have learned about different ways that lead to success or failure. Indeed, middle managers can be a central part of the newly re-evaluated organisation but their position needs to be redefined. They are required to reconsider their position and turn into a teacher and liberator instead of a controller.

Njie, Fon, and Awomodu (2008) believe that middle managers are required to make sure their personnel are dedicated to organisational goals and have a sense of ownership towards the organisation. Regarding the significant role of middle managers, any successful organisation needs to take account of the abovementioned factors that need to be modified. Noronha (2002) believes that a brand-new management method is actually not required as long as modifications are made to the old ineffective behaviours and practices. Although the number of middle managers will decrease, they will assume a significant role in the future of an organisation as channels of change. According to Milisiunaite, Adomaitiene, and Galginaitis (2009), middle managers remain in their positions since they fulfill crucial roles as change agents and coaches instead of bureaucrats.

According to Trimo (2009) when organisations have middle management programmes in place, staff turnover among high performing employees is significantly reduced. These middle managers are also portrayed as mentors who help develop and nurture employees.

Leadership At all LEVELS

First Time or Front Line Managers

- Need leadership fundamentals, business acumen and communication skills development.
- Need to provide hands-on direction, mentoring and assigned training opportunities for their direct reports.
- Require engaging, self paced, technology based learning solutions covering their wide range of needs.
- Learning at the moment and time of need is critical for this multi tasking audience.

Mid Level Managers

- Need blended learning supported by authoritative content and performance support resources.
- Learning resources need to be targeted to their role of managing other managers and balanced with opportunities to learn new skills.
- Must include job rotation/stretch assignments to allow for growth with assigned mentor.
- Feedback and mentoring are critical learning components for leaders at this level of their career.

Executive Level Managers

- Need to develop higher level leadership skills such as motivation, strategy and creating a culture of innovation.
- Peer to peer collaboration and idea sharing are important for today's executives – video and social media channels address this audience's unique needs.
- Highly focused development plans and executive coaching

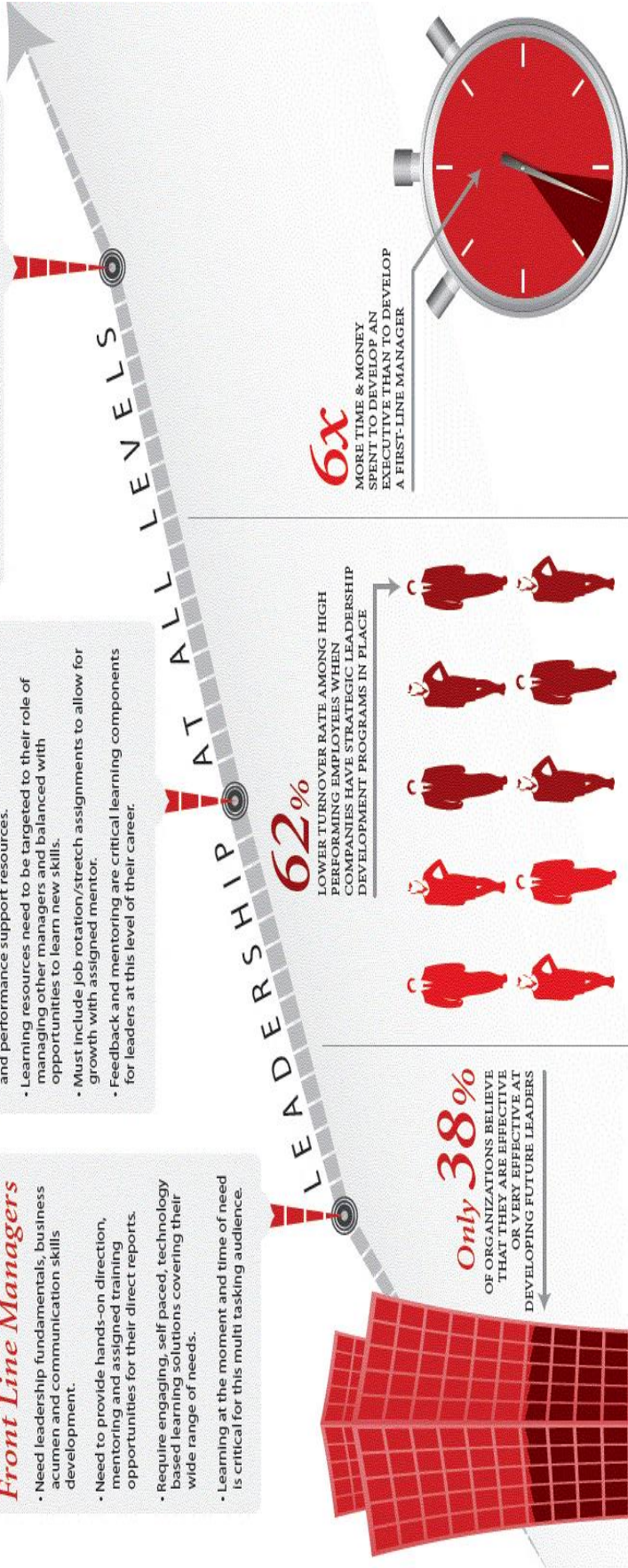


Figure 2. 11: Leadership at All Levels of Management (Trimo, 2009)

The smoothness of the modification procedure is contingent upon middle managers capabilities and as human resources tasks are delegated to these managers, challenges will be confronted (Lam, 1996). Of paramount importance is the task of inspecting the pressures and conflicts middle management faces in order to resolve these frictions. As more responsibilities are delegated to middle managers, they experience heavier workload along with more demanding tasks in comparison with the past. Nevertheless, as Buick and Thomas (2001) put it, middle managers feel more empowered with their more liberated role.

On the contrary, middle managers have been compared to fillings in the sandwiches pressed between conducting senior management strategy plans and the staff demands in the target sector or department. Middle managers' roles and practices are essentially different and pivot on culture, structure, background, sector, and size of the target organisation. Newell and Dopson (1996) report middle managers' widespread discontent regarding their exclusion from strategic-level procedures. This functional contradiction is assumed by middle managers who undergo pressures when executing organisational policies while they are powerless to have an influence on it at the strategic level.

As Newell and Dopson (1996) and Roth (1998) put it, middle managers have experienced a shift in their organisational roles as they are viewed as change agents responsible for bringing about change at a micro level in practice, processes, and staff attitudes towards organisational modifications while these managers close their eyes to their own interests occasionally.

In sum, middle managers are sources of change as well as recipients of it. The new attitudes and philosophies introduced in their organisation largely affect middle managers' performance, their staff, and eventually their business.

2.12 Benchmarking

The notion of benchmarking is concerned with comparing organisational products, strategies, and procedures with pioneering and high-class companies all over the world to understand how quality is accomplished in those organisations. Subsequently, objectives can be set to compete with them and finally exceed them in different aspects.

As Ross (1999) suggests, benchmarking is an operational method for recognising areas that require major enhancements at an organisational level. Benchmarking by itself does not improve performance; rather it provides companies with useful and necessary information in order to enhance operational practices. The term has been brought to the people's attention by the Baldrige Award programme of the National Institute of Standards and Technology (NIST) in the USA. NIST developed criteria that asked how results from operational and quality practices can be compared to competing international companies and how benchmarking can be applied to boost developmental methods and approaches.

Benchmarking is also defined by Freytag and Hollensen (2001) as the manner of assessing an organisation's practices and policies with other best-in-class businesses inside and outside the target industry. Pulat (1994) suggests that benchmarking is about adapting standard and best practices from other organisations in order to enhance customer-related performances and bring about more satisfaction for target customers. Pioneering organisations have utilised benchmarking as a continuous spur in order to support anticipation of organisational improvements. However, as a fashionable and quick fix nowadays, benchmarking can introduce ineffective practices and misunderstanding within the organisations (Macdonald, 1998).

BENCHMARKING

Benchmarking Research Best Practices

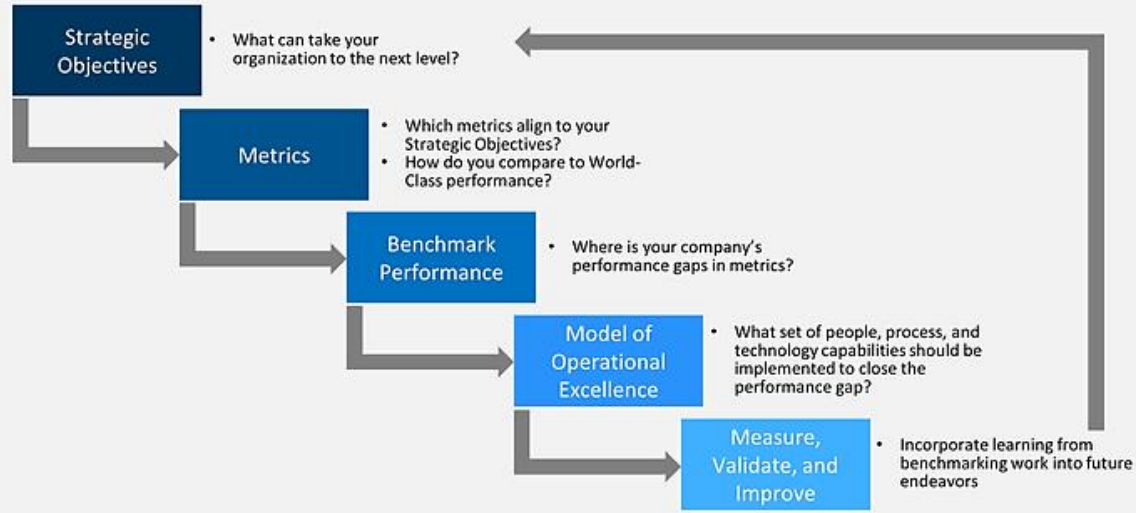


Figure 2. 12: Leadership through Benchmarking (Littlefield, 2012)

Benchmarking is used by many companies as a technique for obtaining the necessary information to be used in the search for best practice and process improvement (Booth, 1995). Figure 3.6 illustrates how organisational leadership can be attained through benchmarking.

Evans and Lindsay (2001) provide another definition for benchmarking which includes the procedure of improvement and awareness of improvement goals along with assessment of organisational practices based on results from pioneering organisations. Zairi (2000) also sees benchmarking as an organised and continuous procedure of evaluating superior organisations to identify best practices and also to set clear business objectives.

Booth (1995) comes to the conclusion that adequate preparation and full awareness of business procedures and weaknesses necessitates a search for the missing data which will lead to successful benchmarking. Ross (1999) gives three major reasons why organisations need to implement benchmarking practices:

- It provides the opportunity for organisations to embark on new realistic and thorough objectives and helps them to convince others of their reliability;
- It helps the organisation to identify particular performance gaps and improvement procedures; and
- It offers a basis for training.

It is with the assistance of benchmarking different companies that organisations can collect useful needed information and thus modify their performance objectives in order to attain them (APOC, 1995). Organisational strengths and weaknesses can indeed be discovered by means of benchmarking which will in turn lead to implementing best practices within the target business.

Evans and Lindsay (2001) refer to three particular kinds of benchmarking:

- performance benchmarking which includes practical quality, pricing, and any performance features of organisational products or services;
- process benchmarking which is concerned with work procedures such as training staff, entering orders, and billing; and
- strategic benchmarking which looks at competitions among companies and searches for effective policies that bring about business success

As stated by Jarrar and Zairi (2000), benchmarking is being widely acknowledged as an effective and influential instrument for enhancing performance of business units and organisations. Benchmarking, as Ross (1999) suggests, is divided into three basic parts:

- internal benchmarking which measures one part of the organisation against another;
- competitive benchmarking which compares organisational performance with competitors' results; and
- universal benchmarking which is viewed as the major source of awareness in comparison with competitive benchmarking and the major objective includes product and service enhancement to turn into a pioneering organisation

Zairi (1994) identified the link between benchmarking and quality and suggested that as the wheel of improvement, quality management performs an internal practice that adds to the value of products and services for customers. On the other hand, benchmarking is regarded as an external practice to pinpoint opportunities and make sure the improvement wheel is on the right track reaching the desired destination – competitiveness standards.

Littlefield (2012) shows how benchmarking can help an organisation. There are several stages which need to be addressed, and each level is cyclical. Upon examination of each level, the outcomes are used to shape the strategic objectives of the organisation.

As Freytag and Hollensen (2001) put it, benchmarking which is viewed as a part of quality management system is closely connected to other TQM practices. Prasad et al. (1996) performed a benchmarking investigation of US organisations and their subordinate plants overseas and came to the conclusion that a number of these organisations adopted a twofold strategy: they transferred manufacturing instruments and facilities to developing countries to decrease labour costs and implemented advanced TQM practices in these overseas plants to prevent quality-related issues from happening. In a similar vein, Macdonald (1998) states that the procedure of benchmarking played a significant role in the evolution of TQM initiatives in Japan where it was developed in different forms such as ‘*shukho*’ i.e. lending staff to other companies.

2.13 Self-Assessment

Self-assessment allows an organisation to develop a systematic, objective approach to understanding and measuring its success in applying TQM principles along with the fact that organisational strengths and weaknesses are identified (The European Foundation for Quality Management, 1995). Recognition of the intimate connection between self-assessment and implementation dates back to 1950s when Deming delivered speeches on Statistical Product Quality Administration in Japan which led to the launch of the Deming Prize in 1951 (Jackson, 1999).

Self-assessment is useful for a number of reasons. It can be used as a measure of progress and whether or not implementation is successful; additionally, it encourages a regular, systematic,

and equitable approach. Self-assessment also ensures an incremental or evolutionary building of quality factors, adding strength upon strength. Following the principle of attaining small achievable results at fairly complete levels with measurable indicators, it prevents setting unobtainable or unrealistic goals. Jackson (1999) suggests that it is more reasonable to identify the impact of previously performed activities on improvement areas before new practices are pursued.

The definition of self-assessment provided by Conti (1999) focuses on three major self-assessment aspects: 1) results which refer to internal or external user satisfaction; 2) assessment of processes; and 3) appropriateness of the quality system. Conti envisions that the first process or input registers the level of customer satisfaction, both internal and external. The second input derives from current organisation measurements and periodic audits of main organisation processes. Audit results and findings of fitness-for-use surveys concerning the quality system are the third process. Combining the three provides the self-assessment diagnosis.

Self-assessment within the quality management framework systematically follows the processes that drive the organisation towards continuous improvement and customer satisfaction. Self-assessment is made by systematic design and through application of a structured model, such as Hillman's (1994), which has two objectives: a) to maintain high levels of achievement in success areas; and b) to identify additional improvement areas and opportunities for positive action. In Davis' model (1993), self-assessment takes three directions: a) establishing the current level of performance and highlighting improvement priorities; b) monitoring achievements and progress in organisation improvement; and c) providing a future planning and development focus. Other models follow various checklists of TQM standards, such as those found in the Deming Award, the Baldrige Award, and the European Quality Award. Organisations may choose to develop their own integration of various model elements or expand upon these with individualised elements.

In terms of developing integrated models or overall evaluation systems, the focus of continuous improvement must be maintained. Assessment, therefore, cannot be constructed as negative, hostile, disruptive, or combative. It is collaborative. It also acts as prevention to disturbance or misdirection in the quality process. Even so, the perspective of coordinating continuous evaluation with continuous improvement inherently reveals some conflict since the assessment must be focused on the identification of non-conformity and review of corrective action. Hence,

assessment manifests a control orientation in conjunction with an extension of quality system elements. Therefore, self-assessment extends beyond mere control towards a definite improvement orientation (Conti, 1999).

The engagement of executive managers in self-assessment procedures as well as their leadership is viewed as significant as they play a central part in continuous organisational development. According to Fountain (1998), senior managers' awareness and preferences determine the choice of self-assessment implementation model. The self-assessment model termed 'target assessment' incorporates a number of elements and rationales explained in the following sections.

2.13.1 Target Assessment

Strengths and opportunities are the focus of target assessment. Advantages include increased focus on people, change management, empowerment, communication, and suppliers (Fountain, 1998). These 'soft' areas of traditional elements can be neglected by the organisational leadership's agenda because of difficulty in their measurement. Senior management can experience empowerment through targeted self-assessment with sharpened focus for improvement potential.

Pitt (1999) revised the European Business Excellence Model (EBEM) of self-assessment approach according to six requirements directed towards EBEM quality criteria: 1) leadership; 2) policy and strategy; 3) people management; 4) resources; 5) processes; and 6) customer satisfaction. The six requirements for evaluation include:

- proof of a managed method for ongoing and organised improvements in all the aspects of quality;
- practice based on systematic review procedures;
- proof of ongoing improvement during 3 to 5 years;
- explicitness and consistency of organisational management and policies (management says what it will do);
- efficient implementation and consistency of managers' practices (management does what it says); and
- high-quality benchmarking performed regularly to bring about improvement

This model was found to offer a comprehensive, broadly covered overview. Self- assessment should be brought into a tight cycle in which it is combined with action planning, implementation, and operational assessment – within the framework of continuous, strategic improvement. As Pitt (1999) puts it, if this tight cycle is absent, the driving force may disappear and the transformation of self-assessment results into ongoing improvement will not be efficient. Self-assessment has been established as one of the major elements of organisational modification, development, and enhancement. The self-assessment endeavour appears especially attractive for senior management. In his review performed in the domain of health, Jackson (1999) came to the conclusion that general managers are personally engaged in quality improvement practices since it is a vital element in organisational leadership. Furthermore, this involvement provides the opportunity for these managers to communicate with the staff, indicate their support for TQM practices (in the form of providing training for the staff), highlight empowerment, and work alongside other personnel they would not see otherwise.

Table 2. 4: Target Assessment (Fountain, 1998)

Target Element	Reasoning
1. People	<ul style="list-style-type: none"> • This element is not sufficiently depicted by other models. • People are the most valuable resource an organisation has.
2. Leadership	<ul style="list-style-type: none"> • This is in common with all other models. • Without leadership there would be no direction.
3. Empowerment	<ul style="list-style-type: none"> • People need to become responsible. • Clear understanding of requirements is essential.
4. Process control	<ul style="list-style-type: none"> • The backbone must be firm. • The basics must be in place.
5. Change management	<ul style="list-style-type: none"> • The only certain thing that will happen in life is change. • Companies are notoriously bad at change management (this may be ‘time to market’, reorganisation, or process reengineering).
6. Supplier development	<ul style="list-style-type: none"> • By working together with suppliers, huge gains can be made in cost, quality, and delivery.
7. Business performance	<ul style="list-style-type: none"> • Like MBNQA and EQA, the inevitable focus of the business is survival.
8. Customer perception	<ul style="list-style-type: none"> • The most important person is the customer and what he/she thinks. • Perception may be different from the organisation ‘facts’.
9. Communication	<ul style="list-style-type: none"> • Vertical/horizontal communication is vital for workforce commitment. • The cascade must come from the top, but the whisperings at the bottom must be visible to the top.

Based on Wilkes and Dale (1998), self-assessment within the process of TQM implementation for continuous improvement corresponds to the formulations of experts in the domain of TQM who perform their jobs according to the preferences of leaders of multinational organisations. Adaptation of models for specific organisations, through integration of approaches, may be appropriate and further draws upon senior management initiative, involvement, and direct-participation decision within the overall agenda of continuous improvement. As Jackson (1999) notes, for firms that fall outside the large, multinational profile, development of models of self-assessment should be performed by individuals who possess an intimate knowledge of the working practice of that type of organisation.

2.13.2 Teamwork

The literature review revealed the fact that, in an organisation, an effective and strong culture based on core values needs to be developed which calls for innovative practices. The rationale behind this is the significant part of culture in bringing about necessary changes and in preventing staff resistance to change, which is reported to be a major obstacle to modifications (Chang & Sinclair, 2002). As mentioned earlier, culture, quality, and teamwork within an organisation affect organisational practices. Arumugam, Mojtahedzadeh, and Malarvizhi (2011) as well as Arumugam, Ooi, and Fong (2008) also highlight the significance of organisational culture in the success of both gradual and radical procedures of change.

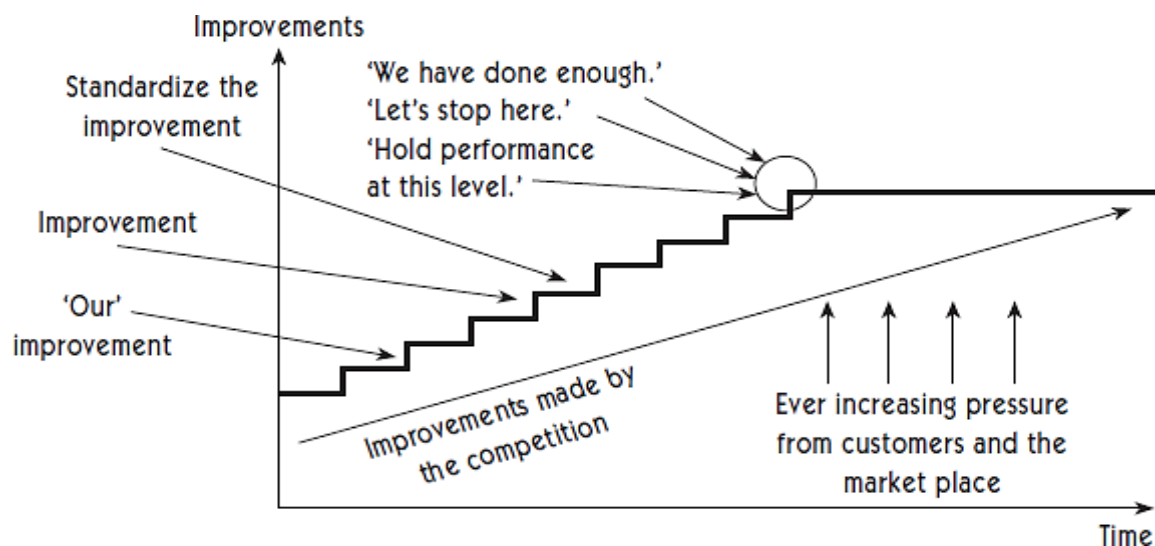


Figure 2. 13: Process Management Improvement through Effective Leadership (Arumugam, Ooi, & Fong, 2008)

2.13.3 Reward and Recognition

According to what Twomey and Twomey (1998) state, business owners and managers admit that reward and recognition is a critical factor to motivate organisational staff. Several strategies are used in an organisation to encourage personnel such as employee of the month plan, paying commission on sales, profit sharing, and etc. Different types of rewards are occasionally used in different settings and there seems to be little knowledge regarding the rationale behind it. A type of incentive that has attracted a number of managers is team-based; nevertheless, a large number of them are reluctant to apply this reward system as they think it

might adversely affect individual performance of employees. As Poole and Jenkins (1997) put it, incentive pay (reward for the task result not the time of working) should be viewed as motivation instruments as well.

According to Darity (2001), organisational leaders can convey a loud and clear message regarding their preferences and what they view as significant by using rewards. The manner by which employees are rewarded and assessed affects their behaviour to a great extent. For instance, if teamwork is preferred by organisational leaders, they should reward their employees and set performance objectives based on whether they are good team members. As a result, and as Hausman (2000) notes, reward and recognition and incentive pay turn into essential elements of teamwork. These rewards can be offered according to individual performance and behaviours of employees or based on team performance and thus equally divided among group members. This is what Griego et al. (2000) refer to as team-based rewards.

Six elements are deemed as significant while developing and applying reward systems (Horne et al, 1998):

1. specific and clear strategic objectives regarding rewards and teams;
2. open communication about rewards and team outcomes;
3. clear plans and policies about the principles and types of rewards and recognition;
4. commercial activities and expanded goals;
5. training to improve teamwork and interpersonal skills of employees; and
6. proper evaluation of the reward system

Four general categories can be used to define how reward and recognition systems can be applied: direction, support, reinforcement, and celebration. These categories enable managers to encourage desired behaviour and increase motivation among team members. A large number of organisations are making major modifications to their whole system such as levelling off hierarchies, empowering staff, and basing organisational processes on team performance instead of individual performance. Geroy et al. (2000) believe that these reward and recognition systems are an integral part of organisational modifications and also effectiveness of these changes. According to Kastetter (1999), if organisations are determined to succeed and focus their energy on overcoming the challenges, a full reconsideration and rearrangement of reward

and recognition practices in line with new organisational objectives and culture is essential. Indeed, organisations that apply appropriate compensation and reward as strategic resource instruments can appreciate the great potential of their staff working as part of a team.

Cacioppe (1999) states that to attain team and organisational objectives, motivational programmes aimed at encouraging new staff behaviour and practice are required. The choice of incentives largely depends on team types and teamwork stages. In addition, the organisational reward and recognition system must also reflect the desired culture and values of the target business. Gibb (2001) concludes that managers must be eager to experiment different strategies to hang onto the effective ones and fix the ineffective strategies. They also need to make every endeavour and to put necessary resources into the reward and recognition system so that it can perform properly within the organisation.

2.13.4 Recognition

A number of TQM endeavours are individual; nevertheless, a larger number of them are team based. Therefore, groups or teams and their members are regarded as significant. The following paragraphs focus on two widely-used systems namely informal recognition and formal awards.

Informal Recognition: As soon as organisations make an attempt to apply TQM, new opportunities are opened up for operational management to encourage staff towards implementing TQM in business practices. It has been noticed by organisations which have implemented TQM that personal engagement and strong support by senior managers play a significant role in success of the target programmes.

Formal Awards: This system starts from basic understanding needed in all TQM practices to instruments for formally awarding notable achievements. Indeed, TQM endeavours must be provided with strong feedback (Nelson, 1991). A number of examples provided by Nelson (1991) include: “Quality Action Team (QAT) recommending a process improvement, or a Natural Working Group (NWG) team recommending a problem solution, or a Guidance Team (GT) assisting a QAT” (p. 2).

2.13.5 Awards for Superior Teamwork

According to Nelson (1991), of paramount importance is rewarding teams rather than individuals in order for TQM to succeed. In addition, these rewards should be equally given to team members. Supervisors should nominate awardees to receive NWGs and QATs.

2.13.6 Individual Awards

As mentioned earlier, each team member deserves an equal share of reward and recognition as others. Nevertheless, a number of individuals undoubtedly should be recognised and awarded on an individual basis irrespective of accomplishments the team has made (Nelson, 1991).

2.13.7 Awards for Quality

As Nelson (1991) puts it, even the mere activity of applying for quality awards makes an organisation to thoroughly review customer-supplier arrangements, policies, practices, and achievements.

2.13.8 Intrinsic and Extrinsic Rewards

Whether or not an employee is motivated to make any endeavours is closely connected to the degree of significance he/she attaches to a specific reward. Rewards can be classified into two groups namely extrinsic and intrinsic. The former, as Brah et al. (2000) put it, are externally bestowed and thus are provided to sales managers by the firm. Examples include compensation benefits which principally serve lower-order needs such as psychological or safety needs. On the other hand, Gardiner and Whiting (1997) see intrinsic rewards as internal which include employees' personal perceptions and feelings regarding their jobs. They are used to meet higher-order employees' needs such as self-actualisation and esteem competence.

Lims and Savolaine (2000) refer to a number of commonly bestowed rewards which include salary, fringe benefits, commission, retirement plans, promotion opportunities, stock options, positive attitude of senior managers, and achieving market objectives (e.g., sales volume, sales profit, and etc.).

An example of ineffective use of organisational resources is providing employees with rewards to which they attach no value. Thus, as Twomey and Twomey (1998) suggest, motivation plans need to be designed in such a manner to concentrate on jobs that increase intrinsic rewards. Based on Kastetter (1999), this is in line with a sense of accomplishment with regards to augmenting profits and market share, decreasing organisational costs along with recognition by leaders and peers.

2.14 Leadership and Top Management Commitment

During the past few years, a substantial increase has been experienced with regards to dynamics of organisational change. Prompt decision making requires many individual leaders who can make fast decisions in line with the organisation's vision and strategic goals (Trimo, 2009). The success of the organisation cannot be ensured by the employees who merely possess the necessary business competencies. They also have to be genuinely involved and be able to take initiatives. Also, an increasing number of people want to play a more active role; they want to co-create an ethical way of operating that complies with their values. Leadership is, therefore, also important for the personal and professional development of employees (Mustafa & Bon, 2012).

As Baidoun (2004) put it, TQM implementation and achieving quality outcomes in order to enhance competitiveness is not a short-term procedure; rather, it calls for continuous and practical leadership. Senior managers and leaders play a significant part in TQM application, an aspect that has been highlighted in most of the literature on quality management. Arumugam, Ooi, and Fong (2008) refer to a number of aspects a successful leadership should involve: picturing the future of the target organisation; directing the development of clear missions; supervising organisational development; monitoring the procedures; and directing towards organisational culture. Noronha (2002) believes that continuous and clear leadership is required to turn an organisation into a quality leader. Although TQM policies and practices are to some extent different from one organisation or industry to another, a large number of senior managers concur with the significance of leadership. Indeed, any strategy planning within an organisation requires a strong and clear leadership as Barclay (1993) suggests. Senior managers must clearly understand the notion of TQM and also be aware of its benefits to the

target business. They are also required to recognise the extent of the change TQM introduces in business-running procedures.

Similarly, Dale (2000) highlights the significance of leadership and states that in all quality awards, this criterion not only sits at top of the list but also is found in other criteria leading to the desired success. According to Schonberger (1992), present-day organisations are required to update and challenge their current situations and also reassess their leadership procedures in order to compete with other rival organisations efficiently. In the eyes of Conner (2012), excellent leadership enjoys from seven key features:

- evident, committed, knowledgeable, and dedicated to promoting quality and knowing relevant details as well as how well the business is being run;
- a missionary passion for introducing maximum change into the organisation;
- aggressive objectives in search for major gains and surpassing incremental enhancements;
- strong drivers with attention to cycle time and zero defects;
- communicating organisational values that influence quality culture changes;
- developing flat organisational structures that delegate more power to lower-levels; and
- senior management maintaining close customer contacts

As Carmeli, Schaubroeck, and Tishler (2011) suggest, quality programmes make an attempt to boost a participative management style within the target organisation. In addition, organisations adopting this management style are more inclined to TQM programmes and less in need of changing the organisational structure (Carmeli et al., 2011). In a study performed on employee engagement, Mallur, Hiregouder, Sequeira, and Jagadeesh (2012) came to the conclusion that a participative style of supervision is closely and positively connected to employee engagement. In addition, they reported that the degree of employee engagement is positively related to the evaluation of TQM benefits. In a similar vein, Mustafa and Bon (2012) stated that involvement in an enhancement structure signifies a strong tool which enables staff to contribute to ongoing organisational improvement.

Applying a general quality programme necessitates the control of the management procedure since managers are in charge of leading employee practices within an organisation (Ahmad,

2013). In this vein, managers are required to assume proper leadership indicating their commitment. Correspondingly, Juran and Gryna (1993) associates the failure in quality programmes of 1970s and 1980s in the West to absence of top management involvement. Thus, the responsibility was left to middle management and confined to the quality department.

In a total quality organisation, as Barclay (1993) proposes, leaders' role includes awareness of procedures and variations, awareness of human psychology, respect for employees, and respect for customers. Schonberger (1992) believes that the first step in senior managers' commitment involves the development of a quality programme. As the most critical component of TQM, the significance of strong leadership is also endorsed by Trimo (2009). Engagement of leaders in organisational practices can be actualised through regular meetings with staff, suppliers, and customers; offering recognition both formally and informally; and being trained and training staff.

In order for TQM plans to succeed, noticeable personal engagement of leaders in creating and retaining an environment contributing to quality excellence is essential. Top managers develop and convey fundamental quality values which underline the significance of process orientation, ongoing enhancement, customers, managing based on facts, teamwork, and mutual understanding and respect along with appreciating individual staff and their contributions to the organisation. Senior managers should make sure all the employees are aware of their central part in meeting customers' needs and satisfaction. Different components of quality management structure are developed and placed properly in order to encourage and maintain the quality procedure. Loukkola and Zhang (2010) came to the conclusion that behaviour of managers is the single most important success factor. Figure 3.8 shows the different outcome of managers and leaders' behaviour within an organisation.

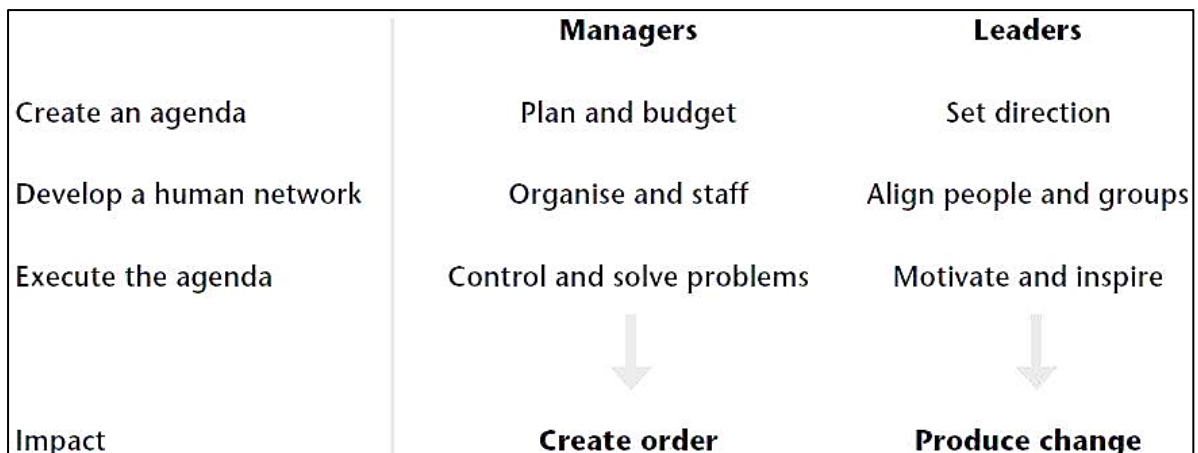


Figure 2. 14: Leadership and Management

The significance of attitudes and practices of top managers are also highlighted by Motwani, Prasad, and Tata (2005) who conclude that management’s attitudes and practices can largely influence organisational productivity. Similarly, Conner (2012) points out that ineffectiveness and low quality are due to the system and managers are to be blamed as they are in charge of the system. Therefore, Gbadeyan and Adeoti (2003) suggest that senior managers and leaders must be viewed as the organisational role models and thus are required to be passionate about organisational values and quality. In addition, Gbadeyan and Adeoti (2003) propose a number of leadership practices that can enhance quality and bring about superior performance levels:

- development of a strategic plan as well as strong quality values that underpin organisational choices and decisions at any level;
- developing high expectations;
- establishing considerable commitment and engagement in quality processes;
- combining quality values into everyday management and leadership; and
- maintaining a proper environment for quality excellence

The importance of leadership involvement has also been highlighted in a number of investigations conducted in Europe and the USA. As Ali and Shastri (2010) report, commitment of managers is assessed as the most fundamental element in quality improvement practices.

A major requirement for effective and successful application of any fundamental initiative in a business setting is deemed to be top managers' and leaders' commitment. Baidoun (2004) stresses the fact that failure in TQM initiatives is undoubtedly prevented by active engagement and commitment of senior managers. According to Dale (2000), quality is such a significant matter in an organisation that cannot be delegated; therefore, senior managers are primarily in charge of commitment to quality initiatives and supporting endeavours to attain organisational objectives. In a similar vein, Chang and Sinclair (2002) reported that absence of management engagement and commitment was a serious obstacle to the application of a productivity improvement plans.

2.14.1 Top Management Commitment and Involvement for TQM

Baidoun's model (2004) (see Figure 3.9) indicates the significance of senior managers and their commitment to target customers as well as improving organisational culture to achieve both customer satisfaction and business excellence. Ali and Shastri (2010) reported that a growing number of organisations have set about to utilise policy deployment as part of a strategic planning method for ongoing improvement. As Noronha (2002) suggests, the enthusiasm of Western organisations for policy deployment has principally been expressed by comparing self-assessment with standard and acknowledged models for business excellence such as Malcolm Baldrige National Quality Award and the European Foundation for Quality Management Model.

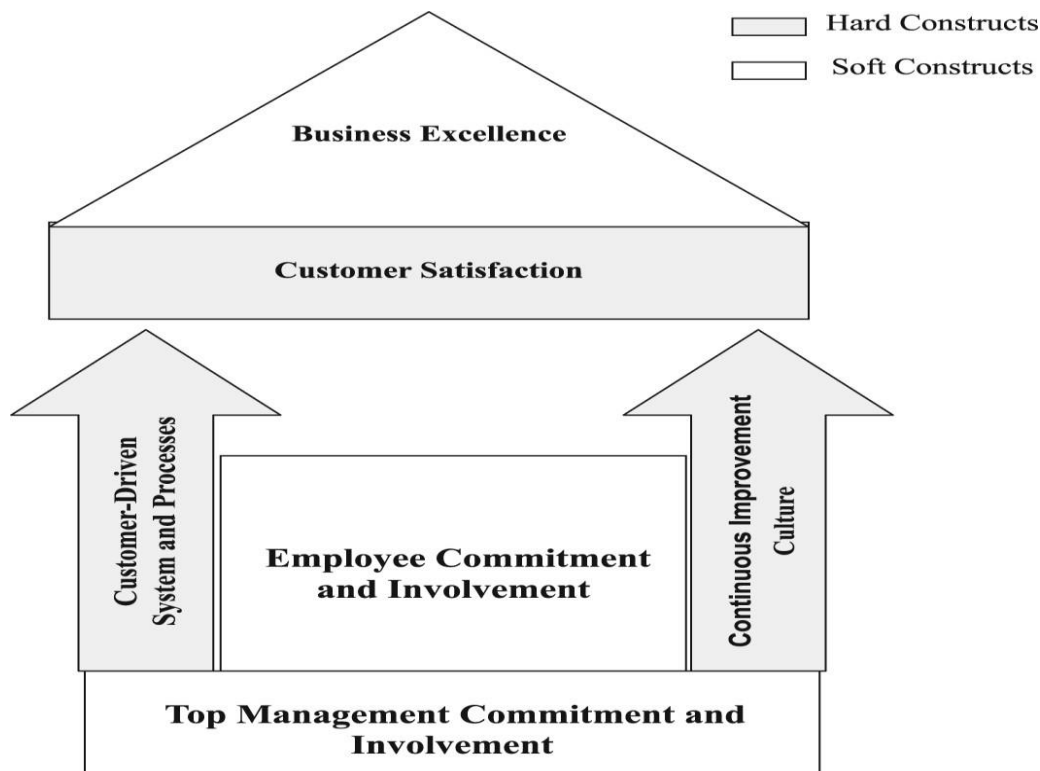


Figure 2. 15: Top Management Commitment and Involvement (Baidoun, 2004)

The literature on the notion of strategy formulation indicates that industrial engineering and business policy have made significant contributions to this notion while TQM literature has been dominated by product management studies. Therefore, as Arumugam and Mojtahedzadeh (2011) suggest, the literature has considered strategy formulation and TQM as two different and distinctive procedures. In their quest for quality management, managers need a comprehensive system in order to direct organisational drift, develop policy, allot resources, concentrate on practices, arrange the practices, and communicate. Numerous ways exist to plan organisational practices; however, managers are frustrated by the challenges and are occasionally accused of short-termism and bureaucracy which lead to their failure to implement required changes.

Policy deployment as an effective strategy aids in generating organisational cohesiveness. It also offers a strong structure for recognising strong and clear organisational objectives. As Minerva Working Group (2005) suggests, a growing interest in policy deployment has been expressed by a number of organisations; nevertheless, it has not been endorsed as a recognised technique in many of them. According to Medhurst and Richards (2010), strategic planning

and policy deployment are essential to TQM since they arrange all the organisational endeavours towards its principal objectives. Quality management is linked to strategic planning by the help of policy deployment which is a vital element in quality culture and quality management success.

A large number of organisations view strategic planning as a fundamental business instrument and put great effort and considerable financial resources in it; nevertheless, the plan is, in many cases, filed and thus not applied in practice. Five reasons have been proposed for failure in strategic plans:

- everyday management not separated from revolutionary objectives;
- unclear values and missions along with weak organisational connections;
- unclear strategic intentions;
- absence of data analysis while generating the plan; and
- absence of regular review and process enhancement

Policy deployment provides a planning procedure which can address these issues, resolve them, and make sure the plan and the policy are lively and successful. Baidoun (2004) points out that management based on policy deployment is represented by organisational intentions, principles guiding practices, a vision of the business future, objectives to attain that vision, priorities given to the objectives, and an action plan engaging every single member of the organisation.

As Schonberger (1992) puts it, policy deployment and strategic planning facilitate the modification and transformation of organisational goals to comply with customers' desires and needs. These two notions include procedures for developing plans, objectives, and areas to be improved upon according to policies and performances of the previous level (e.g., previous year).

The notion of policy deployment as associating organisational plans with performance stages in ongoing improvement has been reemphasised since the procedure covers the notion of empowerment as a balance between sticking to objectives and freedom given to individuals to perform. The ultimate intention of this procedure is to empower individuals to achieve significant improvements. Based on Lakshman (2006), policy deployment includes two levels

to bring about continuous improvement and attain organisational objectives: strategic objectives and daily business control.

2.15 Creativity, Innovation, and Goal Development

The process of policy deployment includes four steps:

1. preparation of the organisation to generate policies to modify its business techniques;
2. developing a plan regarding principal organisational practices based on input from major customers and managers;
3. deploying policies based on rigorous updates and follow-ups and allocating resources to accomplish organisational objectives; and
4. revisiting the above-mentioned steps on an annual basis to reassure the organisation is improving continuously

Nevertheless, as Psychogios and Priporas (2007) state, the complexity of the real procedure cannot be represented by these simplified steps as they fail to highlight the fact that control of daily practices is the basis for policy deployment.

Ali and Shastri (2010) refer the principles of policy deployment as: concentration on procedures rather than outcomes; focus on daily control; customer-based objectives; comprehensive analysis of earlier stages; top-down and bottom-up planning; arrangement of objectives to attain mutual goals; accountability of every single organisational member for the result-oriented procedure; concentrating on a small number of revolutionary items; full awareness of TQM; implementation of resources for attaining goals; consistent and systematic review mechanism; concentration on corrective practices; and vigorous, flexible, and continuous improvement.

With regards to benefits, Collinson et al. (1998) state that policy deployment aids organisations in generating cohesiveness and building agreement on organisational goals at any level. It highlights the future vision of the organisation and arranges and coordinates the endeavours of all organisation members into practice in order to pave the organisation's way towards its goals. Furthermore, policy deployment generates and develops procedures to accomplish

revolutionary objectives annually and provides commitment to selected implementation paths. In addition, it encourages cooperation within different departments, exploits and highlights the cycle in periodic progress reviews, develops a flexible yet well-organised implementation system to help management recognise problem areas and to simplify the procedure of prioritisation. Last but not least, it generates faster and more precise feedback loops and enables desirable communication between organisational departments and levels (Collinson et al., 1998).

As Harper (2006) puts it, the essence of strategic issues, particularly in complex dynamic settings, necessitates a major modification in the way strategic planning is performed. Thus, the attention is shifted from defining a solution for assumed problems to defining a procedure responsive to features of observed problems. This procedure needs to be lively and open to change as further learning occurs. In addition, it should be comprehensive, cross-hierarchical, cross-functional, continuous, and self-correcting. Best-in-class organisations are equipped with managers that utilise the procedure of policy deployment to ensure that employees recognise organisational goals and try to attain them.

Njie, Fon, and Awomodu (2008) suggest that an essential element of quality seems to include careful development of policies, setting objectives, and efficient implementation of those objectives. Quality experts indicate a clear consensus on the significance of TQM strategic planning procedure. Medhurst and Richards (2010) report that this procedure recognises investors' and customers' needs as well as competitors' positions and subsequently implements them in the target organisation where they are converted into particular practices.

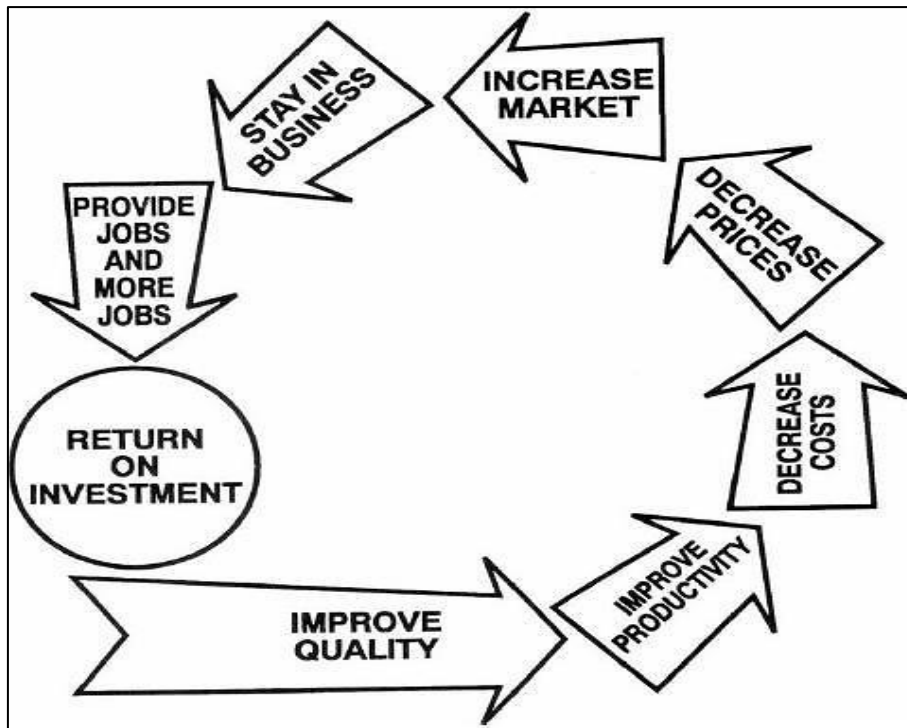


Figure 2. 16: Policy and Strategy Structure (Littlefield, 2012)

Littlefield (2012) demonstrates how policy, and more specifically a structure approach to policy and policy deployment, is vital to an organisation. Figure 3.10 shows clearly that quality forms the foundation of this structured approach. Improving quality leads to increased productivity, decreased costs, decreased prices for customers, and increased market share which in turn helps the longevity of an organisation. Healthy, well-established businesses can provide more jobs which ultimately lead to a return on investment.

2.15.1 Process Management and Teamwork

As Adebanjo and Kehoe (2001) point out, the notion of teamwork is turning into a significant means to productivity and employee satisfaction in the present-day workplaces. A sharp increase is reported in team-based projects since public and private organisations have delegated more responsibilities to team-based structures. Groundbreaking and novel ways of using teams in many domains such as strategic planning, global networks, the virtual organisation, the horizontal organisation, and flexible-jobbing are seen in the modern-day

business world. Stough, Eom, and Buckenmyer (2000) highlight the fact that teams can also be used in traditional decision-making procedures such as nominal group and brainstorming.

Cacioppe (1999) defines team as an active group of individuals who dedicate themselves to attain common goals, perform their jobs together and enjoy doing it, and generate high-quality outcomes. In other words, a team includes a group of interpersonal relationships arranged to attain recognised objectives. In addition, a team can be viewed as a unit in which all members share a common objective and their skills match with those of other members. Findlay, McKinlay, Marks, and Thompson (2000) also define a team as a focused, flexible, and sociotechnical system which is standing in a place between stability and change. It includes a small group of individuals with matching expertise and abilities who consider themselves as mutually responsible for attaining a common goal and performance approach.

According to Goodwin and Johnson (2000), development of a team includes a number of dimensions which are associated with individuals, the task, and the target organisation. Santos and Powell (2001) suggest that team development is a multidimensional concept and that each dimension can have a large impact on all the other dimensions. They maintain that efficient team development requires conscious endeavours to boost the conditions in all the dimensions; team members must recognise those dimensions that require attention and implement proper development techniques. Santos and Powell (2001) also believe that all team members must be held accountable for team development. As Tjosvold and Wong (2000) put it, teams move through various stages which are delineated within the ‘form-storm-norm-perform model’ of team development.

Rickards and Moger (1999) make a distinction between three types of teams namely ‘dream teams’, ‘standard teams’, and ‘teams from hell’ and point out the general trend includes starting from hell and then proceeding to the highest level i.e. dream team. Another model put forward by Kur (1996) is the ‘faces model of team development’ to assess team performance and practices. Teams, in this model, start their journey from moderate levels of performance and proceed to high levels; afterwards, they face conflicts, move through self-assessment and then get back to high levels of performance as if they are changing their faces.

As Castka, Bamber, Sharp, and Belohoubek (2001) suggest, barriers to development of teams are different based on business settings or performance challenges; nevertheless, a number of global characteristics can be observed. Robbins and Finley (1995) believe that failure in team

performance can be associated with incompatible needs, confused objectives, unclear roles, improper decision making, weak leadership, inadequate information and feedback, impractical reward system, personality conflicts, absence of trust among team members, and reluctance to change.

Hiley (2001) points out that group culture is founded on empowerment, engagement, common vision, learning skill, creativity, shared agreement, and trust. In order to enhance team performance, Stott and Walker (1995) suggest that specific degrees of creative chaos and tolerance of mistakes are required. On the other hand, large skill gaps and absence of teamwork have been referred to as obstacles to team performance. Liao and Tsai (2001) state that to overcome the aforementioned issues and to attain group objectives, training and personal development courses in domains such as interpersonal, analytical, technical, and joint skills must be provided for all team members. Although teamwork is turning into an essential element to cope with chaotic organisational settings, a large number of barriers need to be overcome for its effective implementation.

Gee and Burke (2001) suggest that a large number of innovative ways are utilised in order to improve team performance nowadays. They target better team performance and include global teams, flexible jobbing, the virtual organisation, the horizontal organisation, and team-based strategic planning. A number of traditional techniques are also implemented in order to enhance the procedure of decision making within a group such as nominal group, brainstorming, and Delphi techniques, where electronic devices are applied to improve or extend the implementation scope. The aforementioned techniques might be specifically applicable to virtual or global practices as face-to-face meetings are limited in these settings. As Scarnati (2001) puts it, where teleconferencing or any other group techniques are impossible to perform due to time constraints or place limitations, these techniques turn out as very helpful. A rapid changing business setting was experienced in 1990s which was marked by the economic globalisation and competition with information systems. As Griego et al. (2000) express, the concept of virtual team is an innovative way to overcome the restrictions of traditional teams and is described by features such as anonymity, infinity, and transcendence.

Adebanjo and Kehoe (2001) believe that it is almost impossible not to be a member of a team in the modern world. Whether someone is a manager, a student, or a subordinate it is not possible to perform tasks on an individual basis. As Stough et al. (2000) suggest, a large number

of organisations have directly associated performance improvement with development of teams in the business setting. Cacioppe (1999) and Findlay et al. (2000) refer to a number of teamwork benefits:

- Teams enable organisations to generate a larger quantity of information and ideas in comparison with individuals.
- Teams boost awareness and acceptance among team members engaged in the process.
- Teams develop greater motivation and bring about higher performance levels than individuals acting by themselves.
- Teams counterbalance biases and predispositions that adversely affect the decision-making procedure.
- Teams support more risk-taking and innovative decision making.

In sum, team development and teamwork will consistently be a principal objective for every organisation in the future. Knowledge about efficient team procedures, team management, and effective relationships among team members will be regarded as a hot management topic for a long time.

2.16 Building Partnerships and Resource Management

Casturo, Point Management Group, and Swanson (2007) define building partnership as the procedure of pursuing and sustaining efficient, harmonious, and dynamic relationships with peers. The relationship can take different forms such as formal (written agreements that peers review regularly) and informal (e-mails, phone calls, and social visits) (Casturo et al., 2007). Casturo et al. continue that what matters the most is that time and resources must be allocated to sustain partnership; regular communication with partners must be established and opportunities should be provided to evaluate organisational practices.

2.16.1 Resource Management

Resource management is concerned with obtaining, allotting, and handling both internal and external resources needed to carry out a particular project (Bird, 2018). Bird (2018) states that

the procedure of resource management also makes an attempt to make sure the mentioned resources are utilised efficiently. She continues that timing of resource management practices is supposed to be flexible to facilitate adaptation to changes in the project timetable.

