“Trust and Cultural factors impacting on Information System Compliance through the lens of Arab Culture in a Saudi Arabian Company”

By

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A thesis submitted in partial fulfilment of the requirements of the University of Bolton for the Degree of Doctor of Philosophy

The University of Bolton 2021

DECLARATION

I declare that this Ph.D. thesis entitled **"Trust and Cultural factors impacting on Information System Compliance through the lens of Arab Culture in a Saudi Arabian Company"** has been compiled by me under the supervision of Dr. David Bamber and Professor Wood. No part of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other University or Institution.

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Abstract

Previous studies explored some factors that impact on information security but research that presents a comprehensive understanding of managing information security through the lens of local Arab culture has been lacking. Hence this research investigates various cultural factors to enable local organizations to holistically adopt those factors to manage information security compliance in the Middle Eastern Arab region. This study used a quantitative research approach, and a web-based questionnaire was custom designed and administrated to a representative sample of 300 of which there were 247 usable responses. Following a series of pilot phases, the data was analysed using Structural Equation Modelling (SEM) with AMOS, and SPSS software. The sample was drawn from a total of 1500 local Arab employees within a Saudi Oil Company. An initial model linked the 6 factors that were latent in the literature. The initial model connected trust, workplace culture, leaders, western technology, employees' alignment with information security. However, that model was found to be inadequate and following analysis of the pilot data from 3 pilot phases, a final parsimonious model showed 8 interconnections between 6 new emergent factors. That model contained belief, expectation, and trustworthiness of co-workers, workplace culture and supportive leadership, trust towards others, Western IT satisfaction, data privacy, and ISS compliance. Hence, this research makes a novel contribution by modelling the information security compliance in the lens of the local Arab region and leads the way for further research in the context of information security culture in the Arab region. This research was first to be conducted Information Security Management through the lens of Arab culture and opens-up many new avenues for future research in the context of Arab culture and Information Security Management.

DEDICATION

First, to almighty God who gave me the strength when I felt weak, who guided me through the right path when I got lost, who gave me peace in my pray. Without God, this would not be possible, so I always have faith. Despite the struggles that I have been through in my life, I always defeat the hopeless state. This would not be possible without the determination that was encouraged by the spoken words of my mother pushing me forward with kindness and love not to give up. She has been my biggest support although she has been going through tough health conditions, she is always there for me. To myself as I kept fighting under many obstacles and struggles through tough circumstances and more than I can name. To everyone who supported me in this journey Dr. Rob Campbell (Bolton University), my supervisor Dr. David Bamber (Bolton University), Dr. Chris Bamber (Bolton University), Prof. Robert Wood (Bolton University), Dr. Roshan Nimantha Panditharathna, Tareef Attar (Security Expert and Lecturer at Canadian College), Nasser Al-Madi (Information Security Advisor at Chevron), My best friend and brother Eng. Ali Azari (Bolton University). Finally, to my best friend Sana Oqla who has lit my life with courage, support, love, kindness, and faith to move forward with a big smile.

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1. INTRODUCTION

1.1 Research Aim and Objectives

Aim: To model Information Security in the Arab Region in the context of a Saudi Arabian Oil Company and to model trust and other related cultural concepts impacting on information systems security compliance and data privacy compliance in a Saudi Arabian oil company.

Objectives:

The research investigates the impact of trust on Information System Security Compliance in a Saudi Oil Company.

The research investigates if workplace culture alignment and supportive leadership mediate Trust on Information Security Compliance in a Saudi Oil Company.

The research investigates the impact of workplace culture on Information System Security Compliance in a Saudi Oil Company

The research investigates the impact of belief in co-workers at the workplace on Information System Security Compliance in a Saudi Oil Company.

The research investigates the impact of the use of Western IT System on the Information System Security Compliance in a Saudi Oil Company.

Indicative Literature

An initial literature review showed 6 relevant concepts that will form the basis for the custom designed questionnaire:

- Trust
- Information security Compliance
- Workplace Culture
- Leadership
- Individuals' Alignment
- Western Information Technology System Satisfaction

1.2 Research Questions

This section explains the main research question "Do trust and other related cultural concepts significantly impact on information systems security compliance and data privacy compliance in a Saudi Arabian oil company?" in further detail by identifying five subsidiary research questions.

RQ1. Does trust significantly impact Information System Security Compliance at Saudi Oil Company?

RQ2. Do workplace culture alignment and supportive leadership significantly mediate Trust on Information Security Compliance at Saudi Oil Company?

RQ3. Does workplace culture significantly impact Information System Security Compliance at Saudi Oil Company?

RQ4. Does the belief of co-workers at the workplace impact Information System Security Compliance at Saudi Oil Company?

RQ5. Does the use of Western IT System impact the Information System Security Compliance?

1.3 Preamble

"Arab" is considered a cultural term, and the term is used in this research to denote one who speaks Arabic as their first language. It is found that Arabs can be united based on their cultural aspects and their history. Within the Arab culture there are people with different religious allegiances: Muslims, Jewish and Christians can be found. Therefore, it can be said that the individuals living in the Arab region are not just Muslims but also Jews and Christians (ADC, 2009). The Arab region is also considered as the Arab world, which consists of total of 22 countries in the Middle East region and North Africa. Included in the Arab region are Egypt, Iraq, Kuwait, Morocco, Qatar, Saudi Arabia, and the UAE (ADC, 2009). Arab countries have a rich diversity regarding ethnic believes, linguistic choices, and religious beliefs. Further, it has been observed that in the Arab region, the link between Islam and Arabs is deep rooted in history. The individual living in the Arab region generally speaks Arabic, and it is considered as the predominant language in the region. In terms of life in the Arab region, it is found that in urban areas of the Arab region individual have choices of occupations and freedom for women is widespread. Therefore, it can be said that in the urban areas of an Arab region traditional patterns individual behaviour are changing (ADC, 2009). It becomes increasingly important to ensure a high level of information security for both individuals and organizations (Parson et al., 2014). IT security guidelines are becoming highly advanced and user-friendly. However, individuals are less likely to adhere to these guidelines which pose a serious security risk and that makes us wonder: are these guidelines adequate for effective awareness? So, a need for a better understanding of what could influence individuals to comply and pay more attention to these security guidelines. It is the main purpose of this research to identify the factors that influence human behaviour in particularly the Arab region towards information Security Compliance.

This thesis will cover various concepts such as the nature of Arab trust and culture, workplace, individual's alignment, Western technology, information security compliance, and data privacy. The study will conduct a statistical analysis after collecting completed questionnaires from participants, to model the relationship between those concepts.

Despite the understanding of information security issues found in organizations, researchers have explored the understanding of human attitude and behaviour towards information security but there seems a lack of research on how the understanding of the local culture may help us to differentiate or isolate the issues that have been found within Arab cultures such as trust, information sharing culture, data privacy, violation of IS compliance, and resistance to western IT Technology. However, this research focuses, on Arab trust towards information security in the context of Saudi Company, within the local culture, workplace culture, trustworthiness, the belief of co-workers, and Supportive workplace environment.

1.4 Research Problem

Research connecting trust and culture in the Arab Region is sparse. However, a preliminary literature review indicates that members of Arab communities tend to have a high level of trust based on shared values and this may lead to risky information sharing. Hence, the purpose of this research is to better understand trust and information security in the Arab region.

Maintenance of information security and communication technology (ICT) networks requires collaboration between industry and government. There are cyber threats from different nations, hence efforts are required to maintain information security on an international scale. Middle Eastern countries are increasingly investing in (ICTs). Financial institutions, schools, social infrastructure, government services, and others are dependent on the internet. At the regional level, there is a need to develop effective cybersecurity. The Arab region is a desirable target for cyber-attacks as there is a lack of awareness among ICT users along with a lack of technical ability. There is a lack of appropriate legislation which makes it easy for cybercriminals to attack target the regions that have poor regulations. In December 2012, BMI bank in Oman and RAK bank in the UAE were targeted by international cybercriminals (ITU, 2019). Cybercriminals hacked the system of card processing institutions and increased the withdrawal limit and available balance on debit cards. Arab regions' banks lag in the effective implementation of ICT data security measures; however, the financial institutions are taking several measures to improve their procedures and policies to meet the international standards. The cybercriminals also attack those entities dealing with money in the Arab region as they have a gap in their security system. Moreover, the increase in e-commerce sales and the use of mobile internet in Arab regions have been the major targets for cybercriminals.

Companies in the Arab regions have begun to find solutions to cyberattacks and network breaches. However, cybercriminals change their tactics to continue stealing information from different entities in the Arab regions. Some awareness campaigns are taking place in

Qatar, Oman, Saudi Arabia, and the United Arab Emirates. Awareness and education are essential to overcome cyber-attacks in Arab regions. There is a need to provide education to individuals and citizens of Arab regions. The largest number of cyber-attacks have been in Saudi Arabia (Arab Security Consultants, 2019). The reason behind most of the cyber-attacks in Saudi Arabia is recognized to be inadequate security measures and insecure consumer habits. To minimize the risk of cyber threats, basic cyber security guidelines have been issued by Saudi Arabia's National Cybersecurity (Arab News, 2019).

The guidelines have been issued to protect the government networks and systems. All government agencies, institutions, and authorities must apply these guidelines. Moreover, it is also mandatory for private organizations that handle sensitive national infrastructures. To increase the competencies, many government agencies, ministers, and institutions have undergone restructuring. Awareness level is increasing in the Arab region. It has been expected that the cyber security services are about to grow from USD11.38 billion in 2017 to USD 22.14 Billion in 2022. There is a need to develop a corporate risk strategy to establish enterprise security (Arab News, 2019).

According to the Global Security Index (GSI), published by International Telecommunication Union, Oman is the first Arab country and fourth in the world that has cyber security (Gulf Insider, 2019). According to the Director-General of Oman national CERT, Bader Ali Al, the sultanate secured the highest rank in the index that measures five pillars of security that are organizational, cooperation, legal, technical, and capacity building. He also stated that Oman has issued and incorporated laws like combating cyber-crime and electronic transactions laws that make online transactions and the virtual world more secure in the nation. A summit was hosted by Oman National Computer Emergency Readiness Team that reflected the need for collaboration of countries to overcome negative consequences of country's economy and security (Al Nisr Publishing, 2019). Various speakers and delegates attended the summit namely "towards cyber resilience". There were about 350 Arab delegates from regional cyber security centres who attended the summit (Gulf Insider, 2019). Cybercrime laws are made in Oman in a way that there are best legal practices in handling cyber security threats.

Oman ranks number one amongst all the Arab states as far as undertaking best practices are concerned. Information security campaigns have been launched in the country that promotes information security awareness. Oman has played a significant role in fighting against cybercrimes. According to experts, more than 1800 cybercrime incidents that targeted individuals and organizations have been dealt with in Oman (Qatalyst Global, 2019). Ransomware attacks, interrupted data on systems and files have been reported in Oman. So

far in Oman in 2018, 129 cases related to cybercrime and 549 malwares' have been detected (Gulf Insider, 2019). According to experts, it is said that though there were laws that protect cyber-crime in Oman, threats are inevitable and are evolving day by day (Al Nisr Publishing, 2019).

1.5 Thesis structure

The thesis introduction has provided an overview of the research problem and focused research variables. The research aims and objectives were developed specifically for this thesis.

In Chapter Two, the journey of the literature review begins in more detail, critically analysing academic research, journals, and articles, from which provide theoretical concepts on trust, culture, workplace, leadership, and Information security are drawn. Moreover, any limitations, challenges, and gaps are examined.

Chapter Three, a discussion of the research methodology applied in this research. The chapter was divided into various sections such as research paradigm, research method, design, data collection, pilot study, sample size, and strategy.

Chapter Four has covered the results and data analysis approaches, such as the required data to analyse, evaluate, compare, findings, questionnaire, and overall outputs.

Chapter Five has covered the development and use of the questionnaire, pilot studies and tables connecting questionnaire sections (factors) to the literature.

Chapter Six has covered a discussion section that included introduction, achievement of the objectives and aim, about the factors, defining external and internal concurrent validity, the questionnaire, generalizing the methodology, discussion of the model, the novel contributions made by the research, where the research was undertaken, limitations of the sample, questioning the research, weakness of the research, recommendations concerning the methodology and methods, recommendations for further research, implications for policy and practice, and implications for theory.

Chapter seven concludes and summarises the research.

2. LITERATURE REVIEW

2.1 Introduction

This section contrasts the culture that predominates in the Arabian Gulf with that predominating in the west. As the research focuses on the adoption of IS security in the Arab region this also will be the focus of the review. Accordingly, this section attempts to review the scholarly literature about the nature of general culture and Arab culture as it is manifest in the gulf. For contextualisation purposes, this section also reviews some literature on Western cultures in the contrast with those in the Arab region; however, this is not the primary focus of the review.

For contrasting purposes literature related to western culture, in so much as it aligns with Arab cultures is also reviewed. This section covers the nature of Arab culture in general and will focus on the nature of Arab culture specifically as a main focused area which will then present the research questions and gaps. Moreover, the research will also investigate the nature of trust as found in the Arab region and identify the relationship between those factors and their impact on Information security Compliance. Accordingly, a new model will be established based on their impact and the significance of their relationship towards Information security Compliance.

This research presents research findings by identifying and examining the nature of Arab trust compared with other factors then this research extends to investigating the role of trust in sharing information as found and observed in the Arab culture and whether this has something to do with certain aspects of the culture and if so, to what extent do Trust and culture impact Information Security. Finally, the research will identify ways to model information security through these factors to fit the local culture.

The influence of the local culture and how this may impact the findings of this research should be considered, a person having a certain attitude may be expected to behave in a certain way but when subjected to a specific situation may not exhibit the expected behaviour due to cultural restrictions. For example, Arab Individuals tend to be trusting towards other members of their community which contradicts information security principles.

According to Abah (2011), cultural pasts and modernization in the Arab region such as in the UAE and Saudi Arabia contribute to the vivid tensions with the cultural present of the Arabs. The Arabs emphasize their Arabic style of traditional culture despite the engagement of the nationals with modernized communities. This interesting significance of tribal agreements remains a valuable feature of the emirate rule among the locals. The tribe of the Bedouins traditionally lived nomadic lives in the desert. They traded with livestock as they shifted from one oasis to another with their livestock. Interestingly, this cultural past can be

observed in the present culture among the Arabs. Though the Bedouin now live-in houses, they insist on dwelling in tents in their gardens. Also, those in Dubai with white-collar jobs live in the city. However, they prefer taking holidays in the deserts while living in tents. The Arabic culture tends to be pervasive and deeply rooted.

One of the vital cultural factors is trust. Existing research in this area seems to indicate that members of Arab communities tend to have high levels of trust based on shared values (Putnam and Nicotera (2009), so further research is needed to investigate possible ways to adjust the level of trust and therefore reduce the gaps between the nature of local culture and the information security compliance.

According to Rempel et al. (1985), trust in relationships is developed through different foundations that range from empathy in collective calculations, affective bonds, confidence in one's counterparts, and concern for welfare. On the other hand, researchers such as Bulter (1991), Zucker (1986), and Cook and Wall, (1980) attribute the growth of trust to the sharing of information with the confidence of the reliability and competence of the counterparts.

As per the report presented by UNESCO Science Report "Towards 2030", from the period 2004 to 2014, the Arab region has faced political instability, but at the same time, it has been observed that the Arab region has made progress by putting its efforts into many fields, such as R&D. The expenditure made by the Arab countries has also helped them in generating revenue (UNESCO, 2016). It is also observed that the participation of women in the Arab region is less than men, but at the same time, it is observed that the participation of women in the science and research sector is measurable as compared to men. It is found that the countries in the Arab region are taking steps to have more women into all fields existing in the region (UNESCO, 2016). Regarding the science and research sector in the Arab region, it is found that the countries are rich in this sector and in the oil and gas industry. Therefore, the countries in the Arab region are taking steps so that they can use their technology and its advancements to develop and improve the oil and as a sector and countries in the Arab region have initiated the Renewable Energy and Energy Efficiency Programme (UNESCO, 2016).

The intention was to gather all scholarly articles related to these latter areas. The themes mentioned were not set out beforehand but are those that emerged as major literature conversations during the review. This section begins with reviewing key documents that provide a salient overview of trust.

The trust factor encompasses different levels such as trust in relationships, leaders, close friends, tribe or family members, and general trust. One of the vital cultural factors is trust. Existing research in this area indicates that members of Arab communities tend to have a

high level of trust based on shared values, so further research is needed to identify the different trust dynamics levels.

2.2 Trust Dynamics

To introduce the subject, this section provides an overview of trust as defined within sociology and psychology. More specifically, papers are then reviewed relevant to trust as a component of Arab cultures along with themes, namely:

- Trust scale in general
- Trust in close relationship
- Trust in family members
- Trust in leaders and
- Trust in individuals

2.3 The Use of Western Information Security Technology

The issues found within the Arab region are based on the findings on culture and trust and will attempt to isolate it or if possible present a logical solution to it. Transferring Information Technology (IT) to bring it into practice is difficult for many countries, and they even fail to transfer it. The major obstacles that are faced while transferring IT into practices are the cultural and social norms of a developing country. It has been identified that in Arab society the cultural beliefs of the individuals of various occupational groups differ based on the construct of the technology in their daily lives (Hill et al., 1998) and more details are explained under section 2.9.

2.4 Overview of Personality, Trust and Culture Within The Arab Region

It can be said that trust is made in the form of relationships between various individuals which helps in building confidence regarding one's counterparts and their welfare (Abah, 2011). If there are many uncertainties and instability between the relationships, then it can be said that trust cannot be developed. It can also be said that it is the need of the business environments that there are trust and relationship among the individuals working in the organization and between the employers and individuals (Abah, 2011). Therefore, it can be said that the environmental factors are also responsible for building trust and relationships among the individuals of an organization or a country. Further, it can be said that the culture of a place is based on the communication level or culture is viewed as a form of communication. Thus, it is essential that the communication level of a place is understood by every individual living at that place (Abah, 2011). While communicating with other individuals at a place, it is necessary that the message is decoded by the individuals properly and the individuals should also understand the culture and value used while communicating.

It can be said that with the values of a place its cultural values also improve (Hohmann and Welter, 2005).

In the Arab region, it is observed that the cultural presence of the countries can be seen through modernization and culture followed by the Individual. It is found that the Arab countries have their focus on the traditions that are followed in Arabic style by the Individual over the years even though the Individuals living in the Arab region are found to be modernized. The Arabic culture can be seen through the lifestyles of individuals living in the Arab region (Abah, 2011). Therefore, it can be said that in the Arab region, the cultural aspects are deep-rooted. Further, it can be said that inequalities exist between the Arab nations regarding their cultural aspects. It is also seen that in workplaces, authoritative policies are followed where it can be said that unequal distribution of power exists between the higher and lower end of Individuals working in the organization (Abah, 2011). At the same time, it is also found that the nation in the Arab region has a high level of trust among them and they are also willing to share information with each other; therefore, it can be said that possibility of misunderstandings is less, and Individual have a positive attitude (Abah, 2011). The leaders of various organizations take decisions it is found that trust is the most important factor that is required while doing business. Based on the trust factor of a company, it has a reputation in the market, brand recognition, and offline presence. In the Arab countries, trust is dependent on the relationships between the Individual or the company. On the other hand, in western countries trust can be found as the basis of the contracts and agreements made between individuals or the companies (Lunt, Horsfall and Hanefeld, 2015).

In the views of Chrysostome (2014), trust is considered as one of the important aspects in the Arab region as it helps in developing relationship marketing among the Arab countries. Trust and commitment show the shared value between the organizations in the Arab region. Further, it is found that trust is deep-rooted in the Arab region and is reflected through the businesses running across the countries (Chrysostome, 2014). It is observed that most of the businesses running in the Arab world are run by family members. Trust is the foundation of the Arab families, and it is found that the families consider that businesses should run based on trust, which should not be broken. Therefore, it can be said that for running an effective business in the Arab region, the organization must have a trust attribute in the market, which also defines its reputation (Chrysostome, 2014).

According to Hessle (2016), the main reason behind the trust in the organizations in the Arab region is that they want to build a society based on trust and want to build a hard-working society. It is found that the organizations which are based on trust and the individuals are

hardworking, then the organization results in improved productivity and increased profitability (Hessle, 2016).

As per El-Shibiny (2005), it is found that the Arab countries find trust as an important aspect to develop relationships between two individuals or companies. In the Arab region, Individual have shared values and was found to have linguistic similarities; therefore, it can be said that shared value and similarities in the Arab region leads towards trust (El-Shibiny, 2005). Deep roots of trust and shared value among the Individual shows that the Individual has loyalty to them, and the work is done fairly. Shared value culture and trust among the Individual have led towards removing any kind of barriers among the Individual (El-Shibiny, 2005).

2.5 Workplace Nature in The Arab Region

There has been constant change in the Arab region. In an organization, the key knowledge resource is the Individual, hence, maximizing the human resource potential is the main issue for the Arab region. The United Arab Emirates (UAE) has a shortage of manpower. To meet the human resource shortages, the UAE has an open economy model that creates unique business dynamics. Foreign workers work in organizations and there is cultural diversity in the UAE. Due to the lack of necessary skills and experience in the native workforce, foreign workers are employed in the organizations. Due to the diversity in the workforce, the workplace of companies that belong to the Arab region has complex systems.

Intercultural communication is becoming necessary in most workplaces due to globalization. As a result of globalization, the top executives are exposed to the international mobility labour force. The UAE has pressure to employ and manage individuals who come from diverse backgrounds. Hence, there is a need for the management of diversity in the workplace. The managers of Arab companies are required to implement the best diversity and communication strategies to work with a diverse workforce. It is expected the Arab region companies have the best methods and policies regarding intercultural communication and diversity (Al-Jenaibi, 2017). Diversity is an important factor in sustaining equality and providing opportunities in the workplace. Organizations that have equal opportunity for individuals get benefits from the multicultural labour force. Organizations consist of individuals that interact, work, and share knowledge for a specific period. In the workplace of Arab regions, individuals are not only required to work but also, they are required to communicate in different languages with different Individuals. However, there may be some communication problems due to diversity and there may be intercultural conflicts. Knowing about organizational communication is the key to effective communication in an enterprise. Due to the unique nature of the Arab region, work environment, and the density of the labour

force, the organizations are undertaking an examination of diversity and intercultural communication (Trainer, 2017). After the evaluation of the business process, most of the managers of Arab companies think that sharing the work and working in teams could help in overcoming cultural differences. By following the rules and policies individuals could interact in a formal way. Hence there is a correlation between the public environment and work. It has been found by many scholars that understanding the culture of customers could help in dealing with communities more easily (Komuscu, 2017).

The region is mainly Muslim dominated, but all individuals are not Muslims. The economies are different as some are extremely rich, and some are extremely poor. There are two factors that a firm needs to prioritize to be successful in the Arab region, that are work and time (Foster, 2019). In the Muslim-dominated areas, Fridays and Saturdays are holidays and Sunday is open for business. Trust is the factor that has been given importance in the workplace. Dress matters a lot in Arab companies. For non-Arabs, a business suit with a tie is mandatory, and for women business suits (Alhejji, Ng, Garavan and Carbery, 2018). However, in all cases, modesty is important, especially for women. Their arms should be covered below the elbow, no tight-fitting clothes are allowed, and legs should be covered below ankles. Hence, the workplace nature of Arab countries differs from that of other countries.

In the Arab region, men are very supportive of women and there is a sense of respect about the roles and responsibilities assigned to different individuals in the organization (AlDhaheri, Jabeen, Hussain, and Abu-Rahma, 2017). Individuals of Arab countries work for an integrated society. However, in the companies of the Arab region, the number of women is comparatively less than men. The efforts of women are not recognized in the workplace. Educating and training women leads to success as it helps in combating cultural and traditional mentalities. Low wages are one of the major factors that keep women away from work. However, various survey has been done to identify the countries that have most of the women in their organizations. It has been revealed that the UAE leads in the Arab region for having gender equality in their workplace. However, it has been also revealed that women are underpaid as compared to their male counterparts. Organizations in the UAE perceive equality among males and females in the organization.

2.6 Culture in Arab Region

According to Hammoud et al. (2017), the culture of the Arabian region stretches back several years and is considered as one of the most creative and spectacular cultures across the globe. The culture of the region is divided into various areas comprising North Africa, the Arabian Peninsula, and the Levant (Zia, 2017). The Arabians consider family as one of the vital

aspects of society and loyalty towards the close ones is one of the major aspects of the society. Generosity and hospitality of the individuals of the region can be witnessed with the greetings that are provided by them to the tourists venturing the regions. As opined by Dirani and Hamie (2017), the workplace culture of the Arabian regions involves the Individuals defining themselves with their culture and values and motivating each other utilizing the cultural similarities and differences. Hofstede's cultural dimension model is useful in understanding the varying culture of the Individual within the region.

Individualism

The individualists within the economy of the Arabian regions are concerned regarding their individual families and do not contribute much to society. Individualists are hardworking individuals who tend to achieve the objectives of the business but fail to work as a team in situations of group activities (Stebbins, 2017). However, the group of individuals are loyal towards the achievement of business objectives and do not harm the workplace culture

Uncertainty Avoidance

The uncertainties within the workplace lead to certain issues for the different cultures working within the region such as anxiety. The Middle East regions witness the convergence of several religious groups with the impact of globalization (Alhejji et al. 2018). Therefore, there are possibilities of varying cultures working within the workplace leading to certain uncertainties regarding the completion of job responsibilities. However, the individuals are provided adequate training regarding avoidance of uncertainty and working towards the successful growth of the firms and the individual self.

Masculinity

As stated by Stebbins (2017), masculinity generally refers to the competition of the society in achieving a higher level of income and high status to become successful among peers. The Arabian regions utilize the oil reserves to avail the growth of the economy. Moreover, the Individual within the region have healthy competition among themselves and insist on achieving objectives through dedication and hard work. The cybersecurity challenges of the region create various privacy issues for the population of the region but are countered by adopting advanced technologies within the workplace.

Power Distance

Power distance is related to the equalities within the workplace of the region. The attitude and expression of the societies of the Arabian regions towards equality are negative due to the insignificant difference in the income margins. Moreover, the gender inequality within the region has affected the growth of Arabian women. The conservative and patriarchal approach of the societies has led the way towards gender inequality and in various parts of

the region, a small proportion of women is working incorporates. Moreover, the ongoing conflicts within various Arabian regions, such as Syria and Iraq have affected the ability of women to feel safe in going for work (Cuthbert, 2017). The economic disempowerment of the women has contributed to the issue resulting in only 24% of women in the entire Arabian region working outside in the corporate ambiance (Cuthbert, 2017). In addition, the restrictive culture of the families of the Arabian regions affects the legal status of women in the region and leads to discriminatory issues including violence.