According to the Association for Project Management (APM), resource management is defined as the acquisition and implementation of internal and external resources to perform a specific task, project, or portfolio. As a vital part of project management, target managers should detect the required resources to carry out the job and, through scheduling, figure out when these resources will be needed. AMP maintains that the aforementioned resources consist of employees, financial means, equipment, materials, and technology to perform the target task.

As Bird (2018) points out, resources can be acquired from the host organisation i.e. internally or from outside the organisation i.e. externally; they might be consumable or reusable as well. Efficient use of limited resources is contingent upon appropriate definition of them and their accessibility along with awareness of resource demands (Bird, 2018). Bird (2018) continues that regulation of processes is the major tool to avoid resources from being wasted or spent haphazardly. She concludes that all the aforementioned factors lead to project accomplishment and thus organisational success.

2.16.2 Supplier Partnership and Management

As Forza and Filippini (1998) put it, suppliers assume a significant part in quality management and they can fundamentally affect different dimensions of quality. They are critical in achieving quality objectives. Elshennawy and McCarthy (1992) believes that no TQM procedure is thorough unless it takes account of supplier management issues. Quality experts such as Crosby (1989) and Deming (1986) claim that suppliers must be considered as major parts of organisational practices.

According to Easton (1993), a large number of Baldrige applicants have established large-scale quality programmes along with their suppliers. In this regard, Deming (1986) contends that decreasing the supplier base would reduce total costs. Dyer and Ouchi (1993), along the same line of argument, point out that minimising the quantity of direct suppliers enables the

organisation to reinforce the quality yet reducing the expenses. Crosby (1989) highlights the supplier-buyer relationship as one of the most significant constituents of quality improvement procedure. According to his estimation, about half of the quality non-conformance of an organisation can be attributed to poor and flawed materials. Deming (1986) also stresses the significance of selecting suppliers based on their quality (not the price alone) and working with them directly to obtain superior quality materials. Clifton (2001) and Jabnoun (2000) believe that TQM standpoint reinforces strong and close cooperation among organisations and their suppliers which will bring about numerous advantages for these businesses. As Dyer, Cho, and Cgu (1998) suggest, when partners share more information, improve the coordination of their tasks, or jointly invest in assets which decrease costs, the firms will enjoy improved quality, speedier product development, reduced inventory (a prerequisite to just-in-time), and minimised transaction costs.

Jaguar claims that a single-source strategy resulted in improved quality as the number of suppliers was reduced which in turn led to better value of money and more stability and trust in business relationships. Indeed, Jaguar and its suppliers could indicate superior quality commitment due to mutual benefits of larger-scale projects. As Flood (1993) mentions, Jaguar also introduced the 'Supplier of the Year' award as a part of its supplier management programme.

The Motorola Corporation carried the transformation process further than most organisations. The basic principle is that buying from the supplier should please both sides. Motorola actually carried out marketing initiatives in order to elevate its position as a customer. Director of materials and purchasing of this organisation underlined the role of organisation as a customer in association with the supplier as they planned a joint strategy. Motorola's aim is to become a world-class manufacturer as it makes an attempt to launch a long-term cooperation with desired suppliers. This procedure consists of TQM application by both partners. Manufacturers such as Motorola, Ford and Xerox require suppliers to operationalise basic TQM principles, including a supplier award in some cases.

The effort taken to build TQM creates mutual confidence and a common language. Commitments to suppliers last through the product lifecycle, marketing research, and provided service. Typically, and by a factor of ten, the supplier base will be decreased, but in the automobile industry, reductions from thousands to hundreds are typical. Suppliers are involved

in generating costs and quality improvement ideas. Problems through the lifecycle are foreseen and prevented. According to Ross (1999), manufacturers and suppliers make an attempt to both pursue and reach a consensus on high-quality products and services. TQM supplier relationships determined by the manufacturer can emphasise customer requirements beyond the initial trust relationship. This can include insistence on clearly defined requirements, evaluation of supplier conformance, development of the measurement for critical variables, assumption by the vendor of quality verification, and absolutely ensuring that non-conformance is corrected (Richardson, 1997).

Arvin North American Automotive in Columbus, Indiana, implements a Supplier Quality Management (SQM) system in order to manage organisational materials and services. As Richardson (1997) puts it, this organisation has set particular goals to achieve such ongoing quality and productivity improvement, elimination of waste, flexibility in production, management of procedures, prevention of defect, and standardisation. Arvin North American Automotive began the whole approach with the development of a supplier manual setting out the requirements for design, sample preparation, inspection methods, system, conformance standards, and packaging for shipments. The first step in establishing a supplier relationship is to give them the manual to go over. Subsequently, Arvin sent a team to the potential supplier to review systems and management attitudes. Suppliers are rejected or certified on this basis.

2.17 Process Management

The structure of an organisation, its processes and procedures, and responsibilities assigned to each member comprise the different sections of a quality system. In order for TQM to be implemented efficiently, full documentation of this quality system is required to make sure that customers' needs are understood clearly, that the supplier has the capability to fulfil them, and that all the resources are available at an optimum cost (Oakland, 1993). Many TQM gurus advocate designing the documentation system to conform to the requirements of an internationally acknowledged standard, often ISO 9000. This requires expressing the quality system and specific procedures in a quality manual.

Established in 1987, ISO 9000 standards have been globally recognised and endorsed. Many organisations, regardless of their size and products, acknowledge these ISO standard series and

use it to their own advantage (Tsim, Yeung, & Leung, 2001). However, the standard cannot be applied directly; it needs to be customised for individual organisations (Schroder & McEachern, 2002). Evans and Lindsay (2001) point out that these standards are recognised by about 100 countries and meeting these standards has become a requirement for international competitiveness. In some foreign markets, purchases are not made from non-certified suppliers. Sun (2000), in this regard, mentions that ISO 9000 standard series have turned into an entry ticket to European business. A large number of American organisations have reported that they will be prevented from entering the European market if they do not hold ISO 9000 series of standards. The International Standards Organisation announced in 2000 that the entire ISO 9000 standards to the end of 1999 included 343,643.

Evans and Lindsay (2001) classify ISO 9000 as a group of universal quality standards that direct organisational practices in various domains such as planning, production, installation, and service. The major proposition of ISO 9000 is that specific management features can be standardised and also a rigorously-designed and cautiously-controlled quality system ensures that organisational outputs satisfy customers' desires and needs.

ISO 9000 standards are an accurate yardstick to make sure companies abide by particular well-documented processes in delivering their services or products. Motwani, Kumar, and Cheng (1996) highlight that the major target of ISO is production systems and procedures and it makes an effort to ensure these systems and procedures stick to the well-defined criteria. The benefits derived from organisations all over the world being certified under ISO 9000 is categorised under internal and external benefits. The former is concerned with the internal performance of an organisation which includes increases in productivity, improvements in efficacy, and reductions in expenses. Other benefits include enhanced management, clear task structures and duties, better coordination structures, and support in the decision-making procedure. External benefits are concerned with organisational environment, such as maintaining competitive advantage, increasing sales and market share, providing the opportunity for getting into new marketplaces, and safeguarding higher customer satisfaction (Singels, Ruël, and Van De Water, 2001).

Based on a research study carried out by Brown and Van der Wiele (1995) on 160 companies in Australia, a number of benefits ISO 9000 brings about were identified such as increasing awareness of organisational quality, organisational relationship enhancement, enhancements

in customer relations, and customer satisfaction. Another investigation conducted in the UK (Lloyd's Register Quality Assurance, 1994) also revealed that ISO standards assist companies in retaining the market, finding opportunities for winning new contracts, reducing customer audits, and entering into international markets. Tannok and Krasachol (2000) suggest that ISO 9000 standard series have also gained significance in developing countries.

The new version of the ISO 9000 standard series was released on 15 December 2000. Unlike its former editions, ISO 9000, 2000 emphasises the strategic issues of quality management, leading on from a sound mission statement (customer focus), a clear quality strategy formulation (process model), and an effective quality implementation (continuous improvement through Deming's PDCA cycle) (Samuel, 2001). As Oakland et al. (2000) put it, a large number of organisations view ISO 9000 qualification as the first stage in applying TQM. Zhang, Waszink, and Wijngaard (2000) also suggest that a recognised quality system as part of a TQM approach can help TQM by offering a regular and reliable process management in the target organisation.

2.17.1 Organising for a Quality Improvement System

Self-assessment for TQM and continuous quality improvement has been shown to demand and to enhance senior management leadership involvement. Similarly, organising for quality is a senior management function. Oakland and Porter (1995) suggest that in organising for quality, the senior management has to make an attempt to incorporate internal dynamics between marketing, sales, productivity, design, practices, delivery, and accounting and also to take into account customers' and suppliers' interests.

This consideration and structural arrangement is the initiation of organising for quality. In order to do this, senior management generally moves the organisation towards a three-tier structure for quality an example of which is a large British machinery producer (Goulden, 1995, cited in Thiagaragan & Zairi, 1997). The three-tier structure consists of a plant quality council, steering teams, and multi-level project teams. The plant quality council is in charge of the general control and management of quality plan while the steering teams encourage and assist separate teams to make sure they have access to necessary resources. The notion of multi-level project

team indicates different team member are selected based on their relevant areas of expertise to the target project.

Spechler (1993) asserts that organising for quality management implementation requires the establishment of five elements which include:

- **Quality Support Department:** The aim of this department is to coordinate quality initiatives, assist in implementing corporate quality strategies, design certain quality training and awareness programmes, and conduct quality performance reviews.
- **Executive Quality Council:** It is a key organisational feature in initiating and sustaining a quality process over time.
- **The Operating Quality Council:** This is composed of the respective departmental vice presidents or directors. Its purpose is to ensure the implementation of quality policies and the achievement of quality goals.
- **Business Process Analysis:** Teams serve to improve the operating effectiveness of both line and staff functions in manufacturing and service organisations. The creation of these teams gives recognition to the cross-function of business processes rather than interdepartmental activities.
- **Quality Improvement:** Teams aim to address improvement opportunities identified by the business process analysis teams.

The organising effect must go well beyond goals of efficiency indicated by price and cost of production and seek reframing with regards to satisfying customers by which as Ross (1999) notes, longstanding development and productivity are guaranteed.

Senior management initiates development of a synthesis of TQM values and policies with all organisational members' functions. The organisation's infrastructure must be rethought, in a more thorough, rational, and more complexly coordinated and workable system. Total organisation infrastructure should support every job and organisation operation. The two dimensions of structure and people are brought into harmonious working arrangement. All organisation activities are recast to create a harmonious realisation of customer satisfaction. This fundamental requirement involves revolutionary changes to the traditional pattern of organisation activity (Ross, 1999).

Senior management has a very significant role to play as a large number of best-in-class organisations started their quality attempt by developing a quality council or a steering group whose members comprise the senior management. A number of multidivisional organisations try to set up a council in each business unit which can perform as an effective tool for managers to indicate their leadership in all quality practices. According to Ross (1999), the CEO at Motorola is the major quality officer of the organisation while he also holds the responsibility of chairing the Operating and Policy Committee in daily meetings twice each quarter.

New attitudes, practices, and structures should be built with the goal of making quality improvement self-sustaining (Cahill & Follos, 1989, cited in Black & Porter, 1996). Organisation member attitudes are best influenced by education and training in the principles and rationale of TQM. Organising for quality, dependent on senior management oversight and initiative, sees total employee involvement in quality provision and revision of structures to harness organisation members' full potential (Davies et al., 1990, cited in Thiagaragan & Zairi, 1997).

2.17.2 Process Management

According to Drucker (1992), quality improvement is the outcome of individuals' attempts to enhance their procedures and managers' endeavours to enhance the system. Ross (1999) believes that one of the principal goals of TQM is to generate procedures in which individuals or teams 'do it right the first time' and 'do the right things right'. A definition of process provided by Bohan (1994) views this notion as a repetitive system utilised for generating a product or service which consists of inputs, outputs, and state variables that portray what happens within the system.

As noted by Evans and Lindsay (2001), process management focuses on the way an organisation develops and presents products and services, combines production and delivery requisites, and controls supplier practices. They continue that process management needs a well-organised endeavour which engages the entire organisational workforce along with the managers. Generally, processes are regarded as groups of tasks and practices that together convert input into output. Tan (1997) states that process change is a costly strategy and thus organisations are required to be aware of different strategies and how they match the system. Deming (1986) believes that groups of interweaved processes make up organisations;

therefore, enhancement of these processes is the key to performance improvement within the target organisation.

According to Fries (1995), process management is rooted in a central culture change of the target organisation. Senge (1990) suggests that agents of change, a number of stakeholders, and also senior managers are supposed to be the first 'mental models' and understanding these models leads to employee behaviour change. Davenport (1993) recommends a number of process reengineering practices to follow the initial change procedure:

- The major organisational processes should be recognised and a management system should be defined (lead executives, process owners, and process improvement team).
- An innovative process vision which focuses on quantified improvement goals and qualitative features of the upcoming process state should be developed.
- The process should subsequently be examined in order to develop new alternatives to apply in practice.
- The process team should be in charge of monitoring and enhancing the process performance.

Indeed, a well-organised endeavour engaging the entire workforce as well as the management is required to perform process management in an organisation. According to Evans and Lindsay (2001), leading companies share the following common practices:

- monitoring the quality and performances of principal procedures utilised to manufacture products and deliver services;
- pinpointing key differences in procedures and outcomes, identifying original causes, performing corrective practices, and validating outcomes;
- enhancing procedures on a continuous basis to attain superior quality, cycle time, and operational practices; and
- setting flexible objectives and implementing benchmarking and reengineering widely to attain revolutionary performance

Analysis of the role of the entire workforce in the process and recreating the process with the help of information systems can bring about substantial improvements in both cycle time and expenses. Hammer and Champy (1993) suggest the fundamental constituents of improvement

include a renewed view of the whole process, an awareness of feasible practices information systems can offer, and an accurate assessment of process requirements.

2.17.3 Business Results Through Effective Process Management

Best-in-class organisations adopt appropriate measures and indicators to pursue quality and operational performance and subsequently utilise them to monitor and manage the processes. Evans and Lindsay (2001) report that, at Eastman Chemical, industrial procedures are observed and controlled by gathering millions of process information pieces every day. Similarly, the notion of the internal customer-supplier is acknowledged by the entire workforce in Shorts Brothers, UK, which indicates the significance of meeting internal customers' satisfaction as a channel which enables the business to attain its quality objectives. Evans and Lindsay (2001) believe that process management leads to higher customer satisfaction and also helps organisations to deal with issues connected to 'management through function' approach.

In Figure 2.14, Wipro (formerly Western Indian Products) displays their model for effective process management. They split this model into five primary sectors, which are deemed to be fundamental for organisational success.

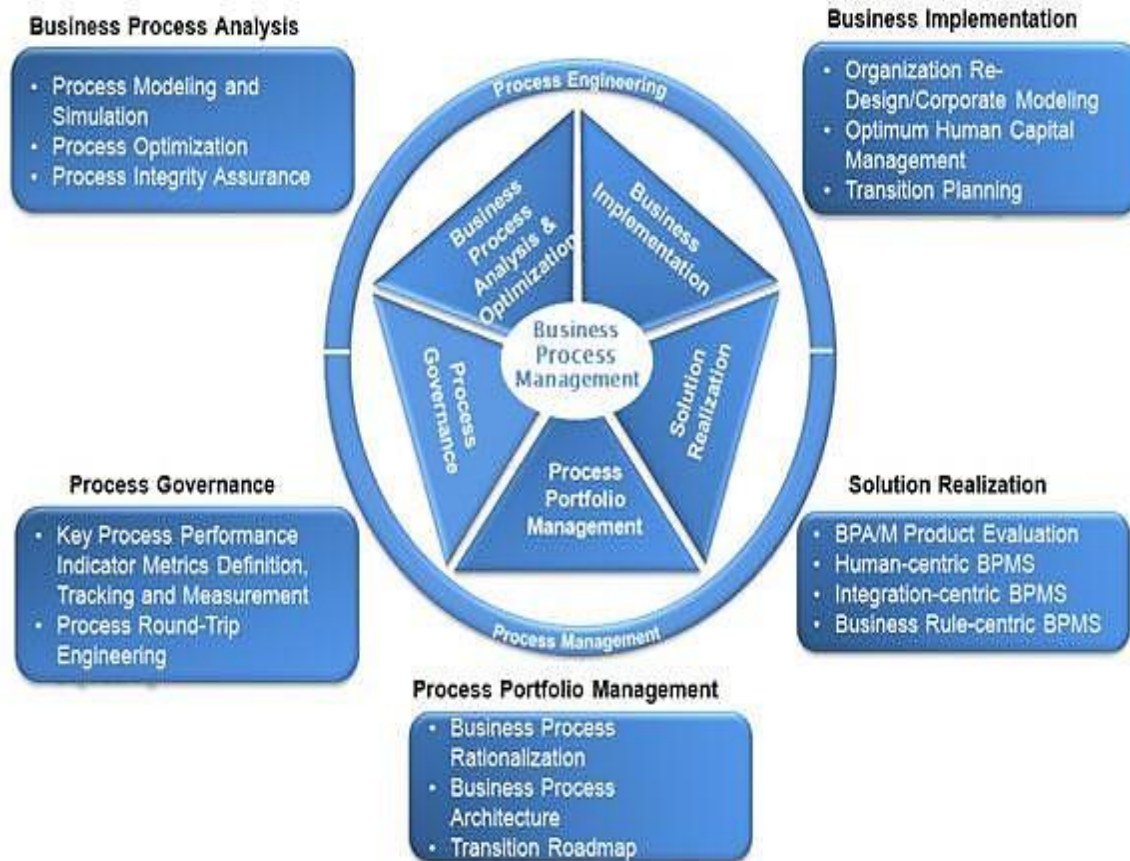


Figure 2. 17: Process Management through Leadership (Wipro example) (Wipro, 2011)

Evans and Lindsay (2001) suggest that the following principles guide the American Telephone and Telegraph's (AT&T) methodology:

- Process quality improvement concentrates on the entire process.
- Quality adopts an approach based on prevention and ongoing enhancement.
- Every single member monitors a procedure at some level and is both a supplier and a customer concurrently.
- Quality improvement procedures are directed by customers' needs.
- Corrective practices concentrate on eliminating the original source of the problem instead of treating the symptoms.
- Simplification of procedures decreases the possibility of making errors and thus reworking.

- Process quality improvement is associated with a regulated and well-organised implementation of the quality management guidelines.

2.17.4 Quality Control and Information Analysis Techniques

Quality control as a part of quality management is defined by ISO 9000 (2005, Clause 3.2.10) as a procedure by which the entire elements of production are analysed with a specific focus on satisfying quality requirements.

Shewhart (1931) defines quality control as the use of statistics to help in production and uncovering the reasons behind variations. Juran (1993) highlights the significance of quality control techniques, not only to minimise defects in production but also to improve quality. According to Deming (1986), high quality conformance can be best achieved and process-related problems can be avoided by implementation of statistical quality control procedures.

As Ahire et al. (1996) put it, the role quality control assumes is as significant as the one played by design quality of products particularly when products are manufactured on the shop floor, where variations in production procedure elements (quality of materials and machinery, employee skills, and etc.) lead to variations in product quality. Ahire et al. maintain that Statistical Quality Control (SQC) as well as Statistical Process Control (SPC) which were established by Shewhart, Deming, Juran and others in 1930s and 1940s have been widely implemented by various US and Japanese companies to identify sources of variation in production quality and to offer valuable information about product design. The SPC and related diagrams are developed to attain a stable procedure and thus decrease variations in target procedures. Brannstrom-Stenberg and Deleryd (1999) performed a research study on eighty-three Swedish companies and summarised the principal advantages of SPC as: decrease in quality expenses as well as rejections, improvement in processes and products, better awareness of procedures, greater possibility to control procedures, and better quality insurance.

As Sinclair and Zairi (2000) put it, the model established by the European Centre for TQM is largely dependent on SPC. Despite the variance in the processing operations of manufacturing and services, SPC can still be applied to processes in both the manufacturing and service sectors alike, however, only if it is recognised that all work is characterised by the input-activity-output transformation process that is capable of variation. Management and control in both sectors

are presumed to be identical (Morris & Johnston, 1987). Oakland (2000) argues that SPC should be made part of the organisation-wide adoption of quality and should be made the springboard for continuous improvement.

SPC tools used by organisations vary in nature. Modarress and Ansari (1989) refer to a number of them such as scatter diagrams, cause-effect diagrams, Pareto charts, and control charts to screen quality. Motorola integrated SPC into their corporate culture and is now applying it to all areas of the plant. The organisation adopted various channels to be able to statistically control the target process, which included characterising the process, controlling it, and adjusting the process where necessary.

2.18 External Stakeholders: The Customers

According to Spacey (2017), entities that are not part of the organisation but are influenced by it or influence the practices of the target organisation are referred to as external stakeholders. This involves the effect of the organisation on the surrounding environment and the life quality of various communities (Spacey, 2017). Spacey maintains the effects of rules and regulations as well as media on organisational practices are also categorised under the notion of external stakeholder. Spacey (2017) believes that in some instances, customers are viewed as major stakeholders since the performance of an organisation can expose them to risks. For instance, a customer using software developed by an organisation might be exposed to significant risks if security issues in that software cannot be solved by the target organisation.

2.18.1 Importance of Customer Satisfaction (Customer Orientation)

Research studies performed on the notion of customer satisfaction have revealed that a customer-oriented approach is of significant benefits to the organisations. Zairi (2000) believes that a customer-oriented approach results in customer satisfaction which also leads to positive word of mouth about products or services. Application of a customer-oriented approach can bring about other benefits for organisations such as superior organisational performance (Donovan et al., 2004) and service quality improvements (Zairi, 2000). Appiah-Adu and Singh (1998) suggest that organisations can attain a higher level of performance and subsequently

maintain that superior performance for a long time. As Deshpandé, Farley, and Webster (1993) note, studies conducted on Japanese companies indicated higher-level performance of customer-oriented companies in comparison with other companies. In a similar vein, Huang and Dastmalchian (2006) also reported that the US best-in-class companies were revealed to adopt a customer-oriented approach as well. In sum, customer-oriented companies are assumed to be superior to other non-customer-oriented competitors (Gummesson, 2008; Shah et al., 2006).

A large number of studies have reported the positive effect of customer orientation on organisational performance and practices in various domains (e.g., Babin & Boles, 1996; Boles et al., 2001; Joshi & Randall, 2001; Knight, Kim, & Cruisinger, 2007). Nevertheless, not being customer-oriented or applying this orientation in an inappropriate manner can result in negative consequences. Nwankwo (1995) believes that misinterpretation of customer orientation can lead to serious issues within an organisation. For instance, Jaiswal (2008) reported the low quality of Indian call centres to be associated with the absence of a customer-oriented approach. Zairi (2000) states that customer orientation enables companies to develop customer retention. He continues that organisations must consider the expenses associated with finding new customers which is reported to be 25 percent higher in comparison with retaining a present one.

Investigations have been performed on customer-oriented approach of salespeople and the benefits it can bring to target companies. A selling-oriented approach can lead to larger sales in the short-term; nevertheless, Knight et al. (2007) reported that a customer-oriented approach can help generate customer loyalty though salespeople might lose profits at the beginning. Knight et al. also found that customer-oriented sellers carried out their jobs at higher levels in comparison with sales-oriented ones.

In conclusion, a customer-oriented approach can provide a large number of benefits to organisations which can be seen when both salespeople and the entire organisation adopt a customer-oriented approach.

2.18.2 Antecedents of Customer Satisfaction

Several researchers have argued about different variables and elements that assist organisations with development of a customer-oriented approach. Two standpoints have been identified in

the literature: one which views the organisation as a whole and the other which concentrates on service staff particularly. Regarding the former standpoint, Zairi (2000) referred to three major drivers:

- The primary step is to know the customers and employ various techniques to collect information about all of them.
- Another significant issue is to know about business dynamics, competitors, business threats, and opportunities.
- It is essential to uncover expectations from the organisation, pressures on the organisation, and how to focus on customers.

In their strategic approach, Karvinen and Bennet (2006) make an attempt to define variables that influence the customer-oriented approach of an organisation. These variables are closely connected to the drivers proposed by Zairi (2000) and focus on five major categories:

- leadership;
- awareness of dynamic settings;
- organisational culture;
- commitment to quality enhancement; and
- learning

Many researchers have allocated their attention to the notion of quality with regards to service employees (e.g., Bove & Johnson, 2000; Henning-Thurau, 2004; Sergeant & Frenkel, 2000). Henning-Thurau (2004) views Customer Orientation of Service Employees (COSE) as a construct which includes four dimensions: “technical skills, social skills, motivation, and decision-making authority” (p. 463). The results of his study indicated that social skills and motivation of employees to meet customers’ desires has a profound impact on satisfaction, commitment, and thus establishing a strong and stable relationship with organisational customers.

The significance of service employee has also been highlighted by Judd (2003) who suggests that employees should be provided with more power as part of the organisational strategic planning. The attitudes and practices of salespeople have also been stressed as significant factors by Wetzels, De Ruyter, and Bloemer (2000). In addition, Knight et al. (2007) came to

the conclusion that the staff must be assigned clear tasks; thus, job roles and their intelligibility are principal factors to consider in organisational settings.

2.18.3 Market and Customer Focus

Organisations are required to manufacture high-quality products and deliver superior services to retain customers if they wish to survive in very competitive markets. Robledo (2001) believes that satisfied customers are willing to return to where they were served appropriately, whereas dissatisfied ones will probably choose to turn to other companies. Organisations need a clear vision of their customers' needs without which satisfaction level will decrease and customers will be lost. Indeed, what distinguishes best-in-class organisations from others is their clear and powerful customer-focused vision.

Therefore, as Gunasekaran, Patel, and Tirtiroglu (2001) and Yang and Chen (2000) put it, companies are required to increase demand for their goods and services by means of superior customer orientation. In order to achieve and sustain superiority, external customer support needs internal systems which are unified to serve the target customers. Internal subsystems are also working in congruence with one another and make an attempt to add value to other subsystems. Kelsey and Bond (2001) suggest that customer satisfaction has revealed itself as an index for assessing strength of managers and profitability of the organisation.

The initial research questions guiding the present research study were adopted from Deming's (1986) framework for establishing customer satisfaction. As Rowley (1999) suggests, the principal concern of TQM includes the relationship between the organisation and its customers. Deming (1986) believes that quality and management improvement bring about productivity improvement which subsequently leads to lower expenses, more market share, and further development opportunities for the organisation.

Kelsey and Bond (2001) define customer satisfaction as the outcome obtained once customers' desires are met regarding product or service and when the organisation satisfies or surpasses customers' expectations. In other words, satisfaction is defined from the point of view of organisational customers and thus any satisfaction-oriented project is required to take into

account customers' needs and desires. As a leading benchmark for pinpointing quality provided for customers, customer satisfaction has been used to refer to several domains of relationship with customers: satisfaction with product or service quality, satisfaction with product or service prices, satisfaction with expectations being met, and satisfaction with a continuous business relationship (Gilbert, 2000; Kelsey & Bond, 2001)

A large number of researchers and business people have indicated their interest in analysis of satisfaction levels particularly when it comes to marketing (e.g., Rowley, 1999; Yu & Dean, 2001). It is believed that increase in satisfaction levels positively influences purchasing behavior of customers; thus, organisations are constantly making a conscious endeavour to enhance satisfaction levels. A number of customer-satisfaction researchers (e.g., Gilbert, 2000; Kelsey & Bond, 2001) suggest the level of satisfaction is closely connected to customer loyalty to a specific product or service (repeated purchase). Gunasekaran et al. (2001) came to the conclusion that customer satisfaction level is established by product or service quality, product or service price, and purchasing procedure.

2.18.4 Effective Communication for Quality

Communication between managers and workers is critical to quality implementation. Quality can be sabotaged when bureaucratic barriers combine with management misunderstanding of what a quality culture requires if it is to function. If communication fails, quality management fails, and this is more likely to happen when management, individuals, or factions are not bought into the process (Ross, 1999). Ross (1999) believes that communication of TQM from top management to organisational members and the communication of commitments are interwoven into the quality procedure. Management may have difficulty in communicating this in an understandable way, or, the filtering process down through the ranks of management may create distortion so that the plan and vision lose clarity and momentum. Information critical to TQM requires encoding according to organisation-wide agreement and commitment so that quality is precisely defined and implementation measures are agreed upon (Ross, 1999).

Spechler (1993) identified four factors needed for consideration in developing successful communication for quality. The plan should:

- convey to all that quality is a team effort;

- establish recognition for quality achievement;
- provide information to all about both long-term and short-term quality goals and initiatives; and
- create shared understanding and language for quality

Kanji et al. (1993) highlight that efficient communication is required in order to develop, increase awareness of, and commit to quality as part of the organisational plan. Indeed, an effective relationship can be built between managers and employees by means of an open and two-way communication method. In line with this, a director at FedEx underlines the fact that such communication is absolutely necessary to attain organisational quality objectives. This FedEx director along with his seniors arranged systematic meetings open to the entire staff at a local hotel. Subsequently and as the procedure became very popular, they expanded the meeting place and used a television network to facilitate their communications. Every six months, the Director broadcasts live on the television network in order to put organisational issues into debate and to answer staff questions raised through the network (cited in George & Weimerskirch, 1998).

A large number of companies use various communication methods. As an example, Whitford and Bird (1996) refer to Redland Roof Tiles, UK, which publishes a friendly and informal newsletter every month in order to present or fortify the notion of TQM and continuous improvement through anecdotes and cartoons.

Ross (1999) also mentions the Digital Switching and Customer Service Division of North Canada Ltd which could attain international recognition and awards for its quality procedures and systems. In this organisation, the significance of quality as an essential notion is continuously discussed with its 5.000 staff and 3 internal communication experts produce daily and monthly newsletters and videos on a regular basis.

The Manufacturing Division of ICL UK, views face-to-face communication as the major characteristic of its interaction strategy. On a regular and yearly basis, the managing director communicates with the entire workforce in small groups each including 50 employees. Seven meetings which start from early in the morning to late at night (around 10:30 p.m.) are arranged for each day. The employees share their opinions and also listen to what the managing director

says. Organisational modifications, news, quality outcomes and training, and customer views are announced through a formal cascade process. Managers make their announcements through prepared questions/answers and make an attempt to provide answers to questions employees raised but could not be answered on the spot. Zairi (2000) also reports that managers utilise online satellite broadcasts and those employees who are unable to see them will receive a video the following day.

Posters are also regarded as an effective and significant medium to deliver the quality message to the entire workforce at IBM, Rochester (Zairi, 2000). If the objective is to satisfy customers on a continuous basis, lateral communication throughout the organisation will be considered as an essential tool. Smith (1994) reports that Digital uses an internal system referred to as 'Notes' which gives the entire 100.000 workforce the opportunity to communicate with each other and receive information on different subjects.

It is clear that not only is the communication itself important, but so are the correct channels for communication. These need to be accessible and appropriate for use. The notion of 'employee voice' has been mentioned earlier. This directly links in with communications. According to many scholars (e.g., Freeman et al., 2007; Marchington, 2008), the notion of employee voice is providing the employee with a means to have a say. As Lewin and Mitchell (1992) and Pfeffer (1998) put it, providing the entire workforce with a voice along with correct and appropriate methods of communication allow employee input while it can assist them with superior business decision-making opportunities, increased awareness, and thus higher commitment.

2.9 Summary

The present chapter was an attempt to examine technical literature related to TQM application and quality cultures. As mentioned previously, the terms quality culture and TQM are often used interchangeably. A foundation for greater understanding has been provided, through examining what a quality culture is, the different types of quality culture, the components of a quality culture and also drivers and barriers to a quality culture. This has been furthered by examining quality cultures in different contexts and more specifically the Iran context, which is fundamental to this research.

This chapter examined and provided information on Iran and details about its oil and gas industry considering the existing quality culture issues. It also further outlined the scale and importance of oil and gas industry in the target setting. The researcher has used the background and understanding of a quality culture established in the first half of the chapter and then established a series of critical success factors, which are considered fundamental for implementation of organisational success if quality culture is supposed to be attained. A number of elements established in this chapter are 'standalone' and can be examined individually. An example of this is customer satisfaction (or customer orientation). Other factors, identified as critical success factors, can be seen to have strong ties between them such as education and training, employee empowerment, and team working.

Throughout the literature on quality, the terms TQM and quality culture are often used interchangeably. Both of these notions rely upon the adoption of critical success factors; therefore, there is reference to both TQM and quality culture throughout the text. Using the critical success factors identified, the researcher formed a skeleton for the next chapter and for the research to be performed. Research design and methodologies are examined in Chapter 3 in which background to research design and methodology along with research strategy for the present investigation are provided.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

The previous chapter on literature review and synthesis discussed major themes in this research. This section aims to discuss the steps in developing the research methodology which serves as a guide to the research process. Therefore, the research methodology will initially discuss the research philosophy, approach, strategy, choice and techniques/procedures of research. Secondly, the stand adopted and justification for adoption is discussed accordingly. Thirdly, the case study design for the research is explained.

3.2 Research Methodology

Research Methodology is an approach to analytically resolve the research problem. It offers the foundation to make informed choices, piece by piece, about how the research ought to be carried out (Kothari, 2004). Saunders, Lewis, and Thornhill (2016) exhibited the overall research methodology as an ‘onion’ in which the thoughts concerning the research problem are located at the core and hence a number of layers are required to be ‘peeled away’ to reach the focal part (see Figure 3.1). The research onion provides an effective progression through which a research methodology can be designed. As Bryman (2012) suggests, its usefulness lies in its adaptability for almost any type of research methodology and can be used in a variety of contexts.

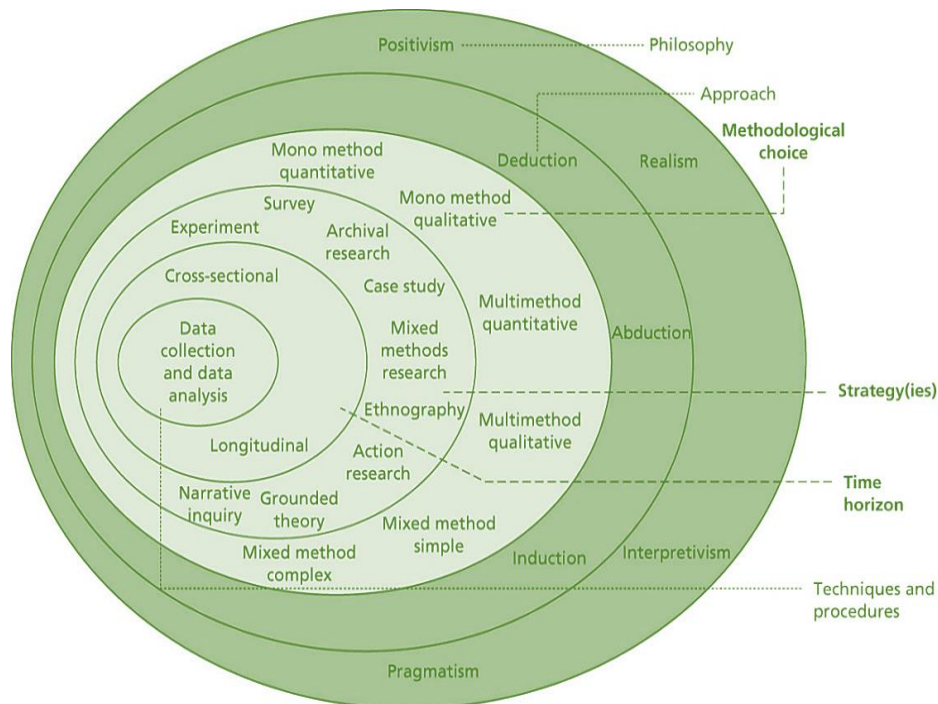


Figure 3. 1: The Research Onion (Saunders, Lewis, & Thornhill, 2016)

As significant dimensions to be reflected on, these layers are very helpful in establishing the research methodology for a particular investigation. Therefore, research philosophy, research approach, research strategy, time horizons, data collection methods, and research choice (Saunders et al., 2016) were the layers distinguished (see Table 3.1).

Table 3. 1: The Breakdown of the Research Onion (Saunders et al., 2016)

Layers	Approaches
1. Research Philosophy	Positivism, Interpretivism (or Phenomenology), Realism, Pragmatism
2. Research Approach	Deductive, Inductive, Abductive
3. Research Methodological Choice	Mono-Method, Multi-Method, Mixed Method
4. Research Strategy	Experiment, Survey, Archival Research, Case Study, Mixed-Methods Research, Ethnography, Action Research, Grounded Theory, Narrative Inquiry
5. Time Horizons	Cross Sectional, Longitudinal
6. Techniques and Procedures	Data Collection and Data Analysis (Sampling, Secondary Data, Observation, Interviews, and Questionnaires)

The selection of a proper methodology is essential to attain results which enjoy both reliability and validity. Thus, it is critical to comprehend the theoretical aspects of research along with a practical approach to research studies. Each of the aforementioned layers will be discussed in the following sections.

3.3 Research Philosophy

It identifies with the expansion and essence of knowledge. Research Philosophy entails major presumptions regarding the way the scientist observes the world and the reality (Saunders et al., 2016). Three noteworthy methods of considering research philosophy exist: Epistemology, Ontology, and Axiology (see Table 3.2).

Table 3. 2: Assumptions of Research Philosophy (Sexton, 2003)

Epistemology (The How?)	General set of assumptions about how we acquire and accept knowledge about the world
Ontology (The What?)	Assumptions that we make about the nature of reality
Axiology (The Why?)	Assumptions about the nature of values and the foundation of value judgement

According to Tashakkori and Teddlie (1998), it is more proper for the investigator to consider the adopted philosophy as a continuum instead of opposite points in a specific research study.

a) Epistemology: as a very broad set of suppositions about how knowledge is obtained and approved about the world, it can be illustrated in a continuum with Positivism and Interpretivism as the extremes (Saunders et al., 2016).

Positivism: As Sexton (2003) suggests, universal laws and cause-effect associations are searched for by appropriate tools in this extreme. The scientist implements the scientific method to propose and examine hypotheses based on organised and quantifiable data so that the research results are not affected by the researcher’s attitudes. To this end, as Saunders et al. (2016) suggest, large samples of quantitative information along with statistical testing of hypotheses are required.

Interpretivism: Based on Sexton (2003), interpretivism makes an attempt to explain how individuals understand the world by clarifying human actions. It concentrates on carrying out research among people as opposed to objects, implementing an empathetic position in order to comprehend their perspective regarding the social world in which they live and the meaning they attach to it. According to Saunders et al. (2016), qualitative data obtained from comprehensive examination of small samples are utilised for analysis in this extreme.

A number of elements depend on technical facets of the collaborative instruments utilised as part of the project management teams. In this specific circumstance, one might say the research takes a position that requires investigating *Positivism* and *Interpretivism* with further inclination towards *Interpretivism*. In this research, Interpretivism (qualitative and interview questionnaire) will be mainly applied due to the nature of this topic which calls for qualitative analysis. Nevertheless, in order to obtain optimum result, Positivism (quantitative and survey questionnaire) will be used as well. This is shown in the figure 3.2.

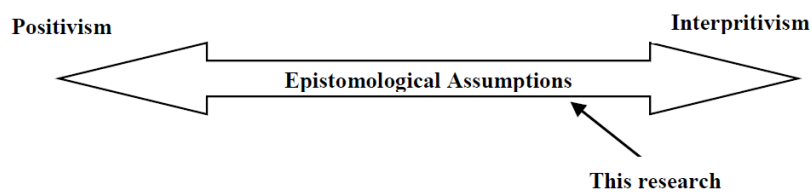


Figure 3. 2: Philosophy of Research – Epistemology Stance

b) Ontology: This stance is oriented towards the essence of reality. As Saunders et al. (2016) put it, issues about different suppositions the researcher holds about the way the world works and the dedication to specific perspectives are significant to this stance. Two principle facets are included in ontology: *Objectivism (Realism)* and *Subjectivism (Idealism)*. The former denotes a stance in which social elements are present in the real world and that is external to the social actors preoccupied with their existence. On the other hand, and based on Saunders et al. (2016), *subjectivism* states that social phenomenon is made of observations and the resulting activities of the social actors involved in their existence.

The present investigation is an attempt to comprehend the reality through observations of members of a project management team in the oil and gas industry as well as insights of experts and thus it deals with objective information. The study also aims to detect fundamental factors that serve as drivers of and obstacles to quality culture development within project management teams in the oil and gas industry. This part of the investigation concentrates on subjective information. Therefore, the present investigation adopts an ontological stance between the two extremes of *Objectivism* and *Subjectivism* which is illustrated in Figure 3.3.

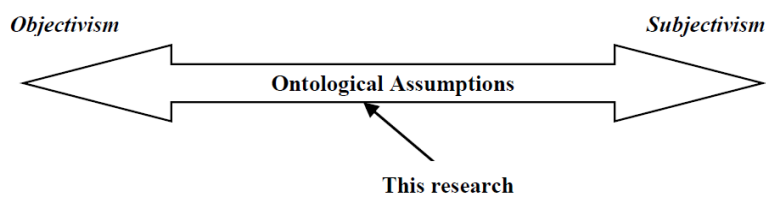


Figure 3. 3: Philosophy of Research – Ontological Stance

c) Axiology: This stance is a subdivision of philosophy which analyses opinions regarding value. It deals with suppositions about the value investigators attribute to the obtained information. According to Heron (1996), scientists exhibit their axiological ability by verbalising their values to make judgements about what investigation they perform and how they actually conduct it. This can be viewed as a continuum with value-neutral and value-biased themes as the extremes. Based on Sexton (2003), a research which is value-neutral is objective while value-biased research is considered to be subjective

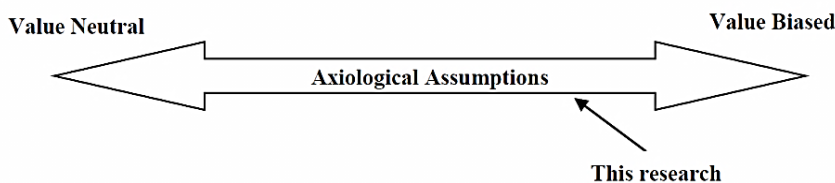


Figure 3. 4: Philosophy of Research – Axiology Stance

The present research study will be an attempt to increase awareness of value judgements made to draw conclusions from the obtained information. As similar values might not be shared among different researchers, the draw conclusions from this study might be different from those obtained by other investigators. Indeed, the researcher places himself within the exploration; axiologically, he puts himself 'value-biased' as illustrated in Figure 3.4.

3.4 Research Approach

The second layer illustrated in the research onion represents the research approach of the present study. Saunders et al. (2016) refer to it as an approach to theory development or a set of principles to be developed for a research. Creswell (2014) refers to it as plans and procedures which involve several decisions in order to come up with a sensible research. Whether it is a theory or a principle, a plan or a procedure, a research approach is adopted according to the philosophical underpinnings of the investigation. Furthermore, the research problem, research design, and research methods inform the research approach adopted in any research.

Two contrasting research approaches identified are inductive and deductive reasoning (Gray, 2013; Saunders et al., 2016). A research approach which is inductive includes a procedure where information is gathered and analysed in order to determine whether any patterns emerge suggesting any relationship among the target variables. In this approach, collection, organisation, and analysis of data is principally directed by a grounded theory with the aim of identifying themes strongly linked to the data set to establish patterns, consistencies, and meanings. Nevertheless, the deductive approach involves using concepts or theories which are then tested through observations. This approach looks at issues from a general to a more specific view. Saunders et al. (2016) identified a third approach i.e., abductive. It includes reasoning where data is collected, themes identified, and patterns established in an exploration in order to develop a new theory or modify an existing one. The abductive approach seeks to find the simplest and most likely explanation of the phenomenon under study. These three research approaches are further illustrated in Table 3.3 below.

Table 3. 3: Deduction, Induction, and Abduction: From Reason to Research (Saunders et al., 2016)

	Deduction	Induction	Abduction
Logic	In a deductive inference, when the premises are true, the conclusion must also be true	In an inductive inference, known premises are used to generate untested conclusions	In an abductive inference, known premises are used to generate testable conclusions
Generalisability	Generalising from the general to the specific	Generalising from the specific to the general	Generalising from the interactions between the specific and the general
Use of data	Data collection is used to evaluate propositions or hypotheses related to an existing theory	Data collection is used to explore a phenomenon, identify themes and patterns and create a conceptual framework	Data collection is used to explore a phenomenon, identify themes and patterns, locate these in a conceptual framework and test this through subsequent data collection and so forth
Theory	Theory falsification or verification	Theory generation and building	Theory generation or modification: incorporating existing theory where appropriate, to build new theory or modify existing theory

The present study tries to explore the implementation of quality culture in the oil and gas sector of Iran. As such a review of literature was valuable to assess the impact of quality culture generally, review institutional framework for infrastructure provision and determine an applicable methodological design suitable to address the purpose of the research. The relation between culture and organisational performance as well as the quality results in delivering successful projects in the oil and gas industry. A detailed understanding of the nature of these interactions, drivers of resistance to change as well as adaptive capacity requires the use of inductive approach. Introducing a set of guidelines to reduce resistance to change and increase culture development factors will use the deductive approach. This research therefore adapts the abductive research approach (where both inductive and deductive approaches will be used) due to the exploratory essence of the investigation where the collection, examination and

continuous re-examination will determine the research findings. Employing both approaches will enable the researcher to overcome the weaknesses of each approach.

3.5 Research Methodological Choice

The third layer of the research onion is the methodology choices and it's the first practical step in the research design. Though guided by the philosophical underpinnings adopted by the researcher, it is a practical way of converting research questions into a project. This deals with the choice of the researcher to adopt either a quantitative, qualitative, or a mixed method research design. Quantitative research as the name implies deals with quantity in the form of numeric data or numbers collected tactically with an instrument such as a questionnaire and analysed statistically. On the other hand, qualitative research studies deal with non-numeric information such as pictures, words, and videos collected through a process such as an interview and analysed non-numerically. Mixed method research combines elements of both quantitative and qualitative approaches within a research study. Saunders et al. (2016) observed that in reality, most researches are more likely to conduct a mixed method research.

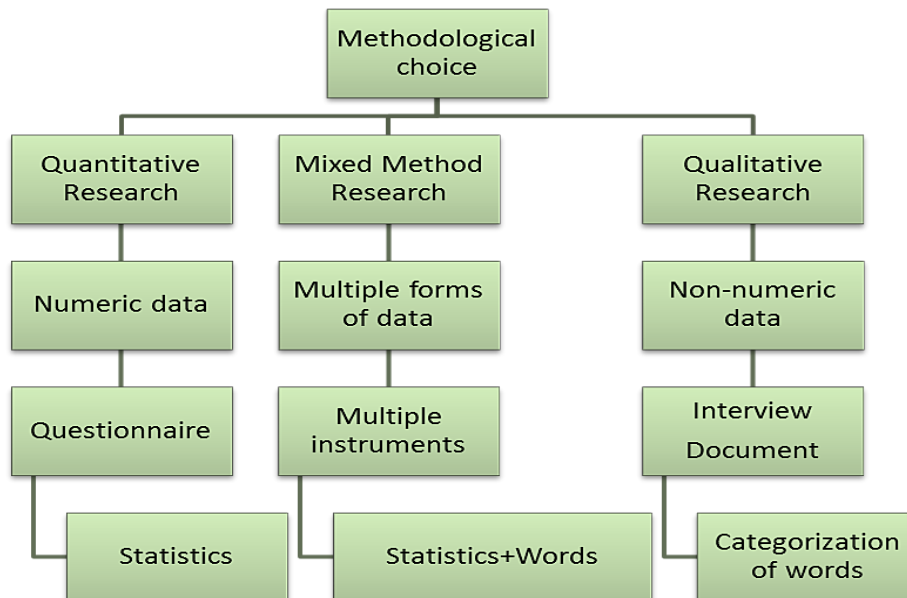


Figure 3. 5: Research Methodological Choice

3.5.1 Mixed Method Research Design

According to Creswell (2014), a mixed method approach in research is the combination of qualitative and quantitative research approaches. This involves a process where the researcher collects, analyses, and combines both qualitative and quantitative data within a study. He observed that this approach gives a rich detail of information and helps overcome the challenges of each method per se. A mixed method case study approach allows a rigorous investigation of phenomena by allowing a combination of both quantitative and qualitative methods to gain an understanding which is unattainable by adapting a single research method.

The purpose of this research is to find and explore the implementation of quality culture in the oil and gas sector of Iran to develop applicable guidelines in order to maximise the quality of oil and gas projects in that region. This research is exploratory and seeks to establish a relationship between the phenomenon under investigation, and as such both qualitative and quantitative methods for collection and analysis of data are employed. Collection of quantitative data has been performed through questionnaires while qualitative data will be collected through interviews and relevant documents. These will be used in a process called triangulation. Triangulation in research includes combining data from different sources, in order to integrate several viewpoints from distinct actors. This is applied to allow an open, complementary research strategy and to provide a more accurate and vivid picture of the research.

Semi-structured interviews with key informants will be utilised to gather qualitative primary data while qualitative secondary data from documents will provide data to gain an in-depth understanding in an exploratory study. Quantitative primary data will be obtained through structured questionnaires based on the list of themes which will be administered to oil and gas employees to collect data by using their real-life experiences from the industry. A survey questionnaire approach is considered the most suitable as it enables the research to gain a farmed perspective of the situation and helps in identifying dominant patterns within the target industry.

The implication and impact of Iran's culture on quality culture within the oil and gas sector obtained through survey questionnaires administered to oil and gas professionals will assist the researcher in identifying the relationship between Iran's culture and organisational culture within the oil and gas sector. An understanding of national culture will provide a vision of

possible variables influencing organisational quality culture and its impact on the success of projects. This will be gathered through qualitative data on the influence of national culture on organisational quality culture and resistance to culture development within oil and gas organisations. The next section will focus on research strategies specifically mixed method as the methodological research choice for the present investigation.

3.6 Research Strategy

Research strategy as the fourth layer of the research onion indicates the general course of the investigation including the procedure of carrying out the research study. Seven types of research strategies might be utilised in different investigations including experiment, survey, case study, action research, grounded theory, ethnography, and archival research (Saunders et al., 2016). As Yin (2013) puts it, for explanatory, exploratory, and descriptive research studies each methodology can be implemented. A number of elements must be taken into account when the appropriate research strategy is going to be selected. According to Saunders et al. (2016), these include research objectives, research question(s), the scope of current information, available time and assets, and the researcher’s philosophical stance.

Table 3. 4: Yin (2013) Research Strategies

Research Strategy	Forms of Research Questions	Requires Control of Behavioural Events	Focuses on Contemporary
Experiment	How, Why?	Yes	Yes
Survey	Who, What, Where, How many, How?	No	Yes
Archival Analysis	Who, What, Where, How many, How?	No	Yes No
History	How, Why?	No	No
Case study	How, Why?	No	Yes

Table 3.4 presents the various research strategies, forms of research questions they are most likely answer, control over events, and focus. As Yin (2011) suggests, an experiment is a method for anticipating a relationship between many variables by generating predictions in amounts that are commonly conducted in laboratories. This is usually done in strict, controlled,

and pre-determined environments, which may result in outcome manipulation. The survey is a strategy that uses numbers to suggest possible reasons for a relationship between variables by administering questionnaires and interviews. Pathirage (2007) believes that both experiment and survey strategies are quantitative in nature, connected to deductive research approach, and tend to be tilted towards the positivist/realist, and value free philosophical view. Archival strategy, also known as documentary strategy, utilises a wide range of sources of information such as texts, audio-visuals, photographs, and etc. (Berland, 2015).

This research strategy is qualitative in nature but all documents are considered secondary sources of data and hence not completely suitable for this research. Saunders et al. (2016) state that history or ethnography research strategy makes use of historical records to study a phenomenon such as behavioural patterns in a particular culture over time. This strategy is qualitative in nature; however, it is time consuming as it requires a researcher spending a considerable period of time in the field. According to Yin (2018), case study strategy involves the development of an in-depth analysis of phenomenon in an authentic setting over a specific time period where the researcher is particular about gaining a rich understanding of the variables under study and not necessarily numbers. Creswell (2014) suggests that case studies can take both the form of quantitative and qualitative approaches and can be used in combination with other forms of research strategies thereby making it suitable for mixed method research. Archival, historical, and case study research strategies tend to lean more towards interpretivist/idealist with value-laden philosophical view.

This research aims to develop a guideline for Iranian oil and gas companies to understand the implications of quality culture which leads to success of projects. The specific objectives to achieve this aim were developed from the ‘What’ and ‘How’ research questions; hence, the present study is an exploratory research project. The study explores to devise a means of assessing quality culture of projects concerning oil and gas and will therefore require experiential evidence of the researcher accessing first-hand data from the target field in a real-life context.

For the purpose of the present research, a case study approach is adopted as it can provide an in-depth knowledge of quality culture within the industry and thus enables the collection of primary data. However, the research is rigorously designed as suggested by Onwuegbuzie, Johnson, and Collins (2009) to accommodate a mixed method including various sources of data

within a case study. Qualitative data is collected primarily through interviews to achieve a thorough understanding of the situation while quantitative information is gathered through a survey questionnaire. Subsequently, the findings from both will be corroborated with document analysis which is a form of qualitative secondary data. As such, the following justifies the reason for selecting case study for the research. This research explores quality culture issues as well as national culture impacts on organisational quality culture in a real-life context which can influence the success of oil and gas projects in Iran. After the case study research strategy is established, the case study design is described.

3.6.1 Case Study Research Design

After defining the various research strategies and justifying the suitability of adopting case study strategy in this research, this section discusses the steps taken in the research design. Research design aims to provide answers to the research questions through set objectives, data collection sources, data collection and analysis methods, ethical issues to consider, and possible constraints to be encountered.

According to Yin (2018), case study is defined as “an empirical inquiry that investigates a contemporary phenomenon within its real life context, especially when the boundaries between phenomenon and context are not clearly evident”. This involves a process where one or more participants or events are studied in a natural setting over a period of time. According to Gray (2013), case studies are very helpful in exploring a variety of issues such as an individual or a group of individuals as they enable an investigation or description of phenomena in its natural setting through different sources of data. Indeed, this can reassure the researcher that the issue under study is viewed from multiple facets to achieve an in-depth understanding. Saunders (2016) emphasized that case studies can be perfect as they enable the researcher to call for a review of a current theory. This is closely linked the interpretivist philosophical view where the researcher draws empirical findings from the real-life context to interpret patterns in order to develop a theory, also referred to as the inductive approach in a case study. On the other hand, the deductive approach initially develops a theory and then uses data to test an existing theory or directs on the generation of a new theory within a case study. Though these are ways to approach a case study, other classifications have emerged based on other criteria such as the case design and the unit of analysis; however, the common feature is that case studies enable

an in-depth study of phenomena in a real-life context. Different types of case study design are described in the next section.

3.6.2 Types of Case Study Design

In a very broad categorisation, case studies can fall under two different classifications: single case studies and multiple case studies. However, Yin (2018) went further to identify a 2 x 2 matrix based on the unit of analysis which could be holistic or embedded. The former includes one unit of analysis while the latter is concerned with more than one unit. Thus, 4 types are distinguished in the literature of case studies: Single holistic, single embedded, multiple holistic, and multiple embedded case study designs (Yin, 2018) (see Figure 3.6).

	Single Case Designs	Multiple Cases Designs
Holistic (single unit of analysis)	Type 1	Type 3
Embedded (multiple units of analysis)	Type 2	Type 4

Figure 3. 6: Types of Designs in Case Studies (Adopted from Yin, 2018)

Figure 3.6 illustrates Yin (2018)'s distinction between two types of single case study designs: single holistic and single embedded case designs, which represent one unit and multiple units of analysis, accordingly. A case study of one unit is good to analyse a significant circumstance in which all conditions are the same. This implies that the findings of the current case will give insight into future cases. Also, a single case study will give the research an in-depth enquiry into the phenomena under study. However, the limitation of a single case study is that it does not give the research breath or a wider coverage. On the other hand, a multiple case design also called comparative studies does not only give depth but also breadth to a research. Two types of multiple case designs are identified by Yin (see Figure 3.6): multiple holistic and multiple embedded case designs to represent multiple cases including analysis of a single unit and multiple cases with analysis of multiple units, respectively. The advantage of multiple case

studies is that it enables the researcher to produce more evidence, compare cases, and copy or reproduce findings through a process called replication. Yin (2018) elucidates that the reproduction of findings also known as replication can be direct or literal (having similar result) or theoretical (having contrasting results).

The aim of this study is to help Iran’s oil and gas industry to have an effective implementation of quality culture in the target projects. In order to achieve this, an understanding of the relation between quality culture and organisational performance is needed. Perception from various levels is suitable to understand the interactions. A single case study is appropriate when conditions are uniform but subject to limits in generalisation; thus, it is not be suitable for the present study. Remenyi, Williams, Money, and Swartz (1998) assert that multiple cases give the researcher a robust plan for data collection. Miles, Huberman, and Saldana (2013) see it as an efficient tool for explanation and generalisation in a research process. It can adopt various methods of data collection and is considered as the most suitable for an in-depth study of oil and gas sector to enable an exploration of wider cross sections of issues.

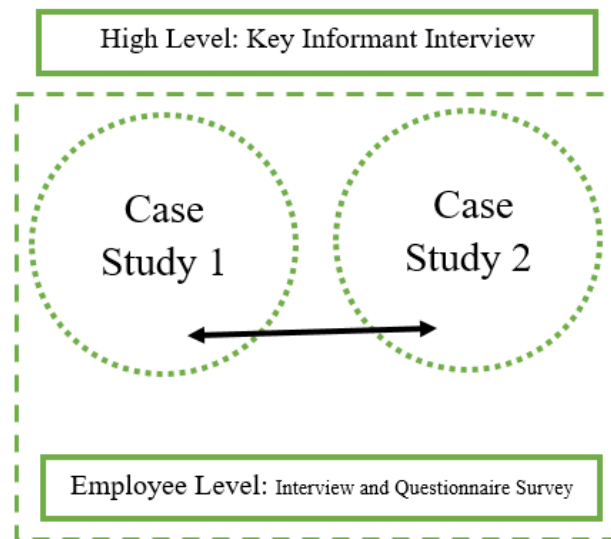


Figure 3. 7: Research Multiple Case Design

Multiple companies within an embedded unit of analysis are adopted for this research. Findings from each case will then be used to draw a single set of cross case conclusions. According to Gilson (2012), a research designed with rigour makes the process of data analysis and

interpretation credible implying that well designed multiple case studies are more likely to produce stronger results than a single case study. With the purpose of achieving this goal, the multiple case study design of the present investigation (see Figure 3.7) is robust in nature, gives room for replication, and therefore is considered as the most suitable.

Figure 3.7 presents the case study design adopted for the purpose of this investigation. A multiple case is designed with two cases to be explored for the study. Case 1 and 2 are designed to produce a direct or literal replication. This is designed with rigour in order to achieve an integrated approach to cover a wide range of industry characteristics and project types. To justify the adopted case study design, criteria for case study selection is elaborated on in the subsequent section.

3.6.3 Criteria for Case Study Selection

Having designed the case study and justification for the adoption of a multiple case study, the criteria for this selection need to be buttressed. The selection of cases involves several approaches. As methodologies for case selection, Denscombe (2014) highlighted random selection and information-oriented selection. Random selection, as its name indicates, picks samples from a large sample randomly to prevent subjective biases, whereas information-oriented selection examples are chosen depending on a population trait or attribute of interest. Yin (2018) gives a critical explanation underlying the selection of cases in any case study research. He opined that each case should be selected in such a way that will yield an identical result i.e. literal replication or a contrasting result which is also known as theoretical replication.

This research recognises the fact that there are many oil and gas companies in Iran with different experiences of employing quality culture, levels of quality management, and practices. Two case studies are conducted and designed to produce both a direct (literal) replication and a theoretical replication. This enables the researcher to detect the similarities and differences in the target companies and ensure consistency in their projects.

3.6.3.1 Case Study Description of Iran's Oil and Gas Industry

The objective of this research study was to investigate the impact and implication of quality culture in Iranian oil and gas companies with a view of developing a set of guidelines to moderate resistance and improve quality culture development. To achieve this, the researcher utilised the adequate methods that support the workability of the proposed aim.

The oil and gas industry in Iran is not a new phenomenon. It could be argued that whilst previously huge wealth was the driver of the oil and gas industry, quality measures and a culture of quality have now become more important. However, very little research has been done on quality cultures in Iran and specifically in the context of the oil and gas industry. There has been little empirical investigation on the influence of culture on organisational performance (Flynn & Saladin, 2006; Naor, Goldstein, Linderman, and Schroeder, 2008); thus, the need for quality practices and measures is presently more important than it has previously been. In addition, the drivers, barriers, and critical success factors need to be established and further examined and a framework for adoption is required to be proposed.

With this in mind, the research aimed to answer the following questions:

- What is a quality culture?
- What are the drivers, barriers, and success factors when implementing or adopting a quality culture?
- What are the implications and impacts of Iran's culture on quality cultures for organisations in the oil and gas industry?

In order to answer the above research questions, the following research objectives were tackled.

The researcher intended to:

- critically analyse the literature on quality cultures globally;
- critically analyse the literature on quality cultures and in particular to focus on theoretical contributions through empirical research into organisations in the oil and gas industry;
- critically analyse the literature on quality implementation and in particular to focus on theoretical contributions through empirical research into practices and impact in Iran;

- distil generic lists of critical factors identified as significantly impacting the successful implementation of quality in Iran;
- explore the relevance and applicability of generic critical factors with specific relevance to the oil and gas industry in Iran;
- document how various critical factors for implementing a quality culture are being implemented in the Iranian oil and gas industry through a case study approach;
- examine how the approaches used by the oil and gas industry in Iran help deliver effective performance outcomes;
- determine how a quality orientated culture in the oil and gas industry helps shape the pursuit of success through sustainable maturity and predictable performance outcomes; and
- propose a guideline for the adoption of a quality culture that will be suitable for the Iranian oil and gas industry

For the purpose of this study, the researcher used a multiple case embedded design of 2 oil and gas companies within the industry as the unit of analysis which is considered the most suitable for an in-depth/ detailed analysis to cover wider cross sections of issues in relation to quality culture rather than a single case study. The researcher has selected the Persia Oil and Gas and Asphalt Tous as a case study unit from Iran's oil and gas industry which will be introduced in the next section.

3.6.3.2 The Background of Persia Oil & Gas Industry Development Co (POGIDC) and AsphaltTous Companies

As an energy superpower, Iran possesses large quantities of energy resources and the petroleum industry assumes a significant role in this country. The country was able to provide 5.1% of the total crude oil of the world (3.9 million barrels per day equal to 620,000 m³) in 2004 with revenues of \$25 billion to \$30 billion USD which was the major source of foreign currency. The level of production increased in 2006 where oil incomes

represented around 18.7% of Iranian gross domestic product (GDP). Nevertheless, the hydrocarbon sector has played a more significant part in Iran's economy. As the major source of financial growth, the oil and gas sector has directly impacted public projects, the annual budget of the government as well as sources of foreign exchange.

The oil and gas sector, in 2009, represented 60% of total revenues of the government and 80% of the overall yearly value of exports as well as foreign currency incomes. The price of crude oil in the global market definitely impacts revenues generated by oil and gas. The Organisation of the Petroleum Exporting Countries (OPEC) (December 2004) has estimated that a change as small as one dollar in the value of crude oil would change oil revenues of Iran by \$1 billion USD.

Exporting about 1.5 million barrels of crude oil per day in 2012, Iran was ranked second among OPEC exporters. It was estimated by Iranian officials that the annual revenues could hit the target of \$250 billion USD by 2015. Nevertheless, international sanctions were applied to Iran from July 2012 to January 2016 which interrupted the aforementioned estimations. At the present time, Iran intends to invest about \$500 billion USD in the oil and gas sector before 2025 (Ghabezi, 2012).

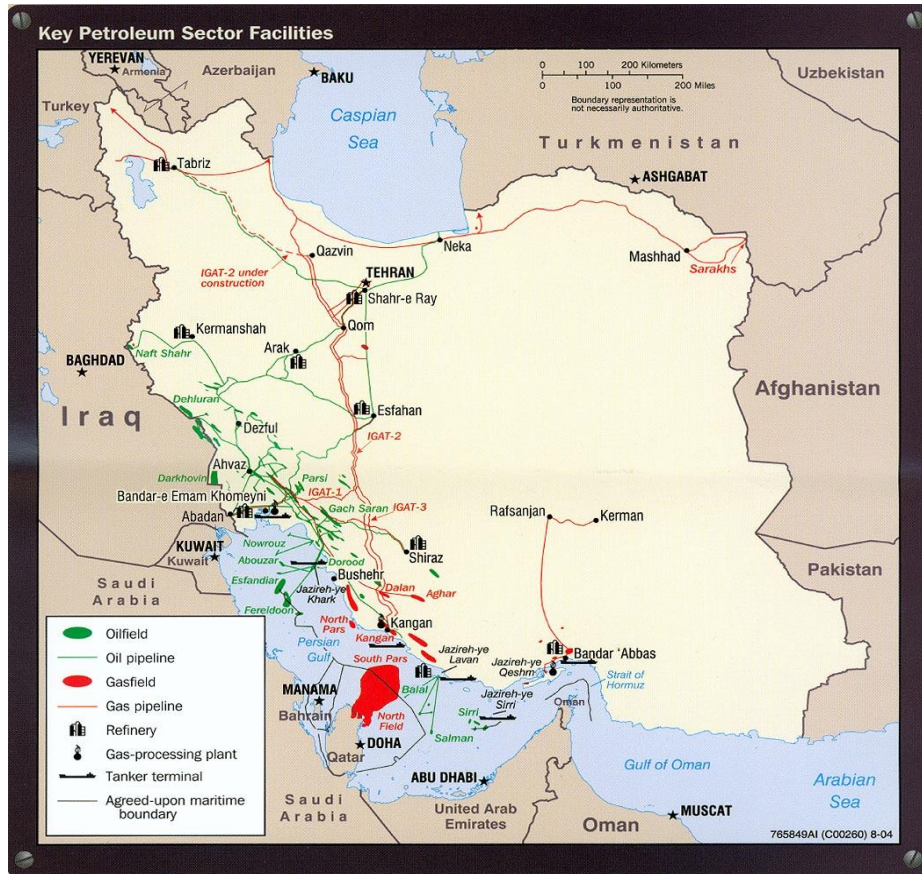


Figure 3. 8: Oil and Gas Industry of Iran

Persia Oil & Gas Industry Development Co (POGIDC): Registered in Tehran in August 2005, this private joint-stock organisation is an affiliate of Tadbir Energy Development Group with 2 billion IRR as its authorised capital. This capital has been decided to increase to 2000 billion IRR as announced by organisational shareholders during their General Assembly. The following missions have been defined for POGIDC in order to accomplish the objectives of its major shareholder (Tadbir Energy Development Group):

- Performing oil and gas projects efficiently with regards to cost and quality within the defined time frame;
- Accomplishing mega projects along with recruiting competent human resources to meet the expectations of stakeholders;
- Remaining competitive among Iranian petrochemical companies in both upstream and downstream industries;

- Making an effort to attract financial resources in order to increase derivation and extraction of oil and gas resources while giving the priority to common fields;
- Accomplishing both upstream and downstream petrochemical projects (exploring, drilling, and developing oil and gas fields) under EDCF/Buy-Back contracts;
- Performing the role of both operator and contractor in oil, gas, refinery, and petrochemical industries; and
- Constructing pipelines, oil and gas installations and transmission equipment along with offering engineering and designing services

The key objectives of POGIDC include collaboration with and investment in national and international companies. The major projects of POGIDC include North Yaran, Mansouri, and South Azadegan oil field developments.

North Yaran Oil Field Development Project: In 2012, this massive and significant on-going project was awarded to POGIDC through a buy-back contract. The intention behind developing this field was daily production of 30,000 barrels of crude oil. North Yaran field is located very close to South Azadegan as well as Jufair and Yadavaran oil fields.

Mansouri Oil Field Development Project: Situated in the south-west of Iran, this oil field is neighbouring Ahwaz oil field in the north-west, Abteimor in the west, and Shadegan in the north east. The purpose behind the development of this oil field in its second phase is the daily production of 50,000 barrels of crude oil, creation of 22 wells, flow lines and wellhead equipment for seventeen wells, construction of desalting units for 75,000 barrels per day along with NGLs (Natural Gas Liquids) units and drilling of twenty-one wells in the sub-surface section.

South Azadegan Oil Field Development Project: The exploration of this oil field dates back to 1997 and presently it is considered as the third largest oil field internationally after Saudi Arabian Qavar and Kuwaiti Burgan oil fields.

Asfalt Tous Company: This well-known organisation has indicated its capability to accomplish major mining, industrial, oil, gas, and petrochemical construction projects led by knowledgeable and skilled employees for about 50 years. Asfalt Tous along with its

subordinate companies cooperate in Engineering, Procurement, and Construction (EPC) projects in various fields such as industrial factories, oil and gas, execution of concrete buildings, industrial steel structures, mine excavation and extraction, storage tank construction, power plant cooling towers, tunnel construction, power transmission lines, and infrastructure projects. Indeed, management of this large organisation calls for professional and highly-coordinated teams which are directed by skilful top managers and directors. Asphaltous has made an attempt to attract highly educated and motivated employees in order to accomplish its desired objectives in the target industry. The staff training system of the organisation makes every endeavour to deliver high-quality workshops and training programmes to equip employees with necessary skills which satisfy organisational objectives.

We have only considered oil and gas section of Asphaltous for the purpose of this study as they have completed many projects in oil and gas industry which include: Bandar Abbas – Isfahan Oil Transmission Pipeline which is 540km with 6 Pump stations, Underground Pipelines for ethylene project of Boushehr petrochemical plant, two oil and gas separation units of the North and South and phases 20 and 21 of south pars gas field development projects in Assaluyeh.

3.6.4 Participant sampling and selection approach

Top level managers from the industry were interviewed through the snowball non-probability sampling method. This helped the researcher to achieve a thorough understanding of the existing quality culture, identify key factors and assess the current state of quality management in oil and gas companies. Each selected organisation was a case of its own and information from individual employees was used alongside general organisation information to address questions about oil and gas organisations. Responses from each case were collated regarding the general performance of the organisation since organisations are dynamic, connected, and interrelated. This helped the researcher to identify quality culture and to assess quality management practice and impacts of quality on the success of projects.

3.6.5 Unit of Analysis

Every research aims at studying a variable, subject, or an entity also referred to as the unit of analysis. This is defined as the major subject under study, which could be an individual, group of individuals, an organisation, or even a behaviour. A research may focus on a case that is

clearly defined such as an individual or not very clear such as decision making. However, Remenyi et al. (1998) suggested that defining the unit of analysis can be achieved by considering the research questions which can give the study a clear boundary of operation.

This research focuses on the employment of quality culture in the oil and gas projects of Iran; therefore, the industry is the unit of analysis for the research. Multiple companies with multiple units of analysis (embedded design) have been studied within this industry. Interviews with organisation's heads and survey questionnaire with individual employees form the levels form the various units of analysis within each case. Though organisation's heads and individual employees involved in oil and gas projects have participated in the study, their responses were collated to generate information about the organisation as a whole, organisation's performance in terms of quality culture, and implication and impact of quality culture in success of projects. Having discussed the research strategy adopted (case study) and criteria for its selection, the following section focuses on time horizon.

3.7 Time Horizon

Time horizon is the length of time which a researcher takes to achieve a research objective or in other words to complete a research. Saunders et al. (2016) describe it as a particular time (snapshot) a research is undertaken or a group of events happening over a period of time. They classify these as cross-sectional and longitudinal research, respectively. A cross-sectional study aims to identify and understand the interaction within factors under a study at a given point in time unlike the longitudinal study which attempts to establish trends over a period of time. Since time constraints are a matter of concern, this study adopted the cross-sectional time horizon to achieve most of the research objectives and used published data collected over time to identify quality culture historically and thus adopting the longitudinal time horizon at this stage. The following section introduces techniques and procedures for collection and analysis of research data.

3.8 Techniques and Procedures

The centre of Saunders' et al. (2016) study on data gathering and methods of analysis represents research procedures and techniques. The text section describes the main data sources, various data collection techniques i.e. qualitative and quantitative, and their appropriate analysis procedures.

3.8.1 Sources of Data

Data is needed for every study to provide answers to the research questions and to attain its objectives. As Saunders et al. (2016) put it, data collection can be done using primary or secondary sources. Data which is collected first hand, from the source by the researcher is referred to as primary data. This is data collected from individuals or a group of people through the use of a pre-determined instrument such as survey questionnaire or interviews. On the other hand, secondary data is information previously researched for other purposes made available to the public through documents and publications. Case study research strategy is capable of using both primary and secondary sources of data either as a multiple source primary data, or multiple source secondary data or a combination of both within a case study. Though several research (Creswell, 2014; Knight & Ruddock, 2009; Remenyi et al., 1998; Saunders et al., 2016; Yin, 2018) suggest different data collection methods, they broadly fall under the two aforementioned sources of data. The most common sub-sources of data are discussed in the next section.

3.8.2 Data Collection Techniques

This section, following discussing the two main sources of data, further explores the many strategies employed by researchers for data collection. Yin (2018) notes that in a case study, data may be gathered from a variety of sources in order to establish a series of rational conclusions regarding the phenomena under study. Yin identifies six frequently utilised sources of evidence: 'documents, archival records, interviews, direct observation, participant-observation, and physical artifacts'. Table 3.5 provides an overview of each source and the strengths and weaknesses identified.

Table 3. 5: Six Sources of Evidence: Strengths and Weaknesses (Adopted from Yin, 2018)

SOURCES OF EVIDENCE	Strengths	Weaknesses
Documentation	<ul style="list-style-type: none"> -Stable-can be reviewed repeatedly -unobtrusive-not created as a result of the case study -Specific-can contain the exact names, references, and details of an event -Broad-can cover a long span of time, many events, and many settings 	<ul style="list-style-type: none"> -Retrievability-can be difficult to find -Biased selectivity, if collection is incomplete -Reporting bias-reflects (unknown) bias of any given document's author -Access-may be deliberately withheld
Archival records	<ul style="list-style-type: none"> - (Same as those for documentation) -Precise and usually quantitative 	<ul style="list-style-type: none"> - (Same as those for documentation) -Accessibility due to privacy reasons
Interviews	<ul style="list-style-type: none"> -Targeted-focuses directly on case study topics -Insightful-provides explanations as well as personal views (e.g. perceptions, attitudes, and meanings) 	<ul style="list-style-type: none"> -Bias due to poorly articulated questions -Response bias -Inaccuracies due to poor recall -Reflexivity-interviewee gives what interviewer wants to hear
Direct observations	<ul style="list-style-type: none"> -Immediacy-covers actions in real time -Contextual-can cover the case's context 	<ul style="list-style-type: none"> -Time consuming -Selectivity-broad coverage difficult without a team of observers -Reflexivity-actions may proceed differently because they are being observed -Cost-hours needed by human observers
Participant observation	<ul style="list-style-type: none"> -Immediacy-covers actions in real time -Contextual-can cover the case's context -Insightful into interpersonal behaviour and motives 	<ul style="list-style-type: none"> - (Same as for direct observations) -Bias due to participation-observers manipulation of events
Physical artifacts	<ul style="list-style-type: none"> -Insightful into cultural features -Insightful into technical operations 	<ul style="list-style-type: none"> -Selectivity -Availability

Documentation or documents are in various forms ranging from reports, letters, articles etc. They provide sufficient background for the investigation, the specific information about the phenomenon under scrutiny and are found to be relevant in case studies as they are strong corroborative tools to other sources of evidence (Proverbs & Gameson, 2008). Archival records include records from public services or organisational records that are mostly quantitative in nature. They also can provide information about a specific issue but a major challenge is accessing such records can be difficult. Yin (2018) identified that in case study research,

interviews are an efficient technique to acquire a large number of samples. The categories of interviews outlined include long, brief, and survey case study interviews. Weaknesses of bias may occur within this source of evidence but when used in combination to other forms of evidence, this weakness can be overcome. Direct and participant observations are techniques that offer the researcher a real understanding of the phenomenon under study; however, it can be costly and time consuming. Physical or cultural artefacts are tools, devices, or work of arts commonly used in anthropological research as observations within a research. Yin (2018) stated that this source of evidence is not a potentially relevant tool in case studies. Having explained the strong and weak points of each source of evidence, it can be concluded that archival records, observations, and physical artefacts are not suitable for the purpose of this research; hence, documents, short interviews, and surveys are adopted. These adopted techniques are further explained in detail in the subsequent sections.

3.8.3 Research Techniques Adopted for Data Collection

This section describes the step by step procedure, instruments, and the sampling techniques used to collect data. In an attempt to add breadth and depth to this research, multiple sources of evidence are adopted where both primary and secondary means are employed to source data. Interviews, survey questionnaires and documents has been used concurrently to complement each technique through a process known as Dual methodology (Leonard-Barton, 1990) or triangulation (Yin, 2018). This offered a richness of data by combining various sources of information in order to strengthen the validity of the research. Triangulation ensured that key meanings are not overlooked by the researcher during the research process or misinterpreted by the reader at the process of reporting. Primary sources of data for this research included key informant interviews with organisation's heads, decision makers, and top managers, and survey questionnaire administered to individual employees of the target companies. Secondary sources of data for this research were collected from relevant project documents reports from oil and gas institutions such as project reports and news letters from the energy companies, the ministry of oil, and other relevant publications.

3.8.3.1 Interviews as a Data Collection Technique

According to Proverb and Gameson (2009), conducting an interview in a case study research is a very important aspect where rapport and relationship is built between the interviewer and interviewee that might be beneficial in the future. Saunders et al. (2016) stated that research interview is a verbal conversation that involves two or more individuals in order to collect information for research purposes through a structured, semi-structured, or unstructured pattern. Yin (2018) refers to them as open-ended key informant interviews, semi-structured focus interviews, and structured questionnaires, respectively. Unstructured or open-ended interview requires free responses from the broad topic under study. Semi-structured interviews are conducted from predetermined questions but gives room for pre-modification at the course of the interview. Structured interviews are conducted strictly based on predetermined questions following a particular pattern.

This research adopted a semi-structured interview pattern for quality culture questions based on the main themes of the research. This was conducted among key informants, including organisation's heads, policy makers, and top managers through a snowball non-probability sampling method. Snow ball sampling also known as Snowballing is a process that involves identifying subjects of inclusion in the sample by referral from other subjects. Trochim (2002) believes that it is convenient for studying small samples distributed over a large area and yet there is the possibility to have a fair distribution across the desired respondents. Saunders et al. (2015) stated that semi-structured interviews are the most suitable as complex and open-ended questions can be used to explore new insights. The use of closed-ended or structured questions was not applicable in this research process as emerging relevant information during the interview not captured in the initial structure were accepted at the course of the interview; hence, the use of semi-structured open-ended questions seemed reasonable.

Deciding the number of interviews to be conducted in a research is critical. Guest, Bunce, and Johnson (2006) provides evidence from previous studies that saturation of information is reached usually when 12 interviews are achieved. Though Yin (2018) is of the opinion that there is no fixed number of interviews for a qualitative research but instead it depends on finding out what you need to know. Also, Saunders et al. (2015) suggested a sample size of between 10 and 25 interviews for a qualitative research. Considering the nature of this research, participants from top level management within oil and gas industry and decision makers were

sought, as such 10 key informant interviews was proposed and documented by the researcher. Though the researcher was not bound by this number, it was an estimate and these 10 interviews from the context of this research achieved fulfilment in terms of coverage of a good number of stakeholders.

Having decided an estimated number of interviews to achieve a good number of stakeholders' coverage, it was critical to decide on the manner the interview needed to be conducted in other words the style of interview. Gillham (2005) categorises face to face interviews and distance interviews as two major styles of doing an interview. Face to face interviews involves the interviewer coming in contact with the respondents which can be one or a group of respondents. The above strategy allows the researcher to obtain more data, especially when observations are involved; yet, it is time consuming and expensive.

Distance interviews, on the other hand, entail a method in which the researcher obtains information from the respondent without actually meeting him or her. Telephone or screening interviews, as well as emails, are examples. The possible downside of this type of interview, according to Saunders et al. (2016), is that personal contact and rapport will not be developed, but it is time and cost effective. Furthermore, internet connectivity has the ability to destabilise it.

Table 3. 6: Sections and Details for Semi-Structured Interviews

SECTION	TITLE OF SECTION	DETAILS	CONNECTING RESEARCH QUESTION	Research Objectives
1	Warm up questions	Number of years Experience		
2	Leadership and People	-The role of leaders and people in creating quality culture -How they are driven, implemented and integrated within the culture of the organisations	RQ1 & RQ2 RQ2	RO1 RO2 RO3 RO4
3	Strategy and Performance	-Systematic approach for implementing strategy and creating a customer focus philosophy -Impact of existing strategy on performance	RQ2 RQ3	RO2 RO3
4	Process and Value Creation	-Driving value for the end customer -Sustaining the delivery of benefits to customers	RQ2 & RQ3	RO3 RO4
5	Resource, Knowledge and Partnership	- Human resource is the main driving force for integrating quality -Knowledge sharing and importance of partnership	RQ3 RQ2	RO1 RO3 RO5
6	Continuity and Sustainability	-Organisation sustainability in their future competitiveness -The degree with which they constantly learn, adapt, innovate and develop new solutions and new approaches	RQ2 RQ2	RO3 RO4 RO5

This research employed face to face interview as the respondents were accessible. Table 3.6 illustrates the arrangement of the semi-structured interview guideline, which includes section names, explanations of each segment's questions, and the research subject that each component is attempting to answer.

3.8.3.2 Survey Questionnaire as a Data Collection Technique

A questionnaire is a set of questions with a choice of answers utilised in a research study to collect the required data. Questionnaires are quantitative in nature and commonly used for descriptive and statistical inferences in a case study survey (Knight & Ruddock, 2009). According to Hoxley (2009), questionnaires can be administered by post, email, phone, the

web, or performed face to face. Further explained is that careful thought should be given to the research design and instrument design as using the questionnaire to collect data and subsequent analysis can be straightforward. Gray (2014) suggested the Likert scale as a relevant scale to measure variables and indicators such as attitudes, opinions, and behaviour of participants during data collection. It is usually designed as predetermined statements to categorise responses on scales of importance, frequency, and etc. Table 4.7 represents the values assigned for the Likert scale.

Table 3. 7: Value Designation for Likert Scale

Value	1	2	3	4	5
Agreement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
Condition	Poor	Fair	Good	Very good	Excellent
Impact	No impact	Low impact	Medium impact	Significant impact	High impact
Importance	Unimportant	Of little importance	Moderately important	Important	Very important
Occurrence	Never	Rarely	Sometimes	Often	Always
Significance	insignificant	Of little significance	Moderately significant	Significant	Very significant

Attitudes, behaviours, and opinions are variables that cannot be quantified; hence, the use of Likert scale to categorise them was found to be appropriate in the context of this research. The values assigned in Table 3.7 range from 1 to 5 with 1 to represent the negative side of the response and 5 to represent the degree of acceptance. It is designed in such a way so that a response either in affirmative or otherwise is received for each question. It does not give room for a no opinion as this is likely to affect the response rates of the questions.

Having designed the questionnaire as the instrument for quantitative data collection, the sample size is then determined. Marshall (1996) asserts that deciding on the sample size for quantitative data to be collected is a primary concern after the instrument for data collection has been designed. Saunders (2016) recommends the use of questionnaire in combination with other methods of data collection though not to imply that it cannot be implemented as the only method for data collection.

This research adopted mixed method approach where a combination of methods is employed; therefore, in addition to the 10 key informant interviews, 50 copies of a questionnaire were administered in each case organisation. A total of 100 copies of the questionnaire were sent out to be administered. The questionnaire was designed to capture experiences of oil and gas professionals about the employment of quality culture in the oil and gas projects of Iran.

Research population of this study is approximately 25,000 people who is active in Iranian Oil and Gas industry. The researcher came to conclusion that the outcome of 100 participant will be valid for the population after sample size calculation:

Sample size is determined in two steps

1. Calculate the sample size for infinity population.
2. Add the sample size to the required population.

$$S = Z^2 * P(1 - P) / M^2$$

$$\text{Adjusted Sample Size} = (S) / 1 + [(S-1) / \text{Population}]$$

S = Sample size for infinite population

Z = Z-scores are measures of an observation and is based on confidence level

P = *Population proportion* 0.5 is most conservative value

M = *Margin of error* is defined as a small amount that is allowed for in case of miscalculation or change of circumstances generally the margin of error is considered as 5% which is 0.05

1. $S = (Z - \text{Score})^2 * P(1 - P) / (\text{margin of error})^2$

$$S = (1.96)^2 * 0.5(1 - P) / (0 - 0.5)^2 \quad S = 384.16$$

2. Adjusted sample size = $(S) / 1 + [(S-1) / \text{Population}]$

$$\text{Adjusted S} = 384.16 / 1 + [(384.1 - 1) / 25000]$$

$$\text{Adjusted S} = 95.75$$

Finally, the researcher determined the sample size for the population is 95.75 therefore, over 95 participants will be representative of the real population for this study.

Table 3.8 presents the layout of the questionnaire which includes the section titles, details of the questions in each section, and the connecting research question that each section sought to answer.

Table 3. 8: Sections and Details for Semi-Structured Questionnaire

SECTION	TITLE OF SECTION	DETAILS	CONNECTING RESEARCH QUESTION	Research Objectives
A	Leadership and People	-The role of leaders and people in creating quality culture -How they are driven, implemented and integrated within the culture of the organisations	RQ1 & RQ2 RQ2	RO1 RO2 RO3 RO4
B	Strategy and Performance	-Systematic approach for implementing strategy and creating a customer focus philosophy -Impact of existing strategy on performance	RQ2 RQ3	RO2 RO3
C	Process and Value Creation	-Driving value for the end customer -Sustaining the delivery of benefits to customers	RQ2 & RQ3	RO3 RO4
D	Resource, Knowledge and Partnership	- Human resource is the main driving force for integrating quality -Knowledge sharing and importance of partnership	RQ3 RQ2	RO1 RO3 RO5
E	Continuity and Sustainability	-Organisation sustainability in their future competitiveness -The degree with which they constantly learn, adapt, innovate, and develop new solutions and new approaches	RQ2 RQ2	RO3 RO4 RO5

3.8.3.3 Document Survey as a Data Collection Technique

Yin (2018) states that documents are useful for validating and supplementing findings from other sources in the case study approach. They may be used to validate information from other sources, such as interviews, and can offer highly strong evidence. Yin nevertheless remarked, in place of substantiated finding, that evidence from documents might conflict and indicated that more investigation is necessary in such a circumstance. Document reviews will be used in this research to corroborate and supplement findings from interviews and questionnaires in a process called triangulation. Newsletters and publications are been used to identify records of quality culture and management used in oil and gas sector of Iran in the past as well as to corroborate information from interviews and questionnaire. Having discussed the various data collection techniques used in the research, the research objectives and corresponding technique to achieving the objectives are here discussed in the next section.

3.8.4 Summary of Research Objectives and Data Collection Technique

Table 3.9 presents a summary of the research objectives and the corresponding data collection techniques used to achieve the objectives.

Table 3. 9: Approach to Meeting Research Objectives

Research Objectives	Data Collection Techniques		
	Literature Review	Case study	
		Interviews	Questionnaire
1. Determine quality and its management within oil and gas industry	X	X	X
2. Identify the implications and impacts of Iran's culture on quality cultures for organisations in the oil and gas industry	X	x	x
3. Identify the critical factors for the success of projects in the oil and gas industry	X	x	x
4. Identify the drivers and barriers of culture development within oil and gas companies	X	x	x
5. Develop a guideline to assess the role of culture in the performance of oil and gas companies	X	x	x

Having discussed the techniques of data collection, sampling and the sampling techniques adopted for the data collection process is discussed in the next section.

3.8.5 Sampling Techniques for Research

Data is required to answer questions in the research process; yet, collecting data from an entire community, except in rare circumstances where the population is a manageable size, is inconvenient and time-consuming. This indicates a need for taking portions to represent the whole population. This is called a sample. Sampling is a process where a small portion or some quantity of a population is used to show what the whole population looks like in order to draw conclusions for generalisation. A representative sample should be selected to ensure that inferences and conclusions portray the true position of the whole population.

Two techniques of sampling include probability sampling and non-probability sampling. The former is a technique which utilises a procedure that assures an equal chance is provided for different units in a population to be selected (Trochim, 2002). Probability sampling requires the researcher to have a sampling frame which will be appropriate to answer the research questions, after which a procedure is then setup so as to assure that the different parts of the population have an equal chance of selection. The population to be sampled is normally distributed and therefore a random selection can be achieved. This type of sampling is used in quantitative research; examples of which are random, stratified, systematic, and multi-stage sampling. In contrast and as Marshall (1996) states, non-probability sampling is a method that collects sample from a population that is not evenly distributed and therefore not all members have an equal chance to be selected. Therefore, the use of random sampling will be inappropriate (Marshall, 1996).

Examples of non-probability sampling are purposive, quota, snowball, and convenient sampling. This method is applicable in researches where the sample frame is not known such as surveys and case study research. Patten (2016) opined that qualitative researchers more often adopt the use of informed judgment to select sample individuals such as key informants while a quantitative researcher would prefer a random selection or selection by chance in a research. However, Robinson (2014) strongly suggests that justified sampling in qualitative research is very important in order to ensure the research is valid, to give the research rigour, and to prevent

unwanted generalisations. The sampling methods adopted for this research are presented in Table 3.10.

Table 3. 10: Sampling Methods Adopted for the Research

Sampling Method Adopted	Snowball	Purposive	Convenience
Stage	Key Informant Interviews	Document Review	Survey Questionnaire

Snowballing is a method which is also known as chain referral sampling. In this method, participants or informants initially identified for a study are asked to recruit potential participants by referring the researcher to them. This is done continuously until the desired sample size is obtained or when the researcher reaches a saturation point: a point when no new themes or information is gained from the interviews but merely a repetition of what has already been covered. In the present research study, snowballing was adopted at the interview stage for key managers. After an initial respondent was identified, he/she was asked to recruit a participant that was knowledgeable in the field.

Silverman (2015) defines **purposive** sampling as a non-probability sampling that is selected when it displays particular features of interest to the researcher. In this method also referred to as judgmental, subjective, or selective sampling, selection of the most productive part of the population is done to achieve the objective of the study. The purposive sampling was employed based on the researcher’s judgement to select documents relevant for the present study. These included government reports, publications, newsletters, lecture notes, and etc.

Convenience also known as availability sampling involves the selection of the most accessible participants to be recruited in a survey. This method was employed at the employee level who has been involved in the oil and gas projects for questionnaire administration; therefore, those that were available and willing to be part of the survey were contacted for the purpose of the present investigation.

3.8.6 Pilot Interviews and Questionnaire

Having designed the instruments of data collection (semi-structured interview guideline and survey questionnaire guideline), two pilot semi-structured interviews and one questionnaire interview were conducted to ascertain how comprehensible the questions were then some changes has been made as a result and also to estimate the time it would take to conduct each interview. A face to face interview with a researcher and a phone interview with an academic were conducted. After the pilot interviews, an average of 45 minutes established to be the time to conduct an interview and 25 minutes to administer the questionnaire.

A pilot questionnaire is developed based on the key factors found in a detailed literature review. This is circulated to researchers and industry experts for validation, enhancement, and modification of the factors used. Based on the participants feedback from the pilot questionnaire, a standardised questionnaire is being created to gather data from a broad sample of organisations in the Iranian oil and gas industry. This is done to evaluate their awareness and degree of quality acceptance, as well as their familiarity with these elements and main influences in quality culture implementation and their efficacy.

The feedbacks from pilot interview and questionnaires help the researcher to group the critical success factors in to five main area based upon the literature review and feedback/suggestions form the panel of experts. The feedbacks and suggestions helped the researcher to finalise the design and structure of interview and questionnaire based on five principal area. Having discussed the pilot interview process, the next section discusses the data analysis process.

3.8.7 Data Analysis

Analysis and interpretation of collected data is critical to achieving the objectives of any successful research. Yin (2018) defines data analysis as a process of investigating, classifying, tabulating, examining or otherwise of qualitative and quantitative information to produce empirical findings. Creswell (2014) explains it as the specific steps taken to make sense of evidences gathered during data collection. This research adopted the mixed method convergent design where qualitative information gathered by means of semi-structured interviews were analysed qualitatively (content and thematic analysis). In addition, quantitative data collected through a survey questionnaire was analysed quantitatively (statistical analysis) and the results

from both approaches were integrated. Indeed, combining the results of both methods allows the researcher to design a procedure that is most appropriate in order to provide an answer to the research questions. The next sections elaborate on data analysis steps for the interviews and survey questionnaire.

3.8.7.1 Analysis of Semi-Structured Interviews

Qualitative data were audio-recorded and also a hard copy was created during semi-structured interviews which were then translated into text format to be analysed later. Interview transcripts in the style of free-flowing text are subjected to context analysis, theme analysis, or discourse analysis, according to Vaismoradi, Turunen, and Bondas (2013), depending on the study goal. Content analysis is an analytical research method used to make reliable and valid interpretations from free-flowing text which is systematically converted to quantities. Here, the frequency or number of times a word appears is considered an important means of making inferences. Thematic analysis, on the other hand, seeks to examine patterns among the data sets to describe the phenomenon under study and not necessarily concerned with the number of times a particular word appears. Discourse analysis or discourse studies unlike content or thematic analysis, which adapts a way of analysing textual data, employs a number of approaches to analyse both verbal and non-verbal communication. The present research study was an attempt to realise the impact of quality culture within the oil and gas industry of Iran by using two companies as subjects for a case study. Therefore, both content and thematic analyses were used in this study. The interviews were conducted in Persian language due to the location of case study companies then the researcher translated to English. The next step was that researcher quantify and analyse the presence meanings and relationships of words and concepts then make inferences about the messages within the data. At third step, the researcher familiarised himself with the data by listening the interview, reading and rereading the translated hard copies which enabled the researcher to get a sense of the text as a whole in order to start formulating an idea of what the main points are then dividing up the data into smaller parts whilst ensuring that the core meaning is still retained this is done using coding units. A code is a name that most exactly describes what this particular condensed meaning unit is about, codes were usually one or two words long and made it easier to identify connections between meaning units.

The last step was applying the coding units in order to sort the data into categories which was formed by grouping together those codes that are related to each other through content or context. This was important to look for commonalities, frequency, pattern, and differences that the interviewees think about quality culture in Iranian oil and gas industry.

The figure below illustrates that the researcher examined both the Persian and English versions of the interviews in order to acquire a thorough understanding of their responses.

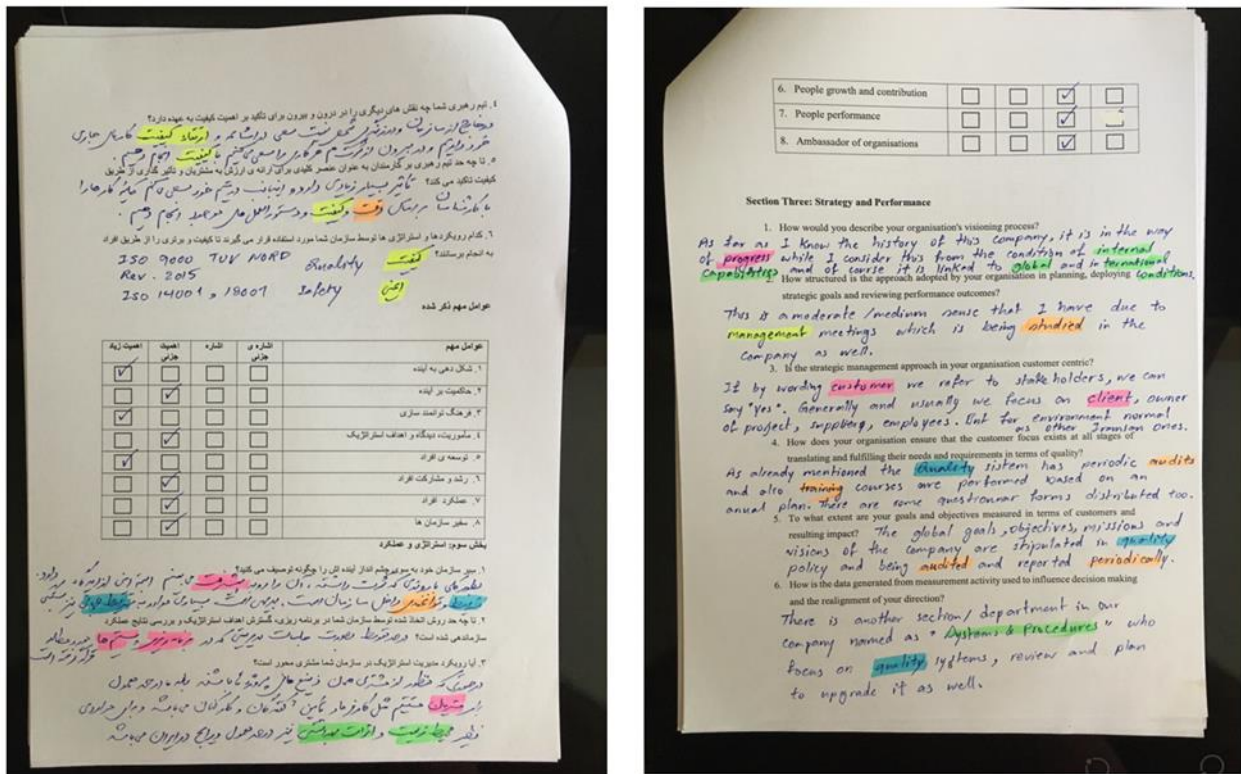


Figure 3.9: Content and Thematic Analysis

3.8.7.2 Analysis of Survey Questionnaire

This research was designed to distribute a total of 100 copies of the questionnaire, 50 for each case study companies. Unlike the qualitative method of research where data collection and analysis can be done concurrently, quantitative data analysis is done after data collection to avoid inferential bias. Therefore, this section describes how the researcher intended to analyse

quantitative data collected with survey questionnaires from case study companies. Section 0 explained the Likert scale used in the questionnaire to capture information at the case study companies. First, the collected data was inserted into Microsoft excel 2010 after which proof reading was done to avoid possible errors. Thereafter, the data was exported to SPSS (Statistical Package for the Social Science) version 23 and subjected to statistical testing (see Figure 3.10).

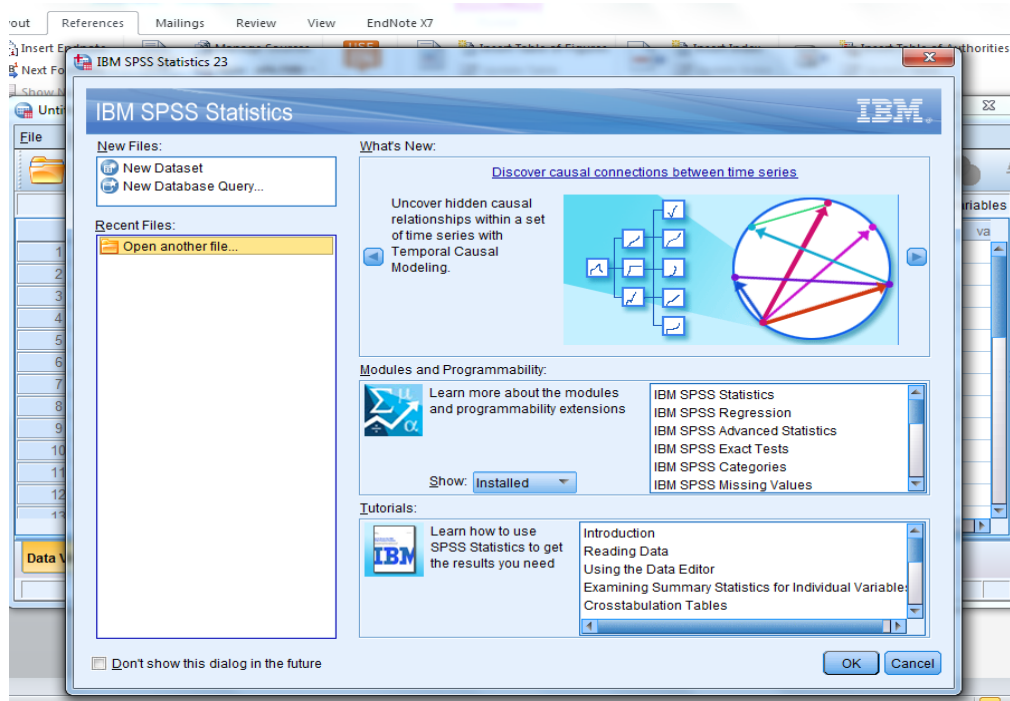


Figure 3. 10: Data Analysis Process Using SPSS

Descriptive statistics was used to determine the characteristics of the data set which were presented as frequencies and percentages as well as figures and tables. Moreover, inferential statistics were used to ascertain relationships between quality culture and success of projects in case study companies. Spearman’s rank correlation was used to rank possible drivers of quality culture to ascertain those with stronger relationships with impacts on success of projects.

Table 3. 11: Summary of Data Analysis

Method of Data Collection	Method of Analysis	Technique of Analysis	Software
Semi- structured Interviews	Code based analysis	Content Analysis	
	Theme based analysis	Thematic analysis	
Survey Questionnaire	Descriptive statistics	Descriptive analysis: measures of central tendencies.	SPSS (version 23)
	Inferential statistics	Inferential analysis: Spearman's rank correlation	

In Table 3.11, a summary of methods of data collection, methods and techniques of analysis, and the software used for this research are indicated.

Having explained the process of data analysis, the next section discusses the case description of the study area.

3.9 Validity and Reliability

This section discusses validity, reliability, and credibility of a research. Validity refers to the quality of being logically or factually sound. In other words, a valid research process is well constructed to produce conclusions that are applicable to the real world. Validity is important in every research as it safeguards the accuracy and credibility of the research finding. Creswell (2014) argues that validity in qualitative research differs from quantitative research as it connotes different things. In addition, he identified common terms that are considered as equal to validity: rigour, quality, and trustworthiness. A number of criteria are implemented to measure the validity of different research processes:

1. Construct validity: guarantees that the data collecting tools include the proper measurements for the study topic.
2. Internal validity: assures that the methods used to perform the study are accurate.
3. External validity: describes the capacity to adapt findings to new situations, persons, or samples.
4. Reliability: assures that the research can provide the same results no matter how many times it is conducted by using the same approach.

In qualitative research, validity is a procedure of ensuring accuracy of research findings, while reliability ensures that the research approach is consistent with a typical research process. According to Yin (2018), these connote different things in quantitative and qualitative research. In the former, reliability relates to the quality of the research while in qualitative research it relates to generating understanding. Nevertheless, reliability generally refers to examining stability. Yin provides a summary of this in Table 3.12.

Table 3. 12: Design Test for Validity in Case Study (Yin, 2018)

TEST	Case Study Tactics	Phase of Research in Which Tactic Occurs
Construct Validity	<ul style="list-style-type: none"> • Use multiple sources of evidence • Establish chain of evidence • Have key informants review draft case study report 	Data Collection Data Collection Composition
Internal Validity	<ul style="list-style-type: none"> • Do pattern matching • Do explanation building • Address rival explanations • Use logic models 	Data Analysis
External Validity	<ul style="list-style-type: none"> • Use theory in single case studies • Use replication logic in multiple case studies 	Research Design
Reliability	<ul style="list-style-type: none"> • Use case study protocol • Develop case study database 	Data Collection

Validation strategies adopted in this research includes: triangulation and member check.

Triangulation is defined as the use of multiple sources of evidence to build on findings from the conducted research. This research used interviews, survey questionnaire, and documents for triangulation.