Pragmatism

Block and Walter (2017) believed pragmatism relates to the tension within societies in maintaining effective relationships with individuals from varying cultures. The growth of the economies of the Arabian regions results in several individuals from different parts of the globe venturing lands such as Dubai and Abu Dhabi for job opportunities. The convergence of several cultures results in certain issues among the varying culture within the workplace creating several challenges for the local Individual. However, the Arabs trust the loyalty of the different cultures and respect their ideologies to maintain harmony within the workplace and society.

Indulgence

Individuals within the society of the Arabian regions insist on inculcating their values and traditions on their children. Moreover, individuals engage in socialization processes on a regular basis to share their values creating a situation of harmony and peace within the region. Trust is based on the similarity of language, traditions, and religious backgrounds. In every form of interpersonal relationship, similarity in these backgrounds can be associated with attributes for a given outcome. Mainly, trust facilitates communication and increased confidence in the security of confidential information. As cited in Putnam and Nicotera (2009), Hall (1959) noted that “Culture is communication and communication is culture” (p. 167). In this respect, communication can be considered as an additional antecedent of trust. Through trust in communication, individuals can engage in communication to resolve disputes, align expectations and perceptions. Hall (1959) stressed the value of communication in culture. He further noted that communication creates a mechanism for conveying and decoding information that pertains to the lives of counterparts. Through similarity in language, individuals can create an organized schema for observing and comprehending the events of the world. For communication to occur effectively, the interaction between partners is necessary. Interaction in communication can be based on the similarity of culture or other aspects that affirm understanding. Also, repeated communication builds competence in establishing trust. The quality of interaction

significantly determines the level of trust between counterparts. In this respect, face-to-face interactions may be valued higher than other forms of interactions. Face-to-face interactions make memorable and significant development of environments for sharing confidential information. Face-to-face conversations between individuals of diverse national cultures contribute to the rise of frequent difficulties. In some instances, such difficulties may be exacerbated by differences in language. The individual from different cultural backgrounds, self-identities, morals, and values could significantly hinder communication. Different cultures allow for different approaches in the expression of perceptions, emotions, and other phenomena. These differences significantly contribute to possible problems and miscommunication. In this respect, individuals that interact without similarity in values may encounter major difficulties in communication.

In both the European and Arabic nations, shared values and culture play a significant role in business and social relations. Many aspects of effective relationships involve engaging with individuals in the capacity of stakeholders, individuals, customers, or suppliers. Research into cross-cultural interactions is widely being applied in global and modern practices and techniques of management. A study into the impact of culture and shared values in management in Arabic countries forms the focus of this section. The theoretical insights drawn from the study involve the fundamental antecedents of trust in business. Also, the study focused on the residents of the Emirates and their value of trust and culture in relationships. Reviews that were captured included:

• Critical examination of shared values and culture,
• Culture and trust in business,
• Antecedents of trust among the Arabs and
• Management practices in Arabic states.

Often, conducting studies in the field of cultures and shared values involves overcoming challenges of accurately defining the meaning of culture. Culture is widely defined in existing works of literature. Also, diverse dimensions and conceptualizations of culture have been introduced. According to Corbitt et al.,2004), the complex nature of culture makes it difficult to define it. Primarily, culture encompasses both intrinsic and extrinsic values and elements. Often, the elements of culture are defined by basic assumptions, behaviour, norms, and values**.** Many researchers, Ashkanasy et al. (2007), Khan and Khan (2015), and Lauring and Bjerregaard, (2009) have conducted studies on the shared elements of culture and values.

According to Mooradian et al. (2006), one hundred and sixty definitions of culture were introduced by Kroeber and Kluckhohn in 1952. The researchers further note that these

definitions multiplied to four hundred by the year 1994. Culture occurs as an essential aspect in social and behavioural sciences. As a result, the definitions, and conceptualizations of culture increase over time. In sociology, the concept of culture is defined as a compound set of patterns of behaviour and characteristics shared by the participating members of the society. In addition, the definition includes the shared feelings, beliefs, and attitudes of members of the culture. The article reviews by Kendall et al. (2009) based on the studies of Braithwaite and Thompson (2000), Putnam and Nicotra (2009), aimed at analysing the numerous instruments used in their quantitative research in measuring culture. In conclusion, culture involved the following primary elements: it is multi-level and complex

- It is shared by individuals within the same society or group,
- It is stable and
- Is established over a long period of time.

However, these elements of culture among Arabs apply differently to men and women. Further elements concerning the Arabic culture in disclosing confidential information are based on Hofstede's research.

2.7 Research on Culture by Hofstede

In his quantitative research conducted at IBM to measure culture and its consequences, Hofstede used diverse sources of data to make his findings on culture within working areas. Hofstede defines culture as mental software that individuals employ when needed to form a belief. He further noted that culture enforces a defined pattern of thought. This pattern can be reflected in the manner of interaction or behaviour of an individual. In his original study, Hofstede conducted his research among individuals in IBM from across more than fifty countries in the world. The study led to many findings that required diverse strategies and ways of approach. These findings include:

- Inequality in the relationship of the society with authority,
- Defined association of a group and an individual,
- Division of social institutions by their level of femininity or masculinity,
- Approaches of managing the expression of emotions, uncertainty, and control of aggression and
- Short term versus long term positioning of life.

Hofstede further grouped the findings into five dimensions with factors that can be associated arbitrarily in different cultures in the world.

Power distance

Hofstede defined powered distance as the degree to which power is accepted among the members of the society. Also, it defines the unequal or equal distribution of power in the society

Collectivism versus individualism

Collective societies include communities that encourage cohesion and strong social links. On the other hand, individualistic cultures tend to be less cohesive. Here, individuals of the society do not engage in the lives of other individuals

Femininity versus masculinity

Feminine cultures tend to exhibit an equal distribution of gender roles among both women and men. The overlapping of the roles promotes loyalty within the community. Conversely, masculinity refers to communities that tend to be highly competitive. Also, gender roles among men and women tend to be distinctly elaborated.

Uncertainty avoidance

Hofstede associated different cultures with different levels of the tendency to embrace situations of unknown outcomes. High uncertainty avoidance results in rules that enable members to avoid such situations.

Long-term orientation versus short-term orientation

Long-term orientation involves a sense of shame, high value of relationships and status, thrift, and persistence. On the other hand, short-term orientation involves saving face, reciprocating gifts, and favours, high regard for tradition and customs, and personal steadiness.

These factors and terminologies were derived from social sciences. According to Hofstede, these factors can be distinctively applied in distinguishing national cultures.

Comparison to the United States, Great Britain, and Arab countries

The comparison indicates that Arab nations have larger scores of 80 in power distance as compared to 40 and 35 for the United States and Great Britain respectively. Moreover, the Arabic nations ranked 7 out of the total 50 nations. The high scores in power distance indicate that the Arab nations tend to have a larger sense of inequalities within their cultures. The desired or expected authoritarian concepts exist in the workplace. Here, an unequal hierarchy of status among the lower and higher end of the society persists. Also, due to strong centralization, the subordinates may be required to never work without the instruction of their superiors. Also, managers practice utmost benevolence and bureaucratic leadership at the workplace. In this respect, the individual in authority often receives high-status

privileges, and power is unequally distributed among the nations. Table 1 below clearly compares the variation in scores of Great Britain, the United States, and the Arab nations.

Power Distance	**Avoidance**		**Individualism/collectivism Comparison to the United States, Great Britain, and Arab countries**		**Masculinity/Femininity**		**Long-/Short-term orientation**			
Country	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank
UK	35	42–44	35	47–48	89	3	66	9–10	25	28–29
USA	40	38	46	43	91	1	62	15	29	27
Arab Region	80	7	68	27	38	26–27	53	23		

Table 1 Five dimensions Factors Comparison
(SOURCE: Putnam and Nicotera, 2009)

2.8 Trust

2.8.1 Trust and Relationships

Various studies conducted previously associate the quality of relationships with environmental factors such as shared values and culture. According to Corbitt et al. (2004), environmental factors occur as a cultural precursor of trust. Therefore, uncertainty or instability in the environment generates low levels of trust. Therefore, environmental benevolence significantly influences the quality of relationships through a complex formula of correlation. The environmental factors referred to in the research encompass social and economic aspects. Another study by Hohmann and Welter (2005) discusses expertise in service entrepreneurship. This study relates to that of Corbitt et al. (2004) although the focus shifts from consumer environments to business environments. The business environment requires utmost trust and not necessarily a focus on shared beliefs or culture. They argue that the cultural market positioning of a buyer firm acts indirectly as a precursor of the level of loyalty exhibited to the main supplier. Barry (2004) conducted a study in 42 states on the antecedents of trust that are driven by culture. The study included factors such as collectivism and wealth in the nation of the buyer. In conclusion, the study noted that trust-building actively involved social behaviours. Moreover, the conclusion explained that these dominant social behaviours were significantly influenced by culture.

Agourram et al. (2009) reviews what is require for Information Security, concluding that commitment to a relationship involves four valuable antecedents. They include:

- Commitment in relationships is driven by trust,

- Sustenance of commitments in a relationship requires effective communication. Communication reduces perceived risk and uncertainty in sharing information,
- The similarity in levels of relationship commitment and shared values play a significant role. These aspects contribute to the alignment of business values. Furthermore, the author cited the need to consider the cultural differences of clients and
- Since clients of financial services value, the range and width of services by financial service providers, comparison and attractiveness of alternatives should be noted.

Agourram and Ingham (2007) noted that people from different national cultures define information systems differently and they proposed developed that groups information systems success as they are defined in France, Canada, and Germany. Another study was conducted by Gefen et al. (2008) on internet communication between exporters from the United States and their distributors. The study concluded that a positive relationship existed between internet communication and cultural distance. This means that the greater the cultural distance the higher the frequency of business letters, facsimile, email, and telephone communication. In conclusion, internet communication does not abbreviate cultural differences. This study based its variables on those identified by Hall (1983). According to Gefen et al. (2008), culture can be viewed as a form of communication. In addition, communication needs to be decoded appropriately to derive the intended understanding.

During the process of decoding, individuals from different cultures may derive a different understanding from the same message in consistence with their cultures and value. In this aspect, minimized convergence of values indicates increased "cultural distance". According to Hall, this instance can be referred to as LC (low context) or HC (high context) dichotomy. In LC (low context) dichotomy communication, the message conveyed holds adequate details and information for the sender and receiver to agree. The message is said to be factual and specific. In HC (high context) dichotomy communication, the message conveyed tends to be less detailed and less explicit. Gefen et al. (2008), argue that cultural contexts in LC (low context) or HC (high context) dichotomy bear a significant influence on the types and number of messages that would be needed to ensure effectiveness in communication. The study found differences in frequency in communication between LC (low context) or HC (high context) distributors and exporters. Primarily, limited studies on shared beliefs and values and culture as antecedents of trust have been conducted. Often, studies with similar variables tend to concentrate on organizational culture and expertise in the service

environment. The authors recommend that other studies should be conducted with an emphasis on the interaction of culture, shared values, and communication.

2.8.2 Arab cultural antecedents of trust

According to Abah (2011), cultural pasts and modernization in the UAE contribute to the vivid tensions of the cultural present of the Arabs. The Arabs emphasize their Arabic style of traditional culture despite the engagement with modernized communities. Interestingly, tribal agreements remain a significant and valuable feature of the emirate rule among the locals. The tribe of the Bedouins traditionally lived nomadic lives in the desert. They traded with livestock as they shifted from one oasis to another for their livestock. This cultural past can be observed in the present culture among the Arabs. Though the Bedouin now live-in houses, they insist on dwelling in tents in their gardens. Also, those in Dubai with white-collar jobs live in the city. However, they prefer taking holidays in the deserts while living in tents. The Arabic culture tends to be pervasive and deeply rooted.

A study by Corbitt et al. (2004) aimed at finding solutions for challenges encountered by young Arabs in their financial workstations. The high rates of attrition among banking Arabs contributed to the study. The authors argue that other than the current focus on economic values, banks needed to realign their training and education towards the values of Arabic cultures. Mainly, the economic value involved planning, economic mentality, productivity, profitability, and annual income. Contrastingly, students highly valued religion, intellect, politics, beauty, social value, and economic values in that order. The study observed that the lack of alignment in priorities of young Arabs and that of the banks led to insecurity and anxiety. As a result, the Arabs resorted to withdrawal in emotional and physical contexts. The study mainly focused on the variations of values and culture among Arabs and non-Arabs and the existing tension between the individual Arabs and the financial institutions.

According to Schuster and Copeland, (1996 as cited in Corbitt et al. (2004), Arabs tend to have more information about each other when compared with Westerners. Schuster and Copeland (1996) noted that the culture of the Arabs allows for networking extensively through socializing. The Arabs endeavour to make new and significant connections in their daily lives. According to the study by Corbitt et al. (2004), Arabic society tends to be tribal: society highly values family and loyalty. Among the Arabs, decision-making can be influenced by social position, family links, instincts and intuition, and personal relations. In this respect, the Arabic culture dictates that established relationships should not be broken. These concerns have extended to management and business operations among the Arabs. For instance, in banking transactions, Arabs tend to be loyal to their initial banker rather than find a replacement. The study notes that the Islamic traditions also influence the tribal values

of Arabs and Arabic society tends to be closed. It is believed that Islam can be considered a comprehensive lifestyle. To understand the business transactions in the Arab nations, one would need to understand religion. Primarily, Arabs tend to be slow in engaging with strangers. On the other hand, a well-grounded trust could be applied as a highly valued mechanism towards reducing uncertainty, with high levels of uncertainty avoidance exist among the Arabic culture. This aspect is replicated in the preference to follow rules and maintain stable business enterprises. The Arabic culture enforces those intrinsic uncertainties of life should be understood and minimized. Such cultures, therefore, exhibit high significance on information security. In this culture, change occurs as a threatening initiative. Therefore, Arabs tend to concentrate on relationships that simplify predictability and interpretations of situations. Here, uncertainty avoidance defines the perception of individuals towards unknown and uncertain outcomes. It cannot be minimized by calculable avoidance of risk. Primarily, Arabs tend to give serious considerations when dealing with fellow Arabs. Arabs are associated with resilience in in-group preferences, loyalty, and collectivist cultures. These aspects come into play when dealing with services, individuals, or products. Conversely, they may be relaxed towards developing a relationship with potential counterparts from other cultures.

2.8.3 The Universal Approach towards Trust

Many studies on trust in communication exist. Initial studies were conducted among the Greeks. Alternatively, recent studies tend to be multi-disciplinary spanning across marketing, psychology, information security, and sociology. Strategic studies of trust in marketing and organizational behaviour include Ashkanasy et al. (2007), Khan and Khan (2015), and Lauring and Bjerregaard, (2009). Khan and Khan (2015) focused on organizational trust while Ashkanasy et al. (2007) and Lauring and Bjerregaard (2009) focused on trust in social relationships. Trust is a prerequisite for building commercial and interpersonal relationships. As cited in Bekmamedova et al (2007), Lewick and Bunker (1995), Ganesan (1994), Ganesan and Hess (1997), and Baier (1986), trust in relationships with a focus in social psychology, sociology, economics, management and marketing, and philosophy in that order. The diverse aspects of trust in relationships further receive attention from disciplines of biology, anthropology, finance, medicine, and economics. These multi-disciplinary perspectives on trust result in diverse outcomes on the same.

2.8.4 Openness to Communication

In the business field, communication can be classified as formal and informal. Also, through communication, meaningful information can be conveyed on a timely basis. In this respect, communication breeds trust. However, the aspects of openness and information sharing

constitute the antecedents of trust in communication. According to HöHmann and Welter (2005), the multi-dimensional structure of communication constitutes willingness to communicate, quality of communication, and quality of feedback. Among the three, willingness to communicate helps in developing trust. Therefore, openness occurs as an antecedent feature of trust. Fundamentally, openness to sharing information can be regarded as a sentimental attribute of the mind. Other studies that concluded that communication developed trust include Mukherjee and Nath (2003) and Anderson and Narus (1989) as cited in HöHmann and Welter (2005). In Mukherjee and Nath (2003), aspects of communication directly and positively impacted the relationship between a retailer and supplier in the tire business. Moreover, the study noted that communication directly relates to trust and sharing information. Another study: Lauring and Bjerregaard (2009), argues that communication is associated with the interlinked nature of industrial communication. Various studies like Chelune (1979), have been conducted towards understanding the significance of openness in communication (Anderson et al., 2004).

2.8.5 Relationship on Sharing Information

Karahanna et al. (2006) focused on the significance of frequency in open communication. In addition, according to Gefen et al. (2008), many aspects of communication and relationships arise in the field of business in high technology. The authors argued that trust based on cognition and propensity did not outweigh affection-based trust. In this respect, openness in communication intensifies success and ultimately enforces the growth of affection-based trust. Trust derived from affection entails a capacity for understanding, listening, openness, concern, and care. In addition, the aspect of trust strongly breeds positive emotional trust. It is based on undoubted liking towards the trustee. Emotional trust tends to be open, receptive, and loyal to its counterpart. Through emotional trust, individuals can communicate confidential information between themselves. Through shared understanding in communication, trust can be developed. It can also lead to establishing a solid foundation in non-opportunistic behaviours. In essence, communication can be effectively developed through, face to face, clear, culturally sensitive, open, honest, and timely communication. According to Palaiologou (2007), trust in relationships can only be developed in interpersonal communication. Also, Corbitt et al. (2004), concluded that face-to-face interaction is vital in the initial stage of developing relationships based on effective communication. In addition, Mooradian et al. (2006), noted that partners in a business setting needed high levels of trust. In this study, openness in communications is viewed as an aspect that builds trust. Again, the study by Theron et al. (2008) is featured in this section as it studies clients and their managers in South Africa. The study concluded that reduction of

uncertainty and risk depended on the effectiveness of communication between the two parties. In the financial services industry, effective communication involved openness with adequate information. In the study, respondent clients preferred that the business values of providers aligned with their values. The study further concluded that fundamental antecedents of trust involve shared values and similarities in cultures.

Abrams, Cross, Lesser and Levin (N.D.) studied the cross-cultural industrial market between the United Kingdom and Saudi Arabia. The study concluded that both countries highly valued communication as a valuable aspect of developing dynamic relationships. The Saudis emphasized the sentimental elements of the dynamic relationship. Contrastingly, the British emphasized calculative and instrumental elements of dynamic relationships. In conclusion, the study found that universally, openness in communication-based on affection is likely to occur between partners that share similar values. The similarity in values was considered as emotional and affective antecedents of trust in communication.

2.8.6 Variables of Shared Culture, Environment and Values in Communication

In normal human interactions, high levels of trust significantly derive from the practice of shared values. According to research by Putnam and Nicotera (2009), the findings indicated that shared values constitute the major components in building unconditional trust among diverse experiences of individuals. Shared values fundamentally and inherently build the standard of loyalty that is highly sustained among individuals to boost fairness and helpfulness. Individuals that share a common value build their trust based on a single similarity. In addition, the study noted that individuals tend to hold a perception that individuals that share their significant value can be called upon for cooperation or certain obligations. The study cited that Tschannen-Moran (2004) noted that individuals that comprehend each other's communication or expertise have higher likelihoods of developing closer bonds and mentality.

Another study by Ganesan and Hess (1997) argues that at a personal level, individuals with similar experiences individuals tend to be highly likely to build trust. The similarity in experiences and trust can be attributed that the subsequent intensification of comfort levels and reduction of interpersonal barriers. In a study of the Emirati clients of a banking institution, the study indicated that the similarity between bankers and clients significantly initiated empathetic feelings. Additionally, this outcome indicates the significant role of shared values in building trustworthy relationships. The study further cited that the study by Woodside and Davenport (1974) made similar conclusions. Here, the relationships managers that held similar values with their colleagues successfully gained more influence in changing opinions and attitudes of other Individuals. Concerning Ganesan and Hess (1997), the study

noted that shared values could be viewed as a multidimensional concept. This concept symbolized the degree to which a client and banker share similar values in privacy, ethics, and security of information. The study also confirms that trust in relationships with clients could be viewed as an antecedent of trust. Such trusts help in building and nurturing long-term bonds in associative relationships. To have a relationship based on trust; bankers were required to exhibit a culture of ethics, privacy, and security of information to their clients. In the Arab nations, obligations, responsibilities, and roles are distinctly outlined. The shared understanding of expectations, norms, goals, expectations, and values promotes the establishment and sustenance of strong trust-based relationships. For this reason, shared values comprise similarity of culture and reproduction of behaviour within similar cultures.

2.9 Individuals' Alignment

As opined by Waldron (2017), individual alignment refers to the management of the individuals within an organization to achieve the goals of the business. There is a need for the managers to identify the potential of the individuals and guide them in a direction within the organization to achieve the goals of the business. Moreover, the individuals who fail to achieve the objectives of the firm are provided with motivation to achieve the business goals. The individuals within the Arabian region have aligned their work with the laws and employment needs that are vital for the advancement of the human resource of the organization.

Individual-Role Alignment

As stated by Kalgin et al. (2018), individual-role management refers to the responsibility of the human resource managers of the organization to find the right Individual for the right position in the job. Most of the countries within the Arab region have a law of providing employment contracts of 30 days or more to the Individual. Therefore, to reduce the possibility of bad hiring within the firm, the managers of various companies provide adequate training to the human resource and ensure their capability of completing the job responsibilities. Moreover, the large and multinational corporations of the region such as National Commercial Bank, SABIC, McDonald's hire individuals only after training them and understanding the potential of the individual (Teimouri et al., 2018). The managers of the firms are competitive but remain loyal towards the individuals of the firm. However, the Individual belonging from the local regions is preferred over those belonging from a different culture for the local firms of the region. In addition, the reluctance to offer high positions to the women population within the organizations of the region due to the persisting cultural issues affects the advancement of both gender within the region (Teimouri et al., 2018).

Individual-Goal Alignment

According to Veld and Alfes (2017), individual-goal alignment refers to the specific goals of the individuals and the collaboration received within the organization to achieve the overall objectives. The diverse culture and religion within the Arabian region result in various issues related to the completion of business objectives. However, the managers of the firms motivate the individuals and encourage them to achieve the business goals. Moreover, the managers of the region maintain trust in the individuals hired and provide them with strategies that are useful for the successful completion of goals. The collaborative efforts of the managers and the individuals result in adequate revenue margins for the organization.

Individual-team Alignment

As stated by Mone and London (2018), teamwork is a vital aspect of achieving its objectives. The managers of the organization motivate the individuals to work in teams and coordinate effectively with each other to achieve the goals. However, the convergence of different cultures within the organizations of the Arabian region leads to conflict among the Individuals while working within a team. Moreover, few of the renowned multinational corporations within the country are unbiased towards women for employment opportunities and create certain issues within the individuals of the firm (Lyons, 2017). The tradition and attitude of the Arabian managers are further supported by the government as the political parties do not indulge in the situation to improve it resulting in persistent issues within the entire corporate system. However, various Arabian regions such as Saudi Arabia and Egypt have maintained gender equality in their workforce in the past few years and provided equal opportunities for both men and women (Lyons, 2017). The convergence of the different religions and genders ultimately has resulted in the overall growth of the companies within the region and instilled the adverse need for teamwork and coordination within the workplace.

Individual-organisation Alignment

Individual-organization alignment refers to the leading factors of the managers of the firm. The workplace, compensation packages, and work infrastructure of the firm are dependent upon the attitude of the leaders towards the individuals. The managers of the Arabian firms are supportive towards the individuals and the minimal amount of taxes charged on the individuals results in a higher amount of disposable income for the Individual. Moreover, the trust and loyalty displayed by the leaders on the individuals result in increased motivation and dedication towards the achievement of organizational objectives (Cuthbert, 2017).

2.9.1 Leadership Style of Management in the Arab world

Leadership has evolved across the years and the impact of globalization has led to the adverse emphasis on leadership qualities of the managers to attain a competitive advantage over rival firms. The leadership styles have further transformed with the managers insisting on adopting innovative measures to delegate responsibilities to the subordinates targeting optimum growth of their organization. Leadership has become a growing phenomenon in various fields such as healthcare, politics, education, business, etc. and the creativity of the leaders determines the outcome of the organization. This report insists on identifying the relationship between the leadership styles of modern-day managers and the productivity achieved by the firms because of innovative and creative leadership techniques. The report takes into consideration the public and private universities of Saudi Arabia for conducting the research process and further studies the behaviour of the individuals and their satisfaction on a particular job. The research questions that are taken into consideration are the leadership styles adopted by the universities of Saudi Arabia and the transformational leadership style that is suitable for improving the job satisfaction of the individuals of the country.

2.9.2 Saudi Arabia context

Saudi Arabia is a country that has a strong culture and is focused on the development of the educational system of the country. The leaders of the universities focus on developing a future for the growth of the universities and aims towards attaining the services of qualified scholars and enhancing the overall educational sphere of the system. The government of the country further supports the institutions delegating additional efforts on education and has allocated around £37 billion for the development of the infrastructure of the educational institutions in the year 2017. The number of students within the region has exceeded 200000 in the year 2015 and the government has invested around £1 billion for providing vocational training to the students of the region. However, apart from the government grants and the initiative of the educational organizations, it is vital for the positive leadership style of the managers of the institutions and enables the successful growth and productivity of the individual institutions leading to the overall growth of the entire educational system.

leadership style adopted in Saudi Arabia is a traditional based on customs, religion, and culture (Altbach and Knight, 2007; Saleh, 1986; Smith and Abouammoh, 2013).

Leadership style is even considered to be highly affected by Islam, which makes the risk-taking abilities of the people extremely low, and the decision-making style becomes completely consultative (Bjerke and Al-Meer, 1993). Leadership theories are essential in understanding the characteristics of different leaders of society. The skills and abilities of

the leaders are determined with the help of the leadership theories and understanding the situational variables that create an impact on the individual leaders in inflicting their decisions.

Trait Theory

The trait theories of leadership reflect personality. Further, it is found that trust is deep-rooted in the Arab region personality and attitude of the individuals in achieving the objectives of the business. The personal traits of the leaders such as courage, self-confidence, extroversion, etc. are the determinants of the decision-making capabilities of the individuals. Moreover, the innovative mindset and the creativity of the individuals are further considered as leadership traits and create an impact on the decision-making abilities of the individuals.

Contingency Theory

Contingency theories of the individuals are related to the environmental factors affecting the firm and creating an impact on the decision-making ability of the individuals. The legal restrictions on various institutions of Saudi Arabia regarding the hiring of female individuals might affect the organizational strategies of the leaders. However, the ability to respond to environmental situations and adopt the existing trends determine the leadership capabilities of the individuals.

Behavioural Theory

The leaders of various organizations take decisions depending upon the belief of the great leaders of the society. The roots established, and the attitude displayed by the great leaders are used as a medium by the leaders to implement strategies and ensure the success of the individual institutions.

Participative Theory

The participative theories of leadership involve the leaders considering the decisions and suggestions provided to the individual by the individuals of the firm. The participative theory of leadership is a collaborative effort of the entire workforce of the organization in taking certain decisions that would ensure competitive advantage.