Member check is a process where research finding is taken back to the participants to ascertain their opinion on the accuracy of the findings. This research conducted a focus group interview to validate research findings.

3.10 Concern of Ethical Approval

This research is guided by the United Kingdom Research Information Office (UKRIO) code of practice for research as this study falls in the category of ‘Science and Technology’. All of

the participants were provided with necessary details about the research and their involvement. Furthermore, the researcher made an attempt to obtain their informed consent to participate and assured the participants to keep all of the collected data secure and confidential and to maintain the participant anonymity throughout the research and beyond. Moreover, the participation in this research was completely voluntary and the participants had the full right to withdraw from the research at any stage (along with their data) without providing any reason.

The researcher obtained ethical approval from the University of Salford after satisfying all of the ethical requirements in order to proceed with data collection and to recruit participants for survey and interviews.

3.11 Summary of Methodology

In this chapter, the research methodology was discussed and justified through various stages of research philosophy, approaches, methodological choice, strategies, and techniques adopted for the research. Figure 3.10 presents a summary of the researcher’s position and Figure 3.11 illustrates the research methodology design.

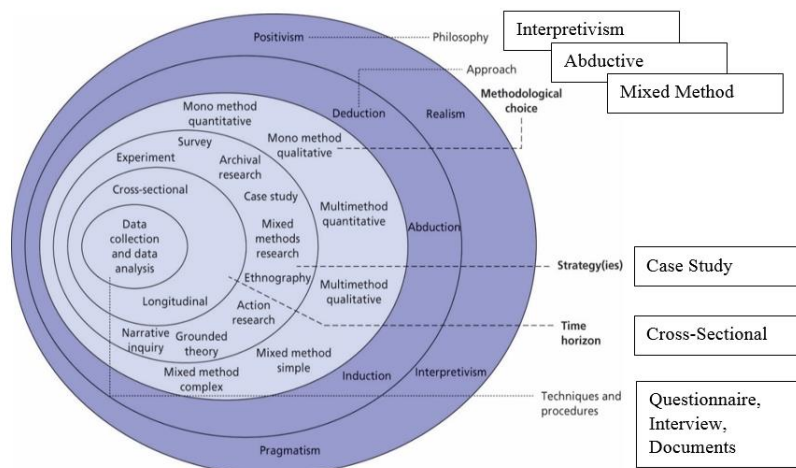


Figure 3. 11: Research Position

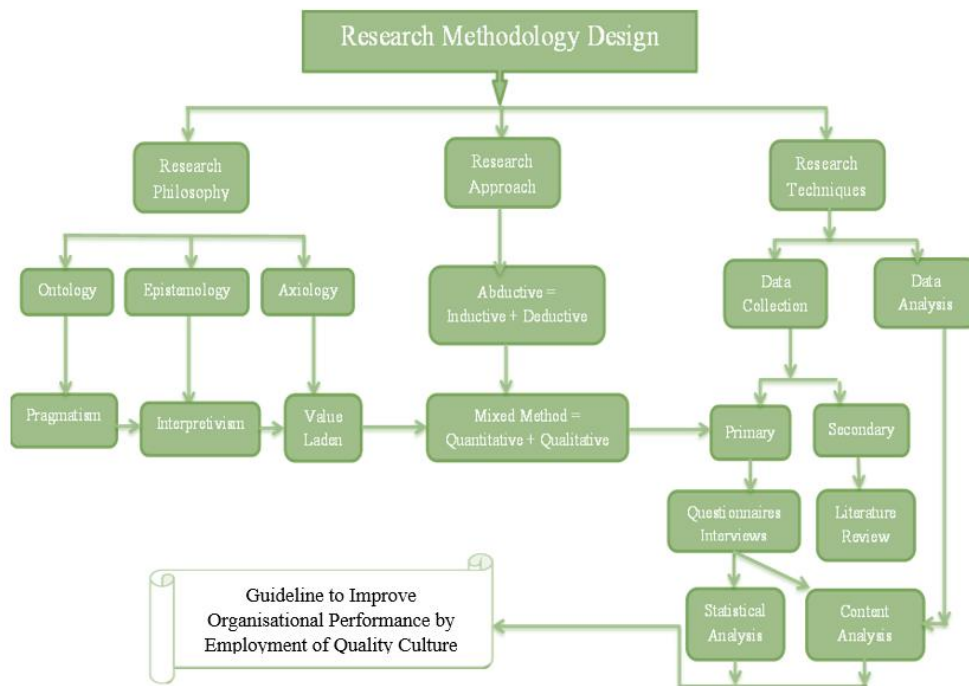


Figure 3. 12: Research Methodology Design

The figure 3.12 illustrates the methods taken by the researcher to develop a guideline for quality culture improvement in Iranian oil and gas organisation. The researcher considered it necessary to know the 'what,' 'how' and 'why' of quality culture implementation. The literature review revealed 'what', then via the use of qualitative methods for validating results. The 'how,' via the survey and analyses, would be confirmed using quantitative and qualitative approaches. In the end the interviews defined the 'why.'

As a result, this study uses a triangulation approach research, including both quantitative and qualitative methods at distinct phases. This strategy uses a combination of techniques to give a more comprehensive picture of the research issue and a better understanding of it. Using a variety of techniques to solve the same problem on the assumption that the deficiencies in each technique would balance each other out, resulting in more compelling results. The decision to adopt mixed approaches was influenced by a number of factors for example, they are achievable within the PhD's time constraints and also, these approaches are suited for the topic and will work perfectly in this exploratory research. Lastly, these methods will provide guidance and answers to the issues that have been raised.

CHAPTER FOUR: QUANTITATIVE ANALYSIS

4.1 The Critical Success Factors of a Quality Culture Within the Oil and Gas Industry in Iran

The study highlighted five critical success factors of a quality culture within the oil and gas industry in Iran. The factors included leadership and people, strategy and performance, process and value creation, resource knowledge and partnership, and continuity and sustainability. Leadership and people were operationalised using ten variables with a maximum score of 5 each for those who strongly agreed and a minimum score of 1 for those who strongly disagreed. The overall score for the leadership and people was obtained by summing the scores for the ten variables. Hence, the possible scores for the factor leadership and people ranged from 10 to 50. From the analysis, the average score for the level at which the departments of AsphaltTous Co focused on leadership and people was 31.7241, with a standard deviation of 11.99374. On the other hand, the average score for the level at which the departments of Persia Oil and Gas organisation focused on leadership and people was 32.2857, with a standard deviation of 10.27201.

4.2 Leadership and People

Leadership and people form part of the many critical success factors for an organisation. Besides, leadership is a soft cultural component. Hence, the survey question sought to understand the leadership in the organisation. Through the responses of the survey questions, it was found that 53.3% of respondents agreed that the leaders in AsphaltTous Co shape the future and make it happen. The number of people who remained neutral in regard to the statement that leaders shape the future of the organisation accounted for 23.3%, which is still high. However, only a small percentage disagreed that the leaders shape the future of the organisation.

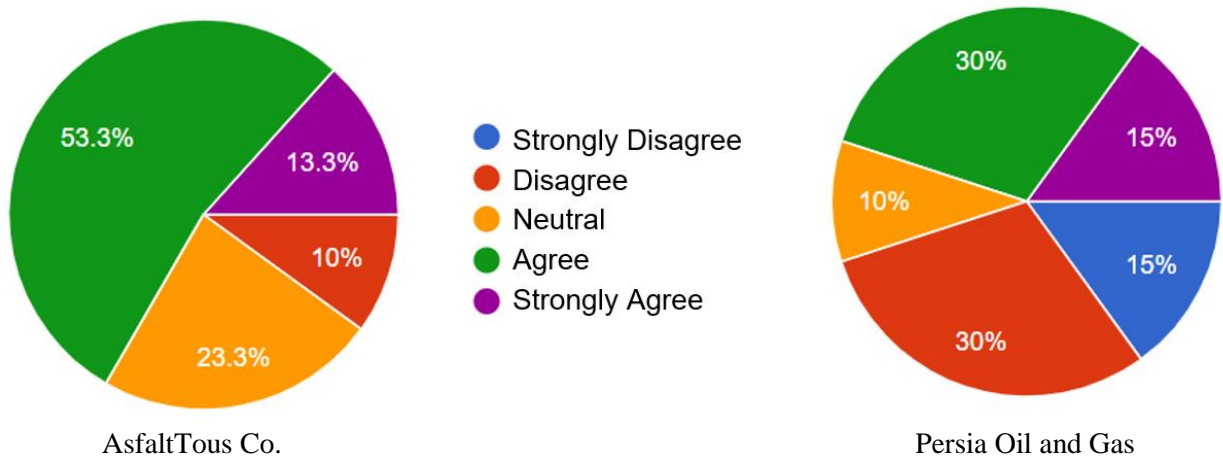


Figure 4.1: Leaders Shape the future and make it happen

Similarly, at Persia Oil and Gas, 30% disagreed that leadership shape the future of the organisation, and a 30% responded in the affirmative. Based on the responses from Persia Oil and Gas, people believe that leaders and their leadership skills are a critical success factor in the performance of an organisation. However, there is a percentage that also believes that leadership and leaders do not play a critical role in shaping the performance and the quality of the organisation.

It was also evident that 63.3% of employees agreed that leaders act as role models for AsphaltTous Co.'s values and ethics. Only 3.3% strongly disagreed that leaders act as role models. Besides, 10% disagreed that the organisation's leadership act as a role model for the organisation's values and ethics. Similarly, 10% remained neutral on whether leaders act as a role model to the organisation ethics and values, as shown in the first pie chart below. Conversely, at Persia Oil and Gas, 42.1% disagreed and 21.1% agreed, while 10.5% strongly agreed leaders act as role models. A greater percentage do not consider leaders in Persia Oil and Gas to be role models however, AsphaltTous is in better position in this regard.

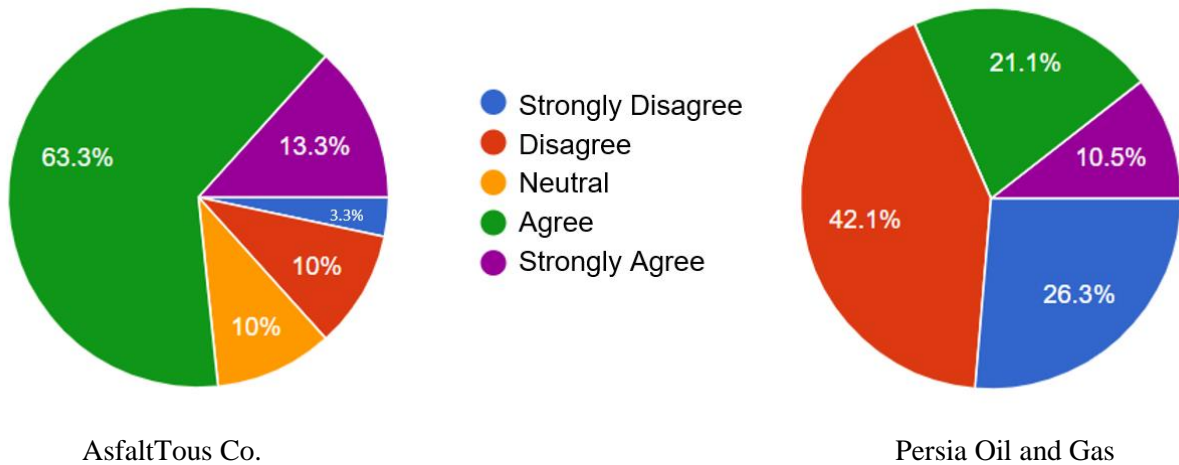


Figure 4.2: Leaders act as role models for organisational values and ethics

Out of the 31 responses received, 70% of the population agreed that leaders value their people while 3.3% strongly disagreed. However, 13.3% strongly agreed that leaders in the organisation value their people. The responses show that on average, the leaders value their people to a very small extent. Despite them being involved in the organisation's operations.

Also, leadership rarely emphasis or play a role in creating a high-quality culture. The second pie chart consists of responses from Persia Oil and Gas. From the pie chart, 25% disagreed and 20% agreed that leaders value their people. Also, 20% remained neutral, while 25% strongly disagreed that leaders value their people. Only 10% strongly agreed about the issue. The results show that a greater percentage disagree that leaders value their people. However, compared to Persia Oil and Gas, leaders at AsphaltTous Co. value their people more.



Figure 4.3: Leaders value their people

Conversely, 63.3% agreed that leaders create a culture of empowerment for the balanced achievement of organisational and personal goals. A further 23.3% remained neutral on whether leaders empower employees through culture. However, it only gave positive feedback about the workers' perception of leadership and the culture of empowerment. Only 10% disagreed that leaders create a culture of empowerment. At Persia Oil and Gas, 50% of the workers disagreed, and 15% agreed that leaders create a culture of empowerment for the balanced achievement of organisational and personal goals. A further 10% remained neutral. Based on the responses, it appears that leaders in AsfaltTous have focused more in encouraging the culture of empowerment compared to leaders at Persia Oil and Gas.

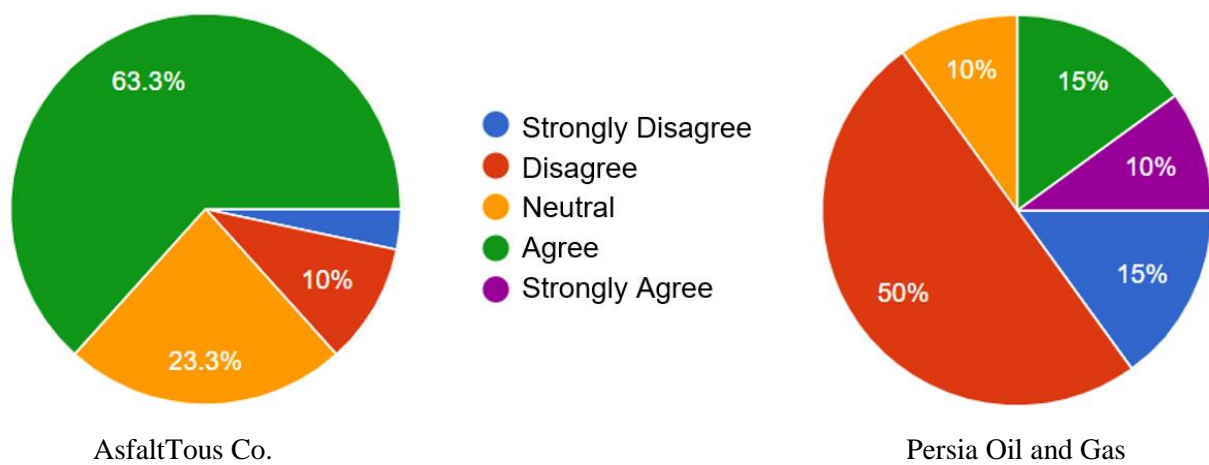


Figure 4.4: Leaders create a culture of empowerment

The neutral respondent that the organisation understands the skills and competencies required to achieve the mission, vision and strategic goals accounted for only 13.8%. Those who agreed and strongly agreed accounted for 72.4% and 6.9% respectively. The responses indicate that the employees in the organisation have trust in the leaders for effective corporate culture, as shown in chart one below. The second chart shows responses from Persia Oil and Gas. From the chart, 45% agreed while 30% disagreed that the organisation understands the skills and competencies required to achieve mission, vision and strategic goals. The number that strongly disagreed with the statement is 15%.

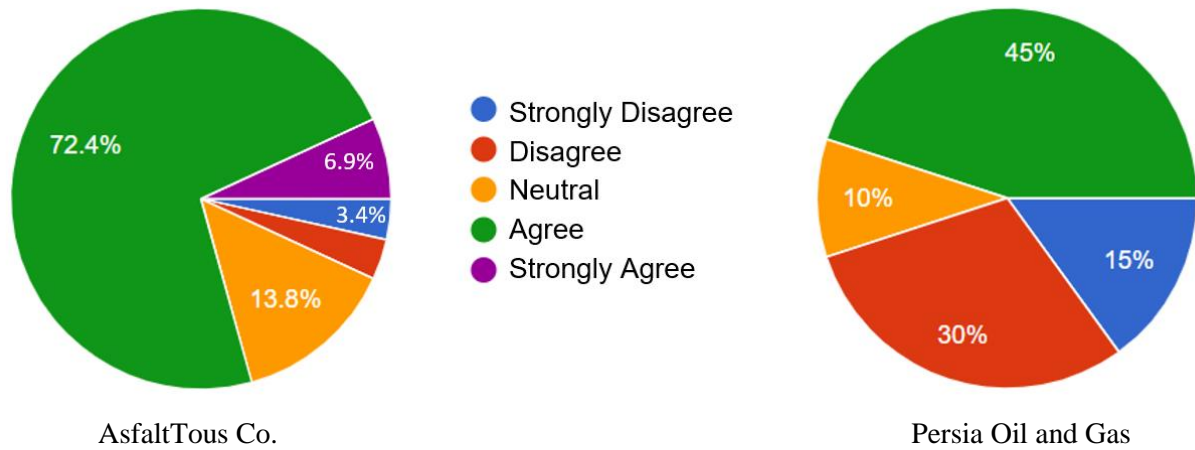


Figure 4.5: Leaders Understand the skills and competencies required to achieve the mission, vision and strategic goals

Leaders at AsphaltTous Co. creates a culture where people’s dedication, skills, and talents and creativity are developed and valued. 13.3% disagreed with the statement, while 46.7% and 30% agreed and neutral, respectively. The results of the survey are shown in the pie chart below. At Persia Oil and Gas, 30%, 15%, 20% and 10% disagreed, neutral, agreed and strongly agreed that the organisation creates a culture where people’s dedication, skills, and talents and creativity are developed and valued respectively.

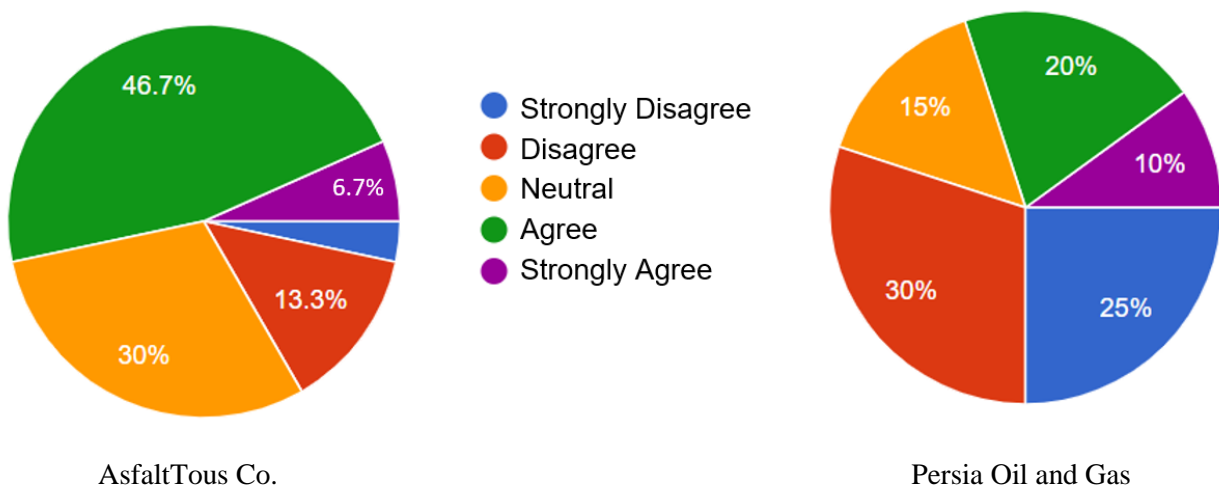


Figure 4.6: Leaders Create a culture where peoples' dedication, skills, talents and creativity are developed and valued

A 43.3% agreed that leaders at AsphaltTous Co. ensure that their people can contribute to their own and the organisation’s ongoing success, releasing their full potential in a spirit of true partnership. Besides, 36.7% remained neutral about the statement, while 6.7% disagreed. Hence, the majority of the employees are satisfied with the leadership of the organisation on

contributing to the success of the operations. At Persia Oil and Gas, 45%, 30%, and 15% disagreed, agreed, strongly disagreed that people could contribute to their own and the organisation’s ongoing success respectively.

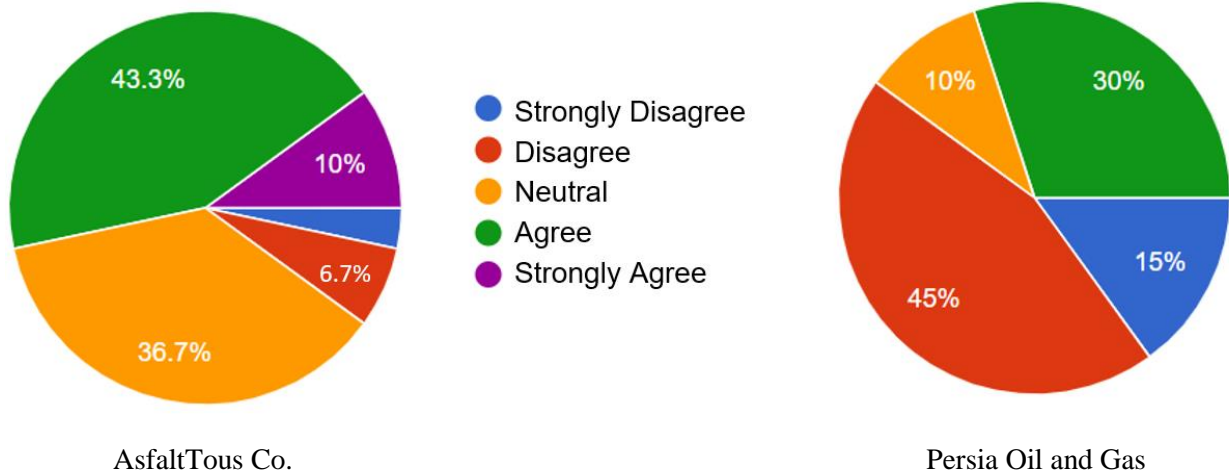
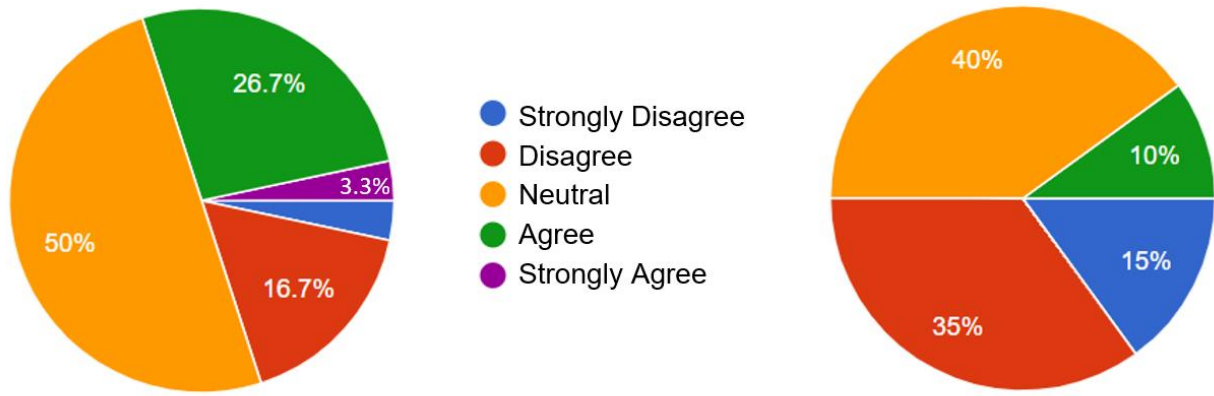


Figure 4.7: Leaders Ensure that their people can contribute to their own, and the organisation's ongoing success

Only 16.7% disagreed that leadership in the organisation plays the critical role of clearly defining the levels of people's performance required to achieve the strategic goals. However, A high number of employees, 50%, remained neutral about the statement. Those who agreed and strongly agreed accounted for 26.7% and 3.3% respectively, as shown in the pie chart below. However, the interview revealed that AsphaltTous Co. has a system quality standard of ISO 9000 from Germany Company TUVNURD Rev.2015, which is mainly focused on risk. The standard plays the role quality in defining and shaping the culture of the organisation. At Persia Oil and Gas, 40%, 35%,15% and 10% remained neutral, disagreed, strongly disagreed and agreed that leadership in the organisation plays the critical role of clearly defining the levels of people's performance required to achieve the strategic goals respectively.

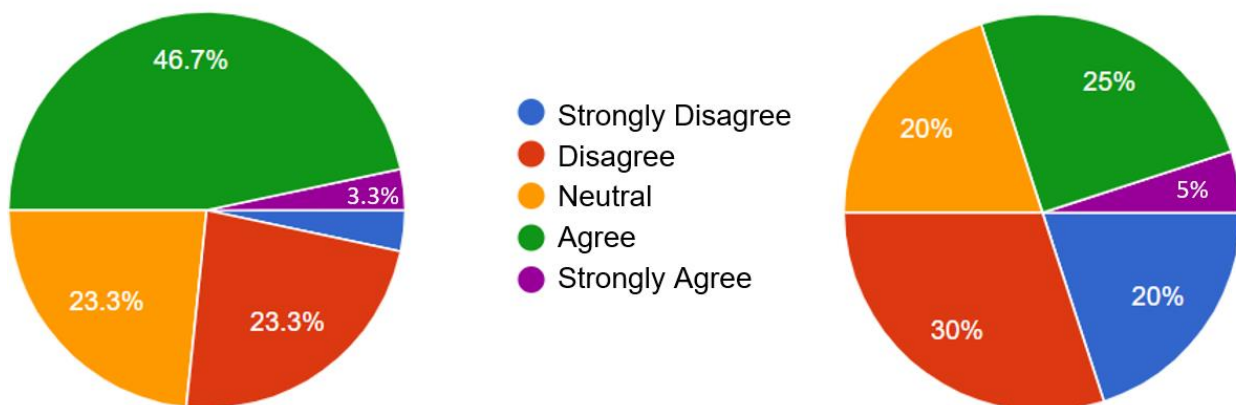


AsfaltTous Co.

Persia Oil and Gas

Figure 4.8: Leaders clearly define the levels of people performance required to achieve the strategic goals

Employees feel that leaders are non-responsive in creating a spirit of teamwork within the organisation. In this regard, 46.7% and 23.3% agreed and disagreed respectively that leaders promote team working and the formation of groups/teams, as shown below. Based on the interview responses, leadership plays the role of creating a quality culture at AsphaltTous Co. by running a periodic audit on the quality system and providing training courses, seminars to refresh and upgrade the knowledge and capabilities of the workers. At Persia Oil and Gas, 30%, 25%, and 20% disagreed, agreed, and strongly disagreed that leaders promote team working and the formation of groups/teams respectively.



Asfalt Tous Co.

Persia oil and gas

Figure 4.9: Leaders promote team working and the formation of groups/teams

Only 10.3% strongly agreed that leaders encourage their people to be the creators and ambassadors of the organisation's ongoing success. 41.4% agreed, while 34.5% remained neutral that leaders contribute towards the success of the organisation. At Persia Oil and Gas, 31.6%, 26.3%, and 21.1% disagreed, remained neutral, and agreed that leaders encourage their people to be the creators and ambassadors of the organisation's ongoing success respectively.

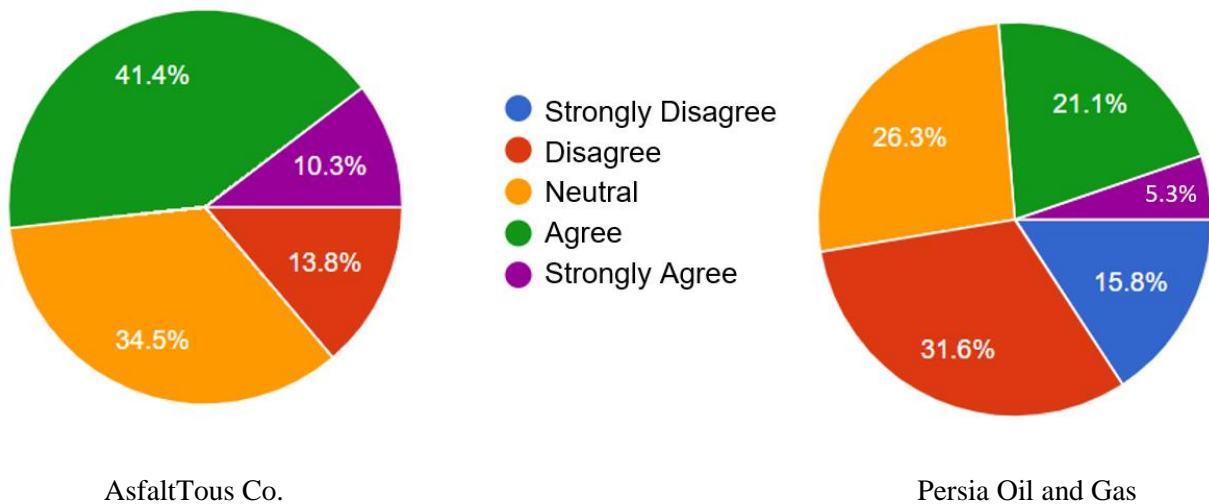


Figure 4.10: Leaders encourage their people to be the creators and ambassadors of the organisation's ongoing success

4.3 Strategy and Performance

Strategy and performance are critical soft cultural factors that contribute to the improved quality of the organisation. The strategy is inherent in a organisation's vision, mission and strategic goals. Which it intends to achieve. Every strategy that a organisation engages in must steer the organisation forward, creating a competitive advantage through the value chain. A survey of the revealed that 58.6% agreed AsphaltTous Co. implements its mission and vision by developing a stakeholder focused strategy. Also, 6.9% strongly agreed with the statement. Those who remained neutral that AsphaltTous Co. implements its mission and vision by developing a stakeholder focused strategy accounted for only 31%, as shown in the pie chart below. At Persia Oil and Gas, 45%, 35%, 10% and 5% disagreed, agreed, strongly agree and strongly agreed that the organisation implements its mission and vision by developing a stakeholder focused strategy respectively.

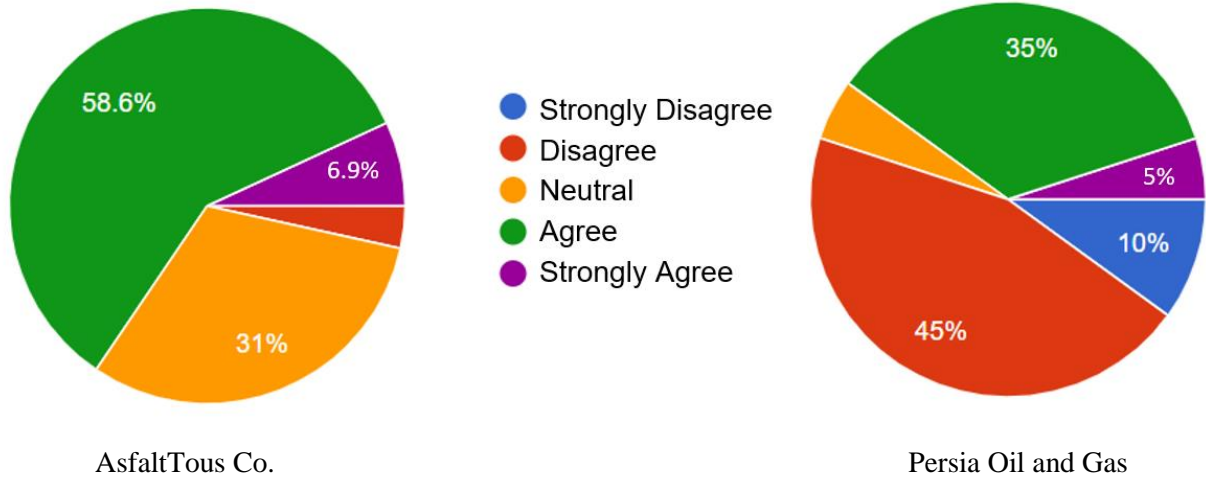


Figure 4.11: Organisation implements its mission and vision by developing a stakeholder focused strategy

According to the survey, 56.7% agreed, while 10% disagreed that the organisation develops and deploys policies, plans, objectives, and processes to deliver the strategy. Besides, only 10% strongly agreed with the statement. At Persia Oil and Gas, 50%, 20%, 15% and 15% agreed, disagreed, strongly disagreed and remained neutral that the organisation implements its mission and vision by developing a stakeholder focused strategy respectively.

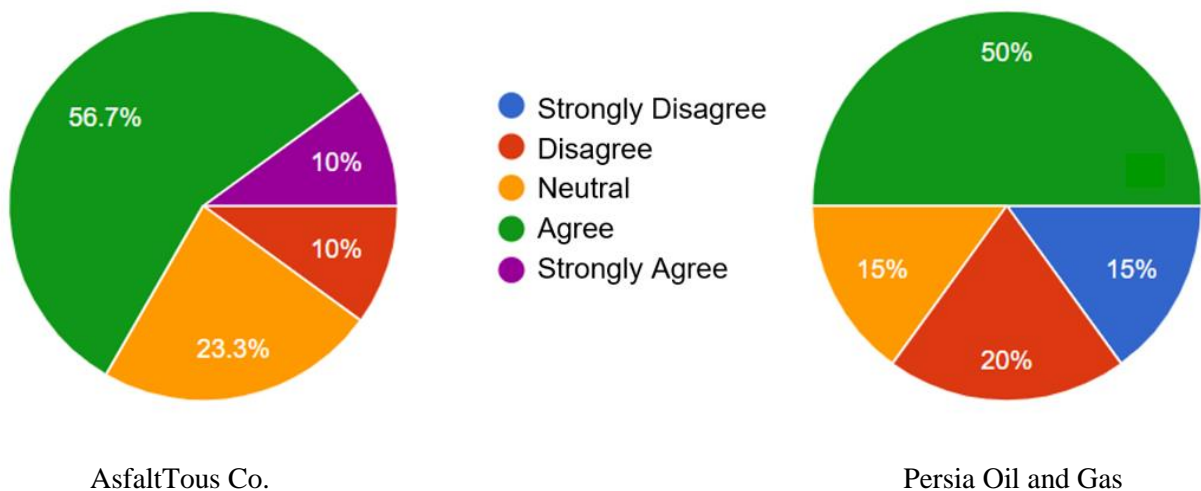


Figure 4.12: Organisation policies, plans, objectives and processes are developed and deployed to deliver the strategy

On whether the organisation develops and agrees on a set of performance indicators and related strategies, only 43.3% agreed while 10% disagreed. Similarly, 43.3% remained neutral about the statement, as shown below. At Persia Oil and Gas, 35%, 25%, 20% and 15% agreed,

disagreed, remained neutral and strongly disagreed that the organisation develops and agrees on a set of performance indicators and related strategies respectively.

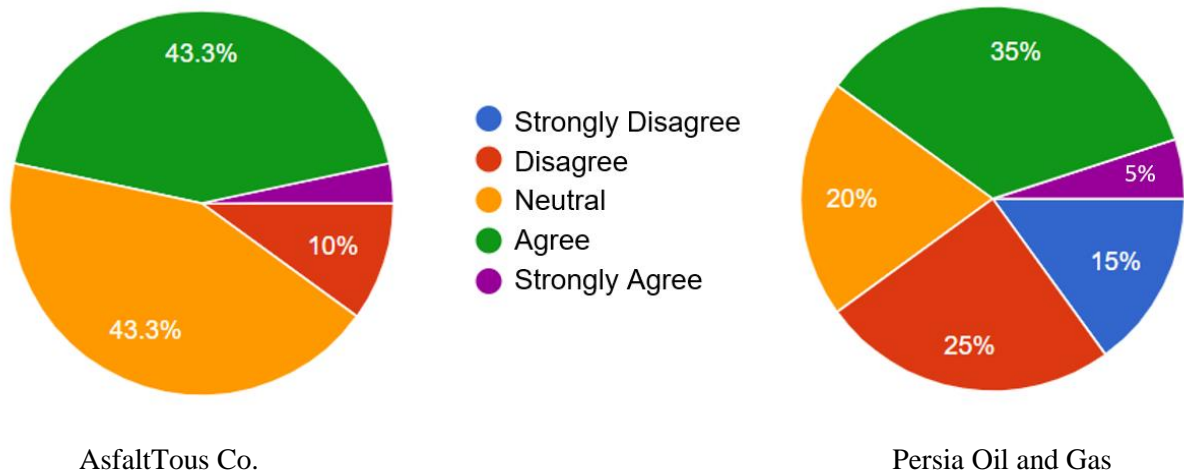


Figure 4.13: Organisation develop and agree a set of performance indicators and related

A 48.3% agreed that the organisation, that it determines the successful deployment of their strategy and supporting policies, based on the needs and expectations of the customers. 34.5% remained neutral about the statement, but 13.8% strongly agreed. Hence, employees have trust in the organisation that it can use its strategy to steer it forwards toward achieving quality. At Persia Oil and Gas, 40%, 25%, 20% and 10% agreed, disagreed, strongly disagreed and remained neutral that it determines the successful deployment of their strategy and supporting policies, based on the needs and expectations of the customers respectively.

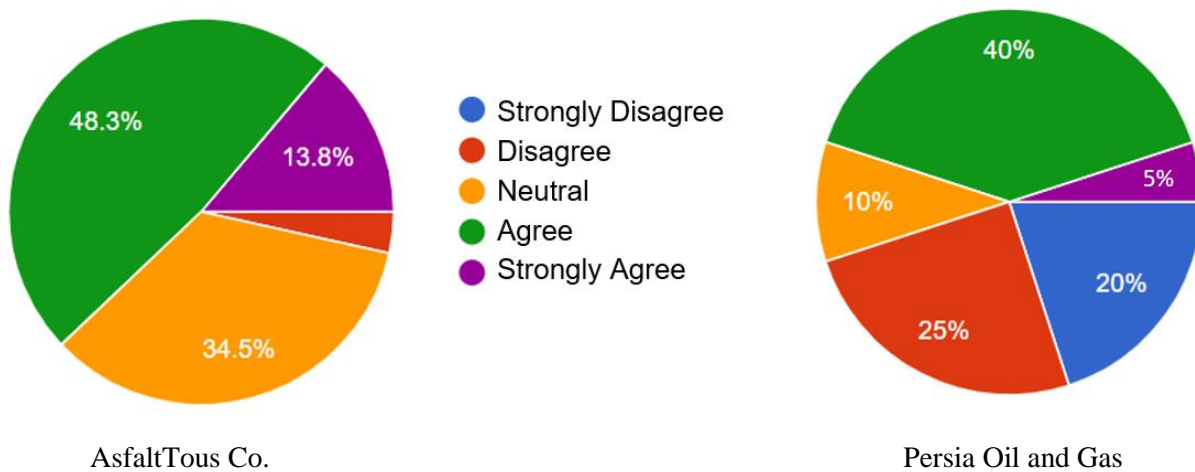


Figure 4.14: Organisation determine the successful deployment of their strategy and supporting policies,

On the other hand, 58.6% agreed that the organisation sets clear targets for key results based on the needs and expectations of the customers in line with the chosen strategy. There were 27.6% of people who remained neutral about the above statement. Only 10.3% strongly agreed with the statement that the organisation elects clear targets of key results. At Persia Oil and Gas, 35%, 25%, 20%, 10% and 10% disagreed, agreed, remained neutral, strongly disagreed and strongly agreed that the organisation sets clear targets for key results based on the needs and expectations of the customers in line with the chosen strategy respectively.

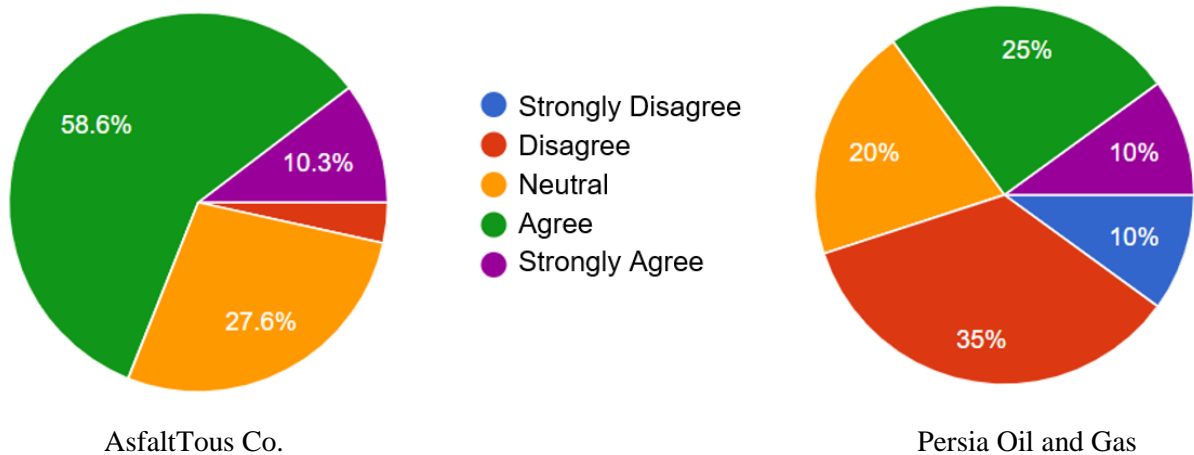


Figure 4.15: Organisation set clear targets for key results

In the past three years, the organisation has demonstrated positive or sustained good customer results over at least three years. In response, only 10.3% strongly agreed with the statement, there is zero percentage of people who responded that the organisation fails to demonstrate a positive or sustained good customer but 44.8% and 44.8% agree and remained neutral, respectively. At Persia Oil and Gas, 10%, 25%, 5% and 40%, agreed, remained neutral, strongly agreed and disagreed that the organisation has demonstrated positive or sustained good customer results over at least three years respectively.

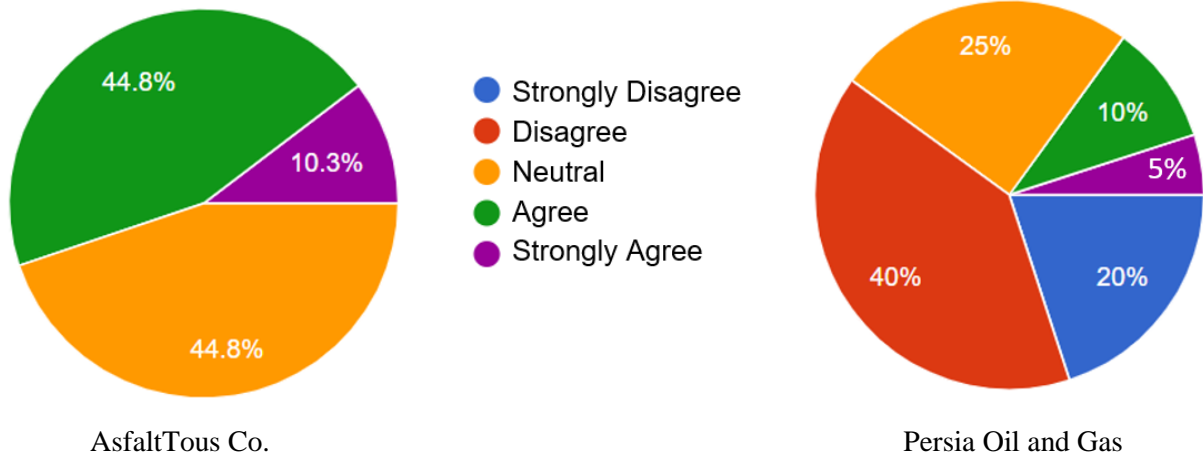


Figure 4.16: Organisation demonstrate positive or sustained good customer results

From the feedback obtained during the study, it was established that AsphaltTous Co. clearly understands the underlying reasons and drivers of observed trends and the impact results will have on other performance indicators and related outcomes. The percentage that strongly agreed was only 6.9% while those who agreed is 48.3%. Hence 44.85 remained neutral as some employees did not feel that the organisation is doing enough to ensure that the drivers have a positive impact on the performance of the organisation. At Persia Oil and Gas, 35%, 25%, 25% and 15% agreed, disagreed, remained neutral, and strongly disagreed that the organisation clearly understands the underlying reasons and drivers of observed trends and the impact results will have on other performance indicators and related outcomes respectively.

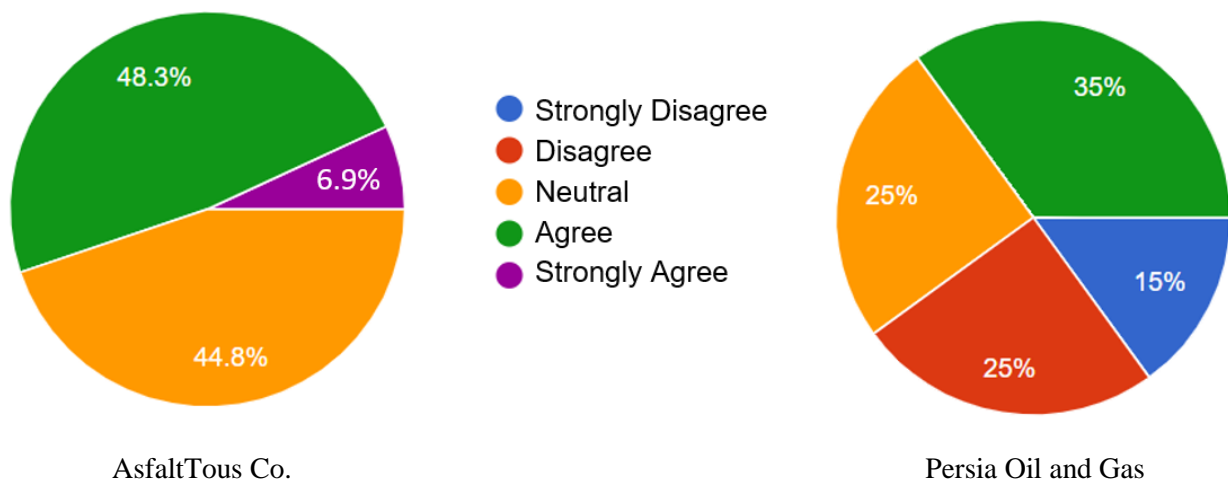


Figure 4.17: Organisation clearly understand the underlying reasons and drivers of observed trends

AsfaltTous Co. strives to achieve a professional/industrial certification or accreditation. 66.7% felt that the organisation is striving enough and as a result agreed with the statement. However, 3.3% disagreed, while 16.7% strongly agreed. At Persia Oil and Gas, 45%, 20%, 25%, and 10% agreed, disagreed, strongly disagreed and remained neutral that the organisation strives to achieve a professional/industrial certification or accreditation respectively.

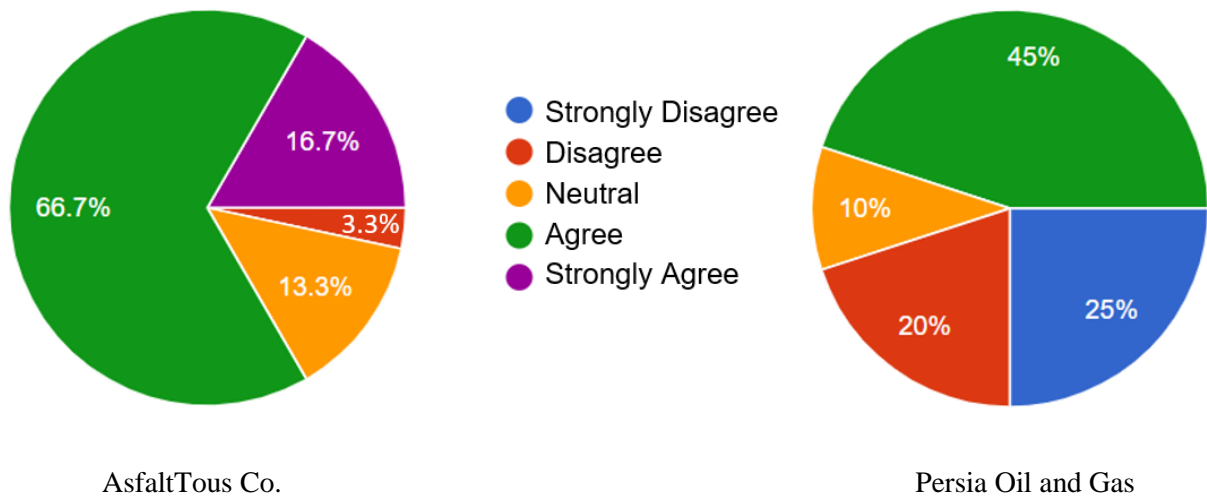


Figure 4.18: Organisation strives to achieve professional/industrial certification or accreditation

Hence the reveals that the AsfaltTous Co. has been keen enough to develop a strategy that is beneficial to the organisation and which aligns with the vision, mission and strategy goals. An organisation has to develop a strategy to be successful in a certain area of operations. Hence, even with huge investment without the strategic plan, the operations may not succeed effectively for lack of value chain. Quality also diminishes even the strategy is not crafted; as a result, having a good set and clearly defined strategy aids in ensuring that the organisation gains value in its chain and that it delivers quality services to its clients. Conversely, a large percentage of employees responded that they agree that the organisation can augment its strategy and achieve success. Hence, AsfaltTous is better in laying strategy and performing better compared to Persia Oil and Gas.

Strategy and performance were operationalised using eight variables with a maximum score of 5 each for those who strongly agreed and a minimum score of 1 for those who strongly disagreed. The overall score for the strategy and performance was obtained by summing the scores for the eight variables. Hence, the possible scores for the strategy and performance factor ranged from 8 to 40. From the analysis, the average score for the level at which the departments of AsfaltTous Co focused on strategy and performance was 24.59, with a standard deviation of

11.01 has been changed but on the other hand, the average score for the level at which the departments of Persia Oil and Gas organisation focused on strategy and performance factor was 25.14 with a standard deviation of 10.29.

4.4 Process and Value Creation

An organisation gains its value regarding the way it carries out its processes and operations. Hence, the organisation must be very careful in its operations and processes that lead to product release. The value chain led to improved service delivery and increased quality hence improving the performance of the organisation. Importantly, improved value chain through quality and service delivery places the organisation ahead of its competitors. In this regard value chain is a critical part of the organisation's processes and in the improvement of competitive advantage.

Only 62.1% agreed that AsphaltTous Co. meets its mission and progresses towards its vision through planning and achieving a balanced set of results that meet both the short and long term stakeholders' needs. A further 6.9% strongly agreed with the above statement, while 27.6% remained neutral about the statement is correct and has no problem. However, the majority posited that the organisation meets its mission and vision, and it is to be taken true that the organisation does so to a large extent. Hence, it only invests in huge projects that are properly manned and which create a value chain. The pie chart below shows the responses given during the survey. On the other hand, the percentage that disagreed, agreed, strongly disagreed and remained neutral about the statement at Persia Oil and Gas is 30%,35%, 25% and 10%. Compared to Persia Oil and Gas, more workers believe that AsphaltTous Co. meets its mission and vision.