The behaviour of the leaders and the strategies adopted provides an idea regarding the leadership styles followed by the individuals. The leadership styles are used for determining the ability of the individuals to solve issues and ensure job satisfaction to the individuals.

The different styles of leadership are:

Democratic

Democratic leadership style means that before taking any major decision the managers take suggestions from the subordinates and then take the final decision.

Autocratic

In autocratic leadership technique, the managers delegate responsibilities to the subordinates and expect them to fulfil the objectives as stated by the authority of the institution.

Distributed

Distributed leadership style involves the coordination of the leaders and the management of the firm in taking decisions. Innovation and creativity are encouraged through distributed leadership style.

Transactional

The transactional leadership technique involves the exchange of thoughts and ideas between the individuals and the managers of the organization. The individuals that provide positive results are entitled to adequate incentives and promotion.

Transformational

Transformational leadership style involves adapting to the changing trends of the market and structuring the business satisfying the needs of the individuals and the customers of the entity.

The leadership style of the managers of the organization is a vital determinant of the satisfaction of the individuals. The positive leadership style, such as transactional and transformational leadership techniques motivate the individuals and contributes to organizational energy. Organizational energy is achieved through the adequate motivation of the individuals such as job security, fair wages, incentives, recognition, motivation provided by the leaders, etc. Organizational energy further contributes towards job satisfaction of the individuals and is dependent on the relationship of the leadership techniques of the managers of the organization.

The research process stated that the leadership styles that are adopted mainly by the authorities of the educational universities of Saudi Arabia are transactional and transformational leadership techniques. The transactional leadership style enabled the managers to exchange ideas with the staff of the universities regarding the changes to be implemented. The transactional leadership style further enabled the managers to understand the role of the subordinates of the organizations during group performances. The coordinated efforts of the management with the individuals resulted in a decline of supervision activities and the firms generated adequate savings from the operational costs. The study of the descriptive statistics further ensured that the performance of the individuals of the organization can be determined effectively by using the transactional leadership style and it enabled the managers in delegating responsibilities according to the capabilities of the

individuals. In addition, the transactional leadership technique allowed the leaders to provide incentives and rewards depending upon their contribution towards the entity.

According to the research, the transformational leadership style was proposed along with the transactional leadership style for the managers of the universities of Saudi Arabia. The purpose of the transformational leadership style is to adapt to the changing trends of the industry and work towards the sustainable growth of the entity through coordinated efforts and teamwork. The transformational leadership technique was determined in the research using the skewness and kurtosis statistics and the normally distributed data provided the results. The descriptive statistics suggested that in the public sector of Dar Alhekma University, the transformational style of leadership enabled the leaders to adapt to the changing trends in education and implement innovative technology leading to the growing attraction of the students toward the entity. The transformational style of leadership further enabled the leaders in understanding the demand of the market and function effectively towards the needs of the consumers.

The leadership styles of the managers of the organization and the behaviour inflicted by the authority on the subordinates presented a concise demonstration of the productive organizational energy of the leading educational enterprises of Saudi Arabia. Productive organizational energy refers to the motivation received by the individuals from the managers and the efficiency delegated on the job responsibilities leading to adequate profitability margins for the firm.

The unique leadership style followed by the leaders of the educational organizations of Saudi Arabia contributed to the growth of the entities through maximizing production and ensuring job satisfaction to the individuals. However, improvement in the infrastructure of the firms and adequate emphasis on removing the gender gap would provide fruitful results for the institutions. The research states that an increase in the number of authors and scholars within the educational universities will not only provide innovative ideas for the growth of the entity, but the diversified workforce would attract the need for education within the region.

The modernization of the world has increasingly emphasized the leadership qualities of the managers of various educational institutions. The growth of the economy of Saudi Arabia and the need for education within the region has prompted the leaders to adopt a transactional style of leadership. Moreover, various leaders have adopted a transformational leadership technique to cope up with the changing trends of the industry and provide adequate recognition to the individuals. The positive leadership style has enabled the maximization of productivity margins with the individuals implementing innovative and creative ideas directed towards the growth of the institutions. The cooperation of the leaders with the

individuals and providing adequate recognition in the form of incentives and fringe benefits has led to the increase in job satisfaction among the individuals of the institutions. However, emphasizing gender equality would provide adequate opportunities to the female section of the society and enable the further growth of the educational universities of Saudi Arabia.

The study on culture by Hofstede unveils the antecedents of trust that form the basis of the management style that is likely to be practiced. In the Arab world, little study has been conducted concerning the management styles that are widely practiced. The worth of Arab nation management styles therefore can never be accurately defined. It is widely perceived that these nations practice strict forms of management as compared to countries in the European regions of the United States of America. However, upon in-depth study, the findings are likely to conclude on the positive or negative aspects of Arab styles of management. Positive outcomes of management include high levels of trust to share confidential information, willingness to share knowledge, avoidance of misunderstandings, and positive regard for Arabic culture. Fougère and Moulettes (2006) conducted a study to determine the permanent style of management among the Emiratis and non-Emiratis based on their similarity of cultures and values. The outcomes of the study were classified based on the causal factors in shared values and culture and their impacts on Arab management styles. Primarily, it is likely that the Arab management style exhibits utmost degrees on social and corporate morality. They also practice openness to trade and consultations in decision-making. Foreigners living in the Arab nations encounter diverse consequences associated with diversity in national cultures

. Fouler and Roulettes (2006), a critic of the Hofstede study noted that cultures cannot be compared against each other while using intellectual frameworks derived from ‘Western’ or modern aspects. Cultural factors significantly come to play in underpinning the mediums of precursors of trust among the Arab cultures. Such antecedents significantly determine the forms of relationships that arise.

2.9.3 Trust in Diversity

The paper titled 'E Pluribus Unum: Diversity and Community in the Twenty-first Century,' by Putnam (2007) concludes that ethnical diversities hinder solidarity in society. Moreover, these diversities significantly contribute towards low levels of social trust. The paper notes that these conclusions were made upon analyzing data collected from the United States. Lancee and Dronkers (2007) further implemented Putnam’s study in Europe. In his 2007 paper; 'E Pluribus Unum: Diversity and Community in the Twenty-first Century,' Putnam concludes that ethnically diverse societies make social solidarity difficult and

simultaneously decrease social capital, and generalized trust is lower in these heterogeneous societies.

In his study, Putnam proposed three hypotheses using the contact hypothesis, conflict theory, and constricts theory in that order. The first hypothesis stated that a high frequency of interaction among communities with diversity in ethnicity increased levels of trust. However, this hypothesis considered that it would be confirmed only when applied to a group with a larger population of the minority ethnic group. The second hypothesis noted that limited resources ultimately result in the development of group solidarity or distrust. Thirdly, ethnic diversity would lower trust both in in-group and out-group settings. Putnam tested these hypotheses in national research guided by the 2001 Social Capital Community Benchmark survey kin America. The survey involved a sample size of 30,000 respondents collected from 41 communities involving Asians, Americans, Whites, Blacks, and others. In a previous study, Putnam (1993) noted that trust contributes significantly towards societal cooperation.

In the Western conceptualization, the construct of trust could be differentiated based on affection and or cognition. In a study by Chua, Ingram, and Morris (2005) that aimed to determine these two constructs of trust, the researchers noted that managers in America practiced these two constructs widely. Traditionally, the surveys on professional networks measured the diverse kinds of relations that the managers employ as they attend to various responsibilities within the network. Such kinds of relations determine the nature and growth of friendship, economic assistance, career advice, and task advice. According to the study, the findings indicated a definite overlap of these relations. The study noted that the overlap could be related to the ease in alteration of interactions as the managers aim at maintaining different forms of trust-based relationships. Mainly, trust-based on cognition was observed to be more likely to grow in settings that provided financial assistance or professional advice. On the other hand, affect-based trust developed significantly in friendship relations. In comparison, trust-based on affection differed from that of cognition on the grounds of ease to share confidential information.

2.10 Western Information Technology

Transferring Information Technology (IT) to bring it into practice is difficult for many countries, and they even fail to transfer it. The major obstacles that are faced while transferring IT into practices are the cultural and social norms of a developing country. It has been identified that in Arab society the cultural beliefs of the individuals of various occupational groups differ based on the construct of the technology in their daily lives (Hill et al., 1998). From the study, it has been observed that the transfer of technology and its

influence varies from the Arab culture to the non-Arab culture (Hill et al., 1998). The main factor that is responsible for the technology transfer in the Arab region and non-Arab region is the socio-cultural factor. Western and cultural beliefs are the major factors that lead towards successful IT in the region. However, in the Arab region, Individuals prefer to deal face-face and develop a family-like environment in their organizations, which mitigate the technology interfaces (Hill et al., 1998). The traditional and religious beliefs of the individuals living in the Arab region show resistance towards IT, especially their resistance is towards the IT aspects that can influence the Arab culture. This influence can be in the form of less humane or change in the perception of the individuals with time.

It has also been examined that the cultural and social beliefs of the non-Arab region get dominated by the Arab cultural and social beliefs (Hill et al., 1998). Arab culture does not get influenced by external factors, such as level of education or technology exposure. However, the Individual in the Arab region is ready for Information Technology Transfer (ITT). It can be stated that ITT cannot transform the Individual within the Arab region into Westerners. In this manner, it can be stated that to bring ITT to the Arab region, a transfer process can be designed as per the culture of the Arab region. Further, to reduce the mismatch, some of the changes can also be made in the western culture regarding the information technology transfer, such as bringing loyalty towards national traditions alignment (Hill et al., 1998).

An article has focused on examining the Arab Culture, by testing the cultural-economic model to gain knowledge regarding international public relations (Al-Kandari and Gaither, 2011). It will also identify the cultural value orientations that affect the culture of the Arab Region. It has been explored from the article that the cultural-economic model is effective in analyzing the Arab Culture, which emphasizes power, culture, and identity. Arab identity and their language are influenced by their history and cultural indicators from past years. In this essence, it can be stated that the Individual living in the Arab Region speaks the Arabic language and follows Arabic Culture. In Arab Region, there are various groups found, and all these groups are not Muslims (Al-Kandari and Gaither, 2011).

Cultural backgrounds, it has been analyzed that the Individuals living in Arab Region tend to follow Arab Culture and language, which creates a strong bond between these individuals based on their culture. However, Non-Arab individuals living in the Arab Region feel difficult to manage with the Arab Individual, due to language as their major barrier. It can be concluded from the observations of the cultural-economic model that in the Arab Region, their culture plays a significant role in maintaining public relations, but in the West different can be found (Al-Kandari and Gaither, 2011).

2.11 Information Security Management

A recent study has been conducted to identify the factors of success of information security management in the segment of small-medium size enterprises in Slovakia (Ključnikov et al., 2019). The research study highlighted the need for the protection of information by understanding the security management field which includes, managing security risks, reviewing, implementing, operating, monitoring, maintaining, and improving the information security in the organization as stated by (Rajnoha et al., 2017; Radu, 2018; Davidekova et al.,2016; Lengyel et al., 2017; Tvaronavičienė, 2018; Davidavičienė et al., 2019).

Dekys (2010) stated that small and medium-sized enterprises are different from large companies in terms of enforcement and information security management. These differences include a non-existing or minimal security team, missing budget, low financial range, time, and human resources allocation, minimized ITC expenditures using open-source projects, and finally the information management to be performed by the IT department.

According to Millaire et al. (2017), Mandorf and Gregus (2014), Zavadska and Zavadsky (2018), there is a fundamental reason why many attackers are targeting SMEs. It has been stated that attackers are looking for simple goals that many SMEs have such as limited budgets where they do not consider cyber security as an important aspect, so they are easier to disrupt, unlike large companies. According to Hau et al. (2016), most companies have been attacked without knowing for months. On other hand, FireEye (2016) stated that many companies were not able to identify these attacks and as many as 77% of these attacks are targeting SMEs. Studies such as Tu et al. (2018) and Olah et al. (2019) have focused on identifying and modelling factors in the segment of information security management. The study has identified six critical factors such as business alignment, organization support, IT competencies, organizational awareness of security risks and controls, and the complexity of how to combine them. Other researchers such as Zamman and Razali (2016) have identified three aspects of information security management factors based on experts' points of view. Where these factors include people, process, and organization. Moreover, authors such as Waly, Tassabehji, and Kamala (2012) stated that information security management can be managed through organizational factors, behavioural factors, and education.

In another paper by Kazemi et al. (2012), the study identified other factors such as senior management, information security policy, labour responsibilities, motivation of employees, Information awareness training. Information security compliance, international standards, and lastly the use of external consultants. Furthermore, a study by Alnatheera (2015) has identified other factors such as creating an effective information security policy, promoting

top management for information security, information security and training, and organizational culture, the author also stated that ethical norms and policies may vary from country to country.

According to McKeown (2019) in the journal published by ISSA on the information security culture, the article stated that to ensure business success, companies should build a strong organizational culture. The culture is established by leaders that consists of shared values and beliefs that are communicated through various methods such as behaviours and employee perceptions (McKeown, 2019). The same author stated that organizational culture that encourages the engagement of employees has resulted in better business performance and not the other way around. The study also has highlighted that security programs tend to be guided by values and beliefs as well as are shaped by the culture where culture is often not considered as part of the information security program.

Another study was conducted at the Center of Analysis and Information Services Judicial Commission Republic of Indonesia; the study aimed to measure the information security awareness level of the employees. The research was conducted through a questionnaire administered to all employees as well as an arranged interview with three information security experts (Mahardika et al, 2020). Moreover, authors such as Sari et al. (2014), and Kusumawati (2018) have carried out an information security awareness study on a smartphone. The study of Sari et al. (2014) has developed the KAB model framework which focuses only on two dimensions namely, knowledge and behaviour where data have been analyzed using the CFA model. In 2015 the following year, the same author has conducted another study that has taken a different approach from the previous study so, it was focused on smartphone users. The KAB model that was used in the previous study has now developed into three dimensions namely, knowledge, attitude, and behaviour where data have been analyzed using Analytic Hierarchy Process (AHP) calculation. The researchers have conducted the same methods, the KAB and AHP methods and the differences were that Sari et al, studied smartphone users and others studied the government employees in Indonesia.

In 2018, Kusumawati conducted other research that uses KAB and multiple-criteria decision analysis (MCDA) methods, the study has used five focused areas (Kusumawati,2018) while other researchers have used 7 focus areas as well as AHP calculation methods. Following further studies conducted by Puspitaningrum et al. (2018) under the Ministry of Communications and Information of the Republic of Indonesia to evaluate the security awareness of the employees. The study has used AHP calculations and Human Aspects of Information Security Questionnaire (HAIS-Q) framework that has been written by Lund (2018) research which consisted of 63 questions that measure three dimensions namely

knowledge, attitude, and behaviour as well as 7 focus areas, these included Password Management (PM), Email Use (EU), Internet Use (IU), Social Media Use (SMU), Mobile Devices (MD), Information Handling (IH), and Incident Reporting (IR).

2.12 Overview of Wasta and Islam

This is a separate section that represents the nature of Arab culture in real-life nowadays. As an observation, I have found that the Wasta refers to power over authorities is existed within Arab countries for many years and because of that, the Wasta within Arabs becomes a key to building a relationship at a different level within their culture therefore the trust that this research is addressing becomes vital to maintain their relationships. Much like China, the basic rule of business in the Arab World is to establish a relationship first, build connections, and only actually come to the heart of the intended business at a later meeting. There is a master assumption that a network or web of connections already exists, and the issues concern if, and how, it may be accessed. In traditional Western models, the emphasis is on the immediate transaction itself. Thus, in the Arab milieu much that subsequently transpires appears to be in direct contrast to Western practice in which focus is placed on 'getting the deal done and a friendship- may only develop later as a separate function to the business transaction. Just as in China, the Arab process of building relationships before transacting business is very time-consuming.

However, once a relationship has been established verbal contracts are absolute and an individual's word is his/her bond, and failure to meet verbally agreed obligations will certainly lead to a termination of a business relationship. Three factors are core to business and society in the Arab World. Firstly, the global philosophy of Islam is based on practice rather than dogma. Secondly, there is an expectation that good practice of Islam is what all Muslims do, Thirdly, Muslim societies are wholly networked, and all business activities revolve around these networks. Like its Chinese counterpart guanxi, Wasta thus also involves a social network of interpersonal connections rooted in family and kinship ties. Involving the exercise of power, influence, and information-sharing through social and politico-business networks, Wasta is intrinsic to the operation of many valuable social processes, central to the transmission of knowledge, and the creation of opportunity. Just as guanxi has a positive connotation of networking and a negative connotation of corruption, so too does Wasta and it is possible to refer to good Wasta and negative Wasta. Though Sawalha (2002) suggests that Wasta, as the use of connections for personal gains, commonly stands for nepotism, cronyism, and corruption in general, and is a deeply rooted practice among all segments of society and in all sectors, this was not the original meaning of Wasta.

Wasta is defined as Arabic for connections or pull and may be utilized as a form of intercession or mediation. Traditionally, the head of the family in Arab nations performed Wasta services by obtaining for the supplicant what is assumed to be otherwise unattainable. In recent years, Wasta has come to mean the seeking of benefits from the government. Though Wasta pervades the culture of all Arab countries and is a force in all significant decision making, it is not usually mentioned by most writers, nor is it openly discussed by Arabs themselves (Sawalha, 2002). By illustration, one could point to a typical response to the question of Wasta's continued influence. Western businesspeople may ask an Arab colleague whether Wasta is still influential in business transactions s/he will very probably at first say no but then if the Westerner asks if Wasta will become irrelevant in Arab business and society, the response will be an emphatic reply that Wasta is central to all Arab life. If the questioner proceeds to express condemnation or dismay at the existence of Wasta in a specific business situation they may be listened to courteously but discreetly humoured as possibly naïve or inexperienced. But too much acceptance and understanding may also be taken as an adverse sign. In principle, Arabs are permitted to criticize Wasta in ways that from a Westerner would be considered unacceptable. Thus, HRD managers are advised to train their international managers from a non-Arab background in the need to learn how to manage what may not be directly acknowledged or discussed.

Cunningham and Sarayrah (1993) argue that Wasta has changed over time and its main goal has shifted from conflict resolution as a means of survival to intercession, and the term denotes the person who mediates/intercedes as well as the act of mediation/intercession (Cunningham and Sarayrah, 1994). Intermediary Wasta endeavours to resolve inter-personal or inter-group conflict and a Jaha (wajaha', mediation group of notable emissaries sent by the perpetrator's family to the victim's family) acts to inhibit revenge being taken following an incident involving personal injury (Cunningham and Sarayrah, 1994). Wasta as mediation binds families and communities for peace and well-being in a hostile environment and this form of Wasta benefits society, as well as the parties involved (Cunningham and Sarayrah,1994). Intercessory Wasta involves a protagonist intervening on behalf of a client to obtain an advantage for the client, such as a job, a government document, a tax reduction, or admission to a prestigious university. In instances where there are many seekers of the same benefit, only aspirants with the strongest Wasta are successful (Cunningham and Sarayrah, 1994). In Western business, it is common to negotiate with only one organization at a time after initial quotes have been received. In the Arab World, negotiations will be conducted with several businesses simultaneously and the organization to win the deal will

usually be the one with the strongest Wasta connections. The lesson for international managers is to avoid placing all their efforts on the product/service delivery but rather to invest their time and resources in the requisite business acumen of cultivating strong connections. In this context, there is no substitute for achieving a good reputation for honest dealing. Western managers may come unstuck if they presume to act as they believe local managers from an Arab background might behave. Indeed, any inference relating to such topics as "corruption" may be very bitterly resented.

Cultural Trust

It has been argued that attempts to regulate traditional forms of networking, particularly the Arab **Wasta**, by legal or juridical constraint usually fail because they are intrinsically tied to trust and social structures and family connections (Weir, 2003a). For the Chinese, emotional trust is more important than cognitive trust and is based on sentiment-based ties between individuals which may also be extended to others through the relationship network, guanxiwang (Gao and Ting-Toomey, 1998). Xinyong (trust) means the use or usefulness of trust but also refers to the integrity, credibility, trustworthiness, or the reputation and character of a person (Kiong and Kee,1998). Moreover, when an individual helps one's guanxi, that individual's reputation is raised and trust and mianzi (face) are won from others. Trust is also associated with the importance of one's word over legal documents. When trust has been established, one's word can be taken in business transactions – to go against one's given word is to lose face and trust and ultimately one's good guanxi. Reciprocity is also linked to guanxi and trust with an unwritten rule that one must Payback + 1 when a favour has been provided. Relations of trust between business partners are integral to successful business transactions in the Arab World also. While the Western world relies on formal agreements and legally prepared and signed contracts, once a trustful relationship has been established in the Arab World business partners need only give their word of honour in business dealings (Demirbag, Mirza and Weir, 2003). Consultation or **Shura** is central to business relationships in the Arab World (Siddiqui, 1997) and decisions carry great importance as they are deemed to have been made on behalf of Allah. Though trust is endemic to business and social relationships, participation is a key and consultation means the right to appeal decisions (Espisito, 1988). While trust in China hails from Confucian philosophy, trust in the Arab World is rooted in Islam and faith in God. It should be noted, though, that while the word of an Arab is his/her bond, the phrase 'Insha'Allah', literally "if God wills it" can be a simple statement or a form of words covering the strong possibility of inaction or even a negative outcome to agreed courses of action. Weir (2003a) argues that, by its very nature, this is an indefeasible expression, for all outcomes represent the will of

God, and what eventually happens, or does not happen, is equally an expression of Divine will. The successful international manager recognizes this pre-existing state and works slowly but surely towards gaining the trust of his/her Chinese and Arab counterparts.

The importance of family

Family is of central importance in both China and the Arab World. In China, the notion of family encompasses the extended family and the wider community. Not only do individuals feel a sense of obligation to their family, but also an obligation to save and maintain face for their family and extended networks. Reciprocal obligations are not limited to family and kinship only but also to non-kin ties in which individuals are expected to help each other as if they are fulfilling obligations to their family members (Bian and Ang, 1997). This reciprocity is integrally tied to guanxi and further extended to the repayment of business and social deeds, and those that fail to deliver may be "labelled as bugou pengyou, or 'not enough of a friend'" (Seligman, 1999, p. 36). Family forms the basis of the business organization even more so in the Arab World than in China. Moreover, the family in the Arab World is the primary Wasta channel (Muna, 1980). The formalities of social, family, and political life are strictly preserved, even in managerial settings. Just as Chinese business culture revolves around banqueting, it is impossible to undertake any kind of meeting in an Arab organization without the ubiquitous coffee or tea rituals associated with the 'diwan'. The traditional tribal Wasta, the shaykh, was a man of honour, whose word was his bond and who would assume responsibility for his acts (Cunningham and Sarayrah, 1994).

Although originally based upon family loyalty, Wasta relationships have expanded to encompass the broader community of friends and acquaintances as does guanxi in China. It is further argued that Wasta-based recruitment and allocation of benefits reinforce family ties, thereby connecting the individual to the economy and polity. Indeed, Cunningham and Sarayrah (1994) and Weir (2003a) proffer that the importance of family connections is so great that how individuals are admitted to the university or hired for a job is less important than their performance in class or on the job. Moreover, where a close family member appears at the office of even quite a senior manager, it is regarded as improper for the demands of organizational hierarchy to take precedence over the obligations due to family (Sulieman 1984). International managers can never assume the position of a close family member, but they are advised to work with Chinese and Arab middle managers and business partners as intermediaries to form a more trustful bond with their individuals and business associates. In so doing they can work towards a situation of insider status and knowledge sharing which will be of long-term profit to their organization Favours. In both China and the Arab World, the notion of favours is tied to guanxi and Wasta respectively. Yet, while

the Chinese differentiate between favours that support guanxi relationships and bribery and corruption, in the Arab World the idea of favours is generally regarded as having negative connotations, despite being widely practiced. In China, the value of guanxi depends upon the element of ganging or affection that is tied to renting (favours) (Kiong and Kee, 1998). The word renting indicates individual emotional responses of daily life and translates into a resource allocated to another person as a gift and connoting a set of social norms to guide an individual to get along well with other Individuals (Wong and Tam, 2000). It has also been used to refer to bribes. However, as the use of bribery is universally condemned in China, particularly now that there has been the introduction of laws specifically dealing with corruption, the Chinese themselves make a sharp distinction between bribes and favours. While giving cash is usually viewed as buying someone's services and hence is condemned, gift-giving may constitute bribery or can be simply guanxi cultivation, depending on the intention and who is giving. Yet, Guthrie (1998) maintains that corrupt practices are increasingly considered backdoor as actors pay more and more attention to the laws, rules, and regulations that are part of the emerging rationale-legal system. Managers of large private organizations, he argues, increasingly view guanxi practice as unnecessary and dangerous considering new controls and official procedures (Guthrie, 1998). Therefore, the extent to which international managers may be required to exercise favours is declining and may only necessitate the type of business entertaining that occurs in Western business. Arabs are increasingly concerned that favours are being interpreted as an attempt to change the behaviour of the recipient. In a pioneering opinion poll carried out by the Arab Archives Institute in 2001, 87 percent of respondents stressed the need to eradicate Wasta, viewing it as divisive and symptomatic of corruption, even though more than 90 percent also responded that they believed they would be using it at some point in their lives (Sawalha, 2002). Weir (2003a) notes, however, that the exchange of gifts in the Arab World, which often puzzles or offends Western managers, should not necessarily be construed as an attempt to influence the judgment of a recipient but may be interpreted merely as a mark of respect. Moreover, it is to signify reciprocal acceptance of status and marking the initiation or honouring of an agreed bond - and to this end, Wasta shares similarities with Western business customs.

2.13 Overview of Research Methods

To examine the designed model, research data were collected from local experts in the field of cyber security within the Saudi Oil company, Journals, Articles, and self-observation as an employee working for the same company. The entire research is a quantitative research study attempting to examine the relationship between different variables, namely trust, leadership, Co-workers' belief, workplace culture, Information security compliance, and

data privacy. The literature review formed the framework and contributed to the amendment of an existed design scale of questionnaire as well as the development of the research hypotheses, which were then tested using a quantitative method approach, which suites the research method. To generalize the findings and make sense of them, a large to medium sample size was required for the research, so the selected data collection tool used is a survey, using a simple random sampling technique. The questionnaires were refined based on the variables mentioned above and note that it has not been tested in any other research except this research. To complement the research findings, the researcher used structural equation modelling, which requires the need to use of various statistical analysis software tools, namely SPSS and AMOS, to draw remarkable outcomes. However, SPSS is used to study multiple regression analysis, frequency analysis, central tendency, kurtosis, and skewers, whilst AMOS is used to compute structural equation modelling, model fit, and other advanced assessments of variables, which will be discussed later in detail in the results chapter

2.14 Research Gaps

Many studies indicate that Arab people tend to have a high level of trust based on collective bond relationships driven by cultural shared values and beliefs as mentioned by Putnam and Nicotera (2009), Chrysostome (2014), Ganesan and Hess (1997), Block and Walter (2017). In close relationships, people tend to be Trustworthy. However, individuals expect others to be the same, having said that, it means you will be trusting others. On the other hand, being trustworthy does not mean that others will trust you. Even though trust is driven by culture, the similarity between individuals in terms of trust indicates that a shared values-based relationship builds trustworthiness. Moreover, trust sometimes is forced by the local culture to maintain harmony within the workplace which leads to certain expected behaviour.