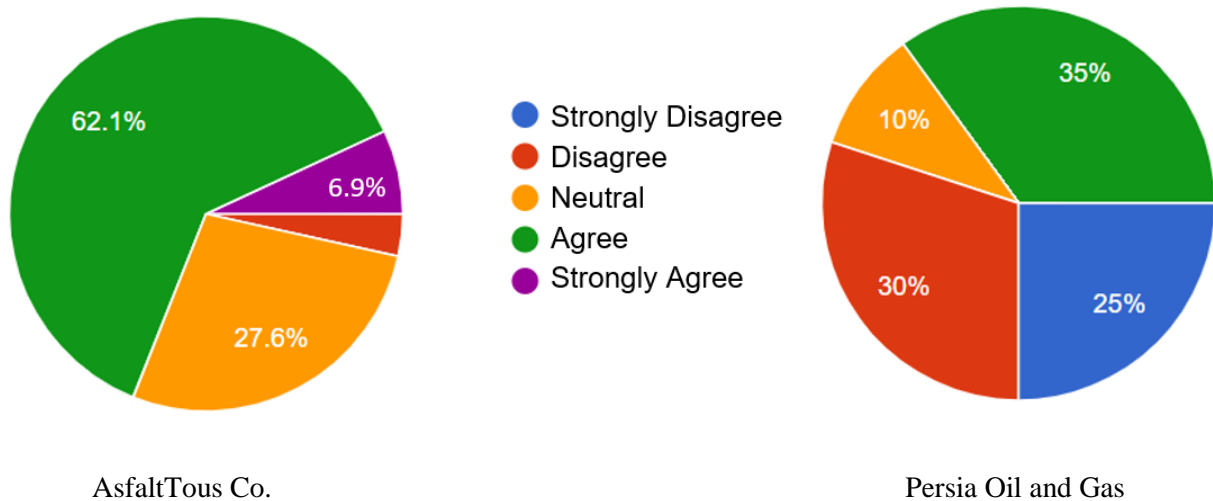


Figure 4.19: Organisation meets its mission and progresses towards its vision

Customers play a critical role in improving the value of an organisation. Customers are the real drivers of the organisation and should be highly valued and treated with esteem. AsphaltTous Co. knows that customers are their primary reason for being in existence. The percentage that agreed with the above statement is 58.6%, while 27.6% strongly agreed and only 13.8% remained neutral as shown below. The survey response shows that many people have trust with AsphaltTous Co. and that the organisation is reluctantly innovating and creating value for its customers. At Persia Oil and Gas, the percentage that agreed, strongly disagreed, and disagreed, that the organisation strives to innovate and create value by meeting customer expectation is 60%, 25%, and 10% respectively.

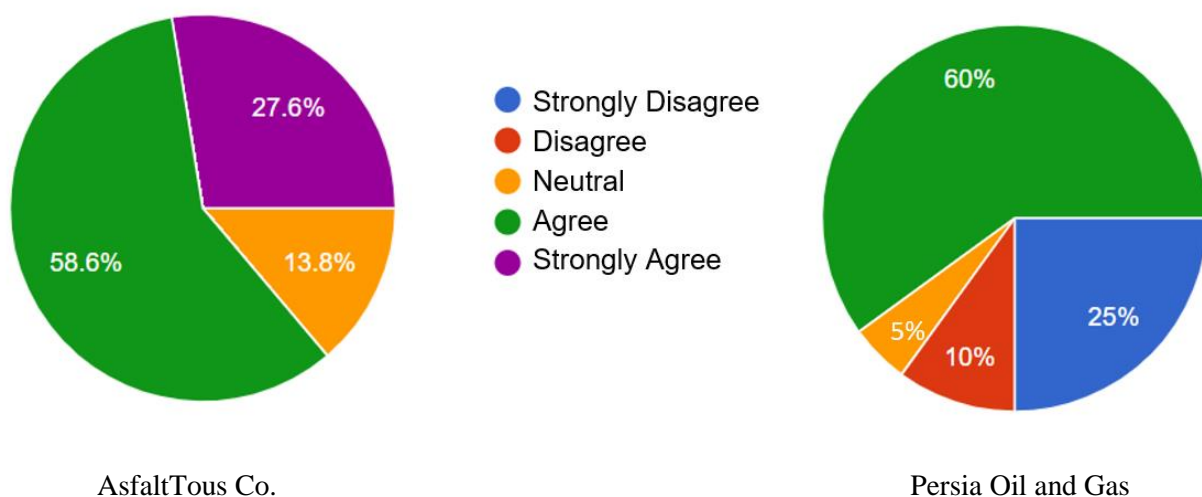


Figure 4.20: Organisation knows that customers are their primary reason

The percentage that agreed that AsphaltTous Co. strives to innovate and create value by meeting customer expectation is 58.6%, while 27.6% remained neutral and only 13.8% strongly agreed as shown below. At Persia Oil and Gas, the percentage that disagreed, agreed, remained neutral, strongly disagreed and strongly agreed that the organisation strives to innovate and create value by meeting customer expectation is 10%, 25%, 30%, 25%, and 10%. Even with a higher number of people who disagreed, the number who agreed that the organisation strives to innovate and create value is higher for AsphaltTous Co. compared to Persia Oil and Gas.

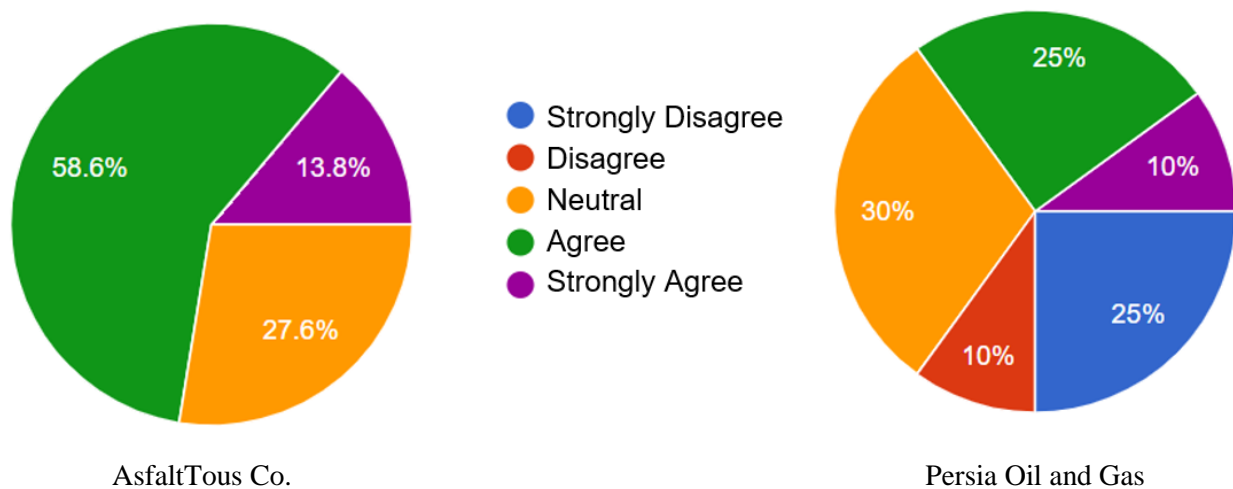


Figure 4.21 Organisation strives to innovate and create value by meeting customer expectation
 A percentage of 10.3% strongly agreed that AsphaltTous Co. manages structured and strategically aligned processes using fact-based decision making to create balanced and sustained results. However, 44.8% remained neutral, while 41.4% agreed. At Persia Oil and Gas, the percentage that disagreed, strongly disagreed, agreed, and strongly agreed with the statement is 40%, 25%, 20% and 5%. Compared to Persia Oil and Gas, AsphaltTous Co. is hence better in managing structured and strategically aligned processes using fact-based decision making.

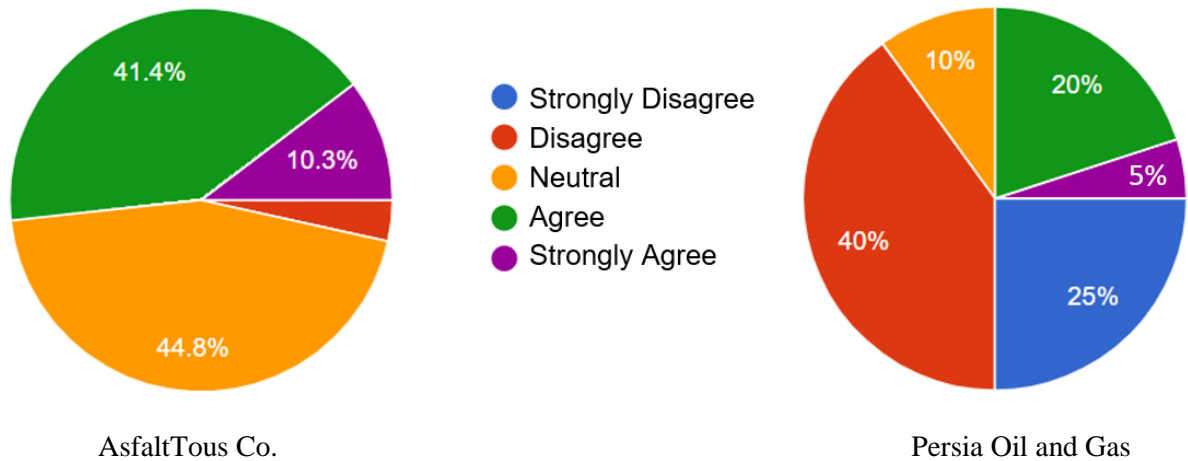


Figure 4.22: Organisation manages structured and strategically aligned processes

More than 51.7% agreed, 10.3% strongly agreed and 37.9% remained neutral that AsphaltTous Co., designs, manages, and improves processes, products and services to generate increasing value for customers and other stakeholders. At Persia Oil and gas, 33.35 disagreed, 27.8% agreed, 27.8% strongly disagreed, and 11.1% remained neutral with the statement. AsphaltTous Co. is hence better in terms of designing and managing the processes, products and services for value creation.

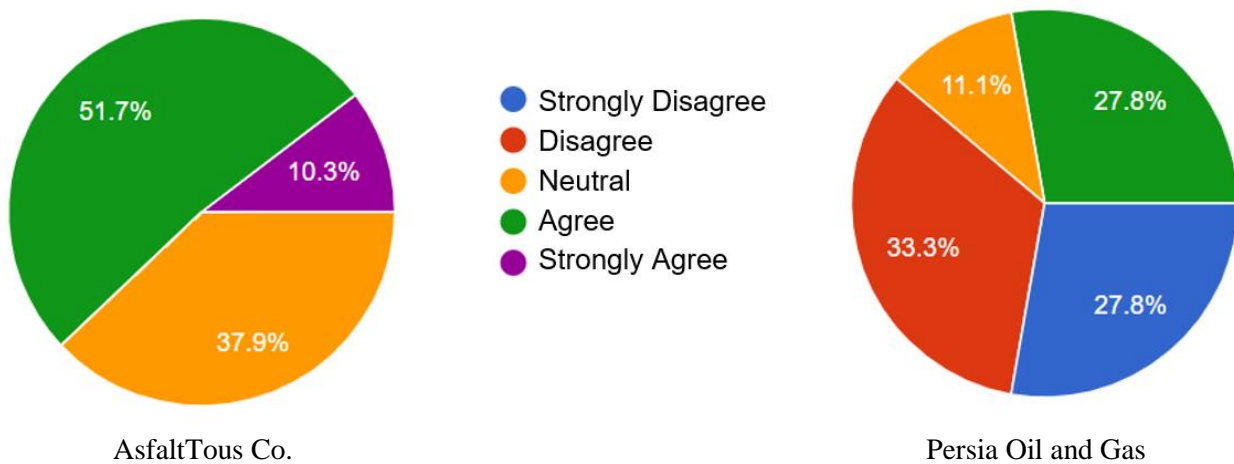
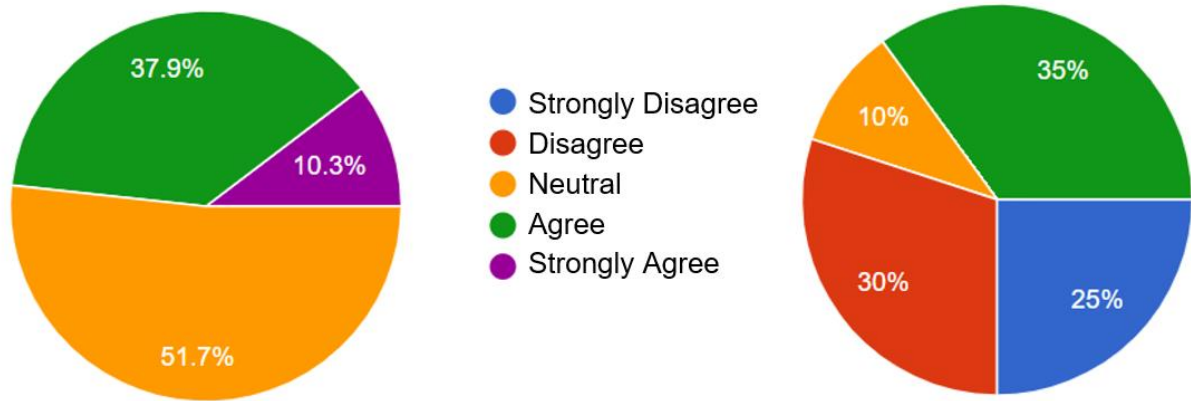


Figure 4.23: Organisation designs, manages and improve processes, products and services

At AsphaltTous Co. 37.9% agreed, and 10.3% strongly agreed, and 51.7% remained neutral that the organisation designs and manages processes to optimise stakeholder value respectively. At Persia Oil and gas, 30% disagreed, 35% agreed, and 25% strongly disagreed that the organization designs and manages processes to optimise stakeholder value.

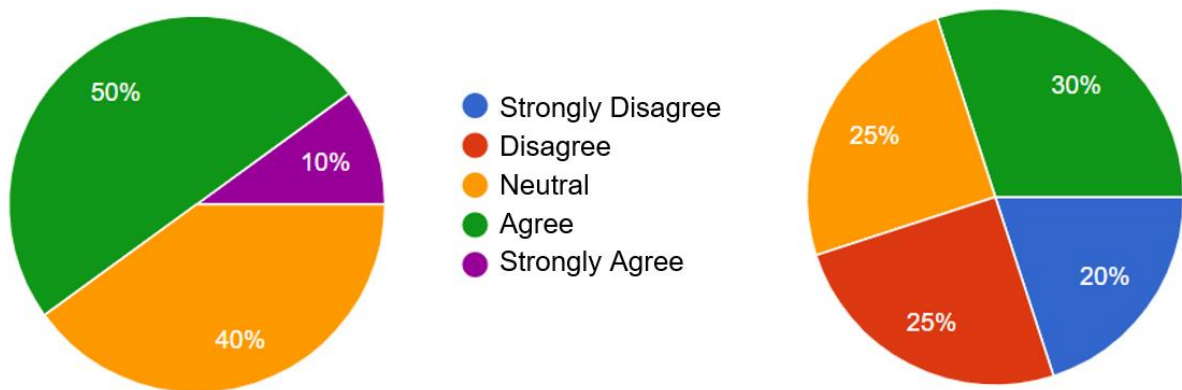


AsfaltTous Co.

Persia Oil and Gas

Figure 4.24: Organisation designs and manages processes to optimise stakeholder value

At AsphaltTous Co. 50% agreed, 40% remained neutral, and 10% strongly agreed that the organization develops products and services to create optimum value for customers, respectively. At Persia Oil and gas, 30% agreed, 25% disagreed, 25% remained neutral, and 20% strongly disagreed that the organisation develops products and services to create optimum value for customers, respectively.



AsfaltTous Co.

Persia Oil and Gas

Figure 4.25: Organisation products and services are developed to create optimum value for customers

At AsphaltTous Co., 60% agreed, 23.3% strongly agreed, and 16.7% remained neutral that the organisation manages and enhances customer relationships. At Persia Oil and gas, 52.6% agreed, 15.8% disagreed, 15.8% strongly disagreed, and 15.8% remained neutral that the organisation manages and enhances customer relationships.



Figure 4.26: Organisation customer relationships are managed and enhanced

At AsphaltTous Co., 48.3% agreed, and 6.9% strongly agreed that the organisation uses internal measures to monitor, understand, predict and improve the performance of the organisation and predict the impact on the perceptions of external customers. At Persia Oil and gas, 35% agreed, 25% disagreed, 20% strongly disagreed, and 20% remained neutral that the organisation uses internal measures to monitor, understand, predict and improve the performance of the organisation and predict the impact on the perceptions of external customers.

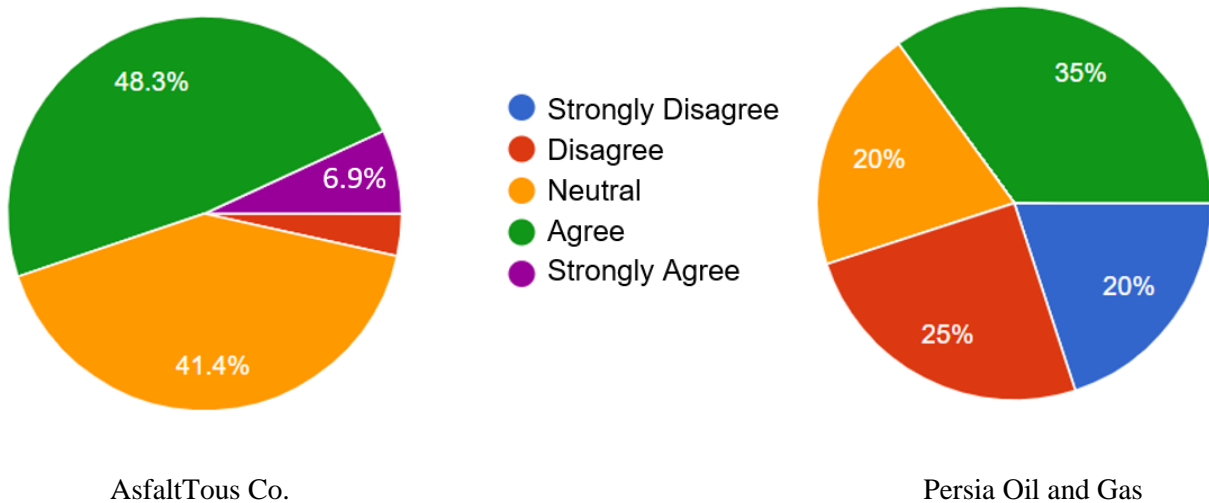


Figure 4.27: Internal measures are used to monitor, predict and improve the performance

At AsphaltTous Co., 63.3% agreed, 6.7% disagreed, and 13.3% strongly agreed that the organization manages and enhances supplier relationships. At Persia Oil and gas, 57.9% agreed, 15.8% disagreed, and 21.1% strongly disagreed that the organisation manages and enhances supplier relationships.



Figure 4.28: Supplier relationships are managed and enhanced

Process and value creation were operationalised using ten variables with a maximum score of 5 each for those who strongly agreed and a minimum score of 1 for those who strongly disagreed. The overall score for the process and value creation was obtained by summing the scores for the ten variables. Hence, the possible scores for the factor, process, and value creation ranged from 10 to 50. From the analysis, the average score for the level at which the departments of AsphaltTous Co focused on process and value creation was 34.66, with a standard deviation of 9.62. On the other hand, the average score for the level at which the departments of Persia Oil and Gas organisation focused on process and value creation was 33.86, with a standard deviation of 11.28. Generally, AsphaltTous Co. does better in creating value and their focus on process.

4.5 Resource, Knowledge, and Partnership

The percentage of employees that agreed and disagreed that AsphaltTous creates a balance between the strategic needs of the organisation and the personal expectation and aspiration of people to gain their commitment and engagement is 44.8% and 10.3% respectively. On the other hand, the percentage that disagreed, agreed, strongly disagreed, and remained neutral that Persia Oil and Gas creates a balance between the strategic needs of the organisation and the personal expectation and aspiration of people to gain their commitment and engagement is 35%, 35%, 15% and 15% respectively.

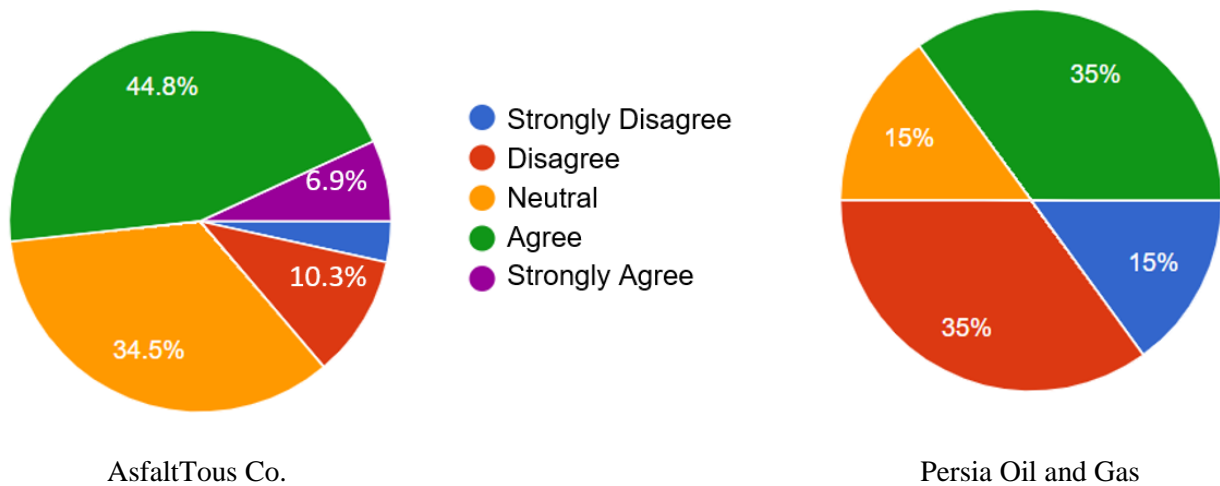


Figure 4.29: Organisation creates a balance between the strategic needs of the organisation and the personal expectation

The percentage that agreed, disagreed, that AsphaltTous Co. sets clear targets for key results based on the needs and expectations of their people, in line with their chosen strategy is 55.2% and 10.3% respectively. Conversely, the percentage that disagreed, agreed, strongly disagreed and remained neutral that Persia Oil and Gas sets clear targets for key results based on the needs and expectations of their people, in line with their chosen strategy is 50%, 30%, 10% and 10% respectively. Based on this information, AsphaltTous Co. appears to have better conditions and capability to set clear targets that lead to successful results.

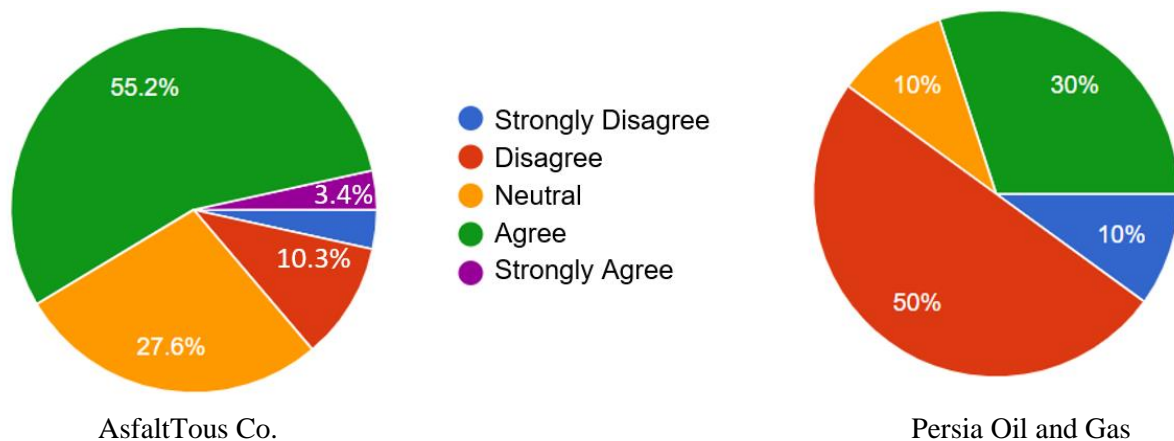


Figure 4.30: Organisation sets clear target for key results

There are 66.7% of people who agreed and 6.7% who strongly agreed that AsphaltTous Co. encourages people to drive improvement activity and optimise value for the end customer using quality tools, excellent methods and innovation thinking. Conversely, 50% disagreed, 20% remained neutral, 20% agreed, and 10% strongly disagreed that Persia Oil and Gas encourages people to drive improvement activity and optimise value for the end customer using quality

tools, excellent methods and innovation thinking. Despite the percentage of those who disagreed being high than those who agreed, Persia Oil and Gas has less percentage. The implication is that Persia Oil and Gas need to take initiative to encourage people to drive improvement activity and optimise value.

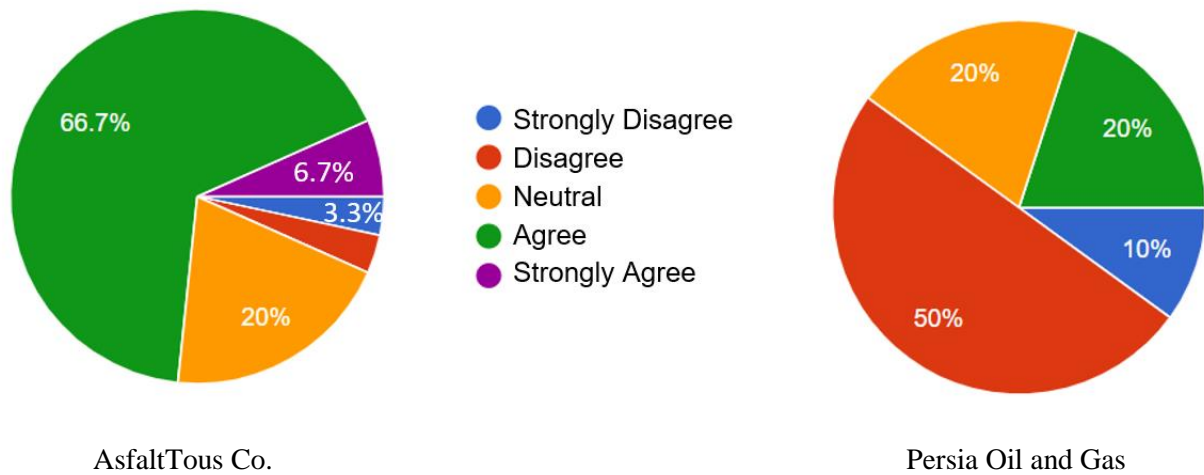


Figure 4.31: Organisation encourage people to drive improvement activity and optimise value
 The percentage that agreed, disagreed and strongly agreed that AsphaltTous Co. manages partners and suppliers for sustainable benefit is 56.7%, 3.3% and 16.7% respectively. Conversely, the percentage that agreed, disagreed, and strongly disagreed that Persia Oil and Gas manage partners and suppliers for sustainable benefit is 50%, 20%, and 10% respectively.

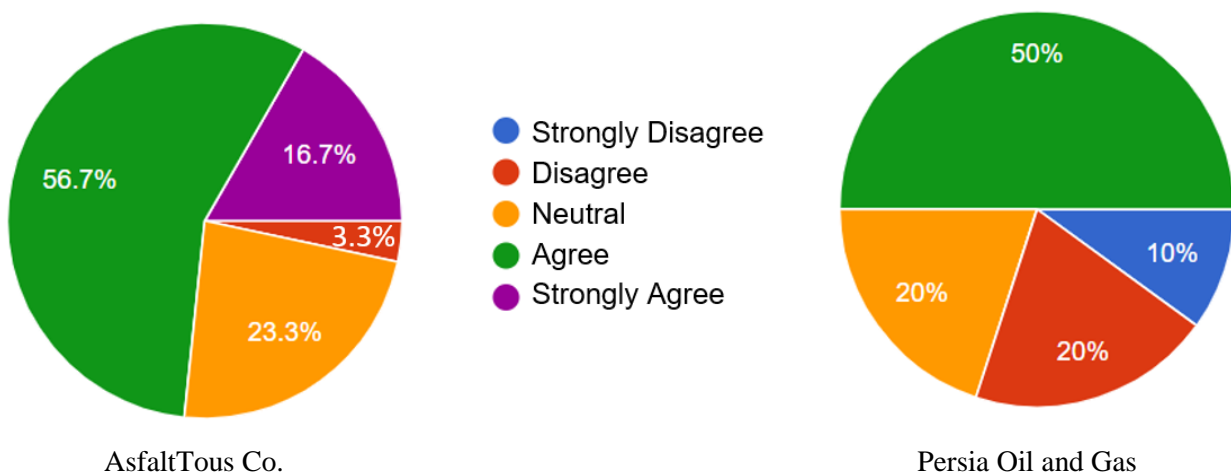


Figure 4.32: Organisation partners and suppliers are managed for sustainable benefit

At AsphaltTous Co., 70% of employees agreed that the organisation manages finances to secure sustained success. Only 23.3% strongly agreed that AsphaltTous Co. manages finances to secure sustained success. At Persia Oil and Gas, 26.3% disagreed and 15.8% strongly disagreed that the organisation manages finances to secure sustained success. The percentage that agreed and strongly agreed with the statement is 36.8% and 10.5% respectively. Based on the responses, both AsphaltTous Co. and Persia Oil and Gas have better management of its finances to secure sustained success but AsphaltTous Co. is in better position.

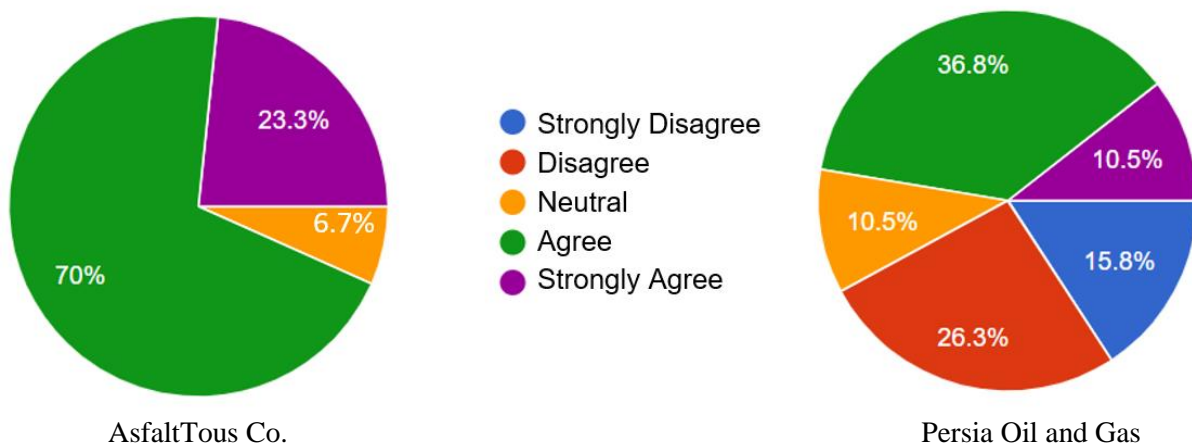


Figure 4.33: Organisation finances are managed to secure sustained success

At AsphaltTous Co. 58.6% of the employees agreed, and 20.7% strongly agreed that the organisation manages buildings, equipment, materials and natural resources in a sustainable way. The percentage of the workers who remained neutral about the statement is 20.7%. At Persia Oil and Gas, 30% disagreed while 10% strongly disagreed and 35% agreed that the organisation manages buildings, equipment, material and natural resources in a sustainable way. However, comparing the two organisations, more workers at AsphaltTous Co. agree with the statement than at Persia Oil and Gas. This implies that AsphaltTous Co. has better sustainable ways of managing its resources.



Figure 4.34: Organisation buildings, equipment, materials and natural resources are managed in a sustainable way

At AsphaltTous Co., 53.3% remained neutral, 33.3% agreed, and 10% strongly agreed that the organisation manages technology to support the delivery of the strategy. At Persia Oil and Gas, 22.2% disagreed, 33.3% agreed, 11.1% strongly disagreed while 33.3% remained neutral that the organisation manages technology to support the delivery of the strategy.

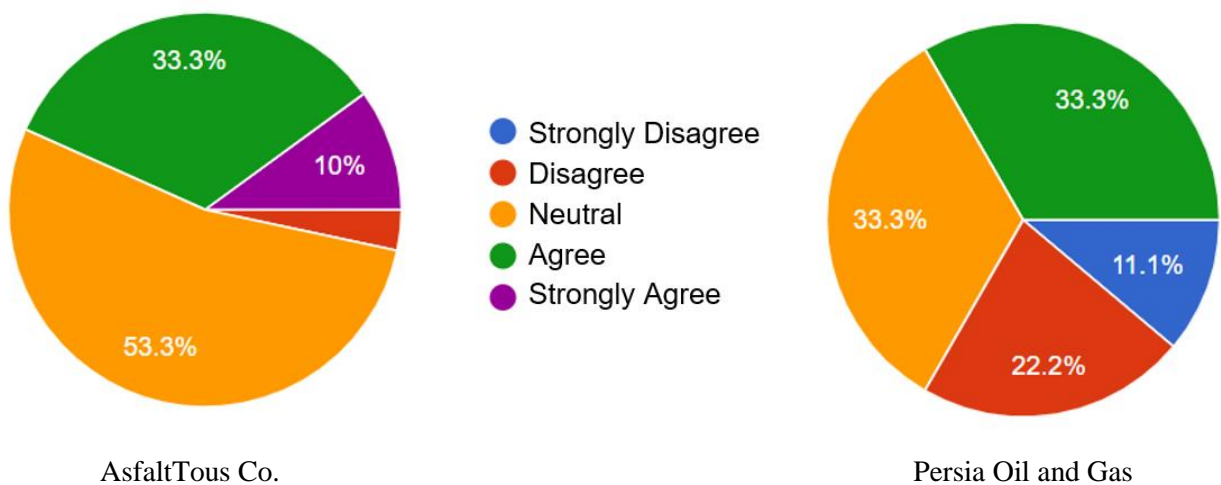


Figure 4.35: Organisation technology is managed to support the delivery of strategy

At AsphaltTous Co., 56.7% agreed, 30% remained neutral and 13.3% strongly agreed that the organisation manages information and knowledge to support effective decision making and to build the organisation’s capability. At Persia Oil and Gas, 25% disagreed, 50% agreed, 15% strongly disagreed while 10% remain neutral that the organisation manages information and knowledge to support effective decision making and to build the organisation’s capability.



Figure 4.36: Organisation information and knowledge are managed to support effective decision making

AsfaltTous Co., 43.3% agreed, 43.3% remained neutral, and 10% strongly agreed that the organisation manages overall performance indicators and outcomes that compare favourably through benchmarking and external comparison in all the key areas. At Persia Oil and Gas, 30% disagreed, 25% agreed, 10% strongly disagreed that the organisation manages overall performance indicators and outcomes that compare favourably through benchmarking and external comparison in all the key areas.

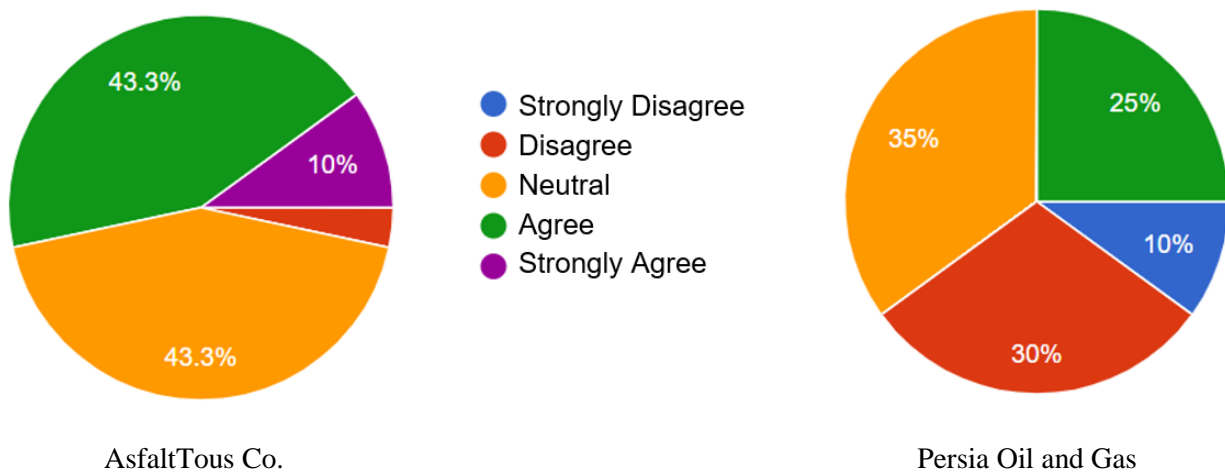


Figure 4.37: Organisation overall performance indicators and outcomes that compare favourably through benchmarking and external comparison in all the key areas

Resource, knowledge, and partnership factor was operationalised using nine variables with a maximum score of 5 each for those who strongly agreed and a minimum score of 1 for those who strongly disagreed. The overall score for the resource, knowledge, and partnership was obtained by summing the scores for the ten variables. Hence, the possible scores for the factor,

resource, knowledge, and partnership, ranged from 9 to 45. From the analysis, the average score for the level at which the departments of AsphaltTous Co focused on resource, knowledge, and partnership was 33.72, with a standard deviation of 10.12. On the other hand, the average score for the level at which the departments of Persia Oil and Gas organisation focused on resource, knowledge, and partnership was 32.29, with a standard deviation of 10.03. The pie charts show that most of the respondent agreed that AsphaltTous Co. has better resource, knowledge and partnership capabilities compared to Persia Oil and Gas. The standard deviation shows a moderate focus on the factor although the high value of standard deviation revealed that the observed values varied significantly across the two sampled companies.

4.6 Continuity and Sustainability

At AsphaltTous Co., 6.7% disagreed, and 36.7% agreed that the organisation generates increased value and levels of performance through continual and systematic innovation by harnessing the creativity of your stakeholders. At Persia Oil and Gas, the percentage disagreed, agreed, and strongly disagreed is 45%, 10% and 20% respectively. Hence, more people have confidence that AsphaltTous Co. generates increased value and levels of performance better than Persia Oil and Gas.

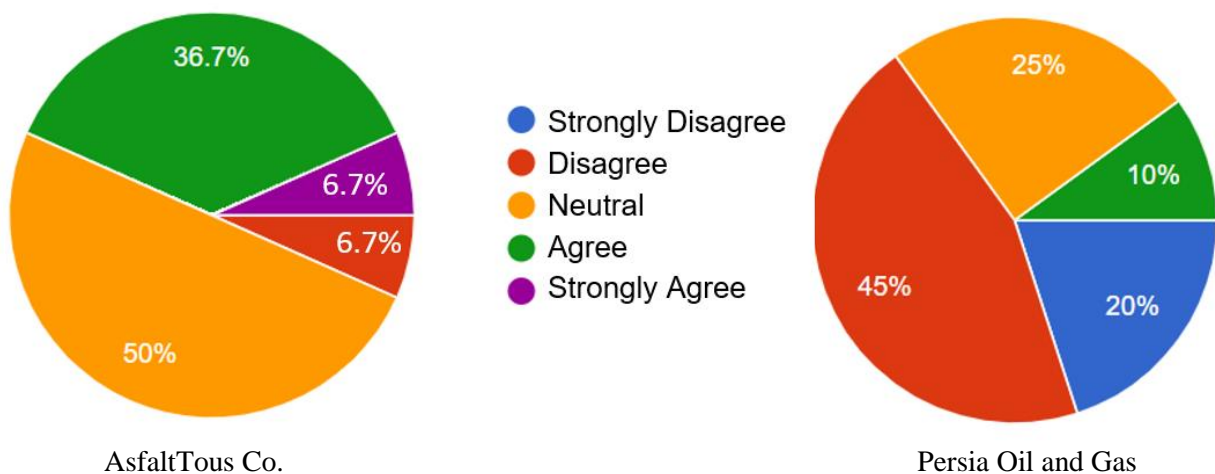


Figure 4.38: Organisation generates increased value and levels of performance through continual and systematic innovation

At AsphaltTous Co., 10% disagreed, 26.7% agreed, 10% strongly disagreed, and 10% strongly agreed that the set clear goals and objectives for innovation and refines strategy in line with innovation achievements. At Persia Oil and Gas, the percentage disagreed, agreed, strongly

and disagreed and strongly agreed is 40%, 20%, and 25% respectively. Hence, Persia Oil and Gas has few people who have confidence with the organisation in setting its goals and objective clearly which appears in the pie chart that there being more people who disagreed with the statement.

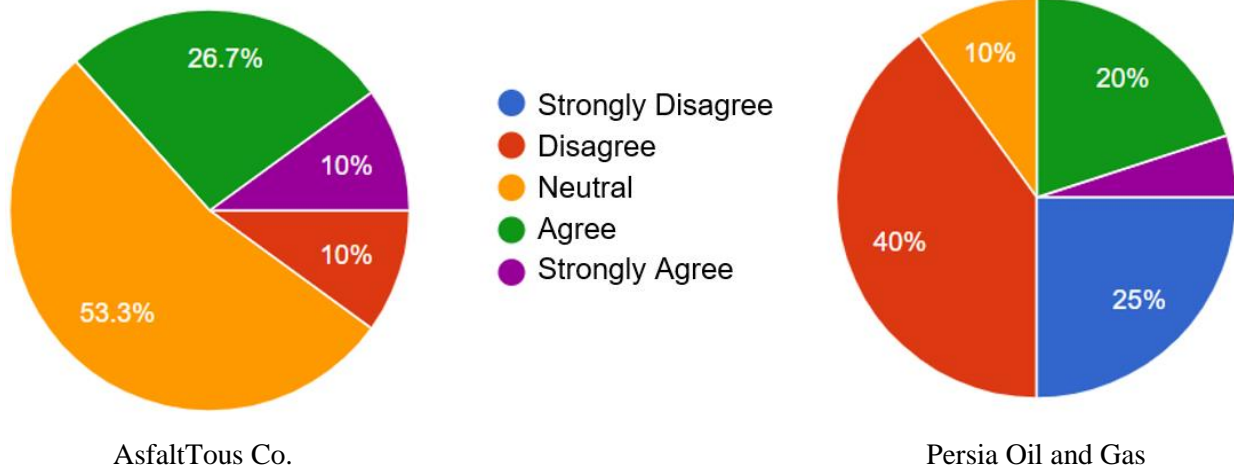


Figure 4.39: Organisation sets clear goals and objectives for innovation

At AsphaltTous Co., 20% disagreed, 43.3% agreed, and 26.7% remained neutral, and 6.7% strongly agreed that the organisation establishes approaches to engage people, partners, customers, and society in generating ideas and innovation. At Persia Oil and Gas, only 35% disagreed, 30% agreed, 25% strongly disagreed, and 10% remained neutral with the statement.



Figure 4.40: Organisation establishes approaches to engage people, partners, customers and society in generating ideas and innovation

At AsphaltTous Co. 50% remained neutral, 6.7% disagreed and 36.7% agreed that the organisation clearly understands the underlying reasons and drivers of observed trends and the impact these results will have on other performance indicators and related outcomes. At Persia Oil and Gas, only 30% disagreed, 10% agreed, 20% strongly disagreed, and 24% remained neutral with the statement. Although those who disagreed are more, the percentage that agreed that AsphaltTous Co. clearly understands the underlying persons and drivers is higher compared to that of Persia Oil and Gas.



Figure 4.41: Organisation clearly understands the underlying reasons and drivers of observed trends and the impact these results will have on other performance indicators and outcomes

The percentage that disagreed, agreed, neutral and strongly agreed that AsphaltTous Co. anticipates future performance and results. At Persia Oil and Gas is 3.3%, 60%, 23.3%, and 13.3% respectively. The percentage that disagreed, agreed, strongly agreed, and strongly disagreed that Persia Oil and Gas anticipates future performance and results is 25%, 45%, 5% and 25% respectively.



Figure 4.42: Organisation anticipates future performance and results

At AsphaltTous Co., the percentage of employees who agreed, remained neutral, strongly agreed and disagreed that the organisation understands how the key results you achieve compare to similar organisations and uses this data, where relevant, for target setting is 51.7%, 34.5%, 6.9% and 6.9% respectively. At Persia Oil and gas, the percentage of employees who agreed, disagreed, strongly disagreed and remained neutral with the statement is 30%, 25%, 25% and 20% respectively

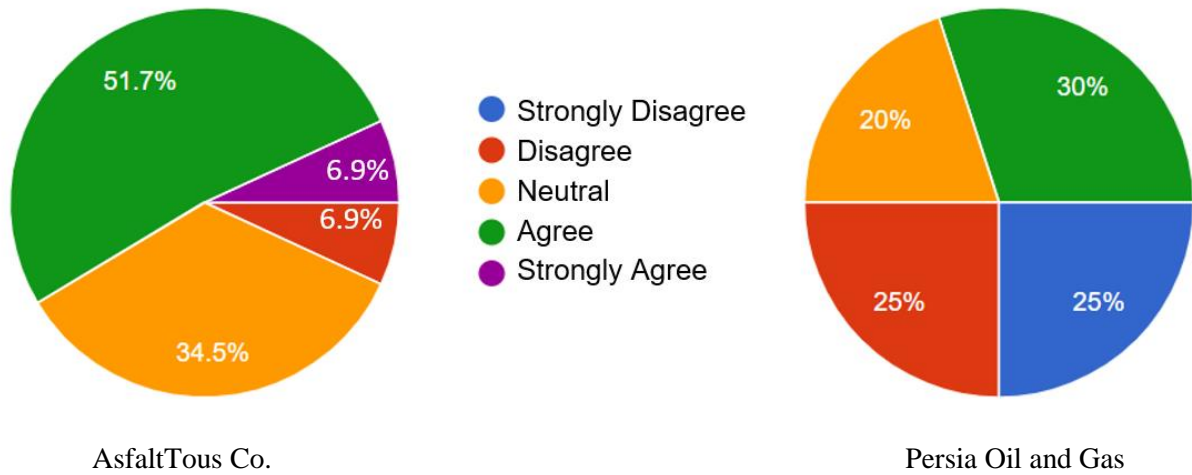


Figure 4.43: Organisation understands how the key results you achieve compare to similar organisations

The percentage that agreed, remained neutral, and strongly agreed that AsphaltTous Co. segments result to understand the performance levels and strategic outcomes achieved within specific areas of the organisation is 44.8%, 44.8% and 10.3% respectively. The percentage that agreed, disagreed, remained neutral and strongly disagreed that Persia Oil and Gas anticipates future performance and results is 35%, 25%, 20% and 20% respectively.

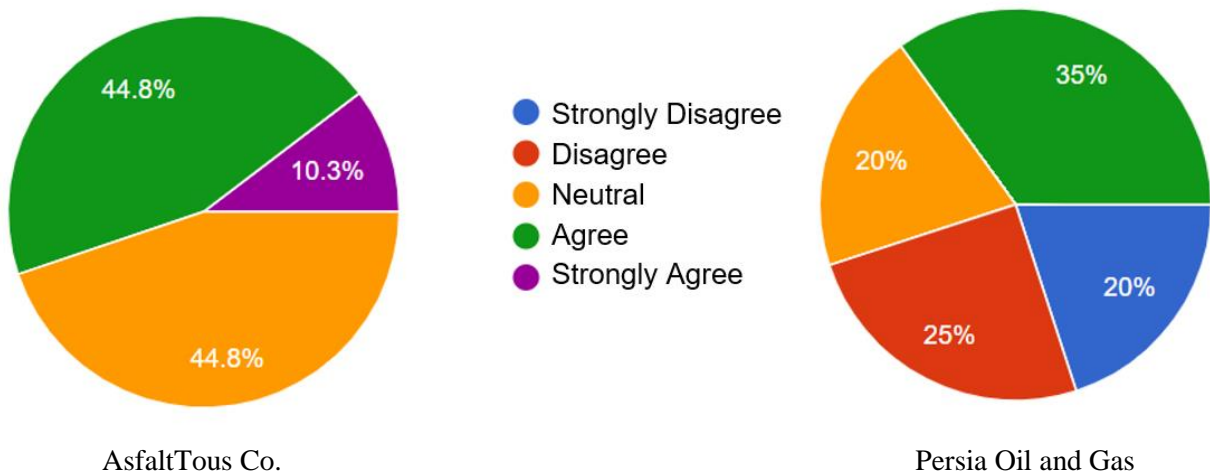


Figure 4.44: Segments results to understand the performance levels and strategic outcomes

At AsphaltTous Co., the percentage of employees who agreed, remained neutral and strongly agreed, that the organisation develops a set of performance indicators to determine the successful deployment of societal and ecological strategy and related policies, based on the needs of the external stakeholders is 42.9%, 46.4%, and 7.1% respectively. At Persia Oil and gas, the percentage of employees who disagreed, agreed, strongly disagreed and remained neutral is 35%, 35%, 15% and 15% respectively. Based on the responses, AsphaltTous Co. has better reviews and has better capacity to develop a set of performance indicators compared to Persia Oil and Gas.

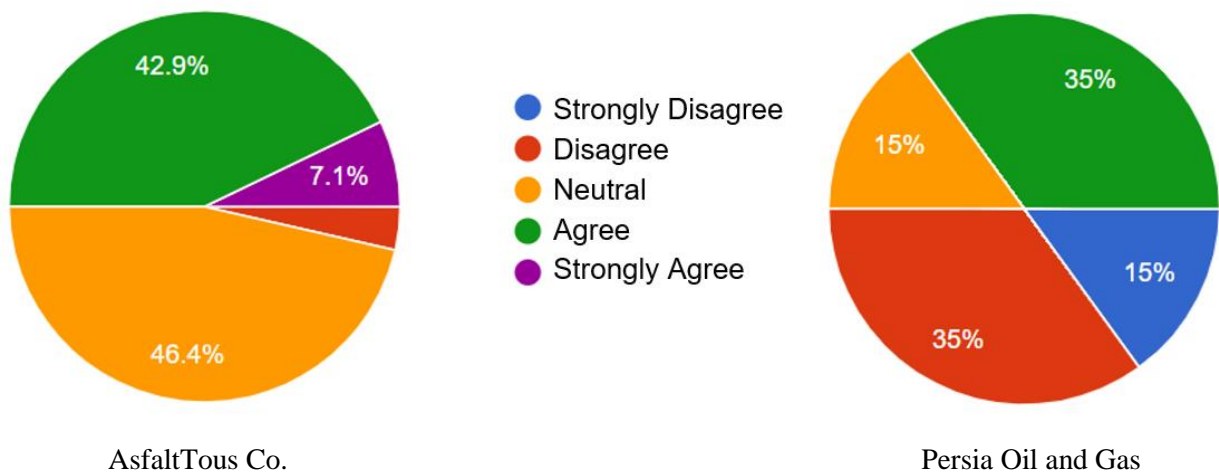


Figure 4.45: Organisation develops a set of performance indicators to determine the successful deployment of societal and ecological strategy and related policies, based on the needs of the external stakeholders

The percentage that agreed, remained neutral and agreed that AsphaltTous Co. secures the future by defining and communicating a core purpose that provides the basis for the overall vision, values, ethics and corporate behaviour is 43.3%, 43.3% and 6.7% respectively. The percentage that disagreed, agreed, strongly disagreed and remained neutral that Persia Oil and Gas secures the future by defining and communicating a core purpose that provides the basis for the overall vision, values, ethics and corporate behaviour is 40%, 20%, 20% and 20% respectively.

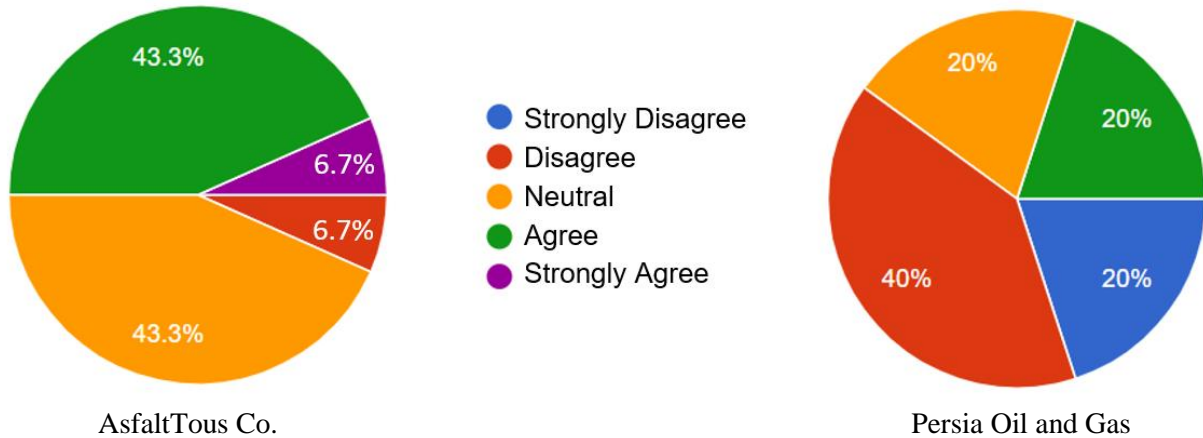


Figure 4.46: Organisation secures the future by defining and communicating a core purpose

The percentage that agreed, remained neutral, and strongly agreed, that AsphaltTous Co. understands its key competencies and how they can benefit the wider society is 56.7%, 33.3% and 10% respectively. The percentage that agreed, disagreed, strongly disagreed, and remained neutral that Persia Oil and Gas understands its key competencies and how they can benefit the wider society is 45%, 25%, 20% and 10% respectively.

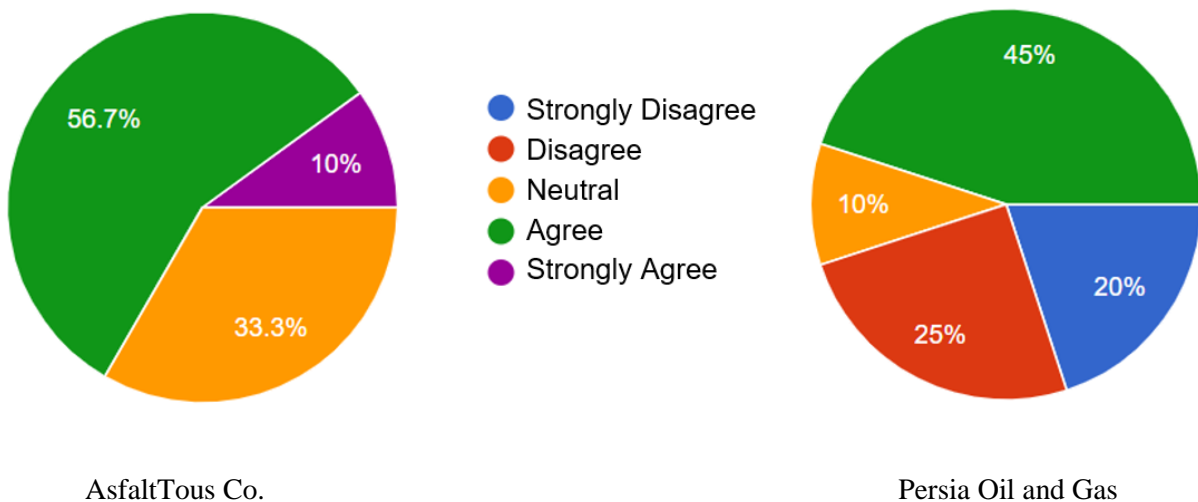


Figure 4.47: Organisation understands its key competencies and how they can benefit the wider society

The percentage that remained neutral, and agreed that AsphaltTous Co. considers economic, societal and ecological sustainability as a reference when balancing the sometimes-conflicting imperatives they face is 46.7%, and 43.3% respectively. The percentage that agreed, disagreed, remained neutral, strongly disagreed and strongly agreed that Persia Oil and

Gas considers economic, societal and ecological sustainability as a reference when balancing the sometimes-conflicting imperatives they face is 30%, 15%, 25%, 25% and 5% respectively.

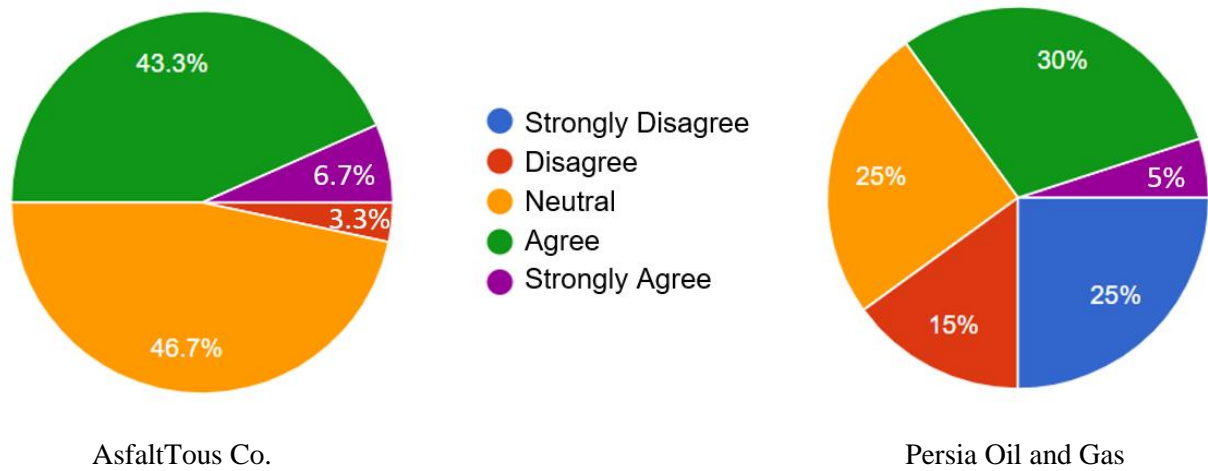


Figure 4.48: Organisation considers economical, societal and ecological sustainability

At AsphaltTous Co., the percentage of employees who agreed, remained neutral, strongly agreed and disagreed that the organisation allocates resources to provide for long-term needs rather than just short-term gain and, where relevant becomes and remains competitive is 56.7%, 16.7%, 16.7% and 10% respectively. At Persia Oil and gas, the percentage of employees who remained neutral, agreed, strongly disagreed, strongly agreed and disagreed with the statement is 30%, 25%, 25%, 5% and 15% respectively. As a result, a greater percentage of people believe that AsphaltTous Co. allocate resources for long-term needs than short term needs compared to Persia Oil and Gas.

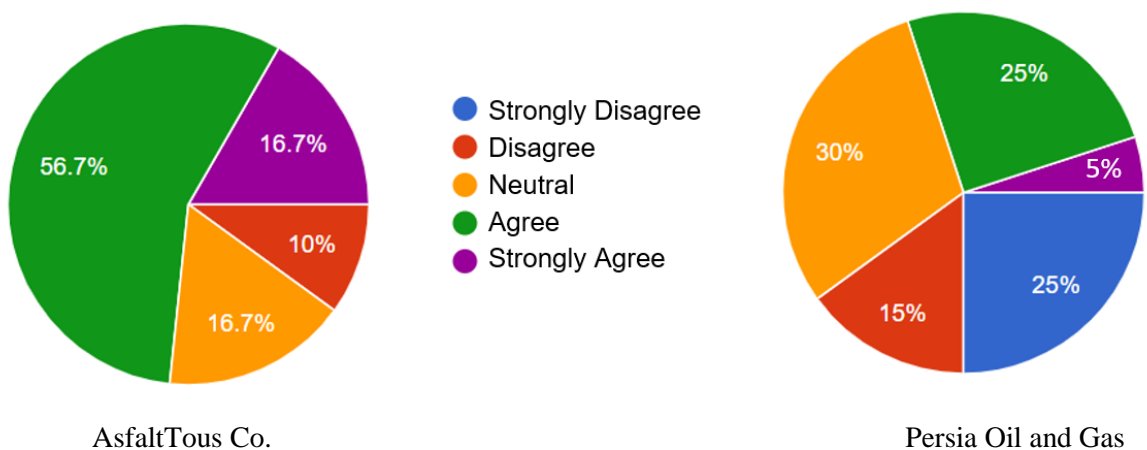


Figure 4.49: Organisation allocates resources to provide long-term needs

Continuity and sustainability factor were operationalised using twelve variables with a maximum score of 5 each for those who strongly agreed and a minimum score of 1 for those who strongly disagreed. The overall score for continuity and sustainability was obtained by summing the scores for the ten variables. Hence, the possible scores for the continuity, and sustainability factor, ranged from 12 to 60. From the analysis, the average score for the level at which the departments of AsphaltTous Co focused on continuity and sustainability was 37.86, with a standard deviation of 14.81. On the other hand, the average score for the level at which the departments of Persia Oil and Gas organisation focused on continuity and sustainability was 34.85, with a standard deviation of 14.83. From the pie charts, the AsphaltTous Co. is better in ensuring continuity and sustainability compared to Persia Oil and Gas. However, the standard deviation shows that two companies differ moderately in their continuity and sustainability, the observed values varied significantly across the two sampled companies.

Report

Organisation		Leadership and people	Strategy and performance	Process and Value Creation	Resource, Knowledge & Partnership	Continuity and Sustainability
AsfaltTous Co	Mean	31.7241	24.5862	34.6552	32.7241	37.8621
	N	30	30	30	30	30
	Std. Deviation	11.99374	11.01141	9.61872	10.11681	14.81246
Persia Oil and Gas	Mean	32.2857	25.1429	33.8571	32.2857	34.8571
	N	21	21	21	21	21
	Std. Deviation	10.27201	10.29702	11.27956	10.02568	14.82662
Total	Mean	31.9600	24.8200	34.3200	32.5400	36.6000
	N	51	51	51	51	51
	Std. Deviation	11.19577	10.61322	10.24484	9.97796	14.74269

The effect of the highlighted critical success factors has on the quality culture was assessed by fitting a linear regression model to the data. The quality culture score was set as the dependent or the response variable and continuity and sustainability, strategy and performance, and resource, knowledge and partnership, leadership and people, and process and value creation as the independent variables. The analysis results yielded values equal to 0.887 and 0.787 for the R-score and R-squared score, respectively. The value of the R-score implied that the independent factors were strongly correlated with the quality culture with a correlation coefficient of 0.887. On the other hand, the value of R² implied that the independent factors, continuity and sustainability, strategy and performance, and resource, knowledge and partnership, leadership and people, and process and value creation, explained 78.7% of the variations in the quality culture.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.887 ^a	.787	.763	8.93795

a. Predictors: (Constant), Continuity and Sustainability, Leadership and people, Strategy and performance, Resource, Knowledge & Partnership, Process and Value Creation

The overall effect of the regression model was assessed using the ANOVA technique. The computed test statistic was equal to $F=32.568$, with a significance value of $0.00 < 0.05$. The significance value was less than 0.05, indicating that the test rejected H_0 (the null hypothesis). Hence, a conclusion was made that the model fit was good. In other terms, the effect of the model was significant.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13008.976	5	2601.795	32.568	.000 ^b
	Residual	3515.024	44	79.887		
	Total	16524.000	49			

a. Dependent Variable: Quality culture

b. Predictors: (Constant), Continuity and Sustainability, Leadership and people, Strategy and performance, Resource, Knowledge & Partnership, Process and Value Creation

The analysis of the model coefficients was done to assess the magnitude of the effect of each factor on the quality culture. According to the study, the computed coefficients for the model were -14.747, 0.026, 0.233, 0.246, 0.580, and 0.454 for the leadership and people, strategy and performance, process, and value creation, resource, knowledge and partnership, and continuity and sustainability, respectively. Hence, the equation representing the fitted regression model was as shown below.

$$y = -14.747 + 0.026x_1 + 0.233x_2 + 0.247x_3 + 0580x_4 + 0.454x_5$$

Where; y was the quality culture, x_1 , x_2 , x_3 , x_4 , and x_5 as the leadership and people, strategy and performance, process and value creation, resource, knowledge and partnership, and continuity and sustainability, respectively. The equation revealed that quality culture would average at a negative value of -14.747 if the effect of the leadership and people, strategy and performance, process and value creation, resource, knowledge and partnership, and continuity and sustainability, were to be eliminated. Nonetheless, the model suggested that the quality culture was expected to increase by 0.026 units for a unit change in the focus on leadership and people, holding other factors constant. Also, the model suggested that the quality culture was expected to increase by 0.233 units for a unit change in the focus on strategy and performance, holding other factors constant. Moreover, the model suggested that the quality culture was expected to increase by 0.247 units for a unit change in the focus on process and value creation, holding other factors constant. Also, the model suggested that the quality culture was expected to increase by 0.580 units for a unit change in the focus on resource, knowledge and partnership, holding other factors constant. Moreover, the model suggested that the quality culture was expected to increase by 0.454 units for a unit change in the focus on continuity and sustainability, holding other factors constant.

The significance of the observed effects was assessed using the t-test analysis technique. The study obtained tests statistics equal to $t_1=0.145$ ($p=0.885$), $t_2=1.092$ ($p=0.281$), $t_3=0.937$ ($p=0.354$), $t_4=-2.404$ ($p=0.021$), and $t_5=2.343$ ($p=0.024$). The results were significant for only two factors, namely resource, knowledge & partnership, and continuity and sustainability, which had probability values less than 0.05. The other three factors had less significant effects on quality culture.

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-14.747	4.963		-2.972	.005
Leadership and people	.026	.178	.016	.145	.885
Strategy and performance	.233	.213	.134	1.092	.281
Process and Value	.247	.264	.138	.937	.354
1 Creation					
Resource, Knowledge & Partnership	.580	.241	.315	2.404	.021
Continuity and Sustainability	.454	.194	.364	2.343	.024

a. Dependent Variable: Quality culture

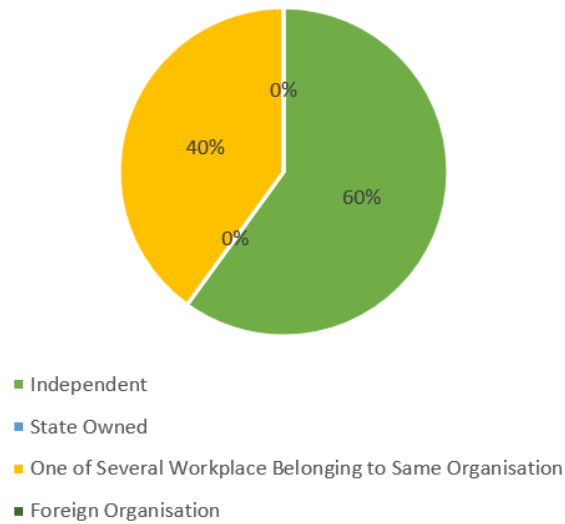
As seen in the available literature, there are other cultural barriers, such as frames of references, priorities of life, political opinions and age, among many others (Garcia, Pierce, Cooper, & Sanchez, 2019). However, cross-cultural communication is not only viewed as a barrier but also an opportunity for creativity, openness to new ideas, new perspectives, and unity in the world. Garcia, Pierce, Cooper, and Sanchez, (2019), advised on eliminating the causes of cultural communication barriers as a way of making communication effective within organisations for better cultural development. In their argument, the authors claimed that cross-cultural understanding must be increased as it decreases the communication barrier caused by culture differences.

4.7 Participants Profile Analysis (Question One to Four from Questionnaire)

The first component of the questionnaire was meant to collect information on the participant's workplace, the kind and size of organisation, the participant's position within the organisation, and the key business activities for which they work.

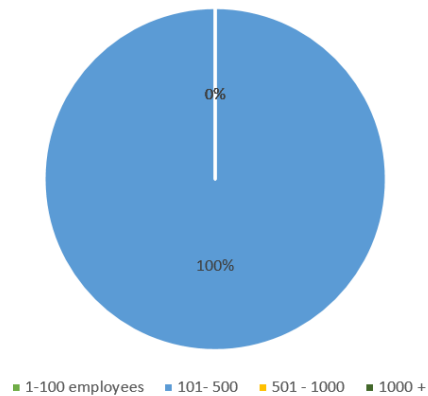
Chart Area

Type of Organisation



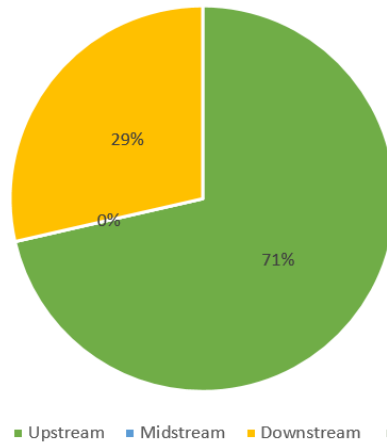
According to the chart above, 40% of the participants were from one of numerous workplaces belonging to the same organisational type, which is a semi-private corporation, and 60% of the participants were from the private sector.

Size of Organisation



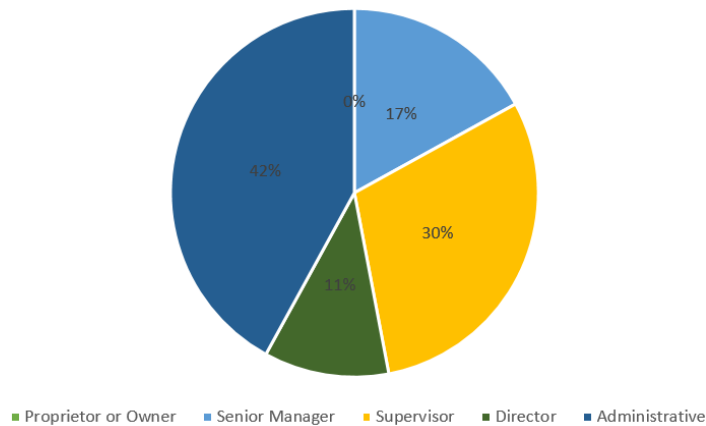
As seen in the chart, both organisations have 101 to 500 employees, accounting for 100 percent of the participants in this group.

Main Business Activity of Organisation



The researcher also intended to learn about the organisation's business activities. Researchers identified three major oil and gas activity areas: upstream, midstream, and downstream. According to the survey results, 71% of participants work in the upstream segment of the oil and gas industry, while 29% work in the downstream segment.

Position in the Organisation



The following data were based on the individual survey responses. Their positions in their respective organisations were documented. The researcher considered the titles of proprietor or owner, senior manager, supervisor, director, and administration. As the chart represent, 0% were proprietors or owners of their organisations. Senior managerial positions were held by 17% of those respondents. 30% respondents were supervisors within their organisations. Directors accounts for 11% of respondents, while 42% held administrative positions inside their organisations.

4.8 Questionnaire Response Rate

The researcher distributed 100 questionnaires between February 2019 and May 2019. The questionnaire was distributed primarily by email. However, the researcher also uploaded an online version onto 'Google form'. This provided a stronger response rate and also helped in data analysis. The researcher also ensured that the questionnaire was designed with 'check boxes', ranking the factors on a Likert scale, so that the questionnaire was user friendly, less time-consuming, easy to complete and easier to analyse. The use of a Likert scale also guarantees that confidentiality is retained.

Finally, the researcher translated the questionnaire into Persian in order to ease replies, retain clarity, and minimise ambiguity. The use of the Likert scale meant that all replies were received, processed, and analysed in the same way, independent of the language of completion. Participants received both versions of the questionnaire and allowed to select which one they wanted to complete.

$$SRR = \frac{\text{Responses}}{\text{Surveys Sent}} * 100$$

$$SRR = \frac{71}{100} * 100 = 71 \qquad SRR = 71\%$$

By the end of May 2019, 71 replies have been received out of a total of 100 surveys sent out. The rate response was 71%, which was sufficient for the purposes of this study.

CHAPTER FIVE: QUALITATIVE ANALYSIS

5.1 The Implications and Impacts of Iran's Culture on Quality Cultures for Organisations in The Oil and Gas Industry

Although being a big organisation with many projects running every year, the National Iranian Oil Company (NIOC) experiences several challenges relating to quality. Despite the organisation following the quality standards such as ISO 9001, quality remain distanced practice in the organisation. The value chain needs to ensure quality for the organisation to be successful in its business operation. However, without an effective value chain, the organisation can be big and fail to command a big competitive advantage. Value for business operations is instilled through the building and establishing organisational culture. The major challenge facing NIOC who owns the oil and gas projects is the failure to institute a corporate culture that would improve on the existing quality standards. Due to the shortages and lack of appropriate and effective corporate culture that can instil quality in the operations, the oil and gas companies have experienced a series of incidents such as fire incidents. The incidents have to the collapse of an oil rig into the sea hence causing pollution in the water bodies and endangering aquatic life (Sharafedin, 2016).

Little research has been conducted on the corporate culture and quality issues facing the oil companies in the Middle East region. There is a need to perform further exploration of the effects of TQM at the quality level to establish the improvements that need to be addressed to improve the quality level. Carrying out several projects simultaneously may not imply an improvement or better quality. Hence, the target of this paper is to establish the weaknesses and shortcomings in the quality culture in the oil and gas industry of Iran. As a result, the study objectives were to define the quality and its management within the oil and gas industry, to

identify the implications and impacts of Iran’s culture on quality cultures for organisations in the oil and gas industry. The third objective was to identify the critical success factors of a quality culture within the oil and gas industry in Iran and to identify the drivers and barriers of culture development among oil and gas organisations. Finally, the last objective was to develop a guideline to improve the role of quality culture in oil and gas companies.

5.2 An Analysis of Section One: Warm Up Questions

According to Saunders et al., (2016), the main goal of conducting qualitative interviews is to comprehend and obtain insight into a certain phenomenon under study. As a result, interviews were undertaken in this study to elicit perspectives on problems that could not be adequately obtained just by a quantitative approach such as a questionnaire. As previously stated, the researchers performed semi-structured interviews with ten managers in high-level roles in the case studies. Because the respondents had varying levels of expertise and working in various departments, they were anticipated to give a broad scope of information that would boost the data richness and dependability of the interviews in terms of range of information and degree of detail. Table 5.1 shows how the researcher classified their job experiences into four categories.

Years of Experience	Under 10 years	10 - 20 years	20 – 30 Years	Over 30 years
Number of Interviewees	1	3	6	0

Table 5.1: Participants years of experience

The participants work in various departments such as procurement, resourcing, finance, project management, and drilling facilities. One of the participants is an offshore oil rig manager and the oil rig manager state that, *“I am an offshore rig manager and have been working in offshore projects for over 20 years as well as refineries and petrochemicals as a project manager from engineering to top management level”*.

A procurement director specified that, *“Employment in the Iranian oil and gas sector is in two major forms: the private sector and the public sector. In the public sector it is done through limited annual (or every few years) exams, multiple interviews and passing a lot of filters. In the private sector, companies are recruiting based on their needs, the volume and number of projects won or undertaken in various ways, such as resume banks, recommendations by other*

professionals, job search websites such as Iran Talent and etc. However, there are no job guarantees in this area”.

The primary conclusion from this section is that all participants agree that the employment market has been changing rapidly as a result of the country's circumstances. Some participants feel that recruiting new employees will be difficult since most oil and gas graduates cannot find work in the oil and gas industry, therefore the number of students studying oil and gas is declining. In addition, some experienced workers are relocating overseas to work for multinational companies for financial reasons.

5.3 Leadership and People

From the interview responses Persia Oil and Gas, three of the respondents said that, Although, leadership could have a key and effective role in quality matters but this has not unfortunately happened in our organisation, and as a result, the managers cannot define the long-term prospects for their organisations. Even after defining the prospects for the organisation, the goals cannot be achieved due to the instability. However, at AsphaltTous Co. one of the respondents who has worked as a project manager and in the top management level said that the organisation has a set of beliefs and practices and the values within the organisation created by the organisation culture.

At Persia Oil and Gas, leaders prefer to sacrifice quality and priorities when faced with challenging financial difficulties. The quality is regarded in terms of its sensitivity such that if the sensitivity is low, quality is disregarded. However, at AsphaltTous Co. quality is believed to improve the culture of the organisation. The leadership team create quality by directing the culture and defining the fundamentals of the culture of the organisation. The organisation makes use of a system quality standard of ISO 9000 from German Company TUVNURD Rev.2015, which is mainly focused on risk. The organisational culture at AsphaltTous is based on trust, honesty and integrity towards organisational excellence. Despite the existence of the organisational culture, the beliefs and shared values by the employees towards the excellence of organisational culture are weak, and AsphaltTous can work on creating an organisational culture by explaining the organisation's policy and vision to employees. If a worker provides better work quality, the organisation has the policy to promote such workers and the industry

offers more opportunities. AsphaltTous has a good culture although it needs a detailed plan and a roadmap for the future. The top management level possesses good influence, although the other layer of the organisation cannot be seen.

Leadership has failed to play effective roles. The interview respondent posited that despite their key and effective role in quality matters, leaders have failed to execute that role at Persia Oil and Gas. However, according to the respondent, the leaders have a chance to improve quality through recruitment of skilled workforce and purchasing of high-quality goods and materials. Rather than leaders emphasising the importance of quality of goods and services at Persia Oil and Gas, the employer does so through the set standards. Any other emphasis on quality is dependent on the personal taste of an individual. At AsphaltTous Co., the leadership team emphasise existing quality and receive feedback to make decisions and further increase quality. Auditing occurs periodically to evaluate the quality system. The management has a significant effect on the quality system, as well as the quality of purchased goods and equipment of projects, which are being audited continually. The quality control also controls the quality of goods in accordance with the ITP. The leadership team has to choose between cost and quality to guide the organisation in the best direction to take. The organisation prefers having a long-term plan compared to doing jobs anyway. This is because having a good work ethic on every project help the country to build good infrastructures for the next generations. Quality and scientific examples play a critical role in the advertisement for the organisation whose leadership plays huge roles and consequently leads to customer satisfaction and creating future opportunities. Hence, the leadership team at AsphaltTous exhaust quality as the major determinant of an organisation's prosperity and success. Despite the good organisational culture displayed by some individuals. Some leaders are not fully committed to a quality culture and as such, fail to play an enormous role in creating quality culture. Such individuals act as barriers to the accomplishment of the organisational's goal and vision.

Due to the role of the personal taste in the organisation, the leaders seem to emphasise on people as the key element for delivering value to the customers and in impacting through quality. As a result, leaders do not complain about the lack of quality for they leave it at a personal level. The most significant thing in quality delivery is the internal and firm belief in quality. The belief quality at Persia Oil and Gas depends on a long-term and strategic view of the policies and interests of the company and organisation. Leadership at AsphaltTous Co. believes that the employees are the key element for delivering value to customers and

impacting through quality. The leadership team make every decision on the choice of quality, cost and time. As a result, right managers give the employees a better insight in terms of quality. Having a good employee who is fully qualified adds up to the quality of services and products offered by the organisation. Leaders, therefore, act as good examples to the rest of the employees. When disseminated to the employees, good work is extended to everyone, and this aligns the organisation towards the culture of quality. In this regard, the employees are the leadership tools that aid in the delivery of value add quality services and products to the customers. Leaders work under certain guidelines, goals, mission and visions which are clarified in the quality policy available for all personnel.

As a result, the culture at Persia Oil and Gas suggests a unique type of approach and strategy in making quality excellent and occur through people. There is, however, departments such as in the oil and gas drill fields where there are zero emphases placed on people. The fields have a leadership team that has no other roles, both internally and externally in emphasising the importance of quality. In this regard, the quality and excellence are at the disposal of the strategies and standards of each project's employer as the major determinant of quality. Excellence is, therefore seen in the eyes of the standards and the strategies that the employer set and wish to be followed. Anything else is achieved through the personal state. Leaders at AsphaltTous Co. provide training and development programmes as well as bonuses for motivation purposes. The department known as System and Plans focuses on the quality system where it reviews, monitor and control the quality system. Non-compliance with the standards and requirements of projects and sometimes staff training throughout the organisation requires a lot of effort and is not clear at AsphaltTous Co. Hence, the department ensures quality standards are followed and maintained throughout the organisation.

Besides, interview responses revealed that at Persia Oil and Gas, the leadership team placed zero emphases on people as the key element for delivery of value to customers and impacting through quality. From the survey questions, it is evident that employees believe that the organisation is not doing well in making the leading firm in channelling the workforce towards a specific corporate culture. Through the System and Plans department, AsphaltTous Co. focuses on the quality system by reviewing, monitoring and controlling the quality system. As a result, the critical factors that define the culture of quality in the organisation include shape future, the culture of empowerment, and developing people.

5.4 Strategy and Performance of the Organization

The critical success factors at AsphaltTous Co. include clear targets for the key result, performance indicators, policies, plan, objectives and processes, and positive/sustained customer relationship result. The organisation focuses on its client, owner of project and suppliers and employees. However, the environment is similar to the most Iranian organisations. Based on this, the organisation's strategic management approach is customer centric. Through system and procedures department, the organisation focuses on quality system, review and plan for the upgrading purposes. As one of the managers said at the interview, we focus on client, owner of project, suppliers and employees and the global goals, objectives, mission and vision of the organisation are stipulated in quality and policy and being audited and reported periodically but for environment same as the other Iranian organisations. There are many environmental issues in Iran's oil and gas sector which requires a separate and in-depth study. Another manager said, our organisation ensure that the customer focus exists at all stages by having middle manager to monitor and control the fulfilment of their needs.

However, at Persia Oil and Gas, the above critical factors do not have significant importance and are only mentioned. Contrary to AsphaltTous, Persia is not customer centric lacks an appropriate approach to planning, deploying strategic goals and reviewing performance outcomes. As one of the managers mention at the interview, due to the instability of senior management in most companies, managers cannot define long-term prospects for their organisations or, if these prospects are defined, goals will not be achieved because of the stated reason. Another manager said, in our organisation no approach is implemented in planning, deploying strategic goals and reviewing performance outcomes

The organisation also lack focus in ensuring that the customers focus exists at all stages of translating and fulfilling their needs and requirements in terms of quality. The goals and objectives are not measured in terms of customers and resulting impact. Due to lack of focus on strategy and performance, the organisation is declining and falling. The qualitative analysis results agree with the quantitative analysis results that AsphaltTous Co. is better in strategizing and performance.

5.5 Process and Value Creation

The critical success factors at Persia Oil and Gas include customers as the primary reason, understanding and anticipating customer needs and expectation, design, manage and improve processes, products and services, optimum stakeholder value, customer relationships and optimum value for customers. However, these have slight importance. One of the interviewees said, considering the project-based structure of our organisation and the limited number of customers, nothing has been done with regards to this notion and another manager said that our organisation does not drive quality improvement activity for optimisation and capability building and process management does not exist in our organisation. One of the top managers believe that in our organisation there are no strategies in place for building long lasting relationships with your customers.

The critical success factors at AsphaltTous Co. include the customers as the primary reason, understanding and anticipating customer needs and expectations, value for customers/stakeholders, customer relationships, the optimum value for customers, development/execution of customer-focused strategy, impact on the perceptions of external customers and optimum value for stakeholder value have significant importance. Four out of five top managers strongly agreed that the process and value creation is important for the long-term success of the organisation.

At the interview a manager said, our organisation is confident to ensure that its strategic planning process delivers the desired results and sustainable outcomes and importance of customer for long term relationship is in the quality policy of our organisation. Another manager said, our organisation believes that customer is always right therefore, customers' performance, feedback and interaction with the organisation will be shared with entire organisation for the purpose of long-term partnership. One of the manager believes that project owner's satisfaction is one of the most important policies of the organisation even if employees are under pressure and all works has to be done according to standards and we run assessment at each stage (corrected if need it) and finally has to be agreed by all stakeholders involved in that project.

5.6 Resource, Knowledge and Partnership

The leadership of Persia oil and gas does not believe that employees are the key element in delivering value to customers and affecting quality. Without having any input from staff, the leadership team takes every decision on the selection of quality, cost and time. According to the interview responses, one of the managers responded that Persia Oil and Gas does not emphasise the importance of people as the key asset for delivering strategic goals and objectives of the organisation. Also, one interviewee said, there are no schemes and initiatives to motivate people in delivering optimum value to customers, making the best use of existing resources and tackling problems and performance obstacles at Persia oil and gas as well as lack of partnership relationship management programme. He also pointed out that quality is not audited and guaranteed when working with external suppliers as a result, this not helping to sustain the quality culture of our organisation. The data from the interviewees reveals that there is no importance in the management of resources, thus, workers are not important and, in terms of handling physical assets, they do without planning and on the basis of personal preference.

The comparison of the data obtained from both companies indicates that AsphaltTous Co. is in a better position to handle its resources and offers a better knowledge and partnership development system. One of the interviewees at AsphaltTous Co. replied that the organisation emphasises the value of people as a main resource by providing job security, and that the organisation hires its employees in other activities to ensure that they have job security and have good training. The interviewee said that human expertise and experience in innovation, teamwork, brain storming will help to accomplish organisational goals effectively and efficiently and creates a quality culture within the organisation. AsflatTous Co.'s approach and policy is customer-centric for long-term relationships as one of the manager at the interview said, we are an EPC organisation, at every stage of projects we have third party auditors as well as our Quality Control team which uses ITP (Inspection Test Plan) to ensure the project meets all the standards and agreed requirements by all parties involved in that project in order to satisfy all the parties that allow us to accomplish further projects.

5.7 Continuity and Sustainability

From the interview responses, AsphaltTous Co. preserves its long term future by initiating several plans that attract new projects and also create internal strength. Another way through which the organisation preserves its long-term future is through the management of resources, taking part in bids and tenders for new projects, saving man-hours and cutting cost using efficient employee and optimising job site cost. It further achieves long-term future through the implementation of new systems and methods. AsphaltTous Co. does not use learning and innovation as a catalyst for ensuring a sustainable future. However, it has a good training plan to urge employees to learn more regarding their related tasks, an aspect that effect on their innovation. Also, the organisation lacks an organised particular way of organising innovation; neither does have a strong plan that defines the long-term strategic requirements and assessing sustainable capability. Like various Iranian companies, AsphaltTous Co. lacks an approach to corporate social responsibility related issues. The organisation lacks a dedicated measurement for tracking CSR related performance; neither does it have a proper procedure that provides help in sustainability and future preservation.

On the hand at Persia Oil and Gas The critical factors on Continuity and Sustainability include increased value and levels of performance, continual and systematic innovation, engage people, partners, customer and society, anticipate future performance and results, transparent and accountable and allocate resources for long-term needs are slight importance except the increased value and levels of performance which has significant importance.

The objective of this study was to investigates that challenges that the Iranian oil and gas industry face as they embrace the quality management guidelines and in creating the operational quality cultures. The study further explores the definitions of culture and how it is generated in the oil and gas organisations as well as the effectiveness of the quality culture. With the growth in the global energy industry is becomes critical to assess the challenges that affect Iran and the Middle East region to establish factors that might impede the growth. In this regard, the study sought to identify the drivers, barriers and success factors when implementing or adopting a quality culture, and the implications and impacts of Iran's culture on quality for organisations in the oil and gas industry.

5.8 Culture Analysis in Iranian Oil and Gas Industry

According to Hofstede (1994), one member of a group can be distinguished from another by looking at the culture of the two. Each group of people has a distinct culture that defines it into what it is and what it delivers. Since culture cannot be inherited but ensues from the social environment within which a person lives, each organisation has a chance to shape its own that makes it unique and distinct. Organisations often have certain definitions of culture that defines them from the other. In this regard, even in the same industry, the organisation will not have similar cultures but different and unique. However, some organisations lack any defined culture. AsphaltTous Co. and Persia oil and Gas organisation fall under the category of the companies that do not define the culture of the organisation. According to the responses obtained during the interview and the questionnaires, the two companies rarely care about the culture of the organisations. One of the respondents at Persia Oil and Gas said that the culture of the organisation is very unplanned and irregular while the role of quality is not defined in the organisation. Another respondent posited that culture at Persia Oil and Gas could be compared to a living creature whose health and well-being is dependent on many other elements. This implies that the culture is dependent on certain factors rather than people and leadership. Besides, the respondent posited that the leadership of the organisation plays no role or has no effect in creating a quality culture. These responses show that the oil and gas industry has poorly defined culture, and this could be the explanation behind the poor performance in the oil and gas industry in Iran.

At AsphaltTous Co., the definition of culture slightly changes from Persia Oil and Gas since it depends on trust, honesty and integrity toward the organisational excellence. Workers believe that quality can be improved if the leadership consider it a priority. Further, quality plays a critical role in defining and shaping the culture of the organisation.

5.9 Drivers, Barriers and Success Factors When Implementing or Adopting a Quality Culture

5.9.1 Drivers

An industry performs well when drivers are compelling it to move forward. The drivers are, therefore, the factors that facilitate the success of the implementation and adoption process of

the quality culture. A culture of quality is achieved through having a set of drivers that catapult it to move forward. According to Bass and Avolio (1993) and Dellana and Hauser (1999), the success of an organisation is highly dependent on the ability of the managers and the owners of the organisation to direct the firm, regularly to generate or develop a cultural agenda that reflects their mission, however, from the interview responses in section two which is leadership and people, we can see there is a big lack in both companies. Hence, having the right attitude towards achieving the prospects of the organisation determine the success, but the opposite determines the failure, therefore, these are some reasons for failure of oil and gas companies in Iranian industry. The cultural philosophy is the fundamental source of business vision and value, and an organisation ought to implement suitable policies, practices and processes that are based on the right attitudes as the researcher structured the process and value creation section as well as strategy and performance section of the interview in this respect.

5.9.2 Barriers

The workers have no trust in the leaders in the organisations as some managers mentioned in leadership and people section of the interview questions. Leadership is, therefore, a huge hindrance to the success of the industry and hence a great challenge. The leadership agrees with the findings from the researchers that inappropriate management is responsible for the failure in timely attainment of objectives in many projects within the Iranian oil and gas industry. During the interview one of the senior managers stated that, “*some project managers are careless in sustainability and long-term business strategy of the organisation*”. Another manager in section five of interview regarding resource, knowledge and partnership, mentioned that, “*our organisation counts on human resource as a key asset but lack of training and development leads to waste to time and money*”. It has been established that a vast number of project managers are not professionally conversant with the necessary tools, methodologies and techniques (Kerzner, 2013). In this regard, most of the time is spent dealing and trying to rectify the problems that occur due to their unprofessionalism. The findings by Kerzner (2013) agrees with the responses from the questionnaires and the interviews that leadership acts as an impedance to the delivery of quality in the two oil and gas companies in Iran. There is hence a culture in Iran that demonise leadership but focuses on people and the set standards by the

employer. At both Persia Oil and Gas and AsphaltTous leadership has failed the organisation for failing to yield significant improvements and in the delivery of quality products and services.

5.9.3 Success Factors

According to Brotherton and Shaw (1996), critical success factors are those procedures and activities that the managers can control and influence to create a competitive advantage and attain organisational objectives. Organisations develop and cultures factors that push them, to achieving future goals and long-term objectives. Hence, five critical success factors determine the quality of the services offered at the two companies that represent the companies in the oil and gas industry. Such factors include leadership and people, strategy and performance, process and value creation, resource knowledge and partnership, and continuity and sustainability. These factors can be changed, controlled and influenced by the managers and the owners of the organisation. Hence, they can be varied to improve or manage the performance of the organisation. Leadership and people are the major determinant of the success and the quality of the total quality management projects in the companies. The interviews in revealed that leadership is insignificant in determining the quality while people are very significant in determining the quality management. People are the major factors that determine the success of an organisation. While the set standards by the employer guide the operations and the quality maintenance, people are left to act according to their taste. This implies that people are the most important factors in influencing and shaping the quality.

Data received from the process and value creation section of the interviews shows that At AsphaltTous Co., the critical factors include customers as the primary reason, optimum value for customers, customer relationships, optimum stakeholder value, understanding, and anticipating customer needs and expectations. Based on these responses, it can be deduced that the organisation value its customers and use them as the primary reason for the operations.

Another critical success factor in an organisation is the training of the workers. They are training the workers to help to sharpen their knowledge and skills hence making them better. As a result, employees can provide better services and produce better products. An organisation always strives to improve the capabilities of its employees to achieve improved performance. Training, is, therefore, a critical success factor that when successfully implemented, ensures that the organisation achieves unprecedented results. The leaders at Persia Oil and Gas improve

the quality culture through education, recruitment of workforce and the required expertise. The organisation understands that education is the key to improving the quality of services and products offered. Asphaltous Co. trains and provides development programmes to its employees as an approach and strategy to make quality and excellence dominate among people. The importance of quality can be emphasised, both internally and externally, through increased research and training.

Quality assessment is also a critical success factor that ensures quality measures are kept on check for effective service delivery. Crosby (1979) posited that assessing quality helps to improve the quality practices in an organisation. The results from the continuity and sustainability section of the interview stated that, Persia Oil and Gas assesses standard compliance and a quality control unit. The quality control unit ensures that the products produced to meet certain standards that the organisation has set. Also, the organisation derives efficiencies from the utilisation of physical assets through supervision and required instructions.

5.10 Implications and Impacts of Iran's Culture on Quality for Oil and Gas Industry

Iran's culture has a great impact on the quality of the companies in the oil and gas industry. According to Karimi and Kadir (2012), culture affects the behaviours of people and how they perform tasks, set personal and professional goals and achieve their roles and responsibilities. Besides, culture the way people think and perceive ideas and surrounding things. Since the Iranian's have their own specific culture, they affect their employment, the operations of the national oil and gas companies. Hence, when the Iranians get employed in the oil and gas industry, they influence the performance of the tasks at the inherent companies.

Quality is an important aspect in every organisation, and as posited by Baidoun (2003), it is the merit of something. As a result, quality can be assessed in terms of tangible properties such as durability and intangible attributes like aesthetics. Customers determine the value of an organisation and the services and products it offers by looking at the quality associated with

them. In this regard, the organisation has to ensure that the products and services are of excellent quality for the customers to be pleased with them and develop a personal touch.

From the case studies, interviews and the questionnaires used during the study, it was evident that quality varies depending on the organisation. Despite being in the same industry, the definition of quality differs from one organisation to another. The findings agree with the research study conducted by Batten (1994), which found that the concept of quality is both perceptual and subjective and as such perceived differently by each individual and organisation. The customers look at the quality of the services and products the organisation offer as the basis for deciding where to purchase the products from (Oakland 2014). In this regard, organisations must pay close attention to the quality that they offer. In the oil and gas industry, different companies have a valid definition and perception of quality. While some organisation is committed to delivering products and services in an honest and trustful manner, others are not concerned with the quality of the products they deliver.

The critical success factors that out rightly depict themselves touch on the customers. For instance, most companies in the oil and gas industry value their customers and as such work to ensure that the customer needs are met and that there is a good relationship between the organisation and the customers. Customers are the most fundamental instrument that drives the organisation forward and that compels it to work tirelessly in offering the products it sells. A organisation operates to serve its customers, and as such, it has the sole responsibility to ensure that the customer leaves the organisation satisfied. In this regard, customer relationship is a success factor in the oil and gas industry.

The organisations in the Iranian oil and gas industry have not adequately developed a culture of quality, and there is room to achieve it for effective service delivery. Having a culture of quality that aligns with the needs of the customers helps to increase the loyalty of customers and increase their value base. Organisations in the oil and gas industry in a high need of implementing the culture of quality to ensure effective delivery of the TQM. As evident from Persia Oil and Gas, leadership is poorly aligned towards the achievement of organisation goals and attainment of the culture of quality.

Persia Oil and Gas need to develop a corporate culture that aligns with its service delivery, and that will ensure that quality is instituted. The quality of products and services is what drives the customers towards an organisation, hence having goods of high quality attracts more

customers. It is established that soft quality components such as leadership must be given primary concern and attended to as long-term issues, therefore, these elements are vital to the success of the TQM plan; thus, ignoring them can fail the application plan. The organisation needs to move and act swiftly to prevent the failure of the TQM plan and consequently, the collapse of the organisation. Managers have the responsibility to carefully evaluate those values and present cultural fields to come up with a practical plan and associated policies that create an environment and cultural atmosphere. With an excellent cultural atmosphere, the organisations will be sure to have a successful TQM and excellent quality culture. According to Karimi and Kadir (2012), organisational culture is known to be a vital and key agent in the implementation of comprehensive quality management. Besides, the improved cultural quality will attract customers, and the organisation will further improve its performance and profit margin. It is, therefore, critical to building a strong culture of quality that will ensure that the organisation produces high-quality products. The oil and gas industry needs to develop the hard-quality components which form the frameworks and tools that assist in achieving the project goals.

CHAPTER SIX: QUALITY CULTURE GUIDELINE FOR IRANIAN OIL AND GAS ORGANISATIONS

6.1 The Advantages of Quality Culture Implementation for Iranian Oil and Gas Organisations

Quality culture refers to a set of common beliefs, attitudes, and standards aimed on satisfying customers and constantly improving quality of products and services. Quality is deeply integrated in practically every area of organisational activity in a quality culture, including recruiting and promotion, employee engagement and continuous training, remuneration, leadership style, decision making, organisational structure, work procedures, and office design. Simply expressed, “quality” is a way of life in a quality culture; quality values are embedded in organisational activities and behaviours. This chapter focuses on the research aim, which is to examine the advantages of implementing Quality Culture in Iranian oil and gas organisations. According to the questionnaire survey, semi-structured interviews and literature review results, the benefits identified as the most important benefits of quality culture adoption. The results of the study related to the benefits of quality culture are as follows:

- Increased customer satisfaction
- Enhancing Employee Satisfaction
- Reduces waste and faults
- Enhancing profitability of the business
- Reducing the organisation's effect on the environment

Customer satisfaction and a customer-oriented strategy have been rated as an organisation's top priority in numerous researches. The organisation's long-term performance was viewed as being contingent on how efficiently it focused on its clients on a consistent and frequent basis. Customers are the most essential focus point for every business and play a significant part in quality culture success.

The results of semi-structured interviews revealed that implementing a quality culture improved the objective of fulfilling customer satisfaction, which can be viewed as a key measure of an organisation's performance and an indication of an organisation's failure or success in its operation. This viewpoint was supported by the result of a questionnaire data analysis, which revealed that respondents agreed with each assertion linked to boosting

customer happiness. Furthermore, the analysis of the literature review supports these conclusions.

The main asset for every organisation is human resources, as they contribute to efficiency and improvement of performance. Organisations must treat their people as the key engine for attaining their short and the long objectives to become more successful and competitive. Based on the results of data analysis, participants strongly believed that the implementation of the quality culture would have a positive effect on staff, such as enhancing satisfaction, improving teamwork and reducing work cost and time and improving the working environment that promotes relationship between employees and their managers. These viewpoints were supported by the questionnaire respondents. It shown that the respondents agreed with each assertion to improve the performance of their employees. In addition, the findings of prior study in the literature review confirm these conclusions. Efficient execution of the quality culture led to increased employee engagement as the quality culture guaranteed that all employees in the organisation were clear in their awareness and understanding of the requirements and the connection between their actions and the business. Quality culture motivates and encourages people to organise, manage, control and improve processes within their ability and commitment. In addition, past researches indicated a strong relation between quality culture and the performance of employees as the quality culture's effectiveness depends mostly on employees' attitudes and behaviours.

At organisations, a vast number of humans, technological, material and environmental mistakes or errors are likely to occur. The results of the initial analysis of the semi-structured interviews demonstrated that the quality culture implementation within the organisation led to improved performance in decreasing and eliminating waste and defects from its operations, especially in the work area, where important operations such as oil field development, drilling or oil wells development. The results of the previous investigations presented in the literature review confirm these conclusions. In addition, the perspectives of interviewees were compatible with the main data results of the respondents to the questionnaire. Therefore, the respondents agreed with every declaration relating to waste and defect elimination. The fundamental findings from interviewees and questionnaire respondents were confirmed the previous researches, which showed that the work processes and possible improvements were focused on activities through a successful implementation of quality culture.

The financial performance of an organisation is essential for its success and reflects its long-term, largely financial aims directly. Analysis of the perception of the respondents from the semi structured interview about improving financial performance showed that the implementation of the quality was seen as positively effecting financial performance by lowering costs, increasing revenues and a direct profit sharing. Financial performance might thus be seen as an important incentive for employees and management to successfully implement the quality culture. This viewpoint was strongly backed by several research studies, which have also been included in the literature review, in conjunction with key results of interviewees. The respondents also, agreed with every statement on enhancing financial performance, on the basis of the questionnaire data. In addition, the earlier researches revealed that there was proof that quality culture implementation in an organisation was linked to increased financial performance and that this helped to boost the organisation's value. Accordingly, on the basis of the above discussion, the financial results can be regarded to be one of the major advantages to the organisation through the implementation of quality culture.

It is well known that environmental protection has become a worldwide challenge that is positively linked to economic and industrial development. However, activities that lead to environmental damage are unavoidable for some organisations. Examples of important goods, yet with considerable environment implications include oil exploration or mining organisations, for example. As per the key results of the interviews, the implementation of quality culture was considered as a beneficial contribution to reduction or mitigation of the negative impact of its activities on the environment. It was also perceived as an increased awareness of the detrimental impact of the operations of the organisation and the need to sustain an ecological balance. The conclusions are corroborated by the literature research. The survey also validated the conclusions of the interviewee totally. It demonstrated that the respondents agreed with each declaration relating to the reduction in the environmental effect of the organisation.

Along with the foregoing findings, the literature analysis demonstrated that quality culture has been widely employed for increasing the quality and value of processes, goods and services across contemporary organisations. This was advanced to include environmental and societal

advantages arising from a diversified environmental management scope. The scope of the quality culture was considered to have several good environmental effects, and environmental considerations have an important influence on quality culture approaches. Consequently, the environmental factors are one of the primary factors if organisations wish to attain an ideal value for its products and services.

6.2 Quality Culture Guidelines for Iranian Oil and Gas Organisations

The establishment and maintenance of a quality culture that permits ongoing changes and improvements is vital to long-term organisational performance. Cultural change in organisation, which requires changes in the way people think and conduct, is a tough process that takes a long time. In order to assure the success of cultural change activities, it must be focused on the development of a clear, compelling and shared vision. Their objective must be to ensure a sustained commitment of top management. The role of the desired conduct by top leaders has to be modelled. The involvement and empowerment of employees must be fostered and also, undertake suitable training to embody the new culture at all levels. It is crucial that the culture envisioned is aligned with the strategy of the organisation.

From the analysis of the survey questionnaire, semi-structured interviews and related literature review, guidelines for implementing quality culture were produced. The 9 important areas that guides the Iranian oil and gas organisations for implementing an effective quality culture are:

6.2.1 Leadership and Top Management Commitment

All quality programmes like quality culture are successful based on the support of senior leadership. Most quality models, such as the European Quality Management Foundation (EFQM) and the Malcolm Baldrige National Quality Model (MBNQA), have been ranked at the top of the list in terms of leadership or management engagement for the effective implementation of Quality Management.

This aspect is the degree to which high-level management of the organisation accepts quality responsibility regarding customer needs. Establishing a culture of quality, dedication to improving quality and influence the organisation in establishing quality plan guidelines and demonstrating effective management within the organisation. Usually, senior managers create

policies, organise the execution of employee strategy. Therefore, on the basis of the previous discussion, the key driving factor required for implementing a quality culture implementation in the organisation is the commitment of top management.

6.2.2 Employee Involvement and Empowerment

Personnel must be engaged and committed to their responsibilities and duties; it is an improvement in quality. The activities offered to all employees, for example teamwork, employee proposals and undertakings. Individuals at the originations have the capacity to serve their customers successfully and understand they have the ability to do things. Human resources are universally recognised as an integral part of every organisation. Sustainable and comprehensive quality culture implementation calls for qualified and dedicated individuals to engage fully in decision-making with full capacity. This is vital in the implementation of quality culture as it has been viewed as a key feature of a successful quality culture implementation that supports and encourages employees to engage in certain portions of the decision-making process. Literature review and survey respondents suggest that excellence is unachievable without the empowerment of employees and engagement.

6.2.3 Training and Development

For the purpose of ensuring full awareness and comprehension of the quality culture concept, all workers should be trained and developed accordingly as, without the training of workers, the organisation would have difficult times in handling changes during the implementation of quality culture. The results from the semi-structured interviews indicated that the quality culture is the obligation of everybody at the organisation, all employees must be trained and specialised, so that their knowledge and experience in quality culture can be fully understood and developed to the best possible extent to achieve their duties and tasks. The results are confirmed entirely by various studies that have demonstrated training and development have an important role as a critical ingredient for implementation of quality culture successfully within an organisation and also, the results of the literature study revealed the important role played by training and development for all employees since they represent one of the essential criteria needed to create quality culture within an organisation.

6.2.4 Communication Management

In an organisation that implementing quality culture, communication is critical not only among employees and managers, even amongst employees at all organisational levels. Previous studies have shown that organisations would not operate without communication. The results of the semi-structured interviews suggested that implementing effective, rapid, and accurate communication throughout all organisational levels it helps to boost collaboration and makes successful quality culture implementation a more achievable objective. This is furthermore backed by the results of the questionnaire survey analysis which showed that each assertion relates to communication with a high proportion of the respondents who agreed.

The literature research also confirms that communication is key for developing an effective and successful quality culture within the organisation. Researchers underlined the importance and benefit of communication throughout work units and functions to ensure that customer demands and expectations were taken into account, that perhaps a trust and knowledge sharing environment has been created and therefore, quality culture was communicated in a reliable way within and outside the organisation. Consequently, on the basis of these results, communication can be strongly argued as one of the important aspects necessary for quality culture implementation in an organisation.