The belief of trusting others is the belief that other co-workers will cause no harm to me which shows a strong collective bond-based relationship. This indicates a high certainty and confidence knowing that the future is uncertain. However, since this is within the same workplace then trust towards others should be maintained because you do not want to break the belief of others' trust in you. since taking a decision depends on the belief between individuals then building trust among them is easy. Moreover, the belief of other individuals especially the close ones such as family members working in the same environment will allow the sharing of information to be exchanged between them knowing that this will cause no harm based on the shared values and beliefs.

Trust is based on the expectation developed from long relationships. However, it is two ways relationship which means I expect you to do to best for me because I trust you and you trust

me. The term culture is broad but when it is based on local beliefs, tradition and, shared values then it becomes specific to these factors. Management heavily trusts everyone within the workplace based on the long relationships and respect. Yet sometimes trust goes for the wrong individuals. Negative dialog with leaders outside the workplace presents more opportunities but at the workplace, leaders like to hear positive things.

Some leaders within Arab culture do not trust employees who belong to the same culture however, they trust non-Arabs living in the same culture. Leaders evaluate individuals based on their boundaries. Though, if expectations are exceeded, leadership could be positive or negative. Motivation is key to building a positive individual which should therefore present a positive alignment within the workplace. Moreover, the local Arab culture has also impacted the adoption of technologies specifically those who have not experienced the diversity in international culture, who have not been educated abroad, or maybe have a resistance to any change. Having said that, Arab cultural beliefs and values tend to have an impact on the transferring of IT technology. Factors such as culture, education, average income levels, traditions will have an impact on technologies in these developed countries.

Furthermore, Arab cultural beliefs and values affect the transferring of IT technology. Successful technology transfer involves communication and cooperation with the receiving countries. when it comes to transferring IT technologies, typically the decision is often negotiated by the upper-level managers who have probably spent time or worked at these ITT-developed countries while it is the lower-level managers and workers who have the responsibility to interact with these technologies without the diverse cultural experience.

leaders promote trust among their teams, so they share information. When breaking the trust between leaders and individuals, negative decisions and attitudes might occur. the relationships between leaders and individuals depend on integrity when it goes up the trust goes up with it. Positive leaders and motivation present a positive individual’s alignment which therefore promotes a high level of trust within the workplace to maintain the harmony of their relationships.

The Arab workplace culture is affected by the leaders for many reasons. The positive leader's attitude motivates workers more which leads to proactivity at work which in turn increases the trust between them to maintain the positive relationship. On the other hand, negative leaders can do the opposite and that tells us something since individuals’ alignment is impacted by the leaders, so the workplace is impacted by individuals’ attitudes based on their job satisfaction and the positivity of the culture, so you can imagine how the Arab leadership style looks like when it’s based on tradition, culture, and shared values.

Despite the new technologies being implemented, “human attitude” is still the main threat to many corporations especially Arab countries who became the most targeted region for cyber-attacks. It is essential to investigate and identify the variables that impact data privacy and Information security compliance within the Arab local culture. The nature of Arab culture is very complex since it is a rooted culture based on many aspects such as shared values, religion, and loyalty. The focus of this research is to highlight the potential variables that impact Information security compliance: trust, culture, leadership, individual alignment, workplace culture, the perceived ease of use of western technology, and co-worker’s belief.

Many studies investigated cultures, Information Management such as Ključnikov et al. (2019), Rajnoha et al. (2017), Radu (2018) Davidekova et al. (2016), Lengyel et al. (2017), Tvaronavičienė (2018), Davidavičienė et al. (2019) Millaire et al. (2017), Mandorf and Gregus (2014), Zavadska (2018), and Mahardika et al. (2020).

Moreover, transferring technologies such as Abah (2011), Hessle, (2016), Dirani and Hamie (2017), Stebbins, (2017). Hill et al. (1998), Al-Otaibi et al. (2018), Straub et al. (2001). It is the focus of this study to model trust towards information security by identifying various concepts and examining the relationships between them by conducting statistical analysis using a quantitative method approach. This research aims to present the nature of the Arab workplace culture in real-life and to model the concepts based on correlation and hypotheses. The expected outcome will present a custom-designed Likert-scale questionnaire based on the findings of these concepts that can be used in many Arab countries. Moreover, to better understand how to evaluate the level of awareness within our local culture in this research case here is “The case study of Oil sector” and finally to propose future research, research limitation, methods, and implication.

Authors	Context and Methods	Findings
Putnam and Nicotera (2009)	Aimed at analyzing the numerous instruments used in their quantitative research in measuring culture. This study claimed that one of the vital cultural factors is trust. Existing research in this area seems to indicate that members of Arab communities tend to have a high level of trust based on shared values. **Method** Qualitative Research Approach	This study claimed that one of the vital cultural factors is trust. Existing research in this area seems to indicate that members of Arab communities tend to have a high level of trust based on shared values.
Lunt, Horsfall and Hanefeld (2015)	Measuring the decisions of the leaders of various organizations **Method** Qualitative Research Approach	It is found that trust is the most important factor that is required while doing business. The study stated that in the Arab countries, trust is dependent on the relationships between the Individual or the company
Abualhamael (2017)	A study of Positive leadership style in Kingdom of Saudi, such as transactional and transformational leadership **Method** Quantitative Research Approach	The findings stated That positive leadership style, such as transactional and transformational leadership techniques motivate the individuals and contributes to organizational energy and that leadership style adopted in Saudi Arabia considered to be traditional based on customs, religion, and culture.
Al-Kandari and Gaither (2011)	Cultural-economic model of international public relations. Study uses critical/cultural perspective to examine Arab culture. The study tested the cultural-economic model to identify orientations that influence Arab culture. **Method** Qualitative Research Approach	The findings stated that individual living in Arab Region tend to follow Arab Culture and language, which creates a strong bond between these Individual based on their culture. These orientations included commitment to religion, devotion to the group, resistance to change/attachment to history and recognition of hierarchal order
Stebbins (2017)	Information Technology Transfer to Arab culture. **Method** Qualitative Assessment Approach	The findings stated that trust is the factor that has been given importance to the workplace. The study findings indicated that most respondents believes that specific components of Arab culture have influence on how IT is viewed and to what extent has been utilized.
Hessle (2016)	Global Social Transformation and Social Action **Method** Qualitative Research Approach	The findings stated that the main reason behind the trust in the organizations in the Arab region is that they want to build a society based on trust and want to build a hard-working society. It is found that the organizations which are based on trust and the individuals are hardworking, then the organization results in improved productivity and increased profitability

Table 2: Previous Studies Concerning ISM

After reviewing the literature on the presented factors; Trust, Information security Compliance, Workplace Culture, Leadership Individuals' Alignment, and Western Information Technology System Satisfaction, it has been shown that no studies have investigated the impact of each of those factors on the information security compliance through the lens of the Arab region. This thesis fills that gap. Table 2 above, 3 and 4 below show the findings of important previous research studies on Information Security Management and Culture using various methods in a variety of contexts. There are other areas outside of the scope of this thesis, such as personality traits which are presented in appendix M.

Waldron (2017)	The Influence of Leadership Emotional Intelligence on Individual Engagement. **Method** The study identified the level of employee engagement within the organization and the level of emotional intelligence of its leaders using Q12 engagement and Schutte self-report emotional intelligence (SSEIT) surveys respectively. These two constructs were then related to each other using the survey data as well as a focus group of company employees	The findings stated that there is a need for the managers to identify the potential of the individuals and guide them in a direction within the organization to achieve the goals of the business. The findings have also revealed that there is no direct correlation within the data obtained from the surveys, employees do understand the effect of leader emotional intelligence in the workplace.
Ključnikov, A.; Mura, L.; Sklenár, D. (2019)	Investigation of cultures and Information Management in a medium-sized company. The study identified 4 main factors of success of information security management, including the Compliance of information security management with the company's business activities, Support of top management, Security controls and Organizational awareness. **Method** Questionnaire Based method using DEMATEL technique (Decision making trial and evaluation laboratory)	The research study highlighted the need for the protection of information by understanding the security management field which includes, managing security risks, reviewing, implementing, operating, monitoring, maintaining, and improving the information security in the organization. The findings indicated that Security Controls and Supportive top management are the most important factors in general, while the factor of organizational awareness is the most obvious and important in the short-term period.
Olah et al. (2019)	Study on service quality dimension effectiveness on customers satisfaction in banking sector. **Method** Quantitative Research Approach using modified SERVQUAL model	The study measured customer satisfaction of 825 respondents using 8 dimensions namely tangibles, responsiveness, empathy, assurance, reliability, access, financial aspect, and employee competences. The findings illustrated that the use of modified SERVQUAL model extracted four dimensions instead of eight as a new model.
Zamman and Razali (2016)	An empirical study of information security management success factors **Method** Qualitative Research Approach with a semi-structured interview	The findings provided practitioners with the high understanding of Information Security Management key factors from other literature and discovering other related factors that could guide practitioners in implementing proper ISM.
Kazemi et al. (2012)	Evaluation of information security management system success factors **Method** Mixed of Case Study and Quantitative Approach method using questionnaire	The study findings identified other factors such as senior management, information security policy, labour responsibilities, motivation of employees, Information awareness training. Information security compliance, international standards, and lastly the use of external consultants. The findings also suggested to implement information security management system with view of experts in the studied organization.

Table 3: Previous Studies Concerning ISM (continued)

The table of previous studies concerning ISM continues the next page.

Mahardika et al, (2020)	Measuring the information security awareness level of the employees **Method** conducted through a questionnaire administered to 25 employees as well as an arranged interview with three information security experts	The results showed that the level of information security awareness in Palinfo and the Data/IT section was at the "average" level. There is one focus area that shows a "good" level. While in the Data/IT department, several sections that show a "good" level. Based on these results
Sari et al. (2014)	Information security awareness study on a smartphone **Method** Questionnaire Theory and Model comparison	developed the KAB model framework which focuses only on two dimensions namely, knowledge and behaviour where data have been analyzed using the CFA model
Sari et al. (2015), Kusumawati (2018)	information security awareness study on a smartphone **Method** KAB and AHP methods and multiple-criteria decision analysis (MCDA)	Developed KAB model that was used in the previous study 2014 has now developed into three dimensions namely, knowledge, attitude, and behaviour where data have been analyzed using Analytic Hierarchy Process (AHP) calculation. The findings indicated that the level of behaviour is average while the knowledge and attitude level is good.
Puspitaningrum et al. (2018)	Evaluate the security awareness of the employees at Ministry of Communications and Information of the Republic of Indonesia. **Method** The study has used AHP calculations and Human Aspects of Information Security Questionnaire (HAIS-Q) framework.	The research consisted of 63 questions that measure three dimensions namely knowledge, attitude, and behaviour as well as 7 focus areas, these included Password Management (PM), Email Use (EU), Internet Use (IU), Social Media Use (SMU), Mobile Devices (MD), Information Handling (IH), and Incident Reporting (IR).

Table 4: Previous Studies Concerning ISM (continued)

3. METHODOLOGY

3.1 Introduction

To complement an extensive review of the research context it is important to apply the most suitable methodology. This chapter described the experimental work. It started by clarifying the research questions. Moving forward, the second section then covers the approached methods, explanation of research paradigm, research approach, and research method which will then be combined with a survey questionnaire, research design, and data collection method. It also included sample size and technique, pilot study, and research limitations. A quantitative study will be undertaken:

• To identify possible factors that are important to the study and have an impact on information security and are latent to the literature and other factors that are extant to the literature.

• To examine trust and other factors that significantly impact Information Systems Security Compliance,

• To refine the initial custom-designed instrument through pilot phases by confirming the internal consistency and Uni-dimensionality of each of the sub-scales,

• To conduct the final study using the final instrument with an appropriate sample size.

• To analyse the collected data from the final study and

• To present the findings and fulfilment of the research gap.

Many researchers adopt the most used method such as descriptive, analytical, predictive, quantitative, and qualitative, deductive, and inductive, exploratory, and explanatory, and constantly based on researcher assumptions (Saunders et al., 2009). The researcher aims to investigate, identify, and examine the relationship between Information Security Compliance and variables highlighted in the literature review namely Leadership, Trust, Local culture, Workplace, the belief of co-workers towards each other, and the employee's alignment at the workplace. It is also aiming to present a model in the context of Saudi Oil companies and identify any significant relationship between them and their impact on Information Security Compliance. Besides the information gathered in the literature review, additional data will be obtained from the employees at the Saudi Oil company through the Human resources department to select the sample size for this research then a designed questionnaire will be developed into phases based on the variables identified in the literature, each phase will be refined using SPSS. The framework will be established for each phase

and the final model will be presented using both SPSS and AMOS (Byrne, 2004). In addition, hypotheses will be developed as the framework is established. Hence, this chapter will also present the structure and theoretical underpinning of what the research have explained above which will then present the findings and results.

The chapter was divided into various important sections. It explored the method used to achieve the research objectives as well as the main aim of this research.

Research Flow

The flow of the research is shown in figure

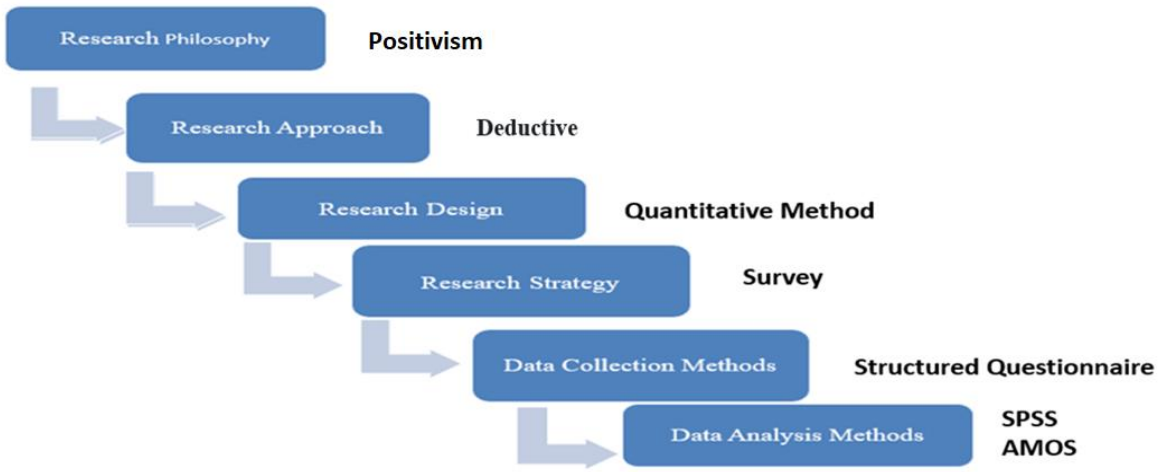

Figure 1: Research Flow

Defining a research focus

The proposed plan of this research is attempted to answer research questions by examining the trust and culture through the lens of local Arab culture. Moving further, this research has extended more on investigating, identifying, and measuring various relevant factors and their correlation to each other and their impact on Information Security Compliance as the focus of this research and whether this has something to do with certain aspects of the cultural factors and if so, to what extent does culture and trust affect the Information Security compliance. Finally, the research will seek to model trust in the context of the Saudi Oil Sector.

One of the vital cultural factors is trust. Existing research in this area seems to indicate that members of Arab communities tend to have a high level of trust based on shared values, so further research is needed to investigate possible ways to adjust the level of trust. Since western' culture has their concepts, beliefs, and values about information system and how it should be utilized, this, therefore, create what is called the cultural challenges or obstacles

when it is transferred to Arab culture which then results in failure accepting it within the Arab region. This paper intends to look at factors impacting Information Security Compliance.

3.2 Methods and Approaches

The research began with a selected group of local Arab adults working for the Saudi Oil Company. Subsequently, an interview will be conducted with some IT experts within the same Company. The group was selected randomly within the Company. A quantitative method was used for the questionnaire. All responses were reported under the analysis section within the data analysis chapter. Individual here is Arabic native speakers and some of them have a good level of competency in the English language, so this should be a rational choice. However, the pilot study was conducted first using an English version questionnaire. However, it is proposed to present the Arabic version in case the questionnaire experienced some invalid results that could be caused by language barriers.

Due to the nature of Arab culture and beliefs, the research questionnaire phase one and phase two were conducted through face-to-face meetings using hard copy documents as the most desirable way to gather as much as possible valid information which suites the targeted culture and increase the rate of responsiveness. The final survey was conducted using a web-based system for a larger scale sample size. Each variable consisted of several items and measure each scale. The initial framework was refined through a series of phases, each phase of the pilot study was tested and refined using SPSS, so the framework was also refined accordingly.

The method began by implementing a trust scale and measuring participants' beliefs about trust and morality of other co-workers this scale will measure and present the research questions' concerns. The approaches of the structural methods and expectations to the problem of the local culture have theoretical difficulties. The approach may provide a sanction system to force the culture to change but this might cause more resistance to change as most individuals have cooperation which makes it difficult in a large group. To overcome these difficulties the proposed method was conducted individually so individuals who stick to cooperation will cooperate individually instead of inducing other members to answer the proposed test. The questionnaire covered various factors such as public opinions, trust, compliance, social trust, the perceived ease of use of Western IT system and satisfaction, the belief of co-workers, and Employee's Alignment.

Methodology and Data Collection Overview

The research was conducted using a quantitative approach through two pilot studies followed by a final study. The first pilot study of the research established an initial theoretical model which was developed from the literature. The initial model consisted of Western IT Systems Feedback, Workplace Culture, Leadership, Employee's Alignment, Trust impacting on Information Security. The initial survey instrument was custom designed to reflect the elements of the initial model and consist of six sub-scales with a total number of 93 items, including seven demographic items. The first pilot study used a sample of 25 respondents who were employees within the case organization. The responses were analyzed to find the Cronbach Alphas (internal consistencies) of each of the sub-scales. The analysis progressed iteratively, and the survey instrument was refined so that a refined instrument was constructed for use in the second pilot study. The instrument used in the second pilot study had twelve sub-scales with a total number of 87 items, including seven demographic items. The second pilot study has also used 25 respondents (a different sample to the respondents in the first pilot study) within the case organization, the responses were analyzed to find the Cronbach Alphas (internal consistencies) of each of the sub-scales. The analysis progressed iteratively to produce a refined instrument for use in the final study. The instrument was used in the final study consisted of thirteen sub-scales with a total number of 67 items, including seven demographic items. It was administered to a target sample size of 300 employees from the case organization. The final data has been collected then AMOS method was used to model the responses and confirm or refute the presented hypotheses that have been identified following the final model fit Analysis.

Selection of The Case Organization and Details of The Samples

The Saudi Arabian Oil Company (SAC) Inc. is engaged in a wide range of petroleum-related interests in the kingdom. SAC is the operating company of the Saudi Arabia Oil Company/Partitioned Zone (PZ) business unit located in South Kuwait near the Saudi border. SAC has two office facilities: the main SAC office facility located in SAC Camp at Mina Saud while the other facility is located at the joint operations in Wafra. The joint operations in Wafra are about a 45-minute commute from the SAC Camp. The main SAC office facilities are comprised of several buildings that house Administration, Technology, Training, and Engineering. The office facilities at the Wafra Joint Operations provide direct support to the operations asset. The buildings are single and multi-level structures. The total workforce including nationals, expatriates, and contractors is more than 1,500 people. The SAC consists of employees and contractors working in partnership with Kuwait Gulf Oil Company (KGOC), the operator for Kuwait's equal interest in the area, through Wafra Joint

Operations. This organization, staffed and funded equally by SAC and KGOC, explores for, develops, and produces oil in the PZ. It operates four oil fields: Wafra, South Umm Gudair, South Fuwaris, and Humma.

SAC was used as a case organization in this research because SAC's information management department's mission is to develop the skills and qualities needed to develop the attitudes and principles of ISS and data privacy compliance. The researcher has been working for the Saudi Oil company for 15 years and has been assigned to different roles during his service including Technical User Support, Infrastructure, and Server Analyst, Network Engineer, and Risk Management and Data Privacy Specialist. During his service, he has communicated with almost everyone in the company: as part of his recent job roles, the researcher has responsibilities to protect sensitive personal and company confidential information and to note any unwanted behaviour and non-compliant gaps that require validation and remediation. The researcher is also responsible for raising information security awareness within the organization. The selected organization is appropriate for this study because first, it is in the Arabian region and is an Arabian Oil company employing mainly Saudi nationals who follow the same culture and tradition. Furthermore, the case organization has been chosen as it serves this research's purpose and will facilitate the achievement of the research objectives. First, the organization consists of over 1500 employees who are Saudi nationals who constitute just over 80% of the workforce. The employees' educational levels vary, some of them study abroad some do not, the experience range between 2 years up to 35 years of service. The workplace has a family-oriented culture, with many families having several immediate family members working in the organization, which means the workplace is an inherently trust-based environment. Arabic is the main communication medium with English is the second language. Employees prefer to deal with each other face-to-face and tend to do business with those they can trust and are loyal to. The organization has implemented guidelines for all members of the workforce to comply with privacy laws, company policies and to take reasonable appropriate steps to protect the confidentiality and privacy of data. However, the trust is endemically embedded within the organization's Arab culture such that where there is an unwanted social behaviour that may compromise the confidentiality of the employees' data and may also mitigate against the adoption of new IT technology. The employees within the organization are an appropriate population for this study because of the heterogeneity of their shared values and culturally based behaviour, which is rooted in the shared culture with a family-oriented environment with a shared linguistic (Arabic) heritage.

Pilot study one was conducted with the help of the researcher's IT team. The survey was administered to a convenience sample of 25 employees (including a mix of managers, technicians, and engineers) who speak Arabic but have different job roles. The instrument for the first pilot study was administered as hard copies to each respondent in a face-to-face meeting, followed by a scheduled visit to each one of them to make sure that all the Likert-type items were clear. Once completed, the forms were then collected by the researcher, who verified that all items were answered then transfer the data to an excel spreadsheet ready for sub-scale reliability and Uni-dimensionality analysis in SPSS.

Similarly, pilot study two was also conducted with the help of the researcher's IT team. The survey was administered to a different convenience sample of 25 employees (including a mix of managers, technicians, and engineers) who speak Arabic but have different job roles. The instrument for the first pilot study was administered as hard copies to each respondent in a face-to-face meeting, followed by a scheduled visit to each one of them to make sure that all items were clear. Once completed, the forms were then collected by the researcher, who verified that all Likert type items were clear were answered then transfer the data to an excel spreadsheet ready for sub-scale reliability and Uni-dimensionality analysis in SPSS.

The final study sample was administered to 300 employees selected from the case organization's workforce. The final survey was conducted using a web-based survey that will be distributed with the help of the researcher's application team. The final survey was sent to different employees using several distribution e-mails groups to target several departments within the organization. The responses were tracked using the e-mail groups which facilitated follow-up and reminder e-mails. The data was collected from the final survey in an excel spreadsheet and the final analysis was proceeded in SPSS and with AMOS software.

3.3 Rational Selection For Methodology

The research methodology is considered an essential phase of a research study because it undertakes tools and techniques which help in conducting the research study in a correct direction and a logical manner. Based on the topic and subject area of the research study, the researcher conducts the study and chooses the best suitable methods for gathering information regarding the study (Supino and Borer, 2012). This research study aims to identify factors related to trust that potentially will have an impact on information security compliance through the lens of Arab culture and address other aspects such as culture, Leadership, and individual alignment. Moreover, to model trust and information security in the Arab region

The researcher linked the methodology with the literature review chapter so that data collection can be done based on the research area and the aims and objectives developed regarding the research topic (Sekaran and Bougie, 2010). It also helps the researcher in justifying using certain methods to conduct the research study. The literature review conducted in a research study is considered as a state of the art that enables the researcher to include information regarding the research topic from various literary sources. It can also be said that the literature review provides a focus on the study and covers each of the components, to conduct the study efficiently (Sekaran and Bougie, 2010).

The methodology section further described the research paradigm which helps a researcher in getting a wider perspective on the research study and conducts the study in a correct direction (Kuada, 2012). Therefore, it can be said that the help of information is gathered regarding the research study will help the researcher in answering the research questions of the study. Further, another important section of research methodology is research design, which is required in research work, to provide a structure to the study (Kuada, 2012). The research design is important in a research study, as it mainly helps the researcher in collecting the information relevant in the research study as per the research topic, assessing the information, and then analyzing it. Further, in a study, qualitative, quantitative, or mixed research methods can be used to collect the information (Kuada, 2012). The research methodology chapter further describes the research approach, which is mainly used in analyzing the collected information so that knowledge can be generated by the researcher to get to the conclusion easily (Kuada, 2012). Data collection methods are also essential for achieving the aims and objectives defined in the study by using proper tools and techniques defined in the research methodology (Kuada, 2012). The methodology also provides a rationale for using different tools and techniques in this research study so that evidence can be provided for using the tools and techniques in the study to get to the conclusion. The data collection is done in phases which are also described in the study with their rationale and methods, so that reader can easily understand the data collection process of this research study (Kuada, 2012).

3.4 Research Paradigm

The research methodology consisted of an essential part; that is the research paradigm. The research paradigm is considered important because it helps in conducting the research successfully by providing a bigger and wider perspective about the research topic (Levers, 2013). It also includes a set of practices, beliefs, and views that guide the research study towards successful completion. The research paradigm consists of a framework that helps in gathering academic ideas and scientific ideas, views of researchers, and beliefs of the

researchers to conduct the research study and get some knowledge out of it. The beliefs and assumptions included in the research paradigm are the views and studies of different researchers (Levers, 2013 and Cryer, 2006). The research paradigm used in a research study can be defined as a process or a specific way in which a researcher thinks to conduct the study with a certain set of rules. The research paradigm also helps in giving direction and foundation to a research work which can be considered as the primary step of a research study, to get to the conclusion easily (Levers, 2013).

3.5 Rationale for the Selection of Positivism Research Paradigm

In this research study, the Positivism research paradigm was used because as per the explanatory researchers those subjective interpretations made based on the experience and memories of individuals are best suited for understanding the reality of the condition about the topic (Pat, 2006). In interpretivism, the methodologies used, such as the observation method or interview method helps in deriving a subjective relationship between the subject of the research and the researcher itself. Further, in realism, the researchers believe even if they are not proven, and they do not believe in science and observation (Krauss, 2005). In the positivism paradigm, hypotheses are developed based on the assumptions of the study, which help in getting to the conclusion by testing the hypotheses. Therefore, the positivism paradigm is chosen in this research study as it is best suitable as it adopts the deductive approach.

3.6 Research Design

The research design is used in a research study to provide a proper structure to the research work. In a research design, the researcher uses a strategy, by which all the components of the study are well integrated so that the study becomes simpler and can be represented in a logical manner (Scruggs and Mastropieri, 2006). The research design also helps in addressing the research problem as it makes the study simpler. It also consists of methods for data collection, data assessment, and analysis. There are three types of research design used in the research methodology section, namely explanatory, descriptive, and causal research design (Scruggs and Mastropieri, 2006).

The explanatory research design was used by the researcher to gain an overall knowledge of the research topic. These types of research designs are useful for the researcher when the researcher does not have much knowledge about the research topic, or the researcher wants some additional information about the topic. On other hand, the exploratory design is an informal approach to conducting the research, as it collects additional information about the research topic, and it also focuses on testing the relationship between variables in the research study (Supino and Borer, 2012). Measuring the variables can be done using the

explanatory design through a quantitative method by conducting a case study and survey as well as understanding the problem of the research study. Therefore, explanatory research can help in determining priority in research and defining the important terms. In this type of research design, surveys, case studies, and quantitative methods can be used to collect the data regarding the research topic.

3.7 Rationale for the Selection of Explanatory Research Design

In this research study, an explanatory research design was used because this research design is flexible and uses a systematic approach to get to the conclusion as well as to assist the impact of certain variables on each other. The flexible nature of the research design also helps in understanding the research problem completely, by analyzing all the possible sources. In this research study, the objective was to find out the influence of culture and trust in the Arab region to better understand the impact on information security compliance. Therefore, exploratory research design can help the researcher to get a better overview of the research topic. The research design also helped in getting a more precise solution to the research problem, and it also helped in addressing all the research questions and research hypotheses developed in the study (Zikmund et al., 2012).

3.8 The use of Quantitative Method

The qualitative method of research helped to get an insight into the research problem, and it can also be used by the researcher to test the relationship between the two variables of the research study so that further research can be conducted (Tracy, 2012). The qualitative method has explored new ideas about a research topic and provides in-depth knowledge about the research topic. With the help of the qualitative method, unstructured data can be collected by using primary and secondary sources. The sources used for data collection are interviews, literary sources, and internet sources of information (Tracy, 2012). However, in this research study, a quantitative method is used as a method of research that provides statistical data to the researcher to analyze the research problem and get to the conclusion easily. The data collected using the quantitative method is structured as compared to the qualitative data. In this method, the data can be collected using a survey questionnaire method, case studies, and reports of organizations (Wetcher-Hendricks, 2011).

3.9 Research Approach

There are two types of research approaches used in research methodology, namely deductive approach, an inductive approach. The inductive research approach is also known to be a reasoning method that helps a researcher in inducing views in general from the existing or the given information (Jonker and Pennink, 2010). The main advantage of using the inductive approach is that it helps in analyzing the given information in the research study

that is collected by the researcher to conduct the work in a correct direction. The analysis of the collected information helps the researcher to get to the conclusion by providing a generalized view about the research topic (Jonker and Pennink, 2010). In this research study, a deductive approach was used where data is collected for trust, culture, and workplace environment in the Arab region. The deductive research approach has helped in getting the generalized view about the culture, trust, and workplace culture in the Arab region from the collected information.

3.10 Rationale for the Selection of Deductive Research Approach

In this research study, the deductive research approach was used because the deductive approach is well aligned with the positivism paradigm. There are several stages in a deductive approach that helps the researcher in getting to the conclusion (Hair et al., 2012). The stages are, observing the data collected for the research, observing the pattern of the change in data, developing a theory based on the findings of the data. Further, the deductive approach is used in this research study because it provides flexibility as it enables to development of a new theory based on the findings from the collected information (Hair et al., 2012). In this study, the deductive approach has been useful for presenting the data obtained from the analysis of the data in getting to the conclusion by testing the relationship between the two variables based on the research topic (Hair et al., 2012).

3.11 Data Collection Methods

A process of citing and gathering the relevant information and arranging them into a structured format eases the process of measuring the data according to the targeted standards, which will allow a person to derive more relevant and significant information. This method is known as the data collection method. Collecting adequate information requires adopting an appropriate method, which when it is applied correctly ensures a suitable amount of information. This process includes techniques that help provide proper answers to the questions and then facilitate the researcher with suitable outcomes for the research question (Vartanian, 2010).

The data collection method is a very significant part of the entire research study as the outcomes of the research depend on the data that has been gathered by implementing various tools and techniques that are involved in this process. The objectives that are defined by the aims and objectives of the research are accomplished for sure when the right technique or method of data collection is selected. There are two variants of data collection methods. Based on their nature, they are named as primary data collection methods and secondary data collection methods (Supino and Borer, 2012).

3.11.1 Primary Data Collection Method

Primary data refers to that type of information or data which has been gathered from various sources and is original as it is assembled for the first time. The data collected is further evaluated based on the existing needs and desire of the researcher, but before that, the data is interpreted in a systematic manner to prepare a statistical table, which will allow the researcher to extract the exact required information (Noor, 2008). There are multiple methods available to collect data from various sources at a primary level that is for the first time. These methods are described as follows:

Interview method: This method includes the process of questioning various individuals on the relevant topic of the research. The time is the most significant element for the entire research study, and this method is a time taking process when large number of samples are needed to be collected. In addition, this process may make respondents uncomfortable, as sometimes personal details are also required to furnish the details of the research study. On the other hand, the positive aspects of this method are the quality of answers and adequate amount of information (Noor, 2008).

Observation: A special environment as per the needed details is collected and then the participants are set in that to answer questions and then their answers and behaviour are observed. This is an expensive method, but results justify the cost appropriately (Noor, 2008).

Surveys: Under this method, a questionnaire is prepared that consist of questions which focus on the important aspects of the research study and on which the information is to be derived from the individual participants. Large number of respondents are involved so that ample amount of data can be collected (Noor, 2008).

3.11.2 Rationale for Choosing the Primary Data Collection Methods

On this research, the primary data or the first-hand data is the most appropriate choice to make. In relation to this research, the survey method is used, which consists of a questionnaire of highly focussed questions that are appropriate to derive information to address the research question. The survey is undertaken to collect relevant information about various variables discussed in the literature review such culture, Trust, workplace, employee's alignment, leadership, and the use of western IT of Individual that will be collected from a private sector in Saudi Arab company. A group of the population was selected, and then the questionnaires were prepared with the questions that were focused on deriving the information about the nature of the Individual of the Arab region. The questions related to the focused area of this research are designed and presented in the questionnaire,

and then the same were distributed among the respondents. The Individual who was selected for the survey were selected from various departments and job title of Private organization, as for the purpose of research it was required to have Individual from different departments and positions. Therefore, the questionnaires were mailed to the official mail ids of the respondents. The advantages of this process are that it is cost efficient; covers large population, no prior requisites or arrangements are needed, no biases and easy to manage (Sapsford and Jupp, 2006).

Thus, this process is a proper fit for this type of research and will assure suitable amount of relevant data for the research study. The survey method is efficient in gathering data from many respondents as in this research it is required to be collected from various groups of Individual belonging to the same private company withing the same Arab regions.

3.11.3 Rationale for Using Questionnaire Survey Method

Questionnaire survey method is chosen for this research study to analyse the views of Individual living in Arab region regarding the factors presented in the literature review within the general employees of the private sector in the Arab region. It can be said that the questionnaire survey method can help in collecting quantitative data regarding the research study (Cargan, 2007). This method is advantageous as it is undertaken in proper steps and organised form so that data can be collected on all the aspects that are related to the research study (Cargan, 2007). Further, it can be said that questionnaire survey method helps in collecting data from a small part of the population. There are various phases that are undertaken in the questionnaire survey method, such as planning the questions, sampling, implementing the method, finally disseminating and documenting. It can also be said that questionnaire survey method is considered as a highly efficient method for primary data collection because it helps in collecting a large amount of data from a large population but in a small time (Cargan, 2007). In this research study, questionnaire survey method has been used to gather primary data from the general Individual of the Arab region, and it is also ensured that the validity is being tested using statistical methods (Cargan, 2007). Therefore, it can be said that use of questionnaire survey method as primary data collection method has improved the validity of the research study and has helped in gaining knowledge about the research questions.

3.12 Secondary Data Collection Methods

The data presented was considered as the secondary data and collection of this type of data is considered as secondary data collection. The sources such as journals, reports, online articles, magazines, and academic books are considered as reliable sources for the collection

of secondary data. This method consists of various advantages that make this method completely suitable to conduct the research study on a large scale. The various associated benefits of secondary data collection method are related to money, time, and resources. This method is efficient in saving these said elements, and thus the researcher is facilitated with current data at low costs and within a suitable time span. In this process, the data is to be gathered from the sources where it already exists. Therefore, the only job involved is related to selecting and gathering the data (Noor, 2008).

In addition to this, the available data was provided by Individual who are scholars and professionally well educated about the field they are imparting knowledge. Thus, this ensures that the data collected were authentic and related to the topic to the research study.

3.12.1 Rationale for Selecting the Secondary Data Collection Methods

In relation to this research study, the methods of secondary data were employed to provide the data that has been already acquired by other researchers. Therefore, this method is efficient in facilitating the researcher to have a second opinion of the other researchers on the topic of the research study. The study of other scholars and academicians on the culture of Individual belonging from Arab region is considered from the point of view of other specialists. Moreover, the traits of trustworthiness and culture that is being followed by the Individual of Arab regions are also taken under consideration to furnish the data for the present research study. The researcher is provided with the detailed information that is effective in explaining the concept of this research properly (Baruch and Holtom, 2008).

3.13 Data Collection of this Research Study

3.13.1 Data Collection: Questionnaire Survey Method

Data collection has been done in phase two with a help of primary data collection method. The method used for primary data collection in this research study is questionnaire survey method. Questionnaire survey method was chosen for this research study to analyse the views of Individual living in Arab region regarding the trustworthiness, trust of co-workers and local culture within the private sector with the Saudi Oil company. Questionnaire survey method has helped the researcher in collecting quantitative data regarding the research study. Further, it can also be said that the method is advantageous as it is undertaken in proper steps and organised form so that data can be collected on all the aspects that are related to the research study (Cargan, 2007). In this research study, questionnaire survey method has been used to gather primary data from the general Individual of the Arab region, and it is also ensured that the validity is being tested by using statistical methods.

3.13.2 Questionnaire Design for Survey

The questionnaire was developed for the survey so that it can be conducted by individuals of the Arab region and gather data regarding trust and culture among the Individual of the Arab region. The questionnaire was developed with the help of the findings from the literature review so that appropriate questions can be developed as per the research study. It is found that the process involved in questionnaire survey method is critical for the researcher, the questions that should be developed in questionnaire method must be understandable by the participants of the study. In this research study, close-ended questions are developed for the questionnaire survey method so that the specific data can be collected with the help of the participants of this research study. With the help of the systematic survey, the researcher can gather the data to analyse the findings of the research study and get to the conclusion easily. Regarding the data collection through questionnaire survey method, the close-ended questions and structures questions were developed in simple English language. The language was chosen English since most employees show a good level of English so that every Individual of the Arab region can understand the questions and provide their relevant answers. However, these questions can be translated to the native Arabic speakers to ensure the understanding of the questions when necessary.

3.14 Sample Size and Sample Technique

It is considered that determining the size of the sample in a research study is essential as it is the integral part which helps the researcher in collecting the information regarding the study and getting to the conclusion successfully. Sample size in a research study can be defined as the total number of observations that will be considered in a data set (Lim and Ting, 2013). There are two ways in which sampling technique is defined or categorised, namely, probability sampling method and the second is non-probability sampling method. Probability sampling method can be defined as a method of sampling in which the researcher is enabled to specify the population that will be chosen for sampling. On the other hand, the non-probability sampling method is another method of sampling in which the samples are collected from the chosen population, but all the individuals among the total population are not given equal chances for being selected for the sampling method. In research studies, the most used sampling types are, cluster sampling, convenience sampling, random sampling, stratified sampling, and systematic sampling. In this research study, random sampling and probability sampling methods will be used to collect data from the samples for deriving knowledge out of the information collected and getting to the conclusion easily (Lim and Ting, 2013).

Sample size has covered generally 300 employees based on the selected time. It targeted different Individual based on age, gender, education status, job title, and experience. Sample size Guideline: "ten times rule: the minimum sample size should be equal to the larger of the following: (1) 10 × the largest number of formative indicators used to measure one construct and (2) 10× the largest number of structural paths directed at a particular latent construct in the structural model (Barclay et al., 1995) Compliance: all studies except for one complied with this rule. Sample sizes ranged from n=38 to n=5,191; in most cases, the rule was easily surpassed (Richter et al., 2016).

The scores number should be at least 200 or more as proposed by (Hinton, 2004). However, others suggest a size of 300 to provide a suitable factor solution. Though the selected sample size for this study is 300, only 247 valid respondents were collected from the Saudi Oil company taking into consideration that the other 50 respondents were collected during the pilot study phase one and phase two. The research has exceeded the recommendations sample size as mentioned in International Business Review (Richter et al., 2016). The sample of 247 respondent was drawn from a total of 1500 local Arab employees within the Saudi Oil Company. Table 2 below indicates that approximately one out of every six employees were selected with a response rate of 82.33% (247 respondents / 300 invitation) compared to other studies. The sample size on this study has exceeded the recommendation.

3.14.1 Rationale for Using Random Sampling Method

Selecting an appropriate sampling method is essential as it helps the researcher in accomplishing the aim and objectives associated with the research study. Therefore, it can be said that the best suitable sampling method for this research study is random sampling method (Lim and Ting, 2013). The sample size is 300 general employees of the private Saudi Oil sector company in the Arab region, which belongs to different classes and areas. The sample size is taken as 300 because it can help the researcher in gathering adequate information regarding the presented variables scales. If the sample size less than 300 is taken, then the researcher would not have been able to gather adequate information regarding the research study. Therefore, to conduct an effective research data analysis, 300 employees of the private organization within the Arab regions are adequate, but at the same time, it would consume more time and efforts of the researcher to gather the information from the participants and analyse it (Lim and Ting, 2013). Further, it is also possible that the costs to conduct the research might increase. The random sampling method was applied to select 250 general employees of Saudi Oil company private sector within Arab region for the research

study and the main purpose of applying random sampling method is to remove bias from the study to enhance the validity of the research work. It can also be said that with the help of the effective use of sampling technique, the researcher will be able to evaluate and analyse the collected data to reach a conclusion successfully (Lim and Ting, 2013).

Authors	Research Topic	Sample Size	Respondents	Response Rate
Gammelgaard et al. (2012)	The impact of increases in subsidiary autonomy and network relationships on performance	5584	528	9.20%
Chung et al. (2012)	Linking international adaptation strategy, immigrant effect, and performance	610	121	20%
Ketkar et al. (2012)	The impact of individualism on buyer–supplier relationship norms, trust and market performance	493	103	20.80%
Bloemer et al. (2012),	Trust and affective commitment as energizing forces for export performance	3875	134	3.20%
Castro and Roldán (2013)	A mediation model between dimensions of social capital	225	225	100%
Puspitaningrum et al. (2018)	Evaluate the security awareness of the employees at Ministry of Communications and Information of the Republic of Indonesia.	28	28	100%
Mahardika et al, (2020	Measuring the information security awareness level of the employees	25	25	100%
Lew et al. (2013)	Roles of social capital in creating exploratory capability and market performance	776	110	14.20%
AlShammari (2021): this study	Trust and Cultural factors impacting on Information System Compliance through the lens of Arab Culture in a Saudi Arabian Company	300	247	82.33%

Table 5: Sample Size and Response Rate

3.15 The Pilot Study

The pilot study was conducted into different phases, at each time the survey questions will be refined and analysed depending on the internal consistency and Cronbach Alpha. A random respondent will be selected with a total number of 25 employees. A pilot study was considered as a study which helps the researcher in conducting a feasibility test. A pilot study is generally conducted in the form of a small survey to test the design and methods used in

the research study. A pilot study was conducted before conducting the completing a large study to improve the efficiency and quality of the research work (Kuada, 2012). The main advantage of using a pilot study is that it can help the researcher in determining the deficiencies of the research design applied in the research so that resources can be saved. It is found that to conduct a research study efficiently and carefully, it is required that the research conducts it by making plans. Therefore, it can be said that pilot study can help a researcher in conducting research by developing a strategy (Kuada, 2012).

A pilot study is usually conducted by a researcher so that the researcher can conduct a small comparison with the main study, to use fewer resources and analyse the main research. It helps the researcher in correcting the errors while conducting the study so that the study consumes less and effort of the researcher. It can also be said that a pilot study can help in providing a large amount of data for conducting the analysis of the study so that the findings are effective, and the validity of the research can improve. The systematic review is done by adding sources to the literature review section of the research study (Kuada, 2012). A pilot study has helped the researcher in providing vital information related to the research study, to use a variety of procedures in the research study. Further, The pilot study has helped in assessing the feasibility of the research study and include a variety of information in the research study. A pilot study can be conducted a variety of times in a research study; therefore, it can be said that with the help of pilot study, a researcher can improve the results of the study (Kuada, 2012).

In this research study, a pilot study was conducted to determine the reliability and validity of the research study. Under the pilot study, the survey was conducted by the researcher and to conduct the survey with the general Individual of the Arab region, emails and messages were sent to them. The messages and emails were sent to ask for their participation in the survey questionnaire regarding the presented variables such as trust, culture, workplace, leadership, and the use of western IT of the employees of the Saudi Oil Company within Arab region. For surveys, a questionnaire was mailed to the employees to collect their views, and each survey was collected through email. The survey and the collected data helped me in developing the report regarding the presented variables. From the findings of the data collection process under the pilot testing, it was observed that there were certain issues that were resolved using the pilot testing. The issues regarding the data collection process are:

Pilot testing survey was conducted among ten Individual within the Arab regions to test the survey questions of the study and check whether the questions are reliable or not for collecting information regarding the research topic.

It was observed that initially all the questions were not answered by the respondents as the questions were difficult to understand and the respondents were also facing the issue of language. However, the issue was rectified, and the questions were revised so that the respondents can easily understand all the questions and answer as per the research topic.

The correct answers from the respondents helped the researcher to accomplish the aim of the research study. Further, it was ensured that the questions were not long and complicated for the respondents.

3.16 Data Analysis Approach

The descriptive method of data analysis was used with theoretical data, where the researcher wants to use the subjective type of data foreknowledge generation. In descriptive analysis method, the information is taken from the literature review of the research study. The data is collected from the literature review section of the research work and then analysed by the researcher using a systematic procedure of evaluation of data and presenting it in an effective manner. This method of data analysis is efficient in gaining relevant knowledge out of the data gathered for the research study and getting to the conclusion (Cavusgil and Riesenberger, 2009).

Ethical Considerations

Ethical considerations are essential for a researcher to follow in a research study as the ethics consists of a set of principles which help the researchers in conducting the study ethically and to consider the ethics while interacting with the Individual involved in the research study. While interacting, there are various activities that may occur, such as survey, in-depth interviews, focus groups and secondary data collection, which is done with the community Individual (Oliver, 2010). To influence the report of the research, it is important for the researcher to consider the ethical considerations while conducting the study. Therefore, it can be said that it is the responsibility of the researcher to consider all the ethical considerations so that no harm is caused to any individual while conducting the research. The researcher must also ensure that the research is conducted by following a mechanism. It can be said that the researcher must identify all the harms that can be caused during the process of conducting the research and evaluate its impact on the research study (Oliver, 2010).

There are many reasons, due to which it can be said that the researcher must consider all the ethical considerations while conducting the research. The first reason can be stated as, ethical consideration, considered in research indicate a sign of respect for all the researchers that

will conduct any research in future. By indicating the ethical considerations can help the researcher in acquiring funds for the research which are important to conduct the research study. Ethical considerations also help the researcher in getting the research accepted by the community and help the researcher in avoiding any kind of criticism from the community Individual (Shamoo and Resnik, 2009).

In this research study, ethical considerations are considered by the researcher in all the areas of the research that are included in this study. The areas are the voluntary participation of the respondents, taking consent before conducting the survey, maintaining confidentiality while collecting the data, and proper communication with the respondents and communicating the results (Shamoo and Resnik, 2009). In this research work, it was ensured while collecting the primary data that the respondents have voluntarily participated in this research work, and they are not forced to answer the questions. It was also ensured that the participants were allowed to leave the survey at any point they want, and prior information was also conveyed before their participation in the research study (Shamoo and Resnik, 2009). The respondents were provided with the full identity of the researcher and the detailed information about the research aim, and objectives were also provided. In this essence, written consent was also taken from the participants of this research study to fulfil the ethics of the study (Shamoo and Resnik, 2009).

Another important ethical consideration that was considered by the researcher was that the respondent's information was made confidential, and their answers were not shared with other participants. It was ensured that the questions mentioned in the survey questionnaire did not reveal the identity of the participant so that confidentiality can be maintained throughout the research work (Shamoo and Resnik, 2009). The participation of the respondents was based on equal participation, and no bias was done while conducting the survey. Further, when the results were conveyed to the supervisor, it was ensured that the work did not contain any plagiarism in research findings and representation of the results of the research work. Thus, it can be said that all attempts were made by the researcher to fulfil all the ethical considerations while conducting the research study (Shamoo and Resnik, 2009).

3.17 Authenticity, Bias, Validity and Reliability of the Research Study

Bias in Research Study: It is essential for a researcher to consider the bias issue in a research study so that the researcher can ensure that the study is conducted authentically, and originality is also maintained throughout the study. As per the bias issue and factor that is considered by the researcher in a study, it is not considered with the responses of the

respondents collected, that the information provided by the respondents have been manipulated regarding the original information or not (Bernard, 2012). In this research work, it is considered by the researcher that the issue of bias can be prevented by providing equal opportunity to the respondents who are participating in the research study and not letting the personal interventions impact the selection process of respondents. If the respondents are selected by considering bias as the process of selection, then it can create conflicts between the groups and their opinion regarding the research study (Bernard, 2012). Therefore, it is essential for a researcher to select the respondent without personal intervention and for the benefit of the research work. In this essence, this research study has adopted random sampling method for selecting the sample for collecting the information regarding the research study. Random sampling method enables the researcher to select the participants without bias and every individual is given equal right to participate in the study and provide their views regarding the research topic (Bernard, 2012). In this research study, the respondents have helped by providing information regarding the personality, trust, and culture within the Arab region.

Authenticity, Reliability and Validity: It is also found that authenticity, reliability, and validity is an important phase of a research study that must be considered by a researcher while conducting the research study. If a researcher ensures that the study conducted is authentic, reliable, and valid, then it can be said that the results derived in the study are useful for the future studies and the study can also be trusted by the users of the study. Reliability in a study means a degree through which the researcher gets same results even after several trails through observation, questionnaire, test, or any other procedure (Baumgarten, 2013). Therefore, it can be said that in a research study, a researcher must get consistent results for the research questions described in the study. There are three measures through which the reliability of a study can be checked by the researcher, namely equivalence, stability, and internal consistency. Further, validity is also considered as a degree with the help of which the researcher is enabled to the measures the research study in a correct way (Baumgarten, 2013). If a research study is considered as reliable and valid, then it can be said that the findings of the research study are accurate, and the findings can be trusted by the users of the research study in the future. It can also be said that validity is an important component in a study as the researcher should ensure that the information used in the research study must be facts that are universally accepted. A research study can be considered as valid when the research study provides a good source of information, knowledge and it should also the practical aspects regarding the research study. A study should also include reliable sources

of information, to improve the reliability of the study (Baumgarten, 2013). Moreover, authenticity in a research study describes the factor of trustworthiness regarding the research study. In a research study, authenticity can be maintained by ensuring the identity and integrity for all the information sources that are utilised in conducting the research study. It is found that the researchers can test the flaws in the research with the help of pilot testing method. In pilot testing method, the questions generated for the questionnaire are checked so that they are easily understandable by the respondents and the questions can be presented without any ambiguity (Cargan, 2007).

In this research study, the issue of bias is considered by the researcher so that all the individuals can get equal opportunity of participating in the research study and the study becomes free from any kind of discrimination. Further, authenticity, validity and reliability criteria are also used in this research study to improve the effectiveness of the research study. Therefore, it can be said that in this research study, all participants were provided with equal opportunity and no discrimination was done while collecting data through survey questionnaire. It is also considered in this study that reliable sources are chosen for collecting information regarding personality, trust and culture within the Individual of Arab region and make the study reliable. To meet the reliability criteria, it was ensured by the researcher that the survey is conducted among the general Individual living in Arab region.

3.18 Summary

Research methodology is an important section of a research study which helps the researcher in designing a method for the main research problem identified in the study. It also helps the researcher in examining the characteristics of the research study by applying scientific methods to get to the conclusion easily. It is essential that the research methodology is based on the literature review section, as the literature review is conducted based on the research topic and main problem, covering the research entirely. Literature review section also enables the researcher to include information regarding the research topic from various literary sources. Further, it is found that there are certain characteristics of a research study which are fulfilled using appropriate research methodology. The characteristics are, logical, systematic, reductive, and empirical. With the help of research methodology, research can be carried out in a systematic manner by collecting the relevant information as per the research topic. For key research terms used in this thesis please see Appendix N.

Research methodology also carries out the study by deriving logical conclusion and to carry out the study, empirical methods are suggested using the methodology section of the study. It is found that another main advantage of using research methodology is that it helps the

researcher in explaining the concepts regarding the research study, which helps in further getting to the conclusion. In this research study, research methodology has covered all the aims and objectives of the research study, to introduce design and methods to gather relevant information regarding the research study.

One of the important sections of research methodology is research paradigm because it helps the researcher to conduct the research successfully by providing a bigger and wider perspective. It also includes a set of practices, beliefs, and views that guide the research study towards successful completion. Further, it can be said that a research paradigm provides a framework that helps in gathering academic ideas and scientific ideas, views of researcher and beliefs of the researcher to conduct the research study and get some knowledge out of it.

The main advantage of involving research paradigm in a research methodology section is that it helps the researcher in giving direction and foundation to a research work which can be considered as the primary step of a research study. Another advantage of research paradigm can be stated as; it provides a logical direction so that the study can be completed effectively by generating knowledge out of the information collected. Research paradigm can also help the researcher to develop the research design in accordance with the nature of the research study.

There are three types of research paradigms which are used in research studies, namely interpretivism, realism and positivism. In positivism paradigm, it is found that the researcher ensures that the findings of the research work are independent, and it can help the researcher in developing hypotheses. These hypotheses are developed so that the researcher can get to the conclusion by testing the hypotheses with the help of statistical methods. In interpretivism paradigm, it is observed that the world is subjective and is formed with the norms of society as per the researcher. The knowledge can be obtained from the views of Individual based on their subjective experience in the world.