6.2.5 Customer Focus and Satisfaction

Customers determine and evaluate quality therefore; customer fulfilment is the aim of organisations with quality culture. The procedures and processes are developed to accommodate both internally and externally customers' expectations.

It's commonly recognised that focusing on customers is the key aspect of quality culture and major concern of organisations because the main customers' demands and wants is quality. An analysis of the interview's respondents indicated that the emphasis on customers was one of the main aspects of the organisation's implementation in all operations. This is also a critical indication to evaluate the success, failure and continuity of an organisation among its competitors.

The conclusion is compatible with the primary data results of the questionnaire survey which showed that the majority of respondents agreed with each customer focus statement.

The literature research findings indicate that the customer is the highest priority in an organisation that implementing the quality culture; is not just an organisation's motto, but belief and commitment. Based on the discussion provided above, it is therefore possible to claim that customer focus is one of the key drivers for quality culture implementation in the organisation.

6.2.6 Process Management

In order to satisfy the consumer, organisations and suppliers need to co-operate to improve product quality, ensure good contact and establish a relationship that matches organisation and suppliers' norms. Whenever a good connection is established between the organisation and supplier, there will be many advantages, such as improvement of members' capabilities to create value, customer commitment, flexibility and a speedy response to constantly changing market or customer expectations and needs, as well as cost/resource optimisation. Quality culture consists of numerous factors to maintain quality in any organisation at some suitable level. Sustainable quality enhancements are achieved by preventative control, such as quality building into working processes. Quality must be achieved primarily by preventing and not via inspection of faults and errors. The emphasis is on preventing, instead of correcting and management of damage or firefighting.

A systematic method that focus on enhancing and improving the company's activities rather than producing results are included in process management. The key results of semi-structured interview data demonstrate that process management played a vital part in analysing all the operations of the organisation on a continuous basis to define the strong and weak points, and to determine what needed to be done in the future for the success of the organisation. Therefore, it is a necessary practise to implement quality culture within an organisation.

According to the survey results, a substantial number of respondents agree with each assertion about process management and also, the answers of questionnaires corroborate with these claims. The findings from the literature review support above primary results. An organisation with quality culture in place, formal structures or processes are not at the core. However, the concentration is on forming process management teams to address organisational issues. In this instance, the most important thing is to make workers aware of their roles and duties inside the organisation and its procedures. An organisation's performance is determined by its attention

on processes such as operations and activities instead of theoretical concerns. The findings of the research and the analysis of the literature proved the importance of process management as being one of the major aspects necessary for quality culture implementation in the organisation.

6.2.7 Continuous Improvement

To keep quality management on pace, the services and products has to be maintained and improved continuously. In order to maintain its position on the market as a whole with regard to its industries, the need for improvements continually open up a space for creativity and innovation.

In any organisation one of the rapidly changing goal is the quality, no one has the best or best quality. Organisation, in order to remain ahead in an increasingly competitive business environment, will always have to continually enhance the quality of its goods and services. Simply, improving quality is a journey that is continuous and will never end.

It is advised that organisations make greater commitment to achieve objectives such as quality maintenance and improvements, performance improvement and lead times reduction and dependability of delivery if they aim to implement continuous improvement to retain a market advantage. According to the results of semi-structured interviews, the majority of participants agreed that continuous improvement is the lifeblood of each stage of implementing quality culture. Continues improvement also, played a significant part in boosting the overall performance of the organisation in order to achieve greater outcomes in the future. It also verifies the results of the questionnaire analysis since it was found that the respondents affirmed their consent in relation to the continuous improvement with each statement.

The results from the literature review supported the key findings from the interviews and questionnaire survey data. Continuously improving the performance and competitiveness of the organisation is the main aim of a quality culture. On the basis of the previous discussion, continuous improvement appears to have been viewed as an important aspect of the organisation's implementation of quality culture.

6.2.8 Strategic and Policy Planning

An effective strategy and policy perform as a steering wheel, keeping organisations on course to achieve their goals and objectives. Stakeholders generally communicate and propose the required quality with top management then the policy and strategic planning are merged and circulated to the employees. There are many auditing programmes responsible for TQM to make sure that the strategy of the organisation is linked, and performs efficiently.

The analysis of the responses received from interview regarding the policy and strategy questions revealed that, in addition to implementing the best policies, an effective strategic vision that incorporated quality into the organisation's plan was useful and essential to establish the path for an effective implementation of a quality culture, also, results of the literature study backed up these conclusions. Results from analyses on strategy and policy questionnaire data suggest that most respondent agreed that the organisation did not implement or handle policy and strategy issues. This would be due to the lack of knowledge of the crucial role played by policies and strategies for implementation of quality culture.

The development of a quality policy, according to the literature analysis, must represent the organisation's mission, incorporating organisational objectives, principles and standards. Organisations that want to build a successful quality culture must have a well-defined strategic vision for the future and keep focused on it in order to achieve their goals through the implementation of the organisation's mission.

6.2.9 Environmental Performance

The technique of implementing and enforcing quality culture concepts has an impact on environmental performance. Certain aspects of environmental performance must be addressed in order to produce a safe and sustainable environment for people and other species. Waste management, water and power usage, and air pollution are all aspects in oil and gas organisations.

The analysis of the interviewees' responses in relation to the environment and cooperate social responsibility (CSR) showed that the organisations are not familiar or not applying CSR in the organisation's operations and the results of the literature review confirmed those conclusions.

The main results of the examination of the survey data in relation to environmental performances revealed that majority participants agree that CSR and environmental concerns had not been incorporated or considered by the organisation.

This may be due to a lack of understanding of the critical role of environmental performance in the successful implementation of quality culture.

The establishment of a quality culture, according to the literature analysis, must represent the organisation's mission, incorporating organisational objectives, principles and standards toward establishing CSR and environmental performances. Additionally, organisations that aimed to establish a strong quality culture had to have a well-defined future strategic approach and remain focused to achieve their goals through the implementation of the organisation's environmental impact plan.

CHAPTER SEVEN: DISCUSSION, CONCLUSION AND RECOMMENDATIONS

7.1 Discussion

Quality is a critical factor that aids companies in competition favourably in a market. In the Oil and Gas Industry, quality is both a necessity and a requirement to remain relevant in the market; otherwise, the organisation risk being evacuated and fail to compete with rivals. In the oil and gas industries, companies are committed to assimilating quality through various quality management systems like the ISO 9001 developed by SGS (Société Générale de Surveillance). Despite that input, the quality in the oil and gas industry is still low, and there is much that needs to be done. Due to the low quality, implementation of the TQM has been challenging. In this regard, although organisations in the oil and gas industry legitimise themselves to quality, their commitment is not a culture yet. The present research study aims to propose a guideline for the effective implementation of a quality culture within the oil and gas industry in Iran.

The objectives of the study include defining the quality and its management within oil and gas industry, to identify the implications and impacts of Iran's culture on quality cultures for organisations in the oil and gas industry and to identify the critical success factors of a quality culture within the oil and gas industry in Iran. The fourth and fifth objectives were to identify the drivers and barriers of culture development among oil and gas organisations and to develop a guideline to improve the role of quality culture in oil and gas companies. Through the above objectives, the study sought to elucidate the drivers, barriers, and success factors when implementing or adopting a quality culture and the implications and impacts of Iran's culture on quality cultures for organisations in the oil and gas industry.

7.1.1 Culture and Quality

According to Sadabad and Pathirage (2017), culture influences the beliefs of people and can as well affect the performance of an organisation indirectly. With culture, the organisation either prosper or fail to depend on what type of culture it adopts. Quality culture is the key to the

success of an organisation. It allows the organisation to compete favourably with its rivals and hence emerge effectively. An organisation must, therefore, manage its quality to establish an influential culture that can stand out. Parast, Adams and Jones (2011) posited that quality management is a management paradigm for increasing the competitiveness and effectiveness of the organisation. Research has established that the sure way to enhance profitability and improve the performance and productivity of an organisation is to implement a quality culture management successfully (Parast, Adams and Jones (2011)). According to the institutional theory, an organisation becomes more adaptive and flexible in the wake of uncertainties in the environment and firm complexities by imitating the processes, norms, practices, structure and rules of the organisation dominating the market.

The data from interviews and questionnaires related to quality culture shows that in one hand at AsphaltTous, culture is based on trust, honesty and integrity toward organisational excellence and they believe that quality will shape and improve the quality culture of the organisation. On other hand at Persia oil and gas the culture is unplanned and unbalanced as one of the managers said at the interview the culture in our organisation is like a living creature whose health and well-being is dependent on many other elements. Quality has not been defined properly within the organisation and as some companies are predominantly in financial difficulties (both in the private and public sectors), quality is often sacrificed and priorities are removed in order of sensitivity to the issue.

7.1.2 Leadership and People (LP)

In an organisation, leaders are the drivers who move the engine. The organisation is a system that is driven by the leaders and the people who work within. According to Wilkinson (1992), leadership is a soft element that is vital to the implementation of the TQM. Hence, based on how it is handled, the organisation can either fail or succeed in the implementation of the TQM plan.

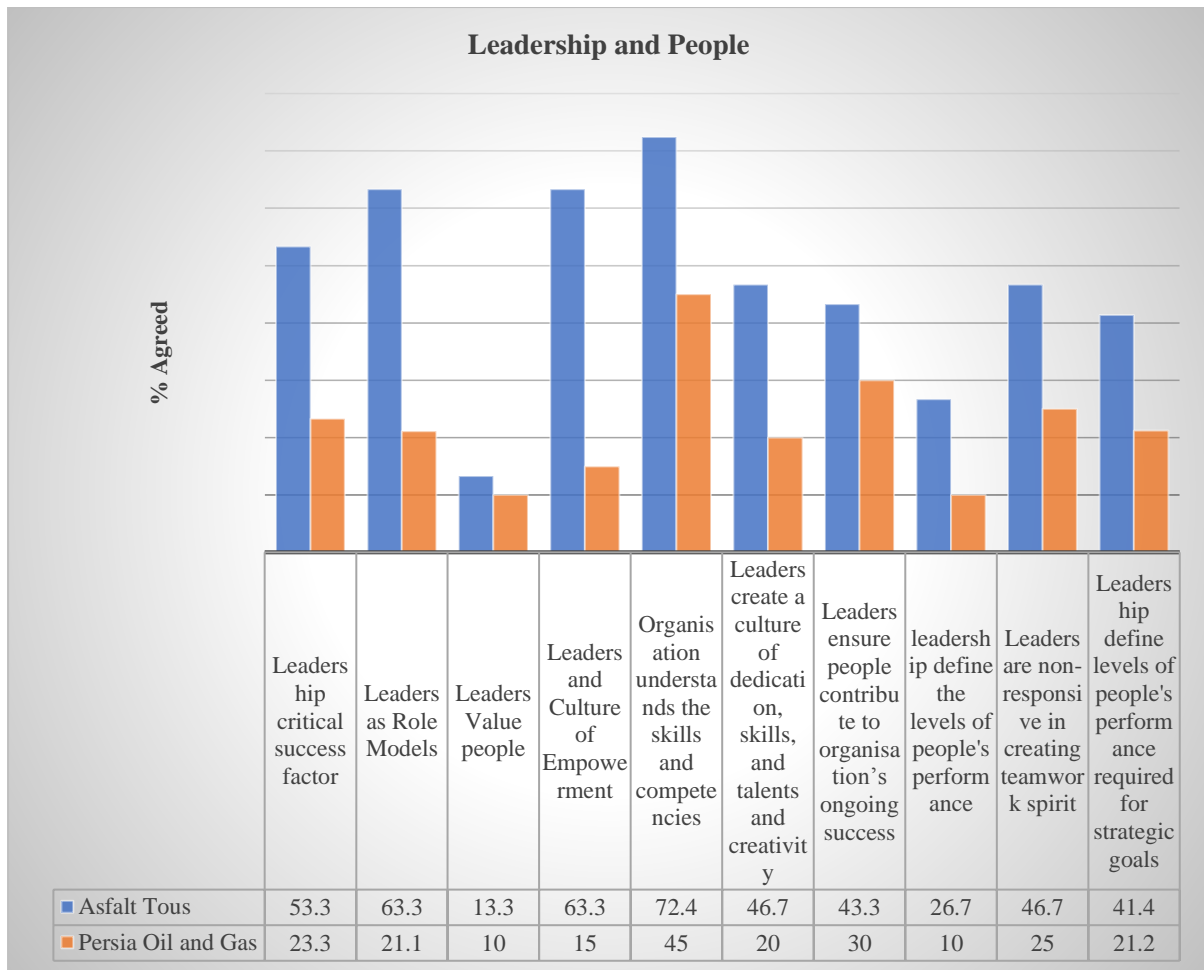


Figure 7. 1: The percentage of employees that responded about leadership and people at AsphaltTous and Persia Oil and Gas

Figure 7.1 above shows that employees at AsphaltTous have more trust in their leaders and that leadership is better compared to Persia Oil and Gas. There are more leadership problems at Persia Oil and Gas than there are at AsphaltTous Co. In this regard, AsphaltTous has better leadership and can implement TQM more easily than Persia Oil and Gas. The data from surveying shows that at Persia oil and gas the role of leadership in establishing a quality culture is very low as 45% were disagreed comparing to 23% disagreement at AsphaltTous. The role of people in establishing quality culture is one of the success factor identified in literature review however, At Persia oil and gas surveying 60% of the employees believe that people are not valued in their organisation and one of the manager at interview said: “there is zero emphasis placed on people as the key element for delivering value to customers and impacting through

quality.” in contrast at AsphaltTous only 10% disagreed with existence of creation of a culture of empowerment for the balanced achievement of organisational and personal goals.

The Figure below shows a graph of the average for the percentage agreed and the leadership and people factor that affect performance at AsphaltTous Co. and Persia Oil and Gas.

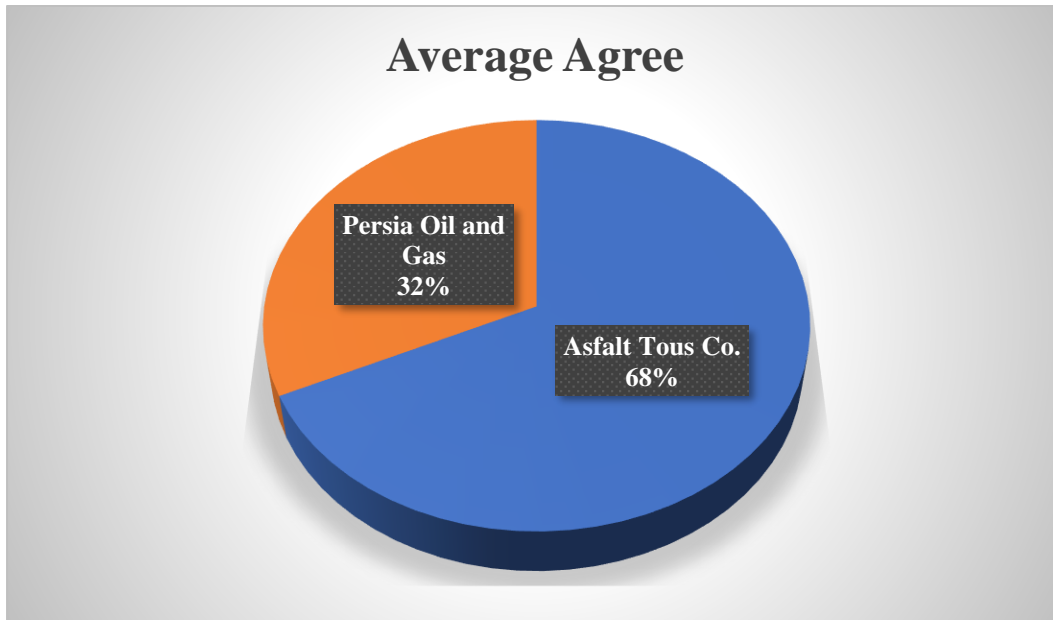


Figure 7. 2: Average for the people who agreed for AsphaltTous and Persia Gas and Oil

Leadership critical success factor: From the results, it was established that leadership is a very critical factor in the success of an organisation. A high percentage agreed that leadership shape the future of the organisation. At AsphaltTous Co., 53.3% agreed while a small percentage of 23.3% disagreed that leaders are critical in shaping and impacting the future of the organisation. Similarly, employees at Persia Oil and Gas view leaders as the drive towards making the organisation succeed. 30% of the respondents allude that leadership shape the future of the organisation. Hence, people believe that leaders and their leadership skills are a critical success factor in the performance of an organisation. Leadership is an act inherent in the leaders, who lead the organisation in the right direction.

Role Models: Leaders cultivate a culture that is in unison with the goals, mission and vision of the organisation. Through the organisation leaders, strategies and management tactics are developed to align every person in the same direction. In this regard, the responses from the

results section align with the generally accepted convention. At AsphaltTous Co., a good number of employees consider leaders to be the role models in channelling values and ethics in the organisation. The general convention is that leaders act and others follow. The findings, therefore, affirm the statement that leaders act as the drivers of the organisation. If the leaders have no values and ethics, then the employees will similarly lack values and ethics to steer the organisation forward. On the contrary, employees at Persia Oil and Gas, do not consider the leaders to be the role models for the entire organisation. The response appears to deviate from the general convention, and this could be that the leaders at the organisation are not serious with their work. As a result, the employees do not consider them to be role models. The leaders at Persia Oil and Gas need to realise that leadership is essential in an organisation, and if they fail, the entire organisation will fail.

Leaders Value people: At AsphaltTous Co., only a small percentage, 13.3%, agree that leaders value their people. Despite people being the fuel that makes the engine system run smoothly, leaders do not value them. Similarly, employees at Persia Oil and Gas believe that leaders do not value people. Only 10% agreed that leaders value people while a higher percentage disagreed that leaders value their people. Although employees at both organisations feel that leaders do not value their people, compared to AsphaltTous Co., leaders at Persia Oil and Gas value their people more. Leadership which is a soft cultural aspect affects the implementation of the TQM. Kaynak (2003) posited that leaders engage the employees to ensure they cooperate and work coordinatively towards accomplishing their set goals. However, if they are not respected, their morale and satisfaction will go down, leading to poor performance. The organisation's agenda consists of the logic that reflects the managers and the stakeholders. When leaders fail to value its people, it implies an impending danger, and in such a situation, the implementation of the TQM can prove problematic. Bad leaders cannot have good leadership, and as a result, the leadership of top managers curtail professional development and are, therefore, hindrance towards the implementation of TQM. According to Bass and Avolio (1993); and Dellana and Hauser (1999), the success or failure of the organisation is highly dependent on the relevance of the leaders' attitudes to the current prospects and limitations faced by the organisation. Thus, the culture or philosophy of the firm is the fundamental source of business vision and value and calls for the policies, processes, and practices of the organisation to be based on these attitudes. But if the leaders are failing to generate and mould a culture of philosophy that consists of excellent business vision and value, the organisation is

ended towards failure. The major challenge facing Iran oil and gas industry is the failure of the leaders to value their employees.

Leaders and Culture of Empowerment: At AsfaltTous Co., 63.3% agreed that leaders create a culture of empowerment for the balanced achievement of organisational and personal goals. In comparison, at Persia Oil and Gas, 15% agreed that leaders create a culture of empowerment for the balanced achievement of organisational and personal goals. The results show that leaders in both AsfaltTous and Persia Oil and Gas do not encourage the culture of empowerment. However, the incidence is greater at the former compared to the latter.

The organisation understands the skills and competencies required to achieve the mission, vision and strategic goals: Results show that 72.4% and 45% agree that AsfaltTous Co. and Persia Oil and Gas respectively understand the skills and competencies necessary to achieve the mission, vision and strategic goals. The responses indicate that the employees in the organisation have trust in the leaders for lacking effective corporate culture.

Leaders create a culture of dedication, skills, and talents and creativity: There are more people at AsfaltTous than Persia Oil and Gas who believe that leaders create a culture where people's dedication, skills, and talents and creativity can be developed and nurtured.

Leaders ensure people contribute to organisation's ongoing success: While 43.3% of employees are satisfied that leaders at AsfaltTous Co. ensure their people can contribute to their own and the organisation's ongoing success, releasing their full potential in a spirit of true partnership, 30% are satisfied with Persia Oil and Gas. Leaders at AsfaltTous have more trust with their employees and that they can contribute to the ongoing success of the organisation.

Leadership define the levels of people's performance: Few people (26.7%) believe that leadership at AsfaltTous plays the critical role of clearly defining the levels of people's performance required to achieve the strategic goals. Only 10% at Persia oil and gas believe in the statement. If the leaders fail to clearly define the levels of people's performance necessary to achieve strategic goals, the organisation can crumble.

Leaders are non-responsive in creating teamwork spirit: Only 46.7% and 25% agreed leaders at AsfaltTous, and Persia Oil and Gas are non-responsive in creating a spirit of teamwork within the organisation. The statistics show the laxity in the leaders towards cultivating a culture of

teamwork. Without teamwork in an organisation, people become confused and make more mistakes. Leaders have a responsibility to motivate the workers and ensure that they are aligned towards one goal. A spirit of teamwork enables the workers to possess one ultimate goal towards executing their duties and roles that they have to play in the organisation.

Leadership define levels of people's performance required for strategic goals: Only 41.4% and 21.2% agreed that leadership at AsphaltTous and Persia Oil and Gas plays the critical role of clearly defining the levels of people's performance required to achieve the strategic goals. Leadership not only play the role of strategising and coining the goals of the organisation but is also important in both personal and professional development of employees working for the organisation. Hence, the leadership has to see that people's performance align with the required strategic goals.

Apart from the data received from two companies the existing literature shows the importance of leaders and people in success of organisations. The one of the best examples is the leadership which is the first principle of eight principles were defined that nowadays create the backbone of the implementation of a quality management system and are incorporated in the standards of ISO 9001:2015. However, both Persia oil and gas and AsphaltTous still far behind in implementing correct and practical ISO standards which believes that the leaders (Top Management) establish the purpose and direction of the organisation. They create the environment in which people become fully involved in achieving the organisation's goals. People are the organisations greatest resource and their full involvement enables their abilities to be used for the organisation's benefit but only small percentages of Persia oil and gas employees agreed that leaders value people within the organisations but in contract most employees in AsphaltTous believes that they are important for their organisation.

Leadership and people involvement are explained ISO 9001 and discussed the commitment and active involvement of top management are essential for the development and maintenance of an effective quality management. The first principle highlights the objective of the quality management is to ensure customer satisfaction; therefore, top management must develop and communicate its policy and objectives as well as ensuring that people are aware of their roles and responsibilities and encourage open and two-way communication. The finding from data shows that leaders are not a role model for the employees in encouraging and creating a quality culture within both organisations.

7.1.3 Strategy and Performance (SP)

Quality is a vital instrument toward achieving success in organisation operations. Sadabad and Pathirage (2017) posited that there is a strong relationship between competitiveness, the strategy and quality. Hence, the organisation makes use of the quality culture to strategise how to be competitive in the market. The strategy is, therefore, a prerequisite of quality towards achieving and increasing competitiveness if an organisation. Increased competitiveness further leads to improvement in the performance of the organisation as more customers start preferring the organisation over the rival. The interview responses show that AsphaltTous has a customer-centric strategic management approach. Customers are the reason why companies improve their quality and culture since a good image will attract them rather than dispelling them. The organisation has to focus on the customers as the core part of the operations and activities. AsphaltTous Co. uses the system and the procedures department to improve its quality system, review and plan for the upgrade required.

Compared to AsphaltTous Co., Persia Oil and Gas is not customer-centric and lacks an appropriate approach to planning, deploying strategic goals and reviewing performance outcomes. Persia Oil and Gas also lack focus in ensuring that the customers' focus exists at all stages of translating and fulfilling their needs and requirements in terms of quality. The goals and objectives are not measured in terms of customers and the resulting impact. Due to the lack of focus on strategy and performance. AsphaltTous Co. is better in strategising and performance compared to Persia Oil and Gas.

Below is a graph showing the percentage of people who agreed that strategy and performance are critical in shaping an organisation. The data is in comparison of the two companies, AsphaltTous Co. and Persia Oil and Gas.

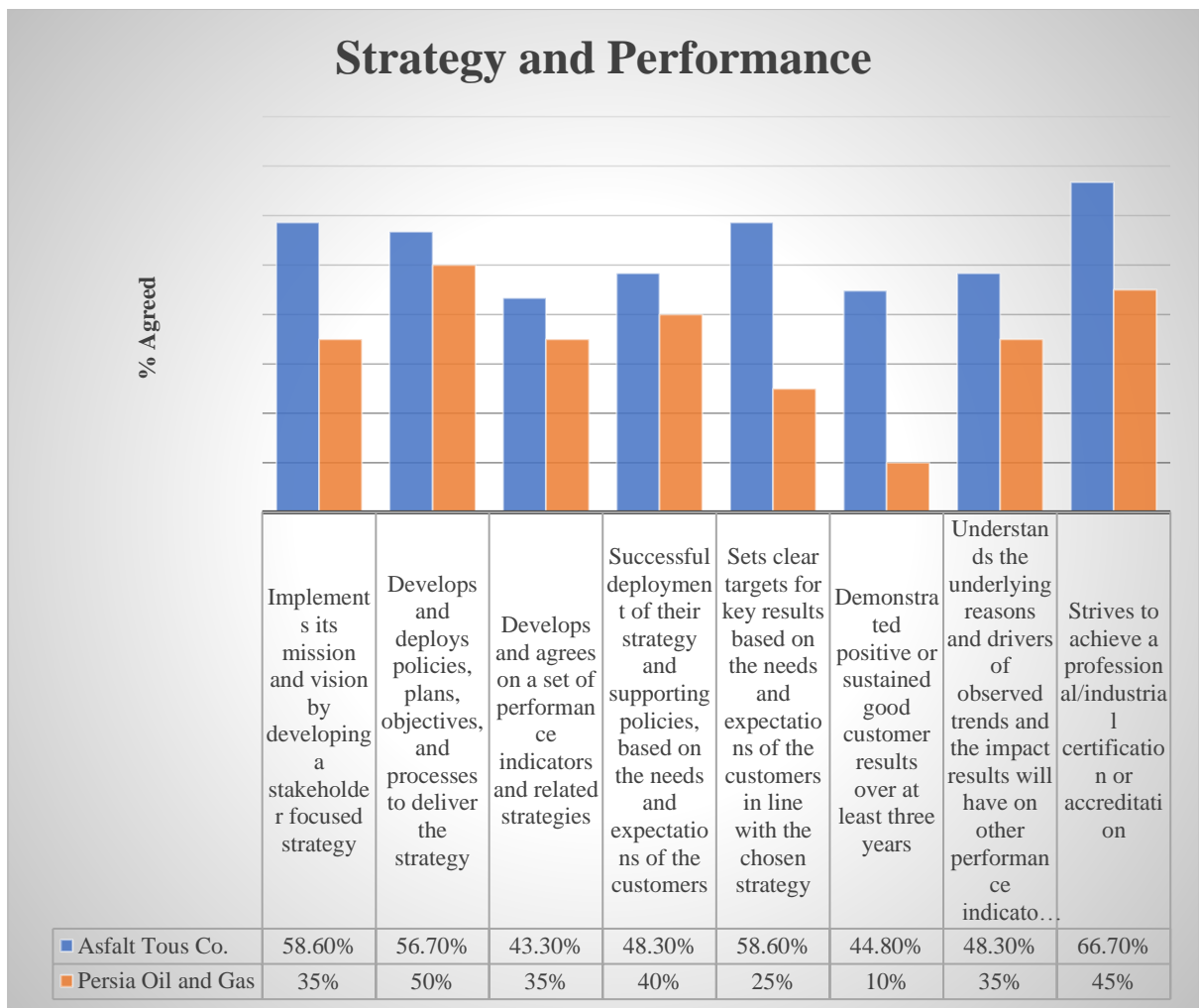


Figure 7. 3: Different Strategy and Performance Factors and The Percentage of Who Positively Agreed

The pie chart below shows the average percentage of the employees who responded positively about strategy and performance. The comparison shows the organisation that has a better strategy and performance based on the responses.

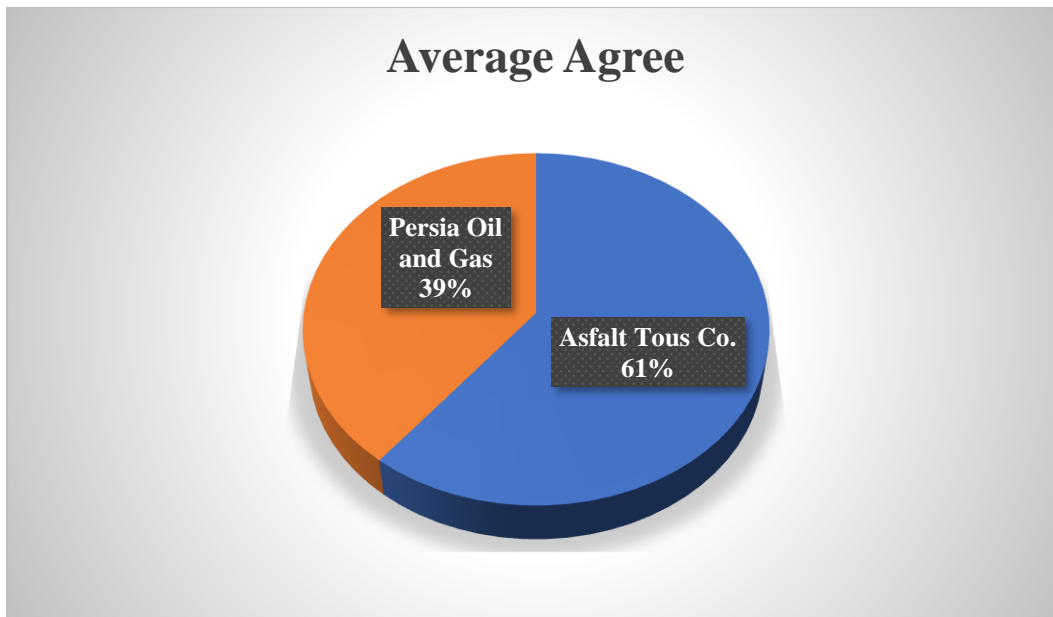


Figure 7. 4: Average Percentage for Persia Oil and Gas and AsfaltTous Co.

Figure 7.4 shows that AsfaltTous Co. had a higher percentage of average people who agreed that the organisation had better strategy and performance. Persia Oil and Gas shows slightly lower average percentage an implication that employees feel that the organisation has not done enough, and there is room to improve. As stated by Hofstede (1994) organisations can be distinguished from the other based on their culture. In this regard, the strategy and the performance of the two companies distinguish them.

A Strategy is a leadership skill that is executed by leaders. Leaders play a critical role in strategising the organisation to fit in the market. A strategy is achieved through efficient management and coordination of all stakeholders involved. To achieve excellent strategising, the leaders require strong leadership skills that necessitate the application of the productive strategy. The leaders must be cognizant of the corporate strategy and demands to be able to translate and reposition the corporate strategy to meet the corporate culture. The leader can, however, fail if he is not able to manage, harmonise and harness the potential that lies in the rich organisation culture.

A culture-based strategy creates is implementable by the stakeholders who implements the mission and vision of the organisation. According to the respondents from AsfaltTous Co., the organisation implements its mission, vision by developing a stakeholder focused strategy. A

stakeholder strategy requires that the stakeholders cooperate in identifying the social and the environmental issues that affect the company (Mwangi, 2018). AsphaltTous agrees to this and 58.6% agrees that the organisation implements its mission and vision by developing a stakeholder focused strategy. Persia Oil and Gas fails to recognise the value of stakeholders focused strategy since 35% agreed that the organisation implements its mission and vision by developing a stakeholder focused strategy. Compared to AsphaltTous Co., Persia Oil and Gas is less reluctant to develop a culture that is stakeholder focused for better performance of the organisation. As stipulated by Mwangi (2018), the culture-based strategy is essential for the implementation of the Total Quality Management.

Strategising necessitates an organisation to develop and deploy policies, plans, objectives and processes to deliver the intended strategy. Figure 7.3 shows that 56.7% and 50% agreed that AsphaltTous Co. and Persia Oil and Gas respectively develop and deploy policies, plans, objectives and processes to deliver the strategy. On this aspect of strategy, both companies received positive response surpassing the 50% mark an indication that there is good progress. A strategy is not enough but its implementation, hence if an organisation fails to implement the adopted strategies is likely to fail. According to Al-Shammari (2000), the strategies and methodologies are the greatest hindrance to the application of the TQM and thus not solely related to TQM principles. It is, however, significant to note that AsphaltTous and Persia Oil and Gas are keen to develop as well as deploy the objectives, plans, and processes for the successful delivery of the strategy.

As shown in Figure 7.3, AsphaltTous Co. is better placed in the development of the performance indicators and related strategies compared to Persia Oil and Gas. Results show that while 43.3% have confidence that AsphaltTous Co. develops and agrees on a set of performance and indicators and related strategies, only 35% agrees about the same at Persia Oil and Gas. The implication is that although AsphaltTous Co. is better than Persia Oil and Gas, they are both weak in the development of the performance indicators and related strategies. The percentages of the people that agreed are less than half showing a significant low move towards accomplishing the goal.

Similarly, both AsphaltTous and Persia Oil and Gas show low levels of successful deployment of their strategy and support for policies based on the needs and expectations of the customers. The percentage of the people who agreed that the former determines the successful deployment

of strategy and supporting policies based on the needs and preferences of the customers is 48.3% and the latter 40%.

Findings show that the percentage that agreed that AsphaltTous Co. and Persia Oil and Gas sets clear targets for key results based on the needs and expectations of the customers in line with the chosen strategy is 58.6% and 25% respectively. However, the response in favour of the statement at Persia Oil and Gas was significantly low compared to AsphaltTous Co. The statistics show that the latter organisation is better in developing targets that meet the customers' needs as per the organisation strategy. Customers are seen as a very critical component of the organisation 's success. The findings agree with the findings of Awadh and Saad (2013), who posited that the quality of an organisation is linked to its customers.

Figure 7.4 shows that AsphaltTous is on average, a better organisation compared to Persia Oil and Gas. The same findings are depicted by the strategy and performance parameter stating that organisations demonstrate positive or sustained good customer results over at least three years. With a percentage of 44.8%, AsphaltTous Co. demonstrated that its relationship with customers was excellent and they were happy with that although this was not satisfactory. The percentage is still low although better compared to Persia Oil and Gas, which had a significantly low percentage of 10%. Relationship with customers is essential in measuring and determining the quality of an organisation. Sadabad and Pathirage (2017) quality are connected to the services and relationships that satisfy the desires and needs of the customers that create higher value. Hence, without proper customer relationship, the value and quality of the organisation are undermined, and the two companies are moving towards undermining that quality value.

The findings show insignificant agreement on whether both companies clearly understand the underlying reasons and drivers of observed trends and the impact results will have on other performance indicators and related outcomes. At AsphaltTous and Persia Oil and Gas 48.3% and 35% respondent in the affirmative, as shown in Figure 7.3. The percentages of the two companies are less than half showing that the majority feels that the organisation does not understand clearly the underlying reasons and the drivers that govern observed trends and results depicted by the performance indicators and outcomes measures. AsphaltTous showed better performance than Persia Oil and Gas. The results imply that the leaders are not concerned with the performance of the organisation neither the quality culture that can aid in the improvement of the organisation 's performance.

Based on the findings, 66.7% and 45% of the respondents alluded that AsfaltTous Co. and Persia Oil and Gas strive to achieve a professional/industrial certification or accreditation, respectively. From the results, great efforts are being made to ensure that there are certification and accreditation that allow the organisation to operate in accordance with the law. Between the two companies, AsfaltTous has made tremendous efforts to ensure that it is accredited and certified to offer certain services. Albeit, it has made efforts, the majority believes that Persia Oil and Gas is doing little to ensure accreditation. Accreditation denotes that the organisation complying with the set standards of operation and hence is trusted with offering quality products. The result, therefore, shows that there is more trust with AsfaltTous than there are with the Persia Oil and Gas organisation.

In line with literature review, an effective strategy is like the steering wheel that keeps companies on a proper and continuous track towards its goals as well as related vision, mission. (Nasseef, 2009). Furthermore, Dale et al. (2013) stated that companies intending to implement successful quality management needs to have a precise strategic vision for the future and remain focused on it in order to attain their goals through the implementation of the organisation's mission.

The review of the interviewee's answers linked to the strategy and performance showed that an effective strategic vision that integrated quality in the organisation 's strategy in addition to deploying the best performance, were essential to pave the way for successful TQM implementation.

The primary findings from the analysis of the questionnaire survey data related to the strategy and performance in figure 7.4 shows the level of participants' agreement for these statements is moderate. This means that an average half of all respondents believed that the organisation had not implemented or considered the issues related to strategy and performance. This might be attributed to the lack of appropriate understanding regarding the significant role of strategy and performance for achieving successful TQM implementation.

7.1.4 Process and Value Creation (PVC)

Culture is a conglomerate of developed behaviours that people within a society possess and display in work (Sadabad & Pathirage, 2017). As a multifaceted entity, culture encompasses

ethics, conventions, faith, regulations, art and information characterising a group in the society. Iran is among the best oil-producing countries in the world and process and value plays a critical role in their leading position. The country realises that oil and gas are fundamental requirements in every economic sector, not only for employing many citizens but also in pulling together various sectors. Due to its apt significance, the oil and gas industry stimulates value creation to maintain a chain of customers. Iran, which is among the Middle East countries, has maintained sustained development through the development of the number of substantial projects, both offshore and onshore. There is also the development of the ongoing quantity of indispensable infrastructure projects and some in the planning stages. Iran's oil and gas industry has, therefore, become a complex and multifaceted business compared to what used to be done in the past.

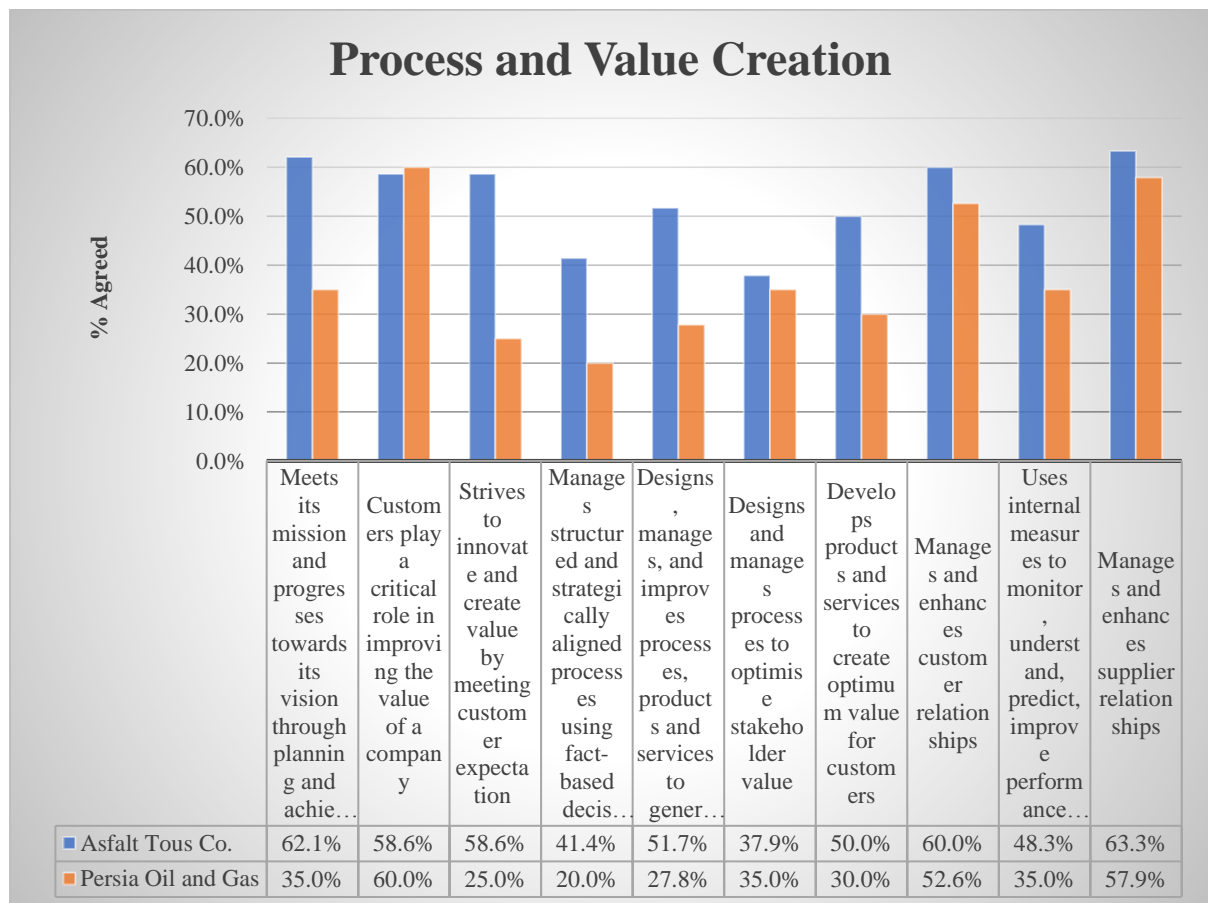


Figure 7. 5: Different Process and Value Creation Factors and Percentage of Who Positively Agreed

The pie chart below shows the average agreed percentage for the two oil and gas companies in Iran.

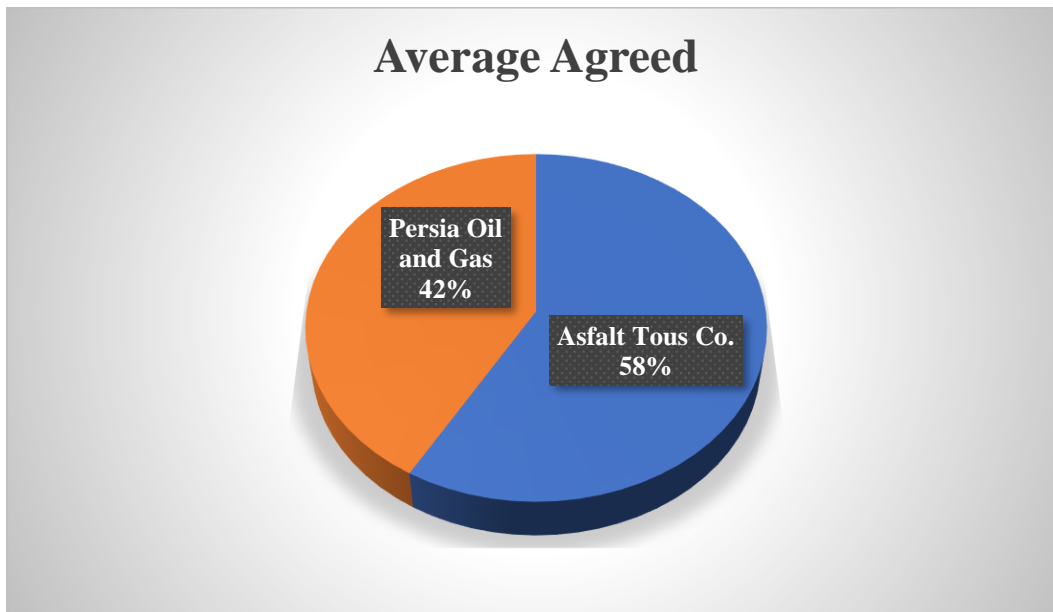


Figure 7. 6: Average Percentage for Persia Oil and Gas and AsfaltTous Co. Process and Value Creation

From the pie chart, AsfaltTous Co. has better rating index compared to Persia Oil and Gas. The average percentage of the respondent who agreed that the companies create process and value was 58% and 42% for AsfaltTous Co. and Persia Oil and Gas. The former is hence better in terms of implementing strategies that lead to the actualisation of the process and creating value.

In Figure 7.5, 62.1% of respondents agreed that AsfaltTous Co. meets its mission and progresses towards its vision through planning and achieving a balanced set of results that meet both the short- and long-term stakeholders' needs. In comparison, Persia Oil and Gas, only 35% agreed. A mission that is not met is as good as dead, and hence, whenever an organisation develops a mission, it must be guided by it and strive to achieve it at whatever cost. Mission or vision act as the guiding principle towards the direction and pace that the organisation will progress. Persia Oil and Gas have low mobility in meeting the mission and vision that the managers set and this may adversely affect the attainment of the balanced set of results both in the long run and short run.

AsfaltTous Co. and Persia Oil and Gas, 58.6%, and 60% respectively agreed that customers play a critical role in improving the value of an organisation. The conventional wisdom is that through the customers' demands, the organisation works towards meeting them, and this compels the organisation to improve its value. As depicted in Figure 7.5, respondents from Persia Oil and Gas have more trust that customers determine greatly the extent to which the organisation should strive towards innovating and creating value to meet the needs and expectations of the customers.

In a bid to meet the needs and expectation of the customers, an organisation must strive to innovate to improve the value of the product and services provided. AsfaltTous ranks better compared to Persia Oil and Gas in innovating and creating value to meet the expectations of the customers. The percentage of the respondents who say that the former innovates and create value by meeting customer is 58.6% and 25% for the latter. As an implication, AsfaltTous has had greater efforts in meeting the expectations of the customer. All the efforts that a organisation engages in are intended towards meeting the expectation of the customer since if the customer is not satisfied the organisation will not sell and will certainly make loses and lose the value of operating. In this regard, AsfaltTous is moving in the right direction, but Persia Oil and Gas have to make greater efforts to meet customer needs. According to Cameron and Stanley (2017), oil and gas companies assist their esteemed customers in use and enjoy the products and services efficiently through innovative means.

AsfaltTous Co. is better in the management of structured and strategically aligned processes using fact-based decision making to create balanced and sustained results. The percentage of the respondent that agreed to the statement was 41.4% while at Persia Oil and gas was 20%. Awadh and Saad (2013) posited that organisation culture through which the cognitive systems of human beings ensue, aids in the improvement of both the decision making and thinking. Hence an effective organisation culture helps in the improvement of the business decisions. In this regard, the success of AsfaltTous in the use of fact-based decision makings impeded in the organisation culture. Persia oil and gas, which has been shown to have poor organisation culture has failed to strategically align its processes using a fact-based decision-making process for balanced and sustained results.

More than 51.7% agreed, that AsfaltTous Co., designs, manages, and improves processes, products and services to generate increasing value for customers and other stakeholders while

at Persia Oil and Gas 27.8% agreed to the same. The management is the one that characterises the service and people-centred values and business cultures. Leaders are the force that drive the quality culture that adds value to the services and products that customers receive (Zairi, 1994). Leaders in the two companies have the responsibility to establish an organisation quality culture that is people-centred be it workers, customers or other stakeholders.

Customers and employees are important in an organisation but also the stakeholders are also important, and the companies have the duty to ensure that their value is optimised through suitable processes. Figure 7.5 shows that 37.9% and 35% agreed that AsphaltTous and Persia oil and gas companies designs and manages processes that optimise stakeholders' value. Albeit AsphaltTous show higher response values, the two are less than 50% showing that despite the initiative, they are yet to reach optimal levels. Both companies have the responsibility to ensure the stakeholders' value is improved for effective integration of the decisions that lead to smooth flow of operations.

At AsphaltTous Co., 50% agreed that the organisation develops products and services to create optimum value for customers, while only 30% agreed at Persia Oil and Gas. The results depict low concerted efforts towards developing products and services that can create optimum value for the customers. The quality of a product is inherent in a value as a result, improving the value of the products improves its quality and further attracts customers.

At AsphaltTous Co., 60% agreed, while 52.6% agreed at Persia and Oil and Gas that the organisations manage and enhance customer relationships. The results positively show that the two companies value the customer relationship and hence the high scores of agreements from the respondent. There is, however, better scores at AsphaltTous Co. than Persia Oil and Gas showing that the former is doing better in terms of ensuring that the customers relate well with the organisation.

At AsphaltTous Co., 48.3% agreed, and 35% agreed at Persia Oil and gas that the organisation uses internal measures to monitor, understand, predict and improve the performance of the organisation and predict the impact on the perceptions of external customers. From the interviews questions, AsphaltTous uses the System and Plans department to address the quality issues as well a monitor and control the quality system. The monitoring and control processes reveal that the non-compliance with the requirements and the standards has been on the rise. Such non-compliance is the facilitating factor to the low levels of prediction of perceptions of

external customers. There is also lack of clear staff training throughout the organisation as it requires a lot of energy. Besides, non-compliances curtail the implementation of TQM and consequently the performance and productivity of the organisation.

At AsfaltTous Co., 63.3% agreed, while at Persia Oil and gas, 57.9% agreed, that the organisations manage and enhance supplier relationships. Suppliers are key stakeholders who supply the organisation with essential services necessary to sustain the processing of the main products the organisation deal with. Hence, the lack of good relationship with the suppliers can create severe challenges that hinder the organisation operations. The statistical data shows that the proves and value creation component had an average score of 34.66 for AsfaltTous Co. and 33.86 for Persia Oil and Gas. The Figures show that AsfaltTous Co. is generally better in-process and value creation than Persia Oil and Gas organisation.

Process and value creation identified by other studies which looked at specifically in establishing a quality culture. Al-Khalifa and Aspinwall (2000) highlighted that a process-centric organisation is at the heart of creating a quality culture. The importance of process and value creation also supported by other research studies that specifically looked at the importance of customer management and the implementation of a culture of customer satisfaction orientation through meaningful relationships. For example, according to Talib (2005) specifically referred to the importance of integrating strategic planning with process management for driving value for the benefit of the end customers.

The results from the interview data showed that process and value creation had a crucial role in implementing quality culture and management as well as understanding the steps need to be taken for implementing a successful TQM for the organisation in oil and gas industry. The primary findings from the analysis of the questionnaire survey data related to the process and value creation in figure 7.6 shows the level of participants' agreement for these statements is not high specially at Persia oil and gas. This means that an average half of all respondents believed that the organisation had not implemented or considered the issues related to process and value creation. The findings from interview and questionnaire survey are supported existing literature review. As an example, according to Kanji (2012), in a TQM organisation, the focus is not on formal systems or structures. Rather, the focus is placed on setting up process management teams to solve the organisation problems. The results of the finding and the

literature review indicated the importance of process and value creation as one of the main factors required for the implementation of successful quality culture and management.

7.1.5 Resources, Knowledge and Partnerships (RKP)

From the interviews, the respondents indicated that the political and financial turmoil has affected the country and as a result AsphaltTous Co. has to focus on the financial side of motivation for the employees to improve the performances. The organisation employs resources such as training course, seminars, workshops, speeches, booklet and the common billboards, social media and networks such as billboards placed strategically placed at the restaurant and entrances. Interviews revealed that people are the major source of knowledge and resources are aimed at increasing it. According to the interview responses, some employees responded that Persia Oil and Gas does not emphasize the importance of people as a critical asset. Some interviewee who acknowledged that the organisation emphasises the importance of people as the crucial asset by evaluating their performance. However, one of the interviewees that Asphalt Tous Co. responded that the organisation highlights the importance of people as a critical asset by having job security, which implies extending their contracts. There is hence the more significant concern about the importance of resources, knowledge and partnership at Asphalt Tous Co. than it is at Persia Oil and Gas. Finances are part of the resources that an organisation can use to run its operations. According to Ashwarya (2017), financial motivation improves the performances of workers and the organisation. AsphaltTous Co., uses training courses, seminars, workshops, speeches, booklets, and conventional billboards, social media, and networks such as billboards placed strategically placed at the restaurant and entrances. Subsequently, the organisation also uses social media platforms such as Google, YouTube, linked in to advertise its activities in the gas and the oil industry. Now that the employees are being perceived as the critical resource in this fuel and gas organisation, much has been emphasized on networking and team-building amongst the employees to ensure the welfare needs have been addressed. Still, on the interview responses, the question on the salary and remuneration in the oil and gas wells has been addressed. Most of the companies are now putting much emphasis on ensuring that they give their employees a generous package and ensuring that safety is guaranteed at their places of work.