The knowledge is derived by the interpretive researcher after examining the knowledge from Individual and studying in-depth about the related phenomena. Further, realism paradigm helps the researcher to get to the research findings based on the reality, where the researcher tries to remove bias from the study and get the results with the help of quantitative methods. In this research study, the researcher has used interpretivism paradigm so that views of Individual can be gathered. Interpretivism paradigm uses method such as observation method or interview method helps the researcher to derive a subjective relationship between the subject of the research and the researcher itself.

In the net section of research methodology, research design is included which is also an important part of the methodology section. It can be said that research design is used in a research study to provide a proper structure to the research work. In a research design, the researcher uses a strategy, by which all the components of the study are well integrated so that the study becomes simpler and can be represented in a logical manner. It can also be said that research design further helps the researcher in addressing the research problem as it makes the study simpler.

The main advantage of using research design in a study is that it consists of methods for data collection, data assessing and analysing. It can help the researcher in conducting the study appropriately and incorrect direction. There are mainly four types of research design available to conduct the research studies, namely exploratory, explanatory, and descriptive research design. In this research study, explanatory research design is used because it helps the researcher to measure various variables as well as analyse the collected data. In this type of research design, surveys and quantitative method can be used to collect the data regarding the research topic.

In this research study explanatory method is used as a research method. The sources used for data collection are, questionnaires, literary sources, and internet sources of information. Second method of research is quantitative method which provides statistical data to the researcher to analyse the research problem and get to the conclusion easily. The data collected using quantitative method is structured as compared to the qualitative data. Quantitative method uses survey questionnaire method, case studies and reports of organisations to gather information.

In the net section inductive research approach is used in this research study. The inductive research approach is also known to be a reasoning method which helps a researcher in inducing views in general from the existing or the given information. One of the advantages of using inductive approach is that it helps in analysing the given information in the research study that is collected by the researcher to conduct the work in a correct direction. In this research study, the inductive approach has helped the researcher in collecting data regarding trust and other variables presented in the literature review.

Data collection method is considered as the most important part of a research study, as it is a process through which a researcher can gather relevant information and moreover arranging the data into a structured format, as it eases the process of measuring the data according to the targeted standards, which will allow a person to derive more relevant and significant information. To collect adequate information, it is required to adopt an

appropriate method, which when is applied correctly ensures the researcher with a suitable amount of information. With the help of data collection method, the researcher has addressed aims and objectives of the research study in significant manner.

There are two types of data collection methods that are used in a research study, namely primary method, and secondary method. Primary data refers to that type of information or data which has been gathered from various sources and is original as it is assembled for the first time. The data collected is further evaluated based on the existing needs and desire of the researcher, but before that, the data is interpreted in a systematic manner to prepare a statistical table, which will allow the researcher to extract the exact required information. Primary data collection in this research study has been done with the help of questionnaire survey method. Under this method, a questionnaire is prepared that consist of questions which focus on the important aspects of the research study and on which the information is to be derived from the individual participants. Many respondents are involved so that ample amount of data can be collected. Primary data collection method is used in this research study because it helps the researcher in gathering first-hand data which will collect relevant information about the local culture of employees within the Saudi Oil Company. The questions related to the local culture were developed and presented in the questionnaire, and then the same were distributed among the respondents.

Secondary data collection was done with the help of library research method. The main advantage of using library research method is that it enables the researcher to identify and located the sources that are essential for this research work, which will also help the researcher in getting to the conclusion of the study. The library research method involves keywords, that are essential as it helps in searching and locating the specific sources in libraries, online and in databases. It is found that, with the help of library research method, a researcher is enabled to systematically search the required and essential sources to address the components of the research study.

The research methodology chapter also describes the phases of data collection, in which primary data is collected and in second phase secondary sources are explored. The sample size taken for conducting survey is 300 general Individual of Arab region and sampling technique used to select the sample is random sampling method. Random sampling method is selected in this research study as it helped the researcher in collecting data from the samples for deriving knowledge out of the information collected and getting to the conclusion easily.

4. QUESTIONNAIRE DESIGN

Questionnaire Construction: Number of Items at Each Phase

Table 3 shows the questionnaire construction, the sub-scales along with number of items at each phase.

Main Scales	Sub-scales	Number of Items Entering Phase One	Number of Items Entering Phase Two	Number of Items Entering Phase Three	Final Study Expected Number of Items
Trust	General Trust	6	5	Factor Anlaysis and Item Ruduction to be undertaken on the Information Security and Data Privacy Scale	5
	Specific Trust	5	5		5
	Trust in Close Relationships: Belief	7	5		5
	Trust in Close Relationships: Expectedness	5	5		5
	Trust in Close Relationships: Trustworthiness	3	5		5
	Trust Towards Others	3	3		3
Western IT Systems	Western IT Systems Satisfaction	19	4		4
	Western IT Perceived Usefulness	6	5		5
	Western IT Ease of Use	6	5		5
Organization	Employees' Alignment	10	5		5
	Workplace Culture	6	6		5
	Leadership	8	8		5
IS Compliance	Information Security and Data Privacy		19	19	13
Total Number of Items		86	80	19	70

Table 6: Questionnaire Construction

4.1 Introduction

The method was conducted using quantitative approach through a serious of pilot study survey. The first phase started by establishing the theoretical framework model which has been developed from literature. The model consisted of various concepts as the focused area of this research i.e., Arab culture, Leadership, Individuals' Alignment, Trust, the use of Western IT technologies and their correlation to each other and their impact towards Information security compliance and data privacy. The questionnaire survey was refined at each stage using SPSS statistic software based on Internal consistency and Cronbash Alpha. After gathering the responses on each phase and before proceeding, the research follows the recommended processes by (Sposito et al., 1983), which consist of case screening, Unengaged responses, and variables screening to make sure that there is no missing data, all steps will be detailed in results chapter.

The initial survey consisted of scales and sub-scales with a total number of 93 items 7 items out of 93 are demographics items which leave us 86 items. The pilot study questionnaire phase one was administrated to 25 respondents within the targeted organization, the responses then will be statistically analyzed based on internal consistency and Cronbash

Alpha. As the survey progress, the questionnaire then will be refined so new sub-scales and items will be introduced and reduced and then sent to another 25 respondents. Moreover, the theoretical framework will be re-developed and improved to correlate with phase 2 questionnaire. Finally, the refined and developed questionnaire from phase 2 was analyzed and finalized as a web-based survey administrated to 300 individuals inside the organization. The research plan series will be undertaken as following:

4.2 Phase One: Initial Questionnaire

Initial Questionnaire 93 items including demographics items administered to 25 employees

- Check the usefulness of 86 items excluded the demographics.
- Confirm the internal consistencies of 13 sub-scales.
- Reduce the number of items where possible.

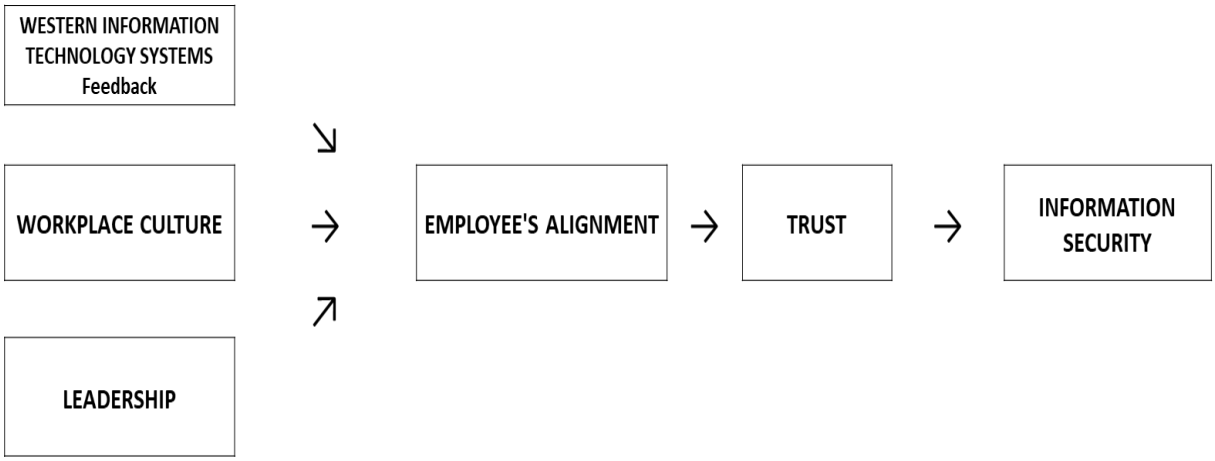

Figure 2: Initial Model

Phase 1 Survey Questions

The first scale consisted of 6 items questionnaire with general statements that measure the general Trust scale which covers the trust, beliefs, and honesty of others. The second scale consists of 5 items questionnaire designed to measure a general level of trust towards other individuals. It focuses on two different factors that form general trust: 1. the belief that other Individuals are honest and 2. The belief that trusting others is risky; these factors will measure the Anxiety scale and trust scale.

The next scale measured trust in a close relationship. Items with a total number of 17 measure the level of trust in one's relationship partner. Answers will be based on a 7-point Likert-type scale. The scale can be divided into sub-scale namely, Expectedness, Trustworthiness,

and Belief.

These designed items were focused to penetrate the way how individuals think in close relationship trust. Similar studies focused on changing the process and procedures of certain guidelines and did not incorporate measures to test the way how Arab behave based on rooted culture and lifestyle. The dominant behaviour controlled by local culture must be expanded to include covert processes or measures to get into the nature of trust as found in Arab culture. Fear of shame can also influence the level of trust in close relationships within the Arab culture and might affect the reputation of their values in the community and result in a misunderstanding between partners based on the way how they think. The framework will be presented to integrate expectedness, Trustworthiness, and Belief. Rather than reviewing failed processes and procedures a need for examining the human psychological aspects based on the nature of local culture can lead to more sustainable processes and user satisfaction.

A designed point scale was presented to indicate the extent to which individuals agree or disagree to certain situations which are related to individuals who have close relationships with someone and shows how they feel about it. The rating scale will be placed on boxes to the right of each statement.

Trust is sometimes treated as a dependent variable; however, this can systematically underestimate its relevance. The approach in this designed scale establishes the importance of trust and its related measures of both leaders and their individuals. The feelings of dissatisfaction towards leaders versus the individuals themselves are affected by trust so low trust helps to create barriers that are difficult for leaders to succeed and vice versa. The next scale Trust towards others designed a questionnaire of 3 items presented to measure the level of Individual trust towards each other. These items provide dichotomous choices. One of the items is the high trust response while the other item is the low trust response.

The following scale designed questionnaire is Western IT Technology system Satisfaction which consists of 19 items that focused on the satisfaction of using the western transferred system within the Arab region. These items indicate the individual's opinion about the simplicity or difficulties of using a western system, it is also followed by 2 scales of 12 items measuring the perceived usefulness and ease of use. Moving to the final scale, a designed scale consist of three sub-scales namely Individual, Culture, and Leadership, 10 items measure individual, 6 items measure culture, and 8 items measures Leadership. The total scales are12 at this phase with a total number of 86 items excluded from the 7 items of demographics shown in Table 6.

4.3 Phase Two: Modified Questionnaire

Modified Questionnaire 87 items included demographics items administered to 25 employees

- Check the usefulness of 80 items excluded demographics items
- Confirm the internal consistencies of 13 sub-scales (IS Compliance now included)
- Reduce the number of items where possible

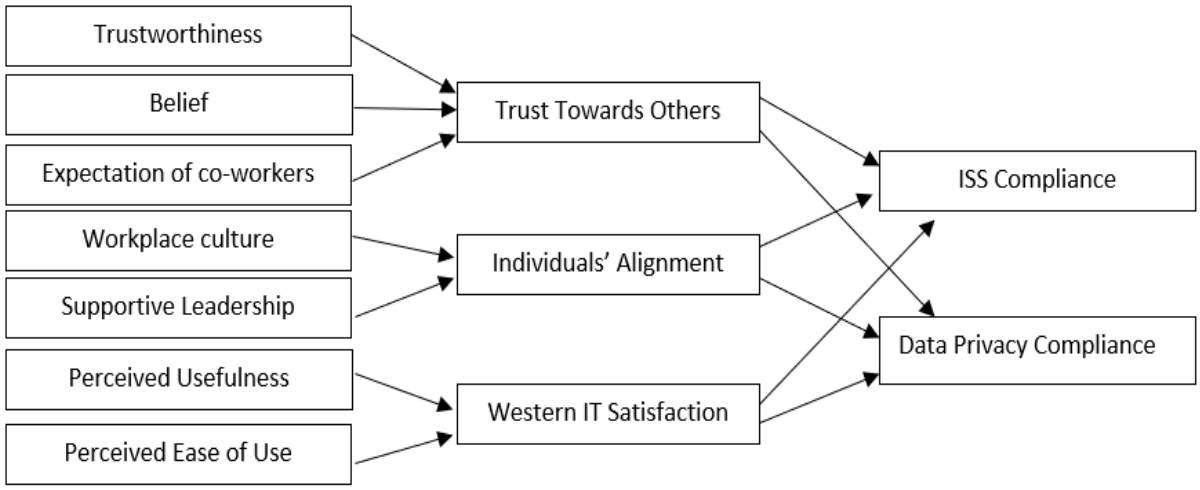

Figure 3: Phase 2 Model with new IS Compliance sub-scales

Phase 2 Survey Questions

The phase 2 survey was conducted using the same sample size of another 25 participants randomly. The purpose of this phase is to refine the questions based on the internal consistency as well as Cronbach alpha. New scales sub-scales will be added to cover all the elements or variables of the focused area such as the walk-through data privacy, Leadership, and Individual alignment. Some questions and scales will remain the same as the phase one survey questions. The phase 2 questionnaire will be presented as follows:

The first scale general trust of 6 items moved to phase 2 with 5 items, item number 12 has been dropped out due to reliability check with .515 under total-item-statistic which result in improved Cronbach's alpha of (.879).

The second scale specific trust moved as it is with 5 items with no dropping out based on reliability check and Cronbach's alpha.

The third scale trust in close relationship consisted of three sub-scales moved to phase 2 with 5 items for sub-scale belief out of 7 items, 2 items dropped 19 and 23 based on reliability check. The second sub-scale Expectation of co-workers moved with the number of 5 items

with o dropping items. The third sub-scale Trustworthiness moved to phase 2 with refined 5 re-worded items instead of 3 items to allow more room later for dropping out items which improve the reliability check and Cronbach's alpha.

Moving to the next scale trust towards others, the scale moved as it is with 3 items whit no dropping out based on reliability check and Cronbach's alpha. A massive dropping out for the scale Western IT System which consist of three sub-scale, Western IT system satisfaction, Perceived ease of use, and usefulness with 4 items moving to phase 2 instead of 19 items for Western IT system Satisfaction as it shows that most of these items are almost the same in people's mind. The items moved to phase 2 are 47,48,49, and 51, and the rest are dropped out.

Continuing with the same Western IT System scales, the following sub-scales Perceived usefulness moved to phase 2 with 5 items instead of 6, item number 58 dropped out as it shows low value in reliability check an item statistic of (.499) which leads to an improved Cronbach's alpha value as the research move forward to the next phase. The last sub-scale Perceived ease of use has also moved to phase 2 with 5 items so one item number 68 dropped out as it shows low value in reliability check an item statistic of (.495) which also shows an improved value of Cronbach's alpha.

As follow, the next scale covers Organizations and is divided into 3 sub-scales Employee alignment, Workplace Culture, and Leadership. As mentioned in phase one, the total item for this scale is 24 items divided into three sub-scale, 10 items for Employee's Alignment, 6 items for Workplace culture, and 8 items for Leadership. There has been a dropped out of 5 items out of 10 from Employee's Alignment which left use with 5 items moved to phase 2. The number of items dropped from the mentioned sub-scale are 72,74,76,78, and 79. These items show a very low reliability check and item statistic value which impacted Cronbach's alpha value. The elimination of these items resulted in an improvement in Cronbach's alpha value. The second sub-scale workplace culture moved to phase 2 with the same number of items with no drop out as the Cronbach's alpha show a value of (0.843). Moving forward to the last sub-scale leadership, it is also moved to phase 2 with no drop out items as the value of Cronbach's alpha shows a value of (0.928). lastly, a new scale named Information System Compliance has been introduced with two sub-scales namely Information Security and Data privacy with a total number of 19 items which will be covered in phase three. Hence, all framework models are refined as the research modify the items and their corresponding scales to match the listed factors on each model.

4.4 Phase Three: IS Compliance sub-scale

- check the usefulness of 19 items
- Factor Analyse the scale
- Reduce the number of items where possible

In this phase, factor analysis and items reduction has been taken on the 19 items, the analysis resulted in dropping out 6 items out 19 items as these items shown an identical meaning and overlapping with each IS Compliance sub-scale. The remaining 13 items were moved to the final phase.

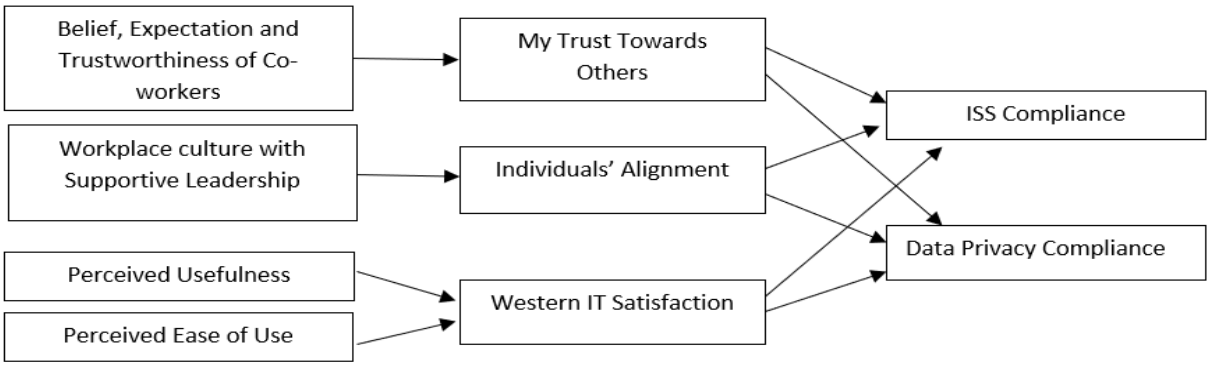

Figure 4: Phase three Model

The refined items from phase three came out with a total number of 67 items excluded the 7 items of demographics namely, Information Security Awareness Training ISAT, Date, Age, Education, Occupation, and Study location (Home/Abroad). The final items will then be administered using web-based survey to 300 employees. The analysis will be presented using AMOS on the final phase.

4.5 Final Phase

The Final Scale had 67 items and included demographics items to be administered to 300 employees, of which 247 responded giving a response rate of 82.33%

The technical analysis proceeded through three main stages:

- check the usefulness of 60 items (not including demographic items) for produce factor analytic sub-scales
- Factor Analysed the final scale and
- Analyse the refined model using AMOS

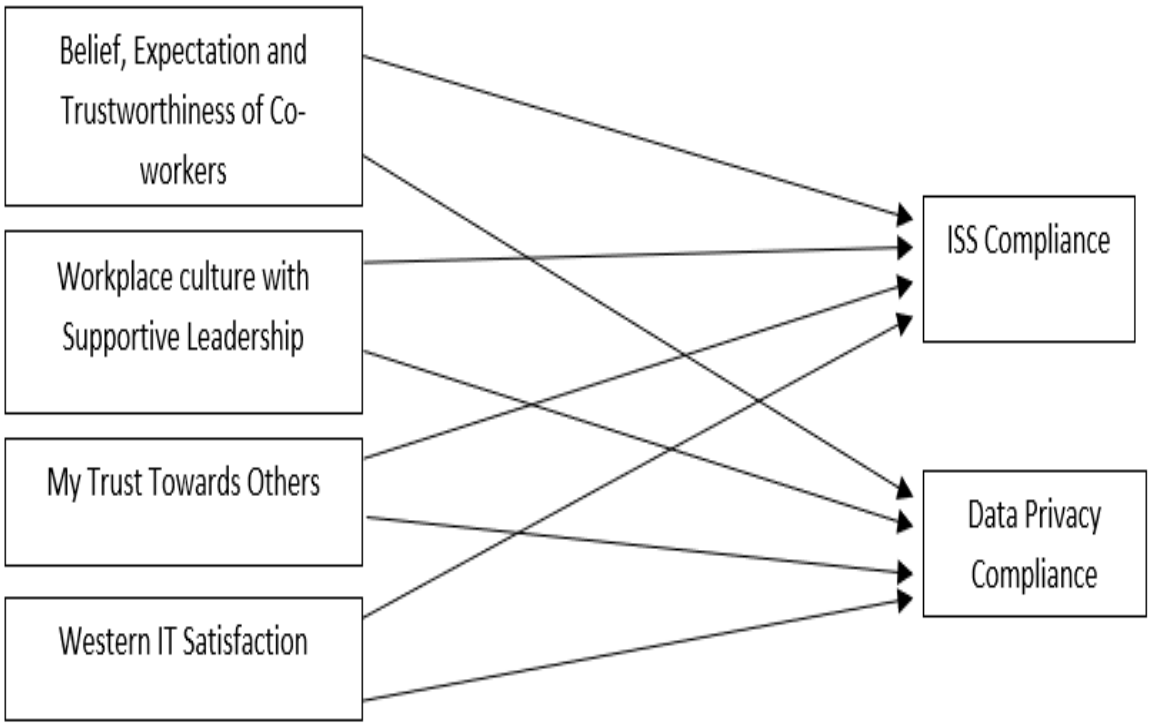

Figure 5: Final Model

In the final phase a total number of 67 items included 7 demographics items with 9 factors developed from literature and the refined of each phase namely, Trust towards others, Belief in co-workers, Expectation of co-workers, Perception of the Trustworthiness of co-workers, Western IT Technology, Perceived Usefulness, Perceived ease of use, Information Security Compliance, Data Privacy, Individual's Workplace Alignment, Workplace Culture, and Supportive leadership.

As the questionnaire progressed, the research Factor analyze the 67 items including the 7 items of demographics using SPSS and finally, the research model fit our variables using AMOS. The research starts with Exploratory Factor Analysis (EFA) and the 9 factors mentioned above and then, proceeded with the following steps below:

- Exploratory Factor analysis (EFA).
- Adequacy (KMO, Communalities)
- Convergent validity
- Discriminant validity
- Reliability Analysis
- Development of Hypotheses

- Confirmatory Factor Analysis (CFA)
- Model Fit
- KMO and Bartlett's Test
- Metric invariance (Chi-square)
- Scalar invariance
- Validity and reliability check

As the research moved forward with SPSS and AMOS analysis, the outcome of model fit reached its destination with 9 factors and 30 items excluded the 7 demographics items namely, Information Security Awareness Training ISAT, Date, Age, Education, Occupation, and Study location (Home/Abroad). These demographics items represent questions ranging from Q1-Q7. Following up, the research then proceeded with the analysis using AMOS and the output will be used to test the developed hypotheses as well as the research objectives and aim. Detailed results are presented in chapter five (Results). To obtain a factor analytic scale, the research proceeded through several phases as detailed in table 7-10. Table 7 (below) presents phase one questionnaire items and sub-scales.

Variable Scale	Sub-scale	Number of Items	Questionnaire items
General Trust scale		6	Q8, Q9, Q10, Q11, Q12, Q13
Specific Trust Scale		5	Q14, Q15, Q16, Q17, Q18
Trust in Close Relationships Scale	Belief	7	Q19, Q20, Q21, Q22, Q23, Q24, Q25
	Expectedness	5	Q26, Q27, Q28, Q29, Q30
	Trustworthiness	5	Q31, Q32, Q33, Q34, Q35
Trust Towards Others		3	Q36, Q37, Q38
Western IT Technology system Satisfaction		19	Q39, Q40, Q41, Q42, Q43, Q44, Q45, Q46, Q47, Q48, Q49, Q50, Q51, Q52, Q53, Q54, Q55, Q56, Q57
	Perceived Usefulness	6	Q58, Q59, Q60, Q61, Q62, Q63
	Perceived Ease of Use	6	Q64, Q65, Q66, Q67, Q68, Q69
People, Culture, and Leadership			
	People	10	Q70, Q71, Q72, Q73, Q74, Q75, Q76, Q77, Q78, Q79
	Culture	6	Q80, Q81, Q82, Q83, Q84, Q85
	Leadership	8	Q86, Q87 Q88, Q89, Q90, Q91, Q92, Q93
Total Items		93	

Table 7: Phase 1 Questionnaire Design

Table 8 (below) shows phase 2 questionnaire items and sub-scales.

Variable Scale	Sub-scale	Number of Items	Questionnaire items
General Trust scale		5	Q8, Q9, Q10, Q11, Q12
Specific Trust Scale		5	Q13, Q14, Q15, Q16, Q17
Trust in Close Relationships Scale	Belief	5	Q18, Q19, Q20, Q21, Q22
	Expectedness	5	Q23, Q24, Q25, Q26, Q27
	Trustworthiness	5	Q28, Q29, Q230, Q31, Q32
Trust Towards Others		3	Q33, Q34, Q35
Western IT Technology system Satisfaction		4	Q36, Q37, Q38, Q39
Perceived Usefulness		5	Q40, Q41, Q42, Q43, Q44
Perceived Ease of Use		5	Q45, Q46, Q47, Q48, Q49
People, Culture, and Leadership			
	Employee's Alignment	5	Q50, Q51, Q52, Q53, Q54
	Workplace Culture	6	Q55, Q56, Q57, Q58, Q59, Q60
	Leadership	8	Q61, Q62, Q63, Q64, Q65, Q66, Q67, Q68
Information Security Compliance		14	Q69, Q70, Q71, Q72, Q73, Q74, Q75 Q76, Q77, Q78, Q79, Q80, Q81, Q82
Data Privacy		5	Q83, Q84, Q85, Q86, Q87
Total Items		87	

Table 8: Phase 2 Questionnaire Design

Phase three Questionnaire Items descriptions are presented in Table 9 (below).

Variable Scale	Number of Item	Questionnaire items
My Trust Towards Others	7	Q8, Q9, Q10, Q11, Q12, Q13, Q14
My belief in co-workers	14	Q15, Q16, Q17, Q18, Q19, Q20, Q21, Q22, Q23, Q24, Q25, Q26, Q27, Q28
Western IT Systems	10	Q29, Q30, Q31, Q32, Q33, Q34, Q35, Q36, Q37, Q38
Individual's Workplace Alignment	9	Q39, Q40, Q41, Q42, Q43, Q44, Q45, Q46, Q47
Supportive Leadership	5	Q48, Q49, Q50, Q51, Q52
Information Systems Security Compliance	15	Q53, Q54, Q55, Q56, Q57, Q58, Q59, Q60, Q61, Q62, Q63, Q64, Q65, Q66, Q67
Total Items	67	

Table 9: Phase 3 Questionnaire Design

The Final Phase Questionnaire, Items and codes used in the analysis are presented in table 10 (below).

Variable Scale	Number of Item	Code used in SPSS and AMOS	Questionnaire items
Belief, Expectations and Trustworthiness of Co-workers	11	CW	CW1 CW2 CW3 CW4 CW5 CW6 CW7 CW8 CW9 CW10 CW11
Workplace Culture Alignment with Supportive Leadership	9	WPC	WPC1 WPC2 WPC3 WPC4 WPC5 WPC6 WPC7 WPC8 WPC9
Western IT Satisfaction	7	WIT	WIT1 WIT2 WIT3 WIT4 WIT5 WIT6 WIT7
My Trust Towards Others	5	T	T1 T2 T3 T4 T5
ISS Compliance	5	ISSC	ISSC1 ISSC2 ISSC3 ISSC4 ISSC5
	3	ISC	ISC1 ISC2 ISC3
Data Privacy Compliance	5	DPC	DPC1 DPC2 DPC3 DPC4 DPC5

Table 10: Final Phase Questionnaire Design with AMOS code names

5. RESULTS

Moving forward, the section offers results of the Exploratory Factor analysis (EFA), Adequacy of Kaiser-Meyer-Olkin (KMO, Communalities), Convergent validity, Discriminant validity, Reliability Analysis, Developed Hypotheses, Confirmatory Factor Analysis (CFA), Model Fit, KMO, and Bartlett's, Test Metric invariance (Chi-square), Scalar invariance, and Validity and reliability check. Once the data has passed the required assumption appropriately, the research then present the next section of results namely factor analysis and explain the results for conducting the reliability test namely the Cronbach's alpha. Lastly, the research used multivariate analysis using structural equation modelling and present the results with various structural models.

5.1 Research Variables Definitions

The previous chapters have established the research problem that this research aims at addressing and the research study significance by choosing the Saudi Oil company through the lens of Arab culture. Further discussion presents variables definitions and constructs being studied and evaluated in this study. Moreover, the research looks at items and labels used in SPSS and AMOS.

5.1.1 Belief, Expectations and Trustworthiness of Co-workers

In the views of Chrysostome (2014), it is found that trust is deep-rooted in the Arab region and is reflected through the businesses running across the countries. Al-Kandari and Gaither (2011) stated about Cultural backgrounds, it has been analyzed that the Individuals living in Arab Region tend to follow Arab Culture and language, which creates a strong bond between these individuals based on their culture. In the perspective of Lunt, Horsfall, and Hanefeld (2015), In Arab countries, trust is dependent on the relationships between the Individual or the company. Table 11 below shows co-workers variables that will be used in the research in the research questionnaire.

Variable Scale	**Measured Factors**	**Number of Item**	**Code used in SPSS and AMOS**	**Questionnaire items**
Belief, Expectations and Trustworthiness of Co-workers	Belief, Trust, Expectations	11	CW	CW1 CW2 CW3 CW4 CW5 CW6 CW7 CW8 CW9 CW10 CW11

Table 11: CW Variable items description

The table 8 above presents 11 items that are used in research questionnaire to represent Belief, Expectations and Trustworthiness of Co-workers. The 11 items were coded CW1 to CW11 in SPSS.

5.1.2 Workplace Culture, Supportive Leadership, and Individual's Workplace Alignment

Stebbins (2017) stated that trust is the factor that has been given importance in the workplace. Abualhamael (2017) stated That positive leadership style, such as transactional and transformational leadership techniques motivate the individuals and contributes to organizational energy. Altbach and Knight, (2007); Saleh, (1986); Smith and Abouammoh, (2013) stated that the leadership style adopted in Saudi Arabia is traditionally based on customs, religion, and culture. Block and Walter (2017) believed the convergence of several cultures results in certain issues among the varying culture within the workplace creating several challenges for the local Individual. However, the Arabs trust the loyalty of the different cultures and respect their ideologies to maintain harmony within the workplace and society.

The table 12 below shows workplace culture that will be used in the research.

Variable Scale	**Measured Factors**	**Number of Item**	**Code used in SPSS and AMOS**	**Questionnaire items**
Workplace Culture with Supportive Leadership	Workplace Culture, Leadership	9	WPC	WPC1 WPC2 WPC3 WPC4 WPC5 WPC6 WPC7 WPC8 WPC9

Table 12: WPC Variable items description

The table 12 above presents 9 items that are used in research questionnaire to represent workplace culture and supportive leadership. The 9 items were coded WPC1 to WPC9 in SPSS.

5.1.3 Western IT system

As stated by Al-Otaibi et al. (2018), Previous studies found that the social and cultural differences between Saudi Arabia and other developed countries, like the United Kingdom, for example, had a significant impact on adoption and satisfaction of using technology such as mobile banking. Hill et al. (1998) stated that Transferring Information Technology to bring it into practice is difficult for many countries, and they even fail to transfer it. The major obstacles that are faced while transferring IT into practices are the cultural and social norms of a developing country. Arabia by Al-Otaibi et al. (2018) on the use of online banking application satisfaction. the study found that information quality and interface design have significant effects on user satisfaction in both UK and Saudi Arabia. the overall findings suggest that all respondents are more satisfied with online banking app in the UK than in Saudi. The table 13 below represent western IT technology factor used in the research.

Variable Scale	Measured Factors	Number of Item	Code used in SPSS and AMOS	Questionnaire items
Western IT System Satisfaction	Perceived Usefulness Perceived Ease of Use		WIT	WIT1 WIT2 WIT3 WIT4 WIT5 WIT6 WIT7

Table 13: WIT Variable items description

The table 13 above presents 7 items that are used in research questionnaire to represent Western IT technology. The 7 items were coded WIT1 to WIT7 in SPSS.

5.1.4 My Trust Towards Others

Gefen, Rose, Warkentin, and Pavlou (2008), argued that trust based on cognition and propensity did not outweigh affection-based trust. In this respect, openness in communication intensifies success and ultimately enforces the growth of affection-based trust. Emotional trust tends to be open, receptive, and loyal to its counterpart. Through emotional trust, individuals can communicate confidential information between themselves. Corbitt et al. (2004), concluded that face-to-face interaction is vital in the initial stage of developing relationships based on effective communication. In addition, Mooradian et al. (2006), noted that partners in a business setting needed high levels of trust. Putnam and Nicotera (2009) claimed that one of the vital cultural factors is trust. Existing research in this area seems to indicate that members of Arab communities tend to have a high level of trust based on shared values. In the views of Chrysostome (2014), trust is considered as one of the important aspects in the Arab region as it helps in developing relationship marketing among the Arab countries.

The table 14 below show trust factor used in the research.

Variable Scale	Measured Factors	Number of Item	Code used in SPSS and AMOS	Questionnaire items
Trust Towards Others	Trust	5	T	T1 T2 T3 T4 T5

Table 14: T Variable items description

The table 14 above presents 5 items that are used in research questionnaire to represent trust. The 5 items were coded T1 to T5 in SPSS.

5.1.5 Information System Compliance

As stated by Stebbins (2017), The cybersecurity challenges of the region create various privacy issues for the population of the region but are countered by adopting advanced technologies within the workplace. All variables discussed above have shown a direct impact

on Information Security Compliance and Data Privacy which has been presented later in this chapter.

Table 15 below shows 3 information security compliance factors that are used in the research.

Variable Scale	Number of Item	Code used in SPSS and AMOS	Questionnaire items
Information Security System Compliance	5	ISSC	ISSC1 ISSC2 ISSC3 ISSC4 ISSC5
Information Security Compliance	3	ISC	ISC1 ISC2 ISC3
Data Privacy Compliance	5	DPC	DPC1 DPC2 DPC3 DPC4 DPC5

Table 15: ISC Variable items description

Table 15 above presents 3 factors namely, Information Security System Compliance coded as ISSC represented in items from ISSC1 to ISSC 5, Information Security Compliance coded as ISC represented in items from ISC to ISC3, finally, data privacy compliance coded as DPC represented from DPC1 to DPC5. All items were used in the research questionnaire.

After clarifying the research variables and its definition, the research moved forward to present the descriptive statistics using the code labels above.

5.1.6 Demographic Profile of Respondents

The demographic profile of all respondents presented in this chapter to deliver an insight into their, Information Security Awareness Training (ISAT), Date, Age, Education, Occupation, and Study location (Home/Abroad) for all sample size.

5.1.6.1 Age

In this research, respondents' ages have been considered to identify any possible relationship between age and other variables within the model and how this affects overall the research findings. The respondents rang differently in age, the majority belongs to the range of 22-40 (Frequency 133, average 20.92) and the minority belongs to the range of 41-76 (Frequency 114, average 86.80) shown in table 16 below:

Age	Frequency	Percent	Valid Percent	Cumulative Percent
22	1	0.4	0.4	0.4
27	1	0.4	0.4	0.8
28	20	0.8	0.8	1.6
30	10	4.0	4.0	5.7
31	5	2.0	2.0	7.7
32	9	3.6	3.6	11.3
33	10	4.0	4.0	15.4
34	9	3.6	3.6	19.0
35	13	5.3	5.3	24.3
36	18	7.3	7.3	31.6
37	12	4.9	4.9	36.4
38	11	4.5	4.5	40.9
39	8	3.2	3.2	44.1
40	24	9.7	9.7	53.8
41	9	3.6	3.6	57.5
42	12	4.9	4.9	62.3
43	12	4.9	4.9	67.2
44	6	2.4	2.4	69.6
45	16	6.5	6.5	76.1
46	8	3.2	3.2	79.4
47	4	1.6	1.6	81.0
48	6	2.4	2.4	83.4
49	7	2.8	2.8	86.2
50	9	3.6	3.6	89.9
51	2	0.8	0.8	90.7
52	4	1.6	1.6	92.3
53	1	0.4	0.4	92.7
54	4	1.6	1.6	94.3
55	5	2.0	2.0	96.4
58	2	0.8	0.8	97.2
59	1	0.4	0.4	97.6
60	2	0.8	0.8	98.4
61	1	0.4	0.4	98.8
63	1	0.4	0.4	99.2
67	1	0.4	0.4	99.6
76	1	0.4	0.4	100.0
Total	247	100	100	

Table 16: Age Distribution of Respondents

Table 16 above shows 247 respondents completed the questionnaire from a total of 300 employees to which the questionnaire was initially distributed.

5.1.7.2 Information Security Awareness Training (ISAT)

It is important to present this demographic item as the Oil Company does have an annual Information security Awareness Training program which will show whether the respondents have taken this training or not, based on that the research can tell if there is any positive or negative relationship towards Information security Compliance. Having said that, employees with a high level of Awareness should present a positive relationship with Information Security Compliance which means low trust towards others. Most people who have taken the ISAT are (220, 89.1%) and only (27, 10.9%) have not taken the ISAT training as shown in table 17 below.

ISAT		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 NO	27	10.9	10.9	10.9
	1 YES	220	89.1	89.1	100.0
	Total	247	100.0	100.0	

Table 17: ISAT Distribution of Respondents

The table 17 above shows respondents who have taken the information security awareness training and those who have not of all respondents used in the questionnaire.

5.1.7.3 Education

In this section, respondents were asked to reveal their education level namely HND, BSc, Master, and Ph.D. degrees. This will illustrate whether the education has an impact on the level of employee's Awareness of Information Compliance or there is not a significant relationship that impacts Information security Compliance. The scale gave a range where 0= less than HND, 1=HND, 2=BA, 3=BSc, 4=Master, 5=PhD. Most respondents have BSc/BA Degree with (169, 68.4%) and a minority of them have Ph.D. with (5, 2.0%) as shown in table 18 below:

Education		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 Less than HND	15	6.1	6.1	6.1
	1 HND	20	8.1	8.1	14.2
	2 BA	3	1.2	1.2	15.4
	3 BSc	166	67.2	67.2	82.6
	4 Master	38	15.4	15.4	98.0
	5 PhD	5	2.0	2.0	100.0
	Total	247	100.0	100.0	

Table 18: Educational Distribution of Respondents

The table 18 above represent the education level distribution of all respondents used in the questionnaire.

5.1.7.4 Occupation

Respondents were asked to reveal their work field so the research can identify any relationship between technical and non-technical employees. Many respondents have technical background Engineering (55, 22.3%), IT, Networks, Petroleum and Telecommunication background (54, 21.8%), Operation (19, 7.7%), and the rest of them non-technical as shown in table 19 below.

Job	Frequency	Percent	Valid Percent	Cumulative Percent
0 Administration	22	8.9	8.9	8.9
1 Contracts	5	2.0	2.0	10.9
2 Materials	1	0.4	0.4	11.3
3 Medical	5	2.0	2.0	13.4
4 Networks	2	0.8	0.8	14.2
5 Operation	19	7.7	7.7	21.9
6 Petroleum	1	0.4	0.4	22.3
7 Telecommunication	2	0.8	0.8	23.1
8 Work Force Development	1	0.4	0.4	23.5
9 Engineering	55	22.3	22.3	45.7
10 Exploration	3	1.2	1.2	47.0
11 Finance	33	13.4	13.4	60.3
12 Health and Safety	4	1.6	1.6	61.9
13 HR	14	5.7	5.7	67.6
14 IT	49	19.8	19.8	87.4
15 Maintenance	4	1.6	1.6	89.1
16 Management	27	10.9	10.9	100.0
Total	247	100.0	100.0	

Table 19: Occupation Distribution of Respondents

The table 19 above represent occupation distribution of all respondents used in the questionnaire.

5.1.7.5 Study Location

Respondents were asked about their degree location, the scale measure is 0= Home, and 1=Abroad. The rationale behind this item is to identify any significant differences between employees who have obtained their degree in their home country or in western countries where English is the main language and to see how this could impact the local culture in terms of trust towards others. Most respondents have home country degrees (162, 65.6%) and the rest of them have obtained their degrees abroad (85, 34.4%) as shown in table 20 below:

Degree	Country	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 Home	162	65.6	65.6	65.6
	1 Abroad	85	34.4	34.4	100.0
	Total	247	100.0	100.0	

Table 20: Degree Location Distribution of Respondents

The table 20 above represent the distribution of education location of all respondents used in the questionnaire.

5.1.7.6 Work Experience

Respondents were also asked to reveal the work experience, scale measure description is 1= >5 or <10, 2= >10 or <20, 3=>20 or <30, 4=>30 or <40, and 5= >40 or <50. The respondents show a range of experience, from 5 -10 (42, 16,9%), from 11-20 (133, 54%), from 21-30 (64, 25.8%), and from 31-50 (8, 3.2%) as shown in table 18 below. The table 20 above represent the years of service and experience at work of all respondents used in the questionnaire.

Final Phase

In the final phase a total number of 67 items included 7 demographics items with 9 factors developed from literature and the refined of each phase namely, Trust towards others, Belief in co-workers, Expectation of co-workers, Perception of the Trustworthiness of co-workers, Western IT Technology, Perceived Usefulness, Perceived ease of use, Information Security Compliance, Data Privacy, Individual's Workplace Alignment, Workplace Culture, and Supportive leadership.

As the questionnaire progressed, the research Factor analyze the 67 items including the 7 items of demographics using SPSS and finally, the research model fit our variables using AMOS. In the beginning, the research gathers the web-based survey data questionnaire and perform a case screening validation which includes missing data in rows, Variable screening, unengaged Responses, and Outliers on continuous variables. Fortunately, a total number of 247 responses has been collected with no data missing during the data screening as well as no un-engaged responses were detected during the calculation of standard deviation STDEVA and no responses less than 0.05 which indicates that all STDEVA shows a high number with no repeated responses to Likert scale, and no data missing in columns as shown table 21a.

Valid	Frequency	Percent	Valid Percent	Cumulative Percent
5	2.0	0.8	0.8	0.8
6	2.0	0.8	0.8	1.6
7	5.0	2.0	2.0	3.6
8	9.0	3.6	3.6	7.3
9	5.0	2.0	2.0	9.3
10	19.0	7.7	7.7	17.0
11	7.0	2.8	2.8	19.8
12	12.0	4.9	4.9	24.7
13	16.0	6.5	6.5	31.2
14	14.0	5.7	5.7	36.8
15	21.0	8.5	8.5	45.3
16	15.0	6.1	6.1	51.4
17	8.0	3.2	3.2	54.7
18	12.0	4.9	4.9	59.5
19	13.0	5.3	5.3	64.8
20	15.0	6.1	6.1	70.9
21	8.0	3.2	3.2	74.1
22	17.0	6.9	6.9	81.0
23	5.0	2.0	2.0	83.0
24	4.0	1.6	1.6	84.6
25	10.0	4.0	4.0	88.7
26	4.0	1.6	1.6	90.3
27	1.0	0.4	0.4	90.7
28	2.0	0.8	0.8	91.5
29	1.0	0.4	0.4	91.9
30	12.0	4.9	4.9	96.8
32	2.0	0.8	0.8	97.6
33	2.0	0.8	0.8	98.4
34	1.0	0.4	0.4	98.8
38	1.0	0.4	0.4	99.2
45	1.0	0.4	0.4	99.6
50	1.0	0.4	0.4	100.0
Total	247	100	100	

Table 21: Experience Distribution of Respondents

Case Processing Summary

		N	%
Cases	Valid	247	100.0
	Excluded[a]	0	0
	Total	247	100.0

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.793	.911	63

Table 21a: Final Phase Reliability Statistics

Table 21a above represents a case processing summary of all collected responses showing no missing data during data screening. The data was gathered using a web-based questionnaire. Outliers on continuous variables have been tested for Age and Experience, the output shows a logical numbers of highest and lowest extremes values for both variables, example a respondent with 30 years of experience has 55 years of age which make sense and no values reported any non-sense values in terms of experience value and age value, see Appendix I for further details. The research observed normal distributions for our indicators of latent factors in terms of skewness. However, the research observed as well normal kurtosis for indicators, these do not violate strict rules of normality, it is within more relaxed rules suggested by Sposito et al. (1983) who recommend 3.3 as the upper threshold for normality. Exploratory Factor Analysis has been tested, two items were removed (CW2, CW7) from variable Belief, Expectations and Trustworthiness of Co-workers and three items remove (WIT5, WIT6, WIT7) from Western IT Satisfaction due to low loading as indicated by reliability analysis. The removed items have shown an improvement in reliability test Cronbach's alpha.

5.2 Descriptive Statistics

Descriptive analysis of the data is considered a theoretical method that is used to analyze subjective data that is gathered in a research study. In the descriptive analysis method, the data is mostly gathered in the form of literature review and the analysis helps a researcher in getting to the conclusion easily (Cavusgil and Riesenberger, 2009). In this research study, descriptive analysis is done for the data gathered. This section presents a detailed descriptive analysis of the different concepts. Sample size, maximum and minimum value, skewness and kurtosis, and standard deviation.

5.2.1 Belief, Expectations and Trustworthiness of Co-workers

The purpose of adopting this variable in this research was to understand the various level of trust. In a close relationship, you tend to be (Trustworthy) however, you expect the others to be the same that means you will be trusting others. On the other hand, being trustworthy doesn't mean that others will trust you. Even though trust is driven by culture, the similarity between individuals in terms of trust indicates that a shared values-based relationship builds trustworthiness. moreover, trust sometimes is forced by the local culture to maintain harmony within the workplace which leads to certain expected behaviour. To develop understanding, a descriptive statistic was employed. The belief of trusting others is the belief that other co-workers will cause no harm to me which shows a strong collective bond-based relationship. This indicates a high certainty and confidence knowing that the future is

uncertain. However, since this is within the same workplace then trust towards others should be maintained because you do not want to break the belief of others' trust in you. since taking a decision depends on the belief between individuals then building trust among them is easy. Moreover, the belief of other individuals especially the close ones will allow the sharing of information to be exchanged between us knowing that this will cause no harm based on the belief.

5.2.2 Workplace Culture with Supportive Leadership

The Arab workplace culture is affected by the leaders for many reasons. The positive leader's attitude motivates workers more which leads to proactivity at work which in turn increase the trust between them to maintain the positivity relationship. in the other hand, negative leaders can do the opposite and that tells us something since individuals' alignment is impacted by the leaders so the workplace is impacted by individuals attitude based on their job satisfaction and the positivity of the culture so you can imagine how the Arab leadership style looks like when it's based on traditional, culture, and shared values.

5.2.3 Western IT system

Arab cultural beliefs and values affect the transferring of IT technology. Factors such as culture, education, average income levels, traditions will have an impact on technologies in these developed countries. Arab cultural beliefs and values affect the transferring of IT technology. Factors such as culture, education, average income levels, traditions will have an impact on technologies in these developed countries.

5.2.4 Individual's Workplace Alignment

Management heavily trusts everyone within the workplace based on the long relationships and respect. However, sometimes trust goes for the wrong individuals. Negative dialog with leaders outside the workplace presents more opportunities but at the workplace, leaders like to hear positive things. Some leaders within Arab culture do not trust employees who belong to the same culture however, they trust non-Arab living in the same culture. Leaders evaluate individuals based on their boundaries. However, if you exceed the expectation, leadership could be positive or negative. Motivation is key to building a positive individual which should therefore present a positive alignment within the workplace. Since most employees within Arab culture enforce the growth of trust and loyalty to each other, it is normally keeping them in the comfort zone. When introducing Information security compliance policies, it is somehow taking them from their comfort zone which therefore affects their alignment within the workplace.

5.2.5 My Trust Towards Others

Leaders promote trust among their teams, so they share information. When breaking the trust between leaders and individuals, negative decisions and attitudes might occur. the relationships between leaders and individuals depend on integrity when it goes up the trust goes up with it. Positive leaders and motivation present a positive individual's alignment which therefore promotes a high level of trust within the workplace to maintain the harmony of their relationships. Since most employees within Arab culture enforce the growth of trust and loyalty to each other, it is normally keeping them in the comfort zone. When introducing Information security compliance policies, it is somehow taking them from their comfort zone which therefore affects their alignment within the workplace.

5.2.6 Information System Compliance

In a high level of trust, people tend to communicate with each other face to face which encourages them to share more information. The more trust they have the lower the information security compliance becomes. However, with affection-based trust, it is common to see individuals working in the same environment within the same culture to have loyalty to each other.

5.2.7 Summary of the Descriptive statistic

Before exploring and describing the factor analysis and structural equations, demographics modelling, and descriptive analysis are presented. As the research have explained in the demographic's tables before, the respondents rang differently in age, the majority belongs to the range of 22-40 (Frequency 133, average 20.92) and the minority belongs to the range of 41-76 (Frequency 114, average 86.80). many people who have taken the ISAT are (220, 89.1%) and only (27, 10.9%) haven't taken the ISAT training. The scale gave a range where 0= less than HND, 1=HND, 2=BA, 3=BSc, 4=Master, 5=PhD. Most respondents have a BSc/BA Degree (169, 68.4%) and a minority of them have Ph.D. with (5, 2.0%). Most respondents have a technical background in Engineering (55, 22.3%), IT, Networks, Petroleum and Telecommunication background (54, 21.8%), Operation (19, 7.7%), and the rest of the non-technical. Most respondents have home country degrees (162, 65.6%) and the rest of them have obtained their degrees abroad (85, 34.4%) and finally, the respondents show a range of experience, from 5 -10 (42, 16,9%), from 11-20 (133, 54%), from 21-30 (64, 25.8%), and 31-50 (8, 3.2%).

5.3 Factor Analysis

After conducting descriptive analysis, namely demographics and statistics, factor analysis was achieved to identify any underlying factors. Factor analysis aims to determine what teams should be included in or excluded.

5.3.1 Assumptions

Before data were factor analyzed, it was essential to making sure that they were appropriate to pass the required assumptions for the analysis. First, the research presented an adequate sample to be factor analyzed, the sample was large enough that the correlation offered a good representation of the selected population values. Sample size Guideline: "ten times rule: the minimum sample size should be equal to the larger of the following: (1) 10 × the largest number of formative indicators used to measure one construct and (2) 10× the largest number of structural paths directed at a particular latent construct in the structural model (Barclay et al., 1995) Compliance: all studies except for one complied with this rule. Sample sizes ranged from n=38 to n=5,191; in most cases, the rule was easily surpassed (Richter et al., 2016).

The scores number should be at least 200 or more as proposed by (Hinton, 2004). However, others suggest a size of 300 to provide a suitable factor solution. Though the selected sample size for this study is 300, only 247 valid respondents were collected from the Saudi Oil company taking into consideration that the other 50 respondents were collected during the pilot study phase one and phase two. The method was used to check the sample adequacy is the Kaiser-Meyer-Olkin (KMO). The KMO was factorable as the measure of sampling adequacy is greater than .60 as suggested by (Huck,2012). The KMO range between 0-1 and any value below .6 is regarded as this value would not be able to account for much variability in the data. The KMO of our analysis revealed a satisfied value close to 1 which indicates that the sample is ready for the analysis.

The below table shows the test of Bartlett's test of sphericity to examine the correlation matrix. This test indicates that the correlation matrix is significantly different from the identity matrix. The results of both Kaiser-Meyer-Olkin (KMO), Bartlett's test of sphericity (BTS), and *p<.00 are summarized in table 22 below.

Single Factor KMO and Bartlett's Test			
Factors	**Kaiser-Meyer-Olkin Measure of Sampling Adequacy.**	**Bartlett's Test of Sphericity**	
		Approx. Chi-Square	**Sig.**
Belief, Expectations and Trustworthiness of Co-workers	0.920	1353.974	0.000
Workplace Culture Alignment with Supportive Leadership	0.920	1094.773	0.000
Western IT system	0.836	655.383	0.000
Data Privacy	0.894	1157.335	0.000
My Trust Towards Others	0.848	767.367	0.000
Information System Compliance	0.759	592.647	0.000
Information Security System Compliance	0.881	1019.845	0.000

Table 22: Single Factor Test results of KMO and BTS

The table 22 above represent a summary of Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity using single factor test in SPSS.

Group Factors KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.883
Bartlett's Test of Sphericity	Approx. Chi-Square	8377.468
	df	0
	Sig.	.000

Table 23: Group Factors test results KMO and BTS

Table 23 above represents a summary of Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity using group factor test in SPSS.

5.3.2 Component Matrix

After testing the assumptions for each construct, factor analysis was subjected and results for each construct are described in section below.

5.3.2.1 Belief, Expectations and Trustworthiness of Co-workers

These constructs were made up from the main scale namely Trust in Close Relationships, the formation of three sub-scales came up after performing factor analysis and then merged into one factor. A total of 11 items out of 17 items were developed and refined through a series of phases as explained in the Questionnaire design chapter based on reliability and Cronbach's alpha. A total of 6 items were removed throughout the three phases and another two items were removed during the final phase CW2 and CW7 to form the factor structure shown in table 24 below

Factor Matrix		**Reliability Statistics**	
	Factor	**Cronbach's Alpha**	**N of Items**
	1		
CW1	0.648		
CW3	0.742		
CW4	0.779		
CW5	0.824	0.918	9
CW6	0.795		
CW8	0.727		
CW9	0.731		
CW10	0.766		
CW11	0.721		

Table 24: CW items Component matrix and Reliability Statistics

Table 24 above represents co-workers factor reliability factor test using SPSS for 9 items out of 11 items used in the questionnaire. Two items out of 11 were removed due to low loading

5.3.2.2 Workplace Culture Alignment with Supportive Leadership

The construct has developed through a series of refined phases. The initial items started as three scales with a total number of 24 items. Throughout the factor analysis, three variables namely supportive leadership, Workplace Culture, and Employee Alignment fall into one variable as these three variables were explained in the questionnaire design chapter. 15 items were removed in total to form the 9 items. The factors structure of 9 items is shown in table 25 below.