The Figure below shows that AsphaltTous Co. is better in terms of utilizing and creating sustainable resources, knowledge and ensuring excellent partnership compared to Persia Oil and Gas.

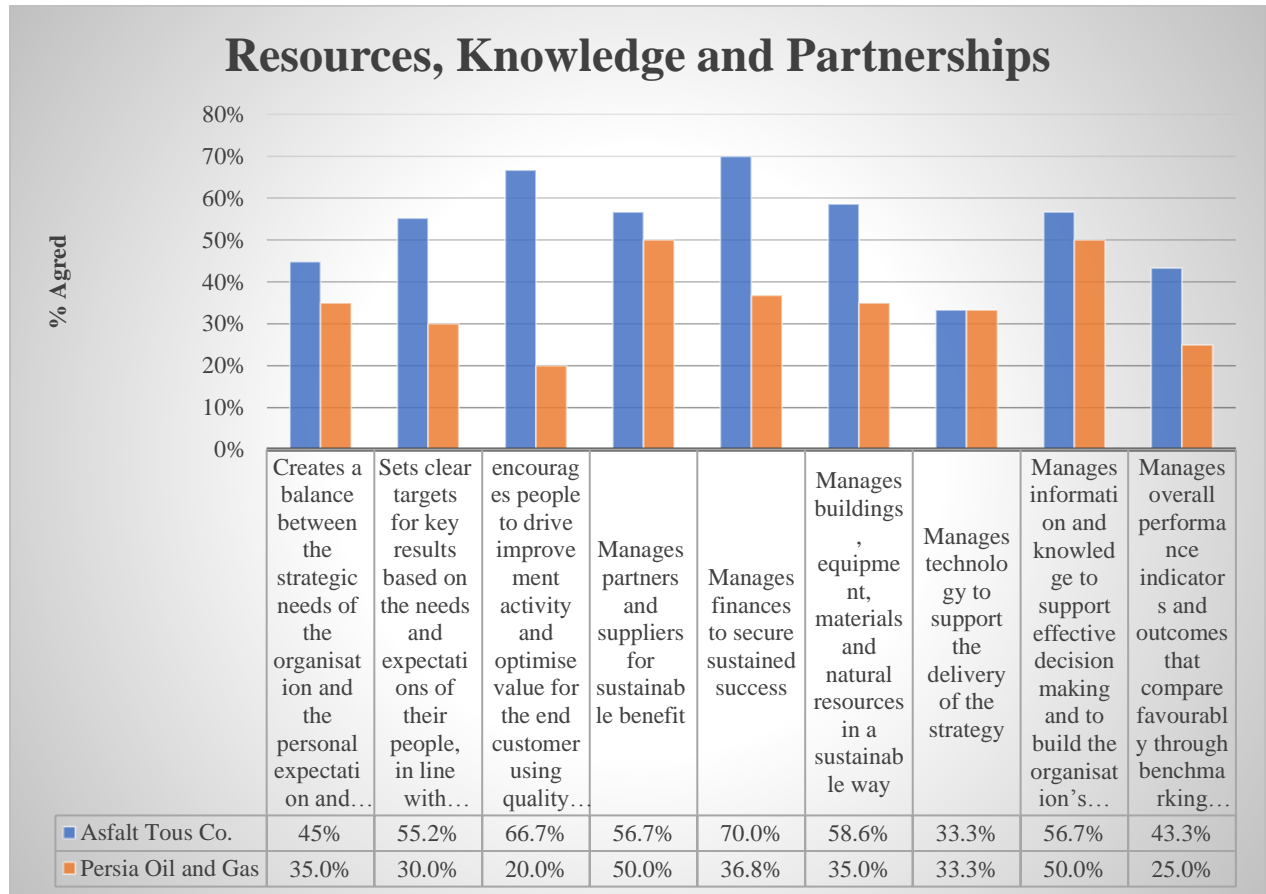


Figure 7. 7: Different Resources, Knowledge and Partnerships Factors and Percentage of Who Positively Agreed

From Figure 7.7 AsphaltTous scored higher than Persia Oil and Gas on all factors except on the management of technology and support for the delivery of strategy where they both scored the same. The results show that the organisation has made several efforts towards attaining excellence and winning the market share in the region.

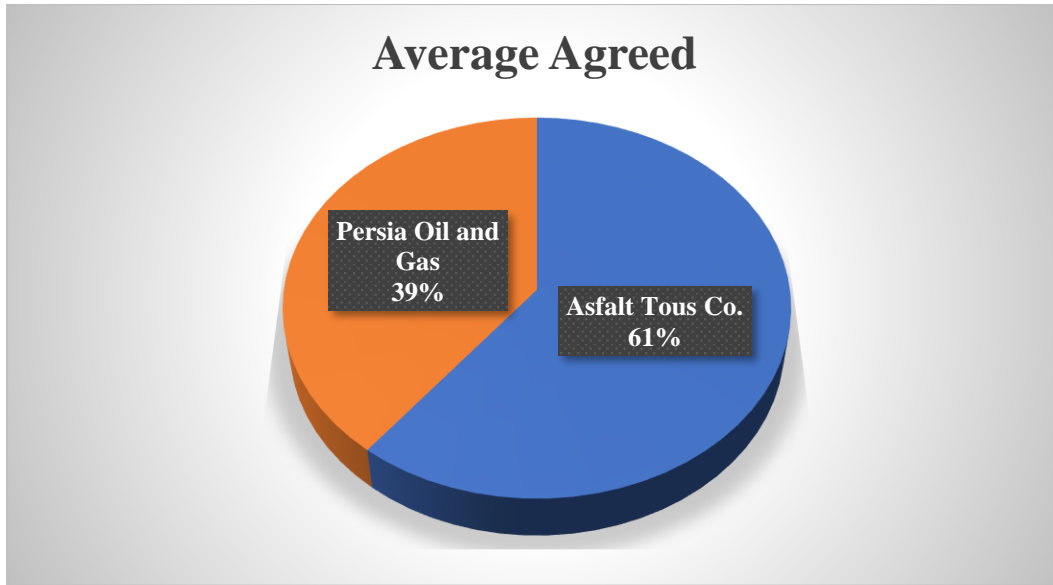


Figure 7. 8: Average Percentage for Persia Oil and Gas and AsfaltTous Co. Resources, Knowledge and Partnerships

From Figure 7.8, it is evident that AsfaltTous Co, does better in improving the resources, knowledge and partnership of the organisation than the Persia Oil and gas organisation does. The latter has a greater work than the former in meeting the target mark and hence maximise on the performance and profit. Knowledge of management practices, the essential tools and the tactics within the total quality management are highly critical in the management of projects (Sadabad & Pathirage, 2017). In this regard, with efficient resource, knowledge and partnership management, the TQM of the organisation will improve making the management of projects better.

The percentage of employees that agreed and agreed that AsfaltTous Co. and Persia Oil and Gas creates a balance between the strategic needs of the organisation and the personal expectation and aspiration of people to gain their commitment and engagement is 44.8% and 35% respectively. The scores of both companies are less than 50% depicting low efforts towards improvement. Despite AsfaltTous Co. having higher scores than Persia Oil and Gas, their difference is minimal and this shows they both reluctantly create a balance between the strategic needs of the organisation and the personal expectation and aspiration of people for commitment and engagement. There is a neglect of one item and or a greater focus of one item leaving the other creating an imbalance.

The percentage that agreed, that AsphaltTous Co. and Persia Oil and Gas sets clear targets for key results based on the needs and expectations of their people, in line with their chosen strategy is 55.2% and 30% respectively. Targets creates a push that the organisation has to always move towards achieving. The targets are, therefore, the force that keeps the organisation moving towards the intended direction. The results as shown in Figure 6.7 show that AsphaltTous organisation has better performance in terms of ensuring that the organisation is aligned towards its targets. Besides, the organisation considers the needs and expectations of its people when setting the targets.

There are 66.7% and 20% of people who agreed that AsphaltTous organisation and Persia Oil and Gas encourages people to drive improvement activity and optimise value for the end customer using quality tools, excellent methods and innovation thinking. The results imply that AsphaltTous organisation is significantly better than Persia Oil and Gas in encouraging people to drive improvement activity and optimise value. Persia Oil and Gas is too low towards reaching the height reached by AsphaltTous.

The percentage that agreed, that AsphaltTous Co. and Persia Oil and Gas manages partners and suppliers for sustainable benefit is 56.7%, and 50% respectively. Unlike other resource, knowledge and partnership parameters, the two companies are trending at the same rate in the management of the partner and suppliers for sustainable benefit. The suppliers and the partners in business are key stakeholders in any business and, therefore, determine many operations and activities of an organisation. Hence, the high score demonstrates that the two giants in the Iran Oil industry value suppliers and partners as key stakeholders. The companies possess greater potential to improve their relationship with the partners and suppliers for better work relationships and partnership.

At AsphaltTous Co., 70% of employees agreed that the organisation manages finances to secure sustained success. Conversely 36.8% agreed that AsphaltTous Co. manages finances to secure sustained success. Based on the responses, both AsphaltTous Co. and Persia Oil and Gas have better management of its finances to secure sustained success. The difference between the two companies is nearly half in favour of AsphaltTous which shows exceedingly excellent results in the management of finances.

At AsphaltTous Co. and Persia Oil and Gas 58.6% and 35% of the employees agreed, that the organisation manages buildings, equipment, materials and natural resources in a sustainable

way. A comparison between the two companies shows that AsphaltTous Co. has better sustainable ways of managing its resources than Persia Oil and Gas.

Although the two companies have done poorly in the management of the technology to support the delivery of the strategy, this is the only resource, knowledge and partnership parameter that the two companies have the same percentage. At AsphaltTous Co., 33.3% similar to 33.3% at Persia Oil agreed that the organisation manages technology to support the delivery of the strategy. The implication is that technology is rarely used in the deployment of a strategy. In the digital era, this shows that there is an urgent need for the organisation to embrace technology for effective strategic development. In the 21st century, technology is becoming a necessity and a requirement.

At AsphaltTous Co., 56.7% agree that the organisation manages information and knowledge to support effective decision making and to build the organisation's capability. At Persia Oil and Gas, 50% agreed to the statement. The two companies differ by 6% which is not a highly significant difference. Both companies are at the same level of supporting effective decision making and building organisation capability. The potential of an organisation lies in its capability, and the results depicted in Figure 7.7 shows that the two companies have capabilities.

AsphaltTous Co., 43.3% agreed that the organisation manages overall performance indicators and outcomes that compare favourably through benchmarking and external comparison in all the key areas. At Persia Oil and Gas, 25% agreed that the organisation manages overall performance indicators and outcomes that compare favourably through benchmarking and external comparison in all the key areas.

The AsphaltTous organisation has made tremendous investment in knowledge management to increase the organisations in today's competitive environment. This move is in line with the observations made by Ashwarya (2017) that much attention has directed to resource, management, and partnership of Iran's oil and gas industry with the backbone being the economy. Managers in the oil and gas have taken the initiative of proactively preparing their members and organisations on the implementation of the knowledge management systems.

Resource, knowledge and partnership acknowledged by other studies which looked at specifically in establishing a quality culture. Kamala and Lingarage (2007) clearly stressed the

importance of teamwork in achieving quality enhancement and value optimisation, as well as the role of suppliers in improving quality and facilitating the delivery of sustainable value to end consumers. Fryer et al. (2007), it also stressed the value of enabling people, through training and learning, to maximise quality and promote high-quality transactions for end-customers. In addition, they established the importance of teamwork and the role of suppliers in maximising value. In order to ensure maximum knowledge and understanding of the principles of quality management, adequate training and development should be offered to all employees as, without employee training, the organisation will face challenging times to solve problems and the attitude and behaviour of employees will not be directed towards the transformation of a quality culture (Dale et al., 2013).

The interview results underlined that, since TQM is the responsibility of everyone within the organisation, all staff members should undergo adequate and advanced training and development courses to ensure the complete understanding and comprehension of TQM and to improve their knowledge and experience in order to carry out their duties and activities in the most appropriate manner. Several studies completely endorse these results. At Persia oil and gas, the primary results of the questionnaire survey data shows, an average of 61 % of the total survey respondents claimed that the organisation had not discussed or considered problems related to training and growth. This may be due to a number of factors, such as lack of organisation resources and lack of proper assessment of these programmes. The results of the research findings and the literature review have established the significant role of training and development for all staff as one of the main factors needed for the implementation of quality culture within organisations.

7.1.6 Continuity and Sustainability (CS)

The statistical analysis shows that the average score for the level at which the departments of AsfaltTous Co focused on continuity and sustainability was 37.86, with a standard deviation of 14.81. Conversely, the average score for the level at which the departments of Persia Oil and Gas organisation focused on continuity and sustainability was 34.85, with a standard deviation of 14.83. The results show that AsfaltTous Co. is better in ensuring continuity and sustainability compared to Persia Gas and Oil. However, the standard deviation shows that two companies

differ moderately in their continuity and sustainability, the observed values varied significantly across the two sampled companies. The same is depicted in Figure 7.9 and Figure 7.10 where AsphaltTous is a better organisation in terms of ensuring continuity and sustainability.

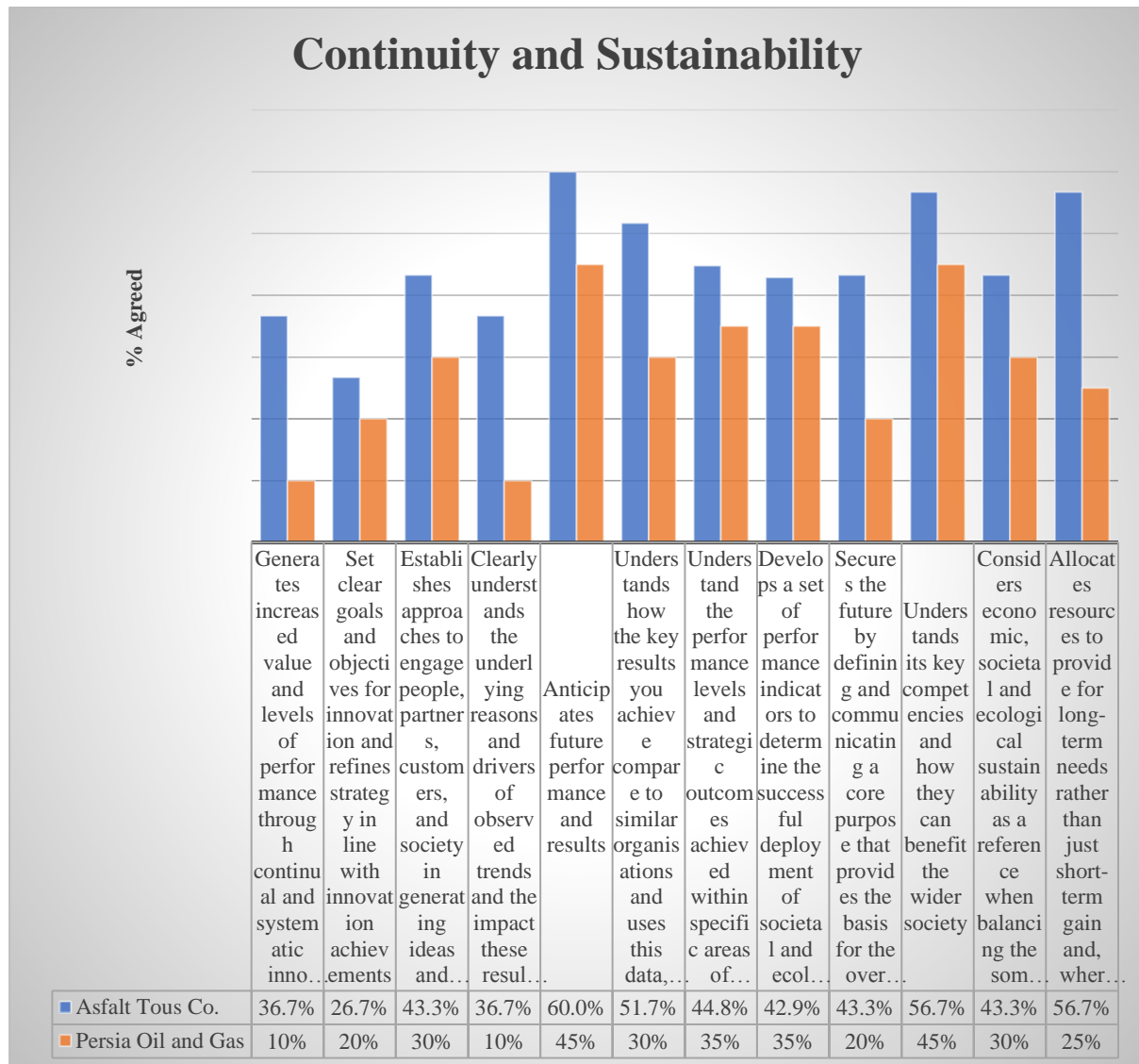


Figure 7. 9: Different Continuity and Sustainability Factors and Percentage of Who Positively Agreed

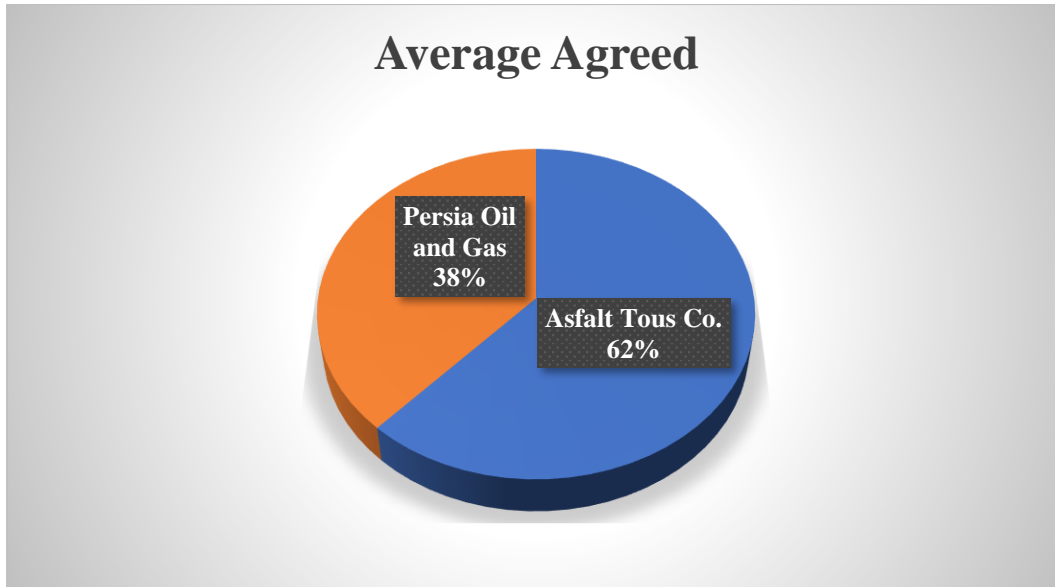


Figure 7. 10: Average Percentage for Persia Oil and Gas and AsfaltTous Co. Continuity and Sustainability

As is the case with other factors, AsfaltTous Co. has done better in ensuring continuity and sustainability than Persia Oil and Gas. The industry reaps much more from AsfaltTous than what it reaps from Persia Oil and Gas. The latter has a greater gap to fill than the former.

Questionnaires responses show that at AsfaltTous Co., and Persia Oil and Gas 36.7% and 10% agreed that the organisation generates increased value and levels of performance through continual and systematic innovation by harnessing the creativity of your stakeholders. At Persia Oil and Gas, registered extremely low score implying that its efforts are also too low. AsfaltTous also did not have high scores because it never reached 50%, however, the difference between the two is significant. As established in previous sections, the level of technological investment is very low at Persia and this is the facilitating factor for lack of better performance.

There is a moderate difference between AsfaltTous and Persia Oil and Gas on setting of clear goals and objectives for innovation achievement. At AsfaltTous Co. and Persia Oil and Gas 26.7% and 20% respectively agreed that the organisations set clear goals and objectives for innovation and refines strategy in line with innovation achievements. According to Massarrat (2004), there have been estimations that, without proper management of the Iranian oil mines, continuity of the oil supply in the country is looking at impending danger. There is hence need

to set clear goal and objectives that will ensure proper management of the mines and further ensure continuity and sustainability of the mines.

At AsphaltTous Co. and Persia Oil and Gas, 43.3% and 26.7% agreed that the organization establishes approaches to engage people, partners, customers, and society in generating ideas and innovation. Both companies are less than 50% hence have scored very low. Society is the surrounding within which an organisation exists and the organisation needs to be cognizant of the people living within through offering corporate social responsibility. Through CSR, the organisation gets into the hearts of the people and moves in unison.

At AsphaltTous Co. and Persia Oil and Gas 36.7% and 10% agreed that the organisation clearly understands the underlying reasons and drivers of observed trends and the impact these results will have on other performance indicators and related outcomes. Although those who disagreed are more, the percentage that agreed that AsphaltTous Co. clearly understands the underlying persons and drivers is higher compared to that of Persia Oil and Gas.

The percentage that agreed that AsphaltTous Co. and Persia Oil and Gas anticipates future performance and results was 60% and 45% respectively. A dominant oil companies like AsphaltTous Co. should be on the look to attract new projects for the future and also invest highly in the oil and gas companies. Also, the organisation should take part in acquiring tenders to expand on the existing projects an also develop new plans to ensure there are continuity and sustainability of the gas products to the economy. With expanded projects, the result and performance will also rise.

At AsphaltTous Co., and Persia Oil and Gas the percentage of employees who agreed that the organisation understands how the key results you achieve compare to similar organisations and uses this data, where relevant, for target setting is 51.7% and 30% respectively.

The percentage that agreed that AsphaltTous Co. and Persia Oil and Gas segments result to understand the performance levels and strategic outcomes achieved within specific areas of the organisation is 44.8%, and 35% respectively.

At AsphaltTous Co., and Persia Oil and Gas, the percentage of employees who agreed, that the organisations develop a set of performance indicators to determine the successful deployment of societal and ecological strategy and related policies, based on the needs of the external

stakeholders is 42.9% and 35% respectively. Based on the responses, AsphaltTous Co. has better reviews and has better capacity to develop a set of performance indicators compared to Persia Oil and Gas

The percentage that agreed that AsphaltTous Co. and Persia Oil and Gas secures the future by defining and communicating a core purpose that provides the basis for the overall vision, values, ethics and corporate behaviour is 43.3%, and 20% respectively. For Iran to continue providing continuous and sustainable oil for the nation and enough for export, a lot of considerations and goals have to be set both short term and long-term goals. Some of the set goals are meant to modify consumption trends while others were keen on focusing on issues about rates of exports and production.

The percentage that agreed, that AsphaltTous Co. and Persia Oil and Gas understands its key competencies and how they can benefit the wider society is 56.7% and 45% respectively.

At AsphaltTous Co. and Persia Oil and Gas the percentage that agreed that the organisation considers economic, societal and ecological sustainability as a reference when balancing the sometimes-conflicting imperatives they face is 43.3% and 30% respectively. Mohamedi (2010) added that with the evidenced high economic and population growth in the country at the moment, the gas reserves might not sustain them in the future. For the gas reserves to be significant, population growth has to be controlled, or the mines added to meet the domestic needs of each individual. Oil and gas companies in Iran have to speed up the development rates of the gas reserves to meet the demand of the ever-rising population.

At AsphaltTous Co., and Persia Oil and Gas the percentage of employees who agreed that the organisation allocates resources to provide for long-term needs rather than just short-term gain and, where relevant becomes and remains competitive is 56.7%, and 25% respectively. As a result, a greater percentage of people believe that Persia Oil and Gas allocate resources for long-term needs than short term needs compared to AsphaltTous Co.

It is evident from previous studies and the findings from this study that continuity is an essential factor and a sufficient way of establishing a sustainable culture of quality for a modern organisation operating in a business environment that focuses on value from a knowledge-based perspective. Organisations are encouraged to put more effort into goals such as sustaining and improving quality, increasing efficiency, reducing lead times and

improving reliability of delivery if they wish to use continuous improvement as a continuous method to achieve a competitive position (Hyland et al., 2000).

Key findings from the semi-structured interviews showed that the majority of interviewees found out that innovation and continuous improvement were the backbone of every phase of the implementation of quality culture. It had an important role to play in improving the efficiency of the whole organisation in order to build a culture of quality and produce better results in the future. This further confirms the obtained results of the questionnaire survey, which showed that 38% and 62% of respondents confirmed their support on continuity and sustainability. The main results of both interview and questionnaire survey data were verified by the findings of the literature review. For example, according to Chin and Pun (2002), the main objective of quality management implementation is to attain sustainable and continuous improvement in performance and business excellence. On the basis of the previous discussion, it is clear that continuous improvement was considered to be a significant factor needed for the implementation of the quality culture in the business.

7.2 Conclusions and Recommendations

The objective of this study was to investigate the challenges that the Iranian oil and gas industry face as they embrace the quality management guidelines and in creating the operational quality cultures. The study further explores the definitions of culture and how it is generated in the oil and gas organisations as well as the effectiveness of the quality culture. With the growth in the global energy industry it becomes critical to assess the challenges that affect Iran and the Middle East region to establish factors that might impede the growth. In this regard, the study sought to identify the drivers, barriers and success factors when implementing or adopting a quality culture, and the implications and impacts of Iran's culture on quality for organisations in the oil and gas industry.

7.2.1 Conclusion

The soft and hard cultural skills majorly determine the quality of the culture in the organisations in the oil and gas industry. Quality has been described as the strategy to compete in the market with rivals. When determining the correlation between quality culture and the response variables namely, continuity and sustainability, strategy and performance, and resource,

knowledge and partnership, leadership and people, and process and value creation the value of R^2 was found to be 0.887. The value implied that the independent factors, continuity and sustainability, strategy and performance, and resource, knowledge and partnership, leadership and people, and process and value creation, account for 78.7% of the variations in the quality culture.

Based on the findings of this study, there is an apt need for improvement in the leadership of the organisations. The nature of the leadership within an organisation is of particular importance in determining whether TQM is likely to be successful. For instance, the leadership at Persia Oil and Gas fails to value and involve the employees in the decision-making process for strategic management. While the involvement of the people in the organisation has been found to successfully facilitate the improvement on the performance and the production of an organisation, the non-participatory style has not shown any such improvement (Yong & Pheng, 2008). Besides, a leader who always dictates and forcefully introduces changes in an organisation fails to integrate the needs and preferences of customers and people. It befits an organisation to develop a culture that is all-inclusive for the benefit of the entire organisation. Therefore, organisations with strong comprehensive cultures find it easy to apply a plethora of TQM elements, such as the leadership of top management, individuals, procedure, and supplier and consumer management. In this regard, a culture-based strategy is the most suited for the application of TQM. Then findings of the study further show that in the oil and gas industry, companies such as AsphaltTous Co. and Persia Oil and Gas derive the main intra-cultural characteristics from their leadership. Besides, leaders play a vital role in building consensus among organisational members to reach the common goal of quality improvement. The implementation of the TQM can, therefore, not be implemented through the non-participative and autocratic types of leadership style, however, democratic and participative leadership styles are efficacious.

The success of an organisation is highly dependent on the ability of the leaders and the people involved in the management of the organisation to direct the firm, regularly to generate or develop a cultural agenda that reflects their mission. Hence, having the right attitude towards achieving the prospects of the organisation determine the success, but the opposite determines the failure. The cultural philosophy is the fundamental source of business vision and value, and an organisation ought to implement suitable policies, practices and processes that are based on the right attitudes. Customers determine the value of an organisation and the services and

products it offers by looking at the quality associated with them. In this regard, the organisation has to ensure that the products and services are of excellent quality for the customers to be pleased with them and develop a personal touch. Leaders must, therefore, possess the leadership qualities that will cultivate a culture synonymous to the mission, vision, and the strategic goals of the organisation. This research demonstrated that leadership and people is a barrier to the successful implementation of quality culture in the oil and gas industry. Leaders care less for the people and do not value them as the most significant asset in the organisation. Workers, therefore, feel demotivated to work in companies. However, leaders at Persia Oil and Gas are the hard-hit and are less concerned with valuing their people or motivating them. The level of unprofessionalism among leaders is high; this hinders the organisation from executing its mandate. Asphaltous Co. is better although not satisfactorily. As a result, people have lost trust in their leaders, and as a result, the companies have failed in the implementation of the TQM, which requires a high presence of the quality culture. Findings show that oil and gas companies in Iran have no definite culture, and each organisation is the mastermind of its own culture. In this regard, an organisation's culture is its creation rather than that of the entire industry. Managers have the responsibility to carefully evaluate those values and present cultural fields to come up with a practical plan and associated policies that create an environment and cultural atmosphere.

Customers are driven to the organisation the quality of the products that the organisation produces. The organisation has to add value to its products and its operations. Otherwise, the organisation risks losing its esteemed customers and failing to gain new ones.

Leaders must be strong and committed to successfully endure the quality programs needed in the organisation. Managers should play a significant role in improving the quality of the entire organisation. Leaders cannot work in isolation with the customers and the works and should hence consider them by taking initiatives to make adjustments suitable for continuous improvement of quality. Involvement and valuing the employees is a requirement in instilling self-confidence and pride towards serving the customers. To achieve this, the leaders must provide necessary resources, equip them with knowledge and partner with to address the dynamic customer needs and demands in the markets. Besides resources, knowledge and partnership enable the workers to meet the worldwide competition for a better-quality product.

The results from the interview and the questionnaires show that AsphaltTous Co. preserves its long-term future by initiating several plans that attract new projects and also create internal strength. The organisation also preserves its long-term future is through the management of resources, taking part in bids and tenders for new projects, saving man-hours and cutting cost using efficient employee and optimising job site cost. Besides, the organisation achieves long-term future through the implementation of new systems and methods. AsphaltTous Co. does not use learning and innovation as a catalyst for ensuring a sustainable future. However, it has a good training plan to urge employees to learn more regarding their related tasks, an aspect that effect on their innovation. Also, the organisation lacks an organised particular way of organising innovation; neither does have a strong plan that defines the long-term strategic requirements and assessing sustainable capability. Like various Iranian companies, AsphaltTous Co. lacks an approach to corporate social responsibility related issues. The organisation lacks a dedicated measurement for tracking CSR related performance; neither does it have a proper procedure that provides help in sustainability and future preservation.

The critical factors on continuity and sustainability include increased value and levels of performance, continual and systematic innovation, engage people, partners, customer and society, anticipate future performance and results, transparent and accountable and allocate resources for long-term needs. These factors are of slight importance except the increased value and levels of performance which has significant importance.

From the below table which is comprised of the research aim and objectives as well as research questions, the initial list of anticipated contributions, it can be seen that the research has succeeded in answering the questions raised and fulfilled the tasks set out by the researched. The research comprised an attempt to examine the relevance of critical success factors of quality management in the oil and gas industry for creating an effective quality culture. It focused on a holistic review of critical factors of quality culture implementation through a comprehensive examination of the existing literature. This research produced a significant list of critical success factors that went through different levels of validation and modification before testing on a large sample of organisations. This study also depends on first-hand assessment of critical success factors implementation in different companies in the oil and gas industry in Iran. Lastly, this research guided to a broad range potential benefits that are of a tangible direct relevance to practitioners, but also provide an intangible contribution to the body of knowledge and to research design.

Table 7. 1: Research Aim, Research Objectives, Research Questions, and Anticipated Contributions

Research Aim	Met?
The research aim is to propose a guideline for efficient and successful implementation of a quality culture in Iranian oil and gas industry.	✓
Research Objectives	Met?
Determine quality and its management within oil and gas industry.	✓
Identify the implications and impacts of Iran’s culture on quality cultures for organisations in the oil and gas industry.	✓
Identify the critical success factors of quality culture within the oil and gas industry in Iran.	✓
Identify the drivers and barriers of culture development among oil and gas organisations.	✓
Propose guideline by the findings of this study in order to improve their performance and the role of quality culture in oil and gas companies	✓
Research Questions	Answered ?
What is a quality culture?	✓
What are the drivers, barriers, success factors and challenges faced when implementing or adopting a quality culture?	✓
What are the implications and impacts of Iran’s culture on quality cultures for organisations in the oil and gas industry?	✓
Contributions of this Research:	Met?
<ul style="list-style-type: none"> It will critically analyse the literature on quality cultures and in particular focus on theoretical contributions through empirical research of organisations in the Iranian oil and gas industry. 	✓
<ul style="list-style-type: none"> It will explore the relevance and applicability of generic critical success factors with specific relevance to the oil and gas industry in Iran. 	✓
<ul style="list-style-type: none"> It will document how various critical factors for implementing a quality culture are being implemented in the oil and gas industry in Iran through a case study approach. 	✓
<ul style="list-style-type: none"> It will propose a guideline for the adoption of a quality culture that will be suitable for the Iranian oil and gas industry. 	✓

7.2.2 Recommendations

The first recommendation is the implementation of the TQM can, therefore, not be implemented through the non-participative and autocratic types of leadership style, however, democratic and participative leadership styles are efficacious. One of the recommendations that the leaders should understand and institute appropriate soft factors to create conditions that facilitate the creation of quality culture necessary for the improvement of the organisation performances and productivity. Another recommendation is that the organisations should sustainably promote knowledge and manage verified and potential oil and gas resources to maximise the benefits.

Another recommendation is that both AsphaltTous Co. and Persia Oil and Gas should design a learning and innovation for sustainable future. As evident from the interview responses, the companies lack a systematic learning and innovative strategies that can ensure sustainability for future changes. Although AsphaltTous Co. has a good training plan to urge employees to learn more regarding their related tasks, an aspect that effect on their innovation, it is not sustainable. Also, the organisation lacks an organised particular way of organising innovation; neither does have a strong plan that defines the long-term strategic requirements and assessing sustainable capability

Another recommendation is that Persia Oil and Gas which is hard-hit by the factors of quality culture need to develop a corporate culture that aligns with its service delivery, and that will ensure that quality is instituted. The quality of products is what drives the customers towards a organisation, hence having goods of high quality attracts m, ore customers. It is established that soft quality components such as leadership must be given primary concern and attended to as long-term issues. As Wilkinson (1992) suggests, these elements are vital to the success of the TQM plan; thus, ignoring them can fail the application plan. The organisation needs to move and act swiftly to prevent the failure of the TQM plan and consequently, the collapse of the organisation. Managers have the responsibility to carefully evaluate those values and present cultural fields to come up with a practical plan and associated policies that create an environment and cultural atmosphere. With an excellent cultural atmosphere, the organisations will be sure to have a successful TQM and excellent quality culture. According to Karimi and Kadir (2012), organisational culture is known to be a vital and key agent in the implementation of comprehensive quality management. Besides, the improved cultural quality will attract customers, and the organisation will further improve its performance and profit margin. It is,

therefore, critical to building a strong culture of quality that will ensure that the organisation produces high-quality products. The oil and gas industry needs to develop the hard quality components which form the frameworks and tools that assist in achieving the project goals.

The Persia Oil and Gas organisation needs to move and act swiftly to prevent the failure of the TQM plan and consequently, the collapse of the organisation. AsphaltTous Co. also needs to improve the way it treats its people because it is no satisfactory. The recommendation for the companies is that they should embrace their people and value them. Employees stand the greatest chance to make a difference in the organisation; hence, if the organisation wishes to prosper, the secret lies in the people. The organisation needs to restructure the leadership structure since it has been the failure to the organisation. Two people are critical in the organisation, and these are the customers and the employees. People are the major factors that determine the success of an organisation. While leadership is insignificant in determining the quality, people are very significant in determining the quality management. Failing to treat them well and with dignity and accord them value can easily make the organisation scrambling. Hence, the oil and gas companies need to cultivate a culture that values people and treats them with dignity. Specifically, the culture of quality is the fundamental type of culture that the organisations need to implement. Although the companies have tried to embrace the international culture ISOs, they are not enough since the organisation has the sole responsibility of ensuring that its culture flourishes.

The recommendation is that the organisation should implement a corporate social responsibility to become in touch with the society and hence improve its relationship with the people both within the organisation and within the community. The implementation of the CSR should be followed by the institution of a dedicated measurement system that can track the performance of the initiative and ensure it runs smoothly. A smooth procedure would assist in improving the sustainability of the organisation and creating a lasting relationship with community that is a potential customer base.

7.2.2.1 Major Contributions of the Study

Theoretical contribution: This research has theoretical contribution and added to the body of knowledge by highlighting the importance of critical factors of quality in the oil and gas sector.

Moreover, numerous updates from earlier researches were provided through this study and in more significant manner new considerations were added. By focusing the five main critical success factor area, this study added school of thought related to people, resource, strategy, process and performance management and finally this research unified the perception of stakeholder orientation by adding the performance management fundamentals in relation to sustainability and corporate social responsibility.

Practical contribution: this study is related to organisations active in oil and gas industry regardless of their scale of operation or size. The study provided a deep insight into the complexity of implementing quality management for a quality culture, and the various challenges and obstacles highlighted through other studies. The outcome of this study provided an empirical evidence that contributes to the importance of total quality management practice as a strategic tool helping oil and gas companies to optimise performance and operate efficiently and effectively in the industry.

The guideline itself is a blueprint that could be easily implemented in various organisations operating in the oil and gas industry. It is practical, pragmatic and extensively based on a flexible approach that will allow any organisation to customise and guide their menu of factors to suit individual cultures. The finding of this study not only is practical in oil and gas industry, can be used in other sectors in Iran.

7.2.2.2 Future Research

The study finally provides fertile ground for new researches that are interested in further examining quality culture in the oil and gas industry context. A number of practical directions for potential research can be recommended:

- To empirically review and improve the proposed guideline for quality culture implementation in oil and gas industry to further explore the relationship within the various variables.
- A comparative analysis of different organisations working in specific sectors of the oil and gas industry could perhaps underline exciting outcomes in terms of adopted approaches and barriers in creating a quality culture.

- The case studies and survey questionnaire focused mainly on experience in quality implementation and the existence of a quality culture. It may be possible, in the future, to conduct research on a wider basis by looking at different levels of organisational readiness for introducing quality or establishing a quality culture.
- It would be feasible for future research to examine at other sectors in Iran.
- The further research can be established to analyse the cultural change that organisations will face by using Artificial Intelligent.

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APENDICES

APPENDIX A: PARTICIPANT INVITATION LETTER

Dear participant:

I am Mohammad Maleki Sadabad, a PhD student at the School of science, engineering and environment, University of Salford, Manchester-UK. I am conducting a study to explore the implementing of quality culture in Iranian oil and gas industry.

The findings of the study will be used to develop a framework and set of best practice guidance to help companies to reduce cost, time and risk by using quality culture within their projects. I believe that your perspectives and experiences over the years will provide meaningful contributions to this research. If you agree to take a part in this research, you will be contacted by me personally.

I assure you that it will be an enjoyable and meaningful experience. I will take all the required ethical concerns into consideration. You may decide to stop being a part of the research study at any time without explanation. In addition, the data I will collect will not contain any personal information. No one will link the data you provided to the identifying information you supplied. Any other ethical issues related to the research philosophy are considered by the researcher and the University of Salford. Thank you.

Yours Sincerely,

M.Maleki

By signing below, you are agreeing that:

- (1) You have read and understood the Participant Information Sheet
 - (2) Questions about your participation in this study have been answered satisfactorily, and
 - (3) You are taking part in this research study voluntarily (without coercion).
-

Participant's signature*

Date

APPENDIX B: CONFIDENTIALITY STATEMENT

TITLE OF RESEARCH: THE IMPLEMENTATION OF QUALITY CULTURE IN IRAN'S OIL AND GAS INDUSTRY

All responses given as part of interviews, questionnaire survey and documents will be treated with utmost confidentiality and will be available only to the researcher and supervisor of the research. Excerpts from the interviews, questionnaire and documents will be used for research publications, but under no circumstances will your name or any identifying characteristics be disclosed in such publications.

This confidentiality statement will be signed by both the participant and the researcher in order to ensure that data obtained will only be used for research purposes, and will not be disclosed to a third party, or be used for other purposes.

Name of Participant (optional):

Name of Institution:

Position of professional:

Signature:

Date:

Name of Field Researcher:

Signature:

Date:

Thank you for your cooperation

APPENDIX C: RESEARCH PARTICIPANT CONSENT FORM

TITLE OF RESEARCH: THE IMPLEMENTATION OF QUALITY CULTURE IN IRAN'S OIL AND GAS INDUSTRY

Name and contact of researcher: Mohammad Maleki Sadabad

School of the Built Environment,
University of Salford, Manchester
Tel:07442179559

m.n.malekisadabad@edu.salford.ac.uk

-
- I confirm that I have read and understood the information sheet for the above study and what my contribution will be.

Yes	No
-----	----
- I understand that my participation is voluntary and that I am free to withdraw at any time without giving reason.

Yes	No
-----	----
- I understand that all the information that I give will be used solely for the purpose of research and will not be revealed to a third party.

Yes	No
-----	----
- I have been given the opportunity to ask questions (face to face, via telephone and e-mail)

Yes	No
-----	----
- I agree to take part in the above study

Yes	No
-----	----
- I agree to the use of anonymised quotes in publications

Yes	No
-----	----

Participant's signature*

Date

APPENDIX D: PARTICIPANT INFORMATION SHEET

TITLE OF RESEARCH: THE IMPLEMENTATION OF QUALITY CULTURE IN IRAN'S OIL AND GAS INDUSTRY

INTRODUCTION:

The aim of this interview is to understand the senior managers and employee's perspective about the issues related to employment of quality culture within Iranian oil and gas sector. The data collected from the interviews will help provide useful insights into understanding the correlation between effectiveness of quality culture and project's outcome. Accordingly, there are no right or wrong answers for the questions rather it is a matter of reflecting the interviewee's experience with the phenomena as they are conceived by him/her.

The study methods will involve interviews, which will be recorded with your permission. The tapes and transcribed text will only be accessible to the researcher and his academic supervisors. All information will be treated confidentially and participants will remain anonymous.

TIME COMMITMENT:

For the interview, I would not keep you occupied for more than 40 minutes.

In order to complete the questionnaire, you will not need more than 25 minutes.

PARTICIPANTS' RIGHTS:

You may decide to stop being a part of the research study at any time without explanation. You have the right to ask that any data you have supplied to that point be withdrawn/ destroyed. You have the right to omit or refuse to answer or respond to any question that is asked of you. You have the right to have your questions about the procedures answered (unless answering these questions would interfere with the study's outcome). If you have any questions as a result of reading this information sheet, you can query the researcher at any point in the study.

CONFIDENTIALITY/ANONYMITY:

The data I collect do not contain any personal information about you. There will be no link between the data you provided and the personal information you may supply.

FOR FURTHER INFORMATION:

My Supervisor Dr Amanda Marshall-Ponting and I will be glad to answer your questions about this study at any time.

You may contact her at: a.j.marshall-ponting@salford.ac.uk

And me at: m.n.malekivadabad@edu.salford.ac.uk

APPENDIX E: INTERVIEW GUIDE FOR COMPANY HEADS

The interview guideline

Introduction

The aim of this interview is to understand the senior managers perspective about the issues related to employment of quality culture within Iranian oil and gas sector. The data collected from the interviews will help provide useful insights into understanding the correlation between effectiveness of quality culture and project's outcome. Accordingly, there are no right or wrong answers for the questions rather it is a matter of reflecting the interviewee's experience with the phenomena as they are conceived by him/her. The study methods will involve interviews, which will be recorded with your permission. The tapes and transcribed text will only be accessible to the researcher and her academic supervisors. All information will be treated confidentially and participants will remain anonymous.

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Section One: Warm up questions

- For how long have you been working with this organisation?
- How would you describe your experience working on Iranian oil and gas sector?

Section Two: Leadership and People

1. How would you describe the culture of your organization?
2. What is the role of quality in defining and shaping the culture of your organisation?
3. What is the key role that your leadership team plays in creating a quality culture in your organisation?
4. What other roles does your leadership team plays internally and externally in emphasising the importance of quality?

5. To what degree does the leadership team place emphasis on people as the key element for delivering value to customers and impacting through quality?
6. What approaches and strategies are used by your organisation to make quality and excellence happen through people?

Section Three: Strategy and Performance

1. How would you describe your organisation's visioning process?
2. How structured is the approach adopted by your organisation in planning, deploying strategic goals and reviewing performance outcomes?
3. Is the strategic management approach in your organisation customer centric?
4. How does your organisation ensure that the customer focus exists at all stages of translating and fulfilling their needs and requirements in terms of quality?
5. To what extent are your goals and objectives measured in terms of customers and resulting impact?
6. How is the data generated from measurement activity used to influence decision making and the realignment of your direction?

Section Four: Process and Value Creation

1. To what extent does your organisation ensure that its strategic planning process delivers the desired results and sustainable outcomes?
2. How is value to your customer delivered in your organization?
3. How does your organization emphasis the importance of customers?
4. How are your processes defined and managed?
5. How does your organisation drive quality improvement activity for optimisation and capability building?
6. How are products and services reviewed with the view to make them better for your customers?
7. What internal measurement a take for ensuring high quality standards?
8. What customer (external) based measurement is used to receive feedback and take appropriate action?
9. What strategies has your organisation got in place for building long lasting relationships with your customers?

Section five: Resources, Knowledge and Partnership

1. How does your organization emphasise the importance of people as the key asset?
2. How are strategic goals and objectives linked to people's performance?
3. How is human talent exploited for delivering efficiency and effectiveness outcomes?
4. What schemes and initiatives are used to motivate people in delivering optimum value to customers, making the best use of existing resources and tackling problems and performance obstacles?
5. What is the degree of emphasis that your organisation makes in relation to establishing external partnership?
6. Does your organization have a partnership relationship management programme?
7. How quality is audited and assured when dealing with external suppliers and to what extent does this help preserve the quality culture of your organisation?
8. Does your organization have a philosophy and approach for cost management?
9. How does your organization derive efficiencies from the utilisation of physical assets?
10. To what extent does your organization rely on information flow and utilisation for the effective decision-making process at all levels?
11. How would you describe your IT infrastructure as an enabler for performance excellence?
12. Does your organisation manage knowledge as a source of competitive advantage?
13. How would you describe the approach used by your organization in knowledge management?

Section six: Continuity and Sustainability

1. How does your organization preserve its long-term future?
2. How does your organisation use learning and innovation as a catalyst for ensuring a sustainable future?
3. How is innovation managed in your organisation?

4. How is the performance result used to define long-term strategic requirements and assess sustainable capability?
5. Does your organisation have a clear philosophy/strategy for stakeholder engagement beyond your customers?
6. What is the approach adopted by your organisation on CSR related issues?
7. Has your organization got dedicated measurements for tracking CSR related performance?
8. How do you describe your organisation's commitment to maintaining continuity of purpose and sustainable performance?
9. To what extent does the quality culture of your organisation provide help in sustainability and future preservation?

APPENDIX F: SURVEY QUESTIONNAIRE GUIDELINE

Please tick as appropriate

Question 1: Is your main workplace:

A single independent establishment?

One of several workplaces in this country belonging to the same organisation?

The sole establishment in this country belonging to a foreign organisation?

Part of a multi-national organisation with workplaces in various countries?

A state-owned organisation?

Question 2: What is your position in this organisation?

Proprietor or owner

Senior Manager

Supervisor

Director

Administrative

Other (please specify)

Question 3: What is the main or what are the main business activities of your organisation in oil and gas industry? (Tick ALL that apply and specify)

Upstream

Midstream

Downstream

Question 4: How many employees does your organisation have?

1 - 100

101 - 500

501- 1000

1001 - 5000

5000+

Please state the extent to which you agree or disagree with the following statement for your organisation by ticking the most appropriate box:

A. Leadership and people

No	The leaders in your organisation:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
1	Shape the future and make it happen					
2	Act as role models for organisational values and ethics					
3	Value their people					
4	Create a culture of empowerment for the balanced achievement of organisational and personal goals					
5	Understand the skills and competencies required to achieve the mission, vision and strategic goals					
6	Create a culture where peoples' dedication, skills, talents and creativity are developed and valued					
7	Ensure that their people can contribute to their own, and the organisation's ongoing success, releasing their full potential in a spirit of true partnership					
8	Clearly define the levels of people performance required to achieve the strategic goals					
9	Promote team working and the formation of groups/teams					
10	Encourage their people to be the creators and ambassadors of the organisation's ongoing success					

Please state the extent to which you agree or disagree with the following statement for your organisation by ticking the most appropriate box:

1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree

B. Strategic and Performance

No	Your organisation:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
1	Implements its mission and vision by developing a stakeholder focused strategy					
2	Policies, plans, objectives and processes are developed and deployed to deliver the strategy					
3	Develop and agree a set of performance indicators and related					
4	Determine the successful deployment of their strategy and supporting policies, based on the needs and expectations of your customers					
5	Set clear targets for Key Results based on the needs and expectations of your customers, line with their chosen strategy					
6	Demonstrate positive or sustained good customer results over at least 3 years					
7	Clearly understand the underlying reasons and drivers of observed trends and the impact these results will have on other performance indicators and related outcomes					
8	Strives to achieve professional/industrial certification or accreditation					

Please state the extent to which you agree or disagree with the following statement for your organisation by ticking the most appropriate box:

1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree

C. Process and Value Creation

No	Your organisation:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
1	Meets its mission and progresses towards its vision through planning and achieving a balanced set of results that meet both short and long term stakeholder needs					
2	Knows that customers are their primary reason for being					
3	Strives to innovate and create value by meeting customer expectation					
4	Manages structured and strategically aligned processes using fact- based decision making to create balanced and sustained result					
5	Designs, manages and improve processes, products and services to generate increasing value for customers and other stakeholders					
6	Designs and manages processes to optimise stakeholder value					
7	Products and services are developed to create optimum value for customers					
8	Customer relationships are managed and enhanced					
9	Internal measures are used to monitor, understand, predict and improve the performance of the organisation and predict the impact on the perceptions of external Customers					
10	Supplier relationships are managed and enhanced					

Please state the extent to which you agree or disagree with the following statement for your organisation by ticking the most appropriate box:

1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree

D. Resource, Knowledge & Partnership

No	Your organisation:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
1	Creates a balance between the strategic needs of the organisation and the personal expectation and aspiration of people to gain their commitment and engagement					
2	Sets clear targets for key results based on the needs and expectations of their people, in line with their chosen strategy					
3	Encourage people to drive improvement activity and optimise value for the end customer using quality tools, excellent methods and innovation thinking					
4	Partners and suppliers are managed for sustainable benefit					
5	Finances are managed to secure sustained success					
6	Buildings, equipment, materials and natural resources are managed in a sustainable way					
7	Technology is managed to support the delivery of strategy					
8	Information and knowledge are managed to support effective decision making and to build the organisation's capability					
9	Overall performance indicators and outcomes that compare favourably through benchmarking and external comparison in all the key areas					

Please state the extent to which you agree or disagree with the following statement for your organisation by ticking the most appropriate box:

1: Strongly Disagree 2: Disagree 3: Neutral 4: Agree 5: Strongly Agree

E. Continuity and Sustainability

No	Your organisation:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
		1	2	3	4	5
1	Generates increased value and levels of performance through continual and systematic innovation by harnessing the creativity of your stakeholders					
2	Sets clear goals and objectives for innovation and refines strategy in line with innovation achievements					
3	Establishes approaches to engage people, partners, customers and society in generating ideas and innovation					
4	Clearly understands the underlying reasons and drivers of observed trends and the impact these results will have on other performance indicators and related outcomes					
5	Anticipates future performance and results					
6	Understands how the key results you achieve compare to similar organisations and use this data, where relevant, for target setting					
7	Segments results to understand the performance levels and strategic outcomes achieved within specific areas of the organisation					
8	Develops a set of performance indicators to determine the successful deployment of societal and ecological strategy and related policies, based on the needs of the external stakeholders					
9	Secures the future by defining and communicating a core purpose that provides the basis for the overall vision, values, ethics and corporate behaviour					
10	Understands its key competencies and how they can benefit the wider society					

11	Considers economical, societal and ecological sustainability as a reference when balancing the sometimes conflicting imperatives they face					
12	Allocates resources to provide for long-term needs rather than just short-term gain and, where relevant become and remain competitive					