Factor Matrix		**Reliability Statistics**	
	Factor	**Cronbach's Alpha**	**N of Items**
WPC1	0.682	0.932	9
WPC2	0.734		
WPC3	0.714		
WPC4	0.553		
WPC5	0.877		
WPC6	0.865		
WPC7	0.796		
WPC8	0.807		
WPC9	0.794		

Table 25: WPC items Component matrix and Reliability Statistics

Table 25 above represents workplace culture factor reliability factor test in SPSS for 9 items used in the questionnaire.

5.2.3.3 Western IT system

The constructed western IT System consists of three sub-scales namely Western IT Satisfaction 19 items, Perceived ease of use 5 items, and Perceived usefulness 5 items with a total of 9 items developed and refined through a series of phases. The initial phase consisted of 29 items for all sub-scales and was reduced to 7 items throughout reliability and factor analysis. Later, A total number of 22 items have been removed. However, during low loading at the final phase analysis 3 more items were removed (WIT5 WIT6 WIT7) to form the factor structure with good reliability test Cronbach's alpha in table 26 below.

Factor Matrix		**Reliability Statistics**	
	Factor	**Cronbach's Alpha**	**N of Items**
WIT1	0.842	0.904	4
WIT2	0.894		
WIT3	0.895		
WIT4	0.725		

Table 26: WIT items Component matrix and Reliability Statistics

The table 26 above represent western IT technology factor reliability factor test in SPSS for 9 items used in the questionnaire.

5.2.3.4 My Trust Towards Others

The construct trust towards others developed through a serious of phase as mentioned in the questionnaire design chapter. The initial phase started with 3 items and ended up with 5 items and was subjected to factor analysis and reliability test. As shown in table 27 below.

Factor Matrix		Reliability Statistics	
	Factor T	**Cronbach's Alpha**	**N of Items**
T1	0.889		
T2	0.909		
T3	0.748	0.890	5
T4	0.814		
T5	0.581		

Table 27: T items Component matrix and Reliability Statistics

Table 27 above represent Trust factor reliability factor test in SPSS for 5 items used in the questionnaire.

5.2.3.5 Information System Compliance

The construct consists of 2 sub-scales namely Data privacy and Information Security Compliance. This variable was introduced in phase two with 19 items and reduced to 3 items for Information Security Compliance, 5 items for Data Privacy, and 5 items for Information System Security Compliance with a total number of 13 items. The variable was subjected to factor analysis and reliability test, 6 items were removed. The factor structure is shown in table 28 below.

Factor DP	Cronbach Alpha		N. of Items	Factor ISSC	Cronbach Alpha		N of Items	Factor ISC	Cronbach Alpha		N. of Items
DP1	0.860			ISSC1	0.835			ISC1	0.917		
DP2	0.911			ISSC2	0.881			ISC2	0.930		
DP3	0.932	0.944	5	ISSC3	0.900	0.933	5	ISC3	0.863	0.930	3
DP4	0.845			ISSC4	0.822						
DP5	0.850			ISSC5	0.860						

Table 28: Factors Loading

Table 28 above presents factor analysis and reliability test for 3 factors namely, Information Security System Compliance coded as ISSC represented in items from ISSC1 to ISSC 5, Information Security Compliance coded as ISC represented in items from ISC to ISC3,

finally, data privacy compliance coded as DPC represented from DPC1 to DPC5. All items were used in research questionnaire.

5.3.3 Factor Analysis Summary

Factor analysis is used as a collection of methods to explain the correlations among variables in terms of more fundamental entities called "factors". The role of exploratory factor analysis has been there for more than 100 years as an important role to conduct a research study in the social sciences (Fabrogar and Wegener, 2011). Exploratory factor analysis (EFA) was performed on all variables mentioned in the previous sections. The following table shows the summary of the 9 factors analysis in the present study. The model fit was performed in AMOS in the next section. Some factors are subjected to further analysis if any low loading presented in AMOS.

Reliability Statistics	
Cronbach's Alpha	**N of Items**
0.871	40

Table 29: All Factors Reliability Statistics

Table 29 above represents factor analysis and reliability test of 40 items of the final and refined a total number of 67 items used in the questionnaire. Several items were removed due to low loading found when using AMOS.

5.3.4 Reliability

A Cronbach's alpha test was used to test the reliability of the variables. The range was between 0.925 and 0.839. the results indicated that all variables were above (0.8). which shows good reliability was attained. Descriptive analysis was performed as well for scale if deleted to increase the reliability upon deletion of an item. It has been found all removed items improved the results of Cronbach's alpha test shown in table 28 below. Table 28 above represents a summary of factor analysis for all factors used in the research. It also stated the number of deleted items of each factor due to low loading. The previous sections have covered the analysis outline and objectives, in order: descriptive analysis, KMO measure of sampling adequacy, Bartlett's test of sphericity, Factor analysis, and Cronbach's alpha reliability test, Convergent validity loading amplitude on pattern matrix, and Discriminant validity with no major cross-loading or correlations. Appropriateness of data adequacy showed a great KMO value of 0.883 as evident in table 24. Bartlett's Test of Sphericity shows a good value as indicated in the same table below.

Factors	Cronbach's Alpha	N. of Items	Items deleted
Belief, Expectations and Trustworthiness of Co-workers	0.918	9	8
Workplace Culture with Supportive Leadership	0.932	9	15
Western IT system	0.904	4	25
Information System Security Compliance	0.933	5	7
Data Privacy	0.944	5	0
My Trust Towards Others	0.890	5	0
Information System Compliance	0.930	3	6

Table 30: Factors Analysis Summary

A significant result (Sig. < 0.05) indicates matrix is not an identity matrix, i.e., the variables do relate to one another enough to run a meaningful EFA. A Maximum Likelihood (ML) has been used as a method to make sure to maximize differences between factors and to provide a model fit estimate (Satorra and Saris, 1985). In addition, this is the approach used in AMOS, so if you are going to use AMOS for CFA and structural modelling, you should use this one during the EFA. The factor structure illustrated a clean loading factor when subjected to the EFA test, which indicates a good convergent and discriminant validity with no major cross-loadings between factors as evident in Appendix L. A good result indicated above has led to the main analysis of structural equation modelling.

5.3.5 Structural Equation Modelling

In this section, a structural equation modelling is presented which focuses on the multivariate analysis using SEM, the analysis is divided into various subsets. At first, the research presented an evaluation of the measurement models where all variables are subjected to a confirmatory factor analysis test (CFA). Moving forward, a structural equation model is illustrated for the focused area of research variables namely, Trust towards others, Workplace culture and leadership, Western IT, Information system Compliance, and Belief, trustworthiness, and expectation of Co-worker.

5.3.6 Evaluation of Measurement Models

The study presents different research variables, this section involves each variable to confirmatory factor analysis (CFA) to model fit these variables and to test data fitting as well as a structural model. As the number of factors determined through (CFA) and reliability

and validity of data has been tested, the research then confirm the fitness of the theoretical model to the data (Long &Perkins, 2003)

5.3.6.1 Complete Mediation Vs Partial Mediation

A complete mediation is when you have variable X that has no direct effect on variable Y when the mediator variable M has been controlled between them. On another hand, partial mediation is when you have variable X has a direct effect on variable Y and remained the same after introducing the mediator variable M (Kenny, 2018) and (Stas et, al, 2018).

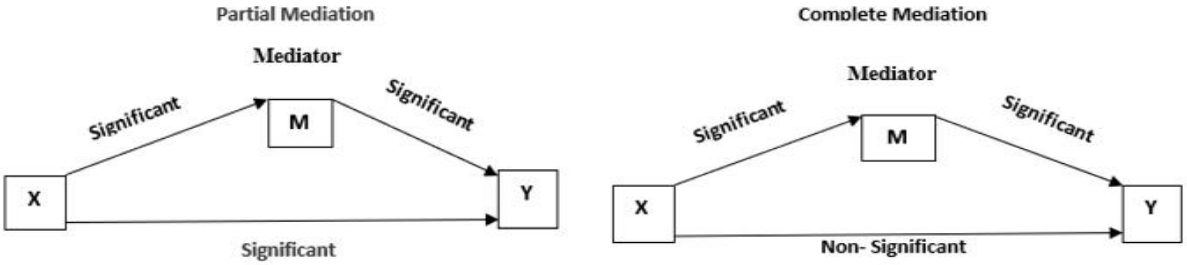

Figure 6: Complete and Partial Mediation

Figure 6 above presents a schematic of a complete and partial mediation used in the research hypothesis.

5.3.6.2 Belief, Expectations and Trustworthiness of Co-workers

As mentioned in the previous sections, a total of 11 items shown in figure 6 below out of 17 items developed and refined through a series of phases with the use of exploratory factor analysis (EFA). A total of 6 items were removed throughout the three phases to form the factor structure. The construct was subjected to CFA and two items (CW2 CW7) with low loading were removed and a good adequate model fit was revealed. The RMSEA was slightly higher, while other indices showed a good fit. Table 31 below shows the loading and fit indices for the Belief, Expectations, and Trustworthiness of Co-workers variable.

Attained Fit Indices

	CMIN/DF	SRMR	CFI	TLI	RMSEA
Belief, Expectations and Trustworthiness of Co-workers	4.090	0.04	0.940	0.917	0.137

Table 31: CW Confirmatory Factor Analysis Summary

The table 31 above represent CFA analysis on co-worker factor using AMOS. The factor has shown a good fit indices shown in figure 7 and indicated in table 31 with a CFI > .900.

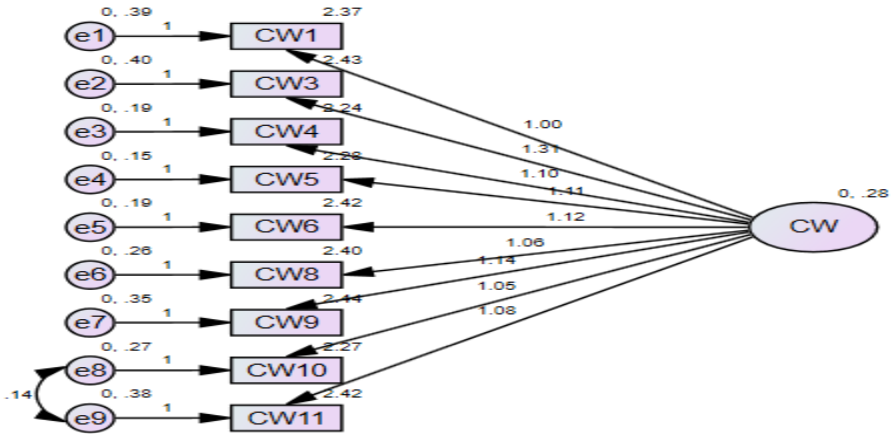

Figure 7: CW AMOS Measurement Model

The figure 7 shown above represent a co-worker factor model fit in AMOS.

6.3.6.3 Workplace Culture Alignment with Supportive Leadership

This construct consists of 9 items shown in figure 7 below, 12 items were removed during the exploratory factor analysis (EFA). The variable was subjected to confirmatory factor analysis (CFA) for model fit and adequacy. The table 32 below showed loading and indices fit.

	CMIN/DF	SRMR	CFI	TLI	RMSEA
Workplace Culture with Supportive Leadership	5.481	.05	.930	.900	.135

Table 32: WPC Confirmatory Factor fit indicators Summary

Table 32 above represents CFA analysis on workplace culture factor using AMOS. Factor has shown a good fit indices as shown in figure 7 and indicated in table 32 with a CFI > 0.900.

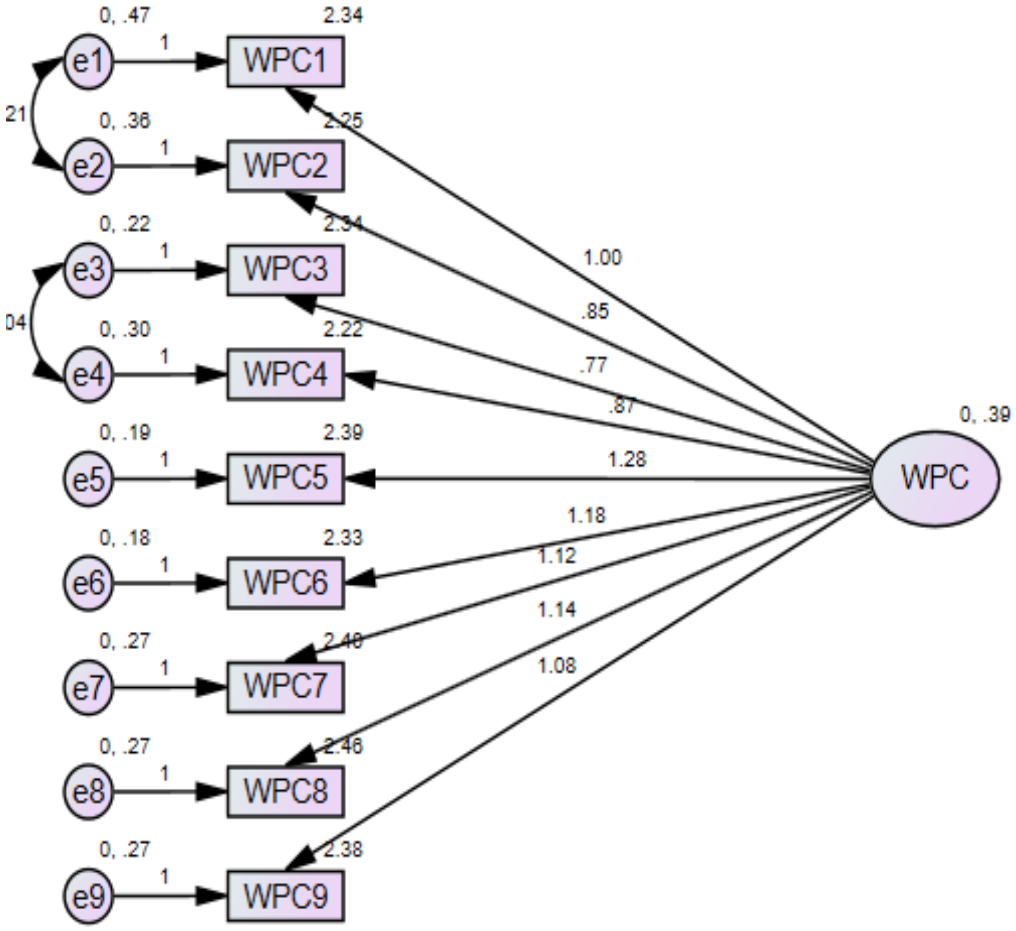

Figure 8: WPC AMOS Measurement Model

6.3.6.4 Western IT system

This construct consists of 7 items. The initial phase consisted of 29 items for all sub-scales and was reduced to 7 items throughout reliability and factor analysis. Later, A total number of 22 items have been removed when subjected to exploratory factor analysis (EFA). The variable also was subjected to confirmatory factor analysis (CFA) for model fit and adequacy. three items (WIT5 WIT6 WIT7) were removed due to low loading which left us with 4 items shown in figure 8 below and a good adequate model fit was revealed. Table 33 below showed loading and indices fit.

	CMIN/DF	SRMR	CFI	TLI	RMSEA
Western IT system	2.043	.01	.997	.990	.03

Table 33: WIT WPC Confirmatory Factor fit indicators Summary

The table 33 above represent CFA analysis on western IT factor using AMOS. The factor has shown a good fit indices shown in figure 9 and indicated in table 33 with a CFI > 0.900.

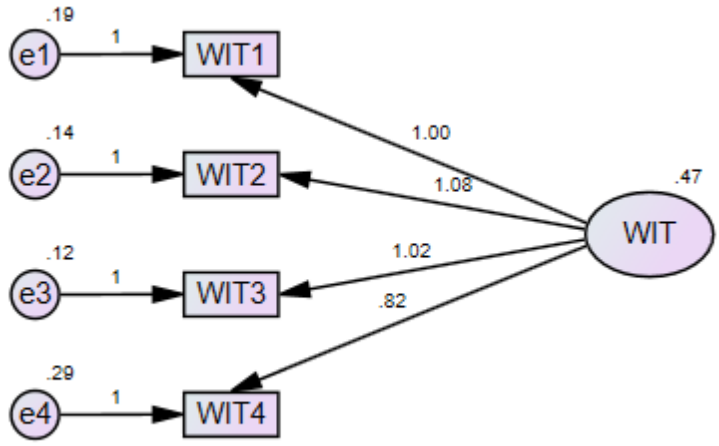

Figure 9: WIT AMOS Measurement Model

6.3.6.5 Information System Compliance

The construct consists of 13 items with three sub-scales Information System security Compliance, Data Privacy, and IS Compliance. The variable was subjected to exploratory factor analysis (EFA), 6 items were removed during reliability factor analysis. The variable was also subjected to confirmatory factor analysis (CFA), a good adequate model fit was revealed as shown in table 34 below.

	CMIN/DF	SRMR	CFI	TLI	RMSEA
Data Privacy	5.758	0.02	0.980	0.959	0.13

Table 34: DP Confirmatory Factor fit indicators Summary

The table 34 above represent CFA analysis on Data Privacy factor using AMOS. The factor has shown a good fit indices shown in figure 10 and indicated in table 34 with a CFI > 0.900.

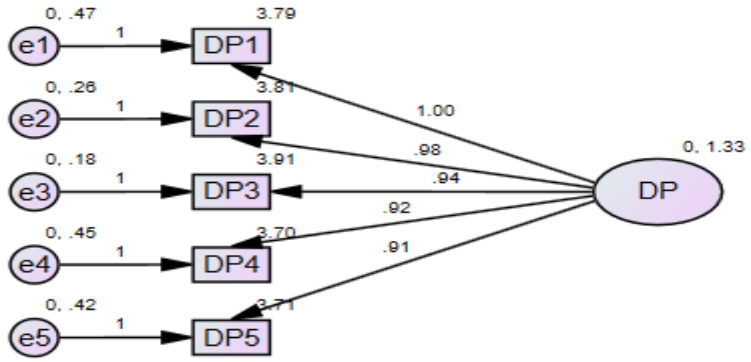

Figure 10: DP AMOS Measurement Model

	CMIN/DF	SRMR	CFI	TLI	RMSEA
Information Security System Compliance	6.544	0.02	0.973	0.946	0.25

Table 35: ISSC Confirmatory Factor fit indicators Summary

Table 35 above represents CFA analysis on information security system compliance factor using AMOS. Factor has shown a good fit indices is shown in figure 11 and indicated in table 35 with a CFI > 0.900.

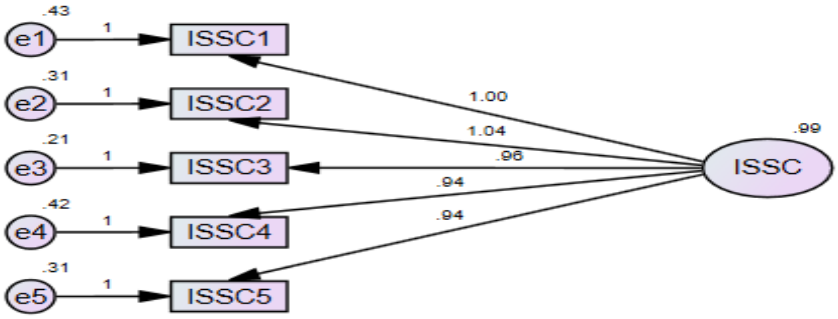

Figure 11: ISSC AMOS Measurement Model

Confirmatory factor analysis has been performed on all measurement models extracted from the exploratory factor analysis and reliability analysis test as shown in the previous sections above. The model has been tested for model fit in AMOS using all constructs and their corresponding items. Even though all factors show no overlapping when subjected to (EFA) and reliability test, the research had to do further model fit test in AMOS. The output of the model fit shows some minor issues due to model fit discrepancies (Inflating chi-square) which therefore led to removing some items to improve the overall model fit output. The items (WPC1 WPC2 WPC3), (CW9 CW10 CW11), (T5), and the whole ISC factors with its correspondent items (ISC1 ISC2 ISC3). The research felt justified as these items belonged

to large latent reflective factors and were thus somewhat redundant. Figure 12 below shows the modified model in AMOS (Costello and Osborne, 2005)

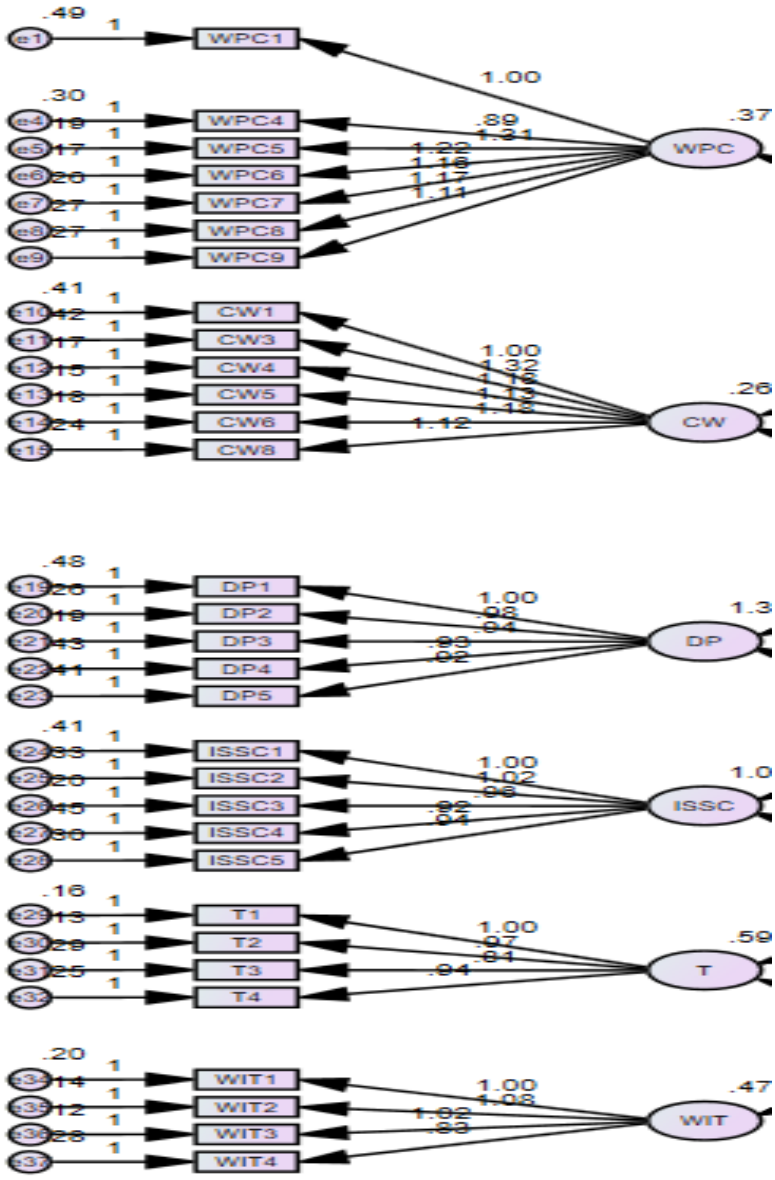

Figure 12: AMOS Model Fit

The attained model fit Summary below indicates a good model fit

	CMIN/DF	SRMR	CFI	TLI	RMSEA
Model fit	2.163	0.05	0.921	0.913	0.06

Table 36: Model Confirmatory Factor fit indicators Summary

Table 36 shown above presents a CFA result of all factors used in the research. These factors indicated in figure 12 have shown a model fit with CFI value > 0.900 and RMSA 0.06.

Validity has been tested with no validity concerns shown in table 37 below. The research observed convergent and discriminant validity as evidenced by (convergent is AVE above

.5, the discriminant is a square root of AVE greater than correlations) and reliability (evidenced by the CR value above (0.700) (Hu and Bentler,1999). The results show a good output because the research have addressed everything in order operation such as data and variables screening as well as model fit test.

	CR	AVE	MSV	MaxR(H)	T	WPC	CW	DP	ISSC	WIT
T	0.907	0.711	0.356	0.920	0.843					
WPC	0.922	0.629	0.186	0.933	0.400	0.793				
CW	0.895	0.588	0.356	0.905	0.597	0.431	0.767			
DP	0.945	0.776	0.421	0.950	-0.067	-0.068	-0.123	0.881		
ISSC	0.934	0.739	0.421	0.938	-0.127	-0.364	-0.151	0.649	0.860	
WIT	0.907	0.710	0.197	0.920	0.277	0.229	0.444	-0.386	-0.263	0.843

Table 37: Model Validity Test

Table 37 is shown above presents convergent and discriminant validity. The results as evidenced in table 37

have shown reasonable output with AVE value > than .5 and CR value > than 0.700 as indicated in table 37 above.

5.3.7 Summary

The previous section has presented by the researcher the measurement model for the research study, namely Trust towards others, Belief in co-workers, Expectation of co-workers, Perception of the Trustworthiness of co-workers, Western IT, Information Security Compliance, Data Privacy, Individual's Workplace Alignment, Workplace Culture, and Supportive leadership. All model showed revealed adequate and good fits, as well as the collected datasets from the Saudi Oil Company, were ready to be examined and the established hypotheses could be tested.

5.4 Regression Analysis

The term regression in the context of the social sciences is defined as one of the most used predictive analysis tests (Seber and Lee, 2012). To describe the relationship between one dependent and independent variable, it was important to conduct regression analysis. Moreover, to run path analysis a need to conduct the linear regression test which leads to the development of the structural equation models that include, analyzing the direction of the data, estimating the model, and evaluating the validity and usefulness of the model (Freedman, 1987, Duncan, 1966, Seber and Lee, 2012). In this section, hypothesis test, path analysis, and development of the structural equation models are presented.

Hypotheses tests	Code
Belief, expectations and trustworthiness of co-workers	CW
Workplace culture with supportive leadership	WPC
Western IT system	WIT
Information system security compliance	ISSC
Data privacy	DP
My trust towards others	T

Table 38: Hypotheses code labels

Table 38 above presents factors hypotheses codes tested in the research. The research analysis starts first by presenting the variables final model fit in AMOS as shown in figure 12 above. In the next section, the research presents the output results of regression linear analysis using SPSS which will seek to evaluate the relationship of the variables and to test our research hypothesis. Moving forward, a structural equation model using AMOS is presented to test the path analysis of each independent variable such as Trust, the belief of co-workers, Western IT, and workplace alignment culture with supportive leadership, and their influence on the dependents variables data privacy and Information system security compliance.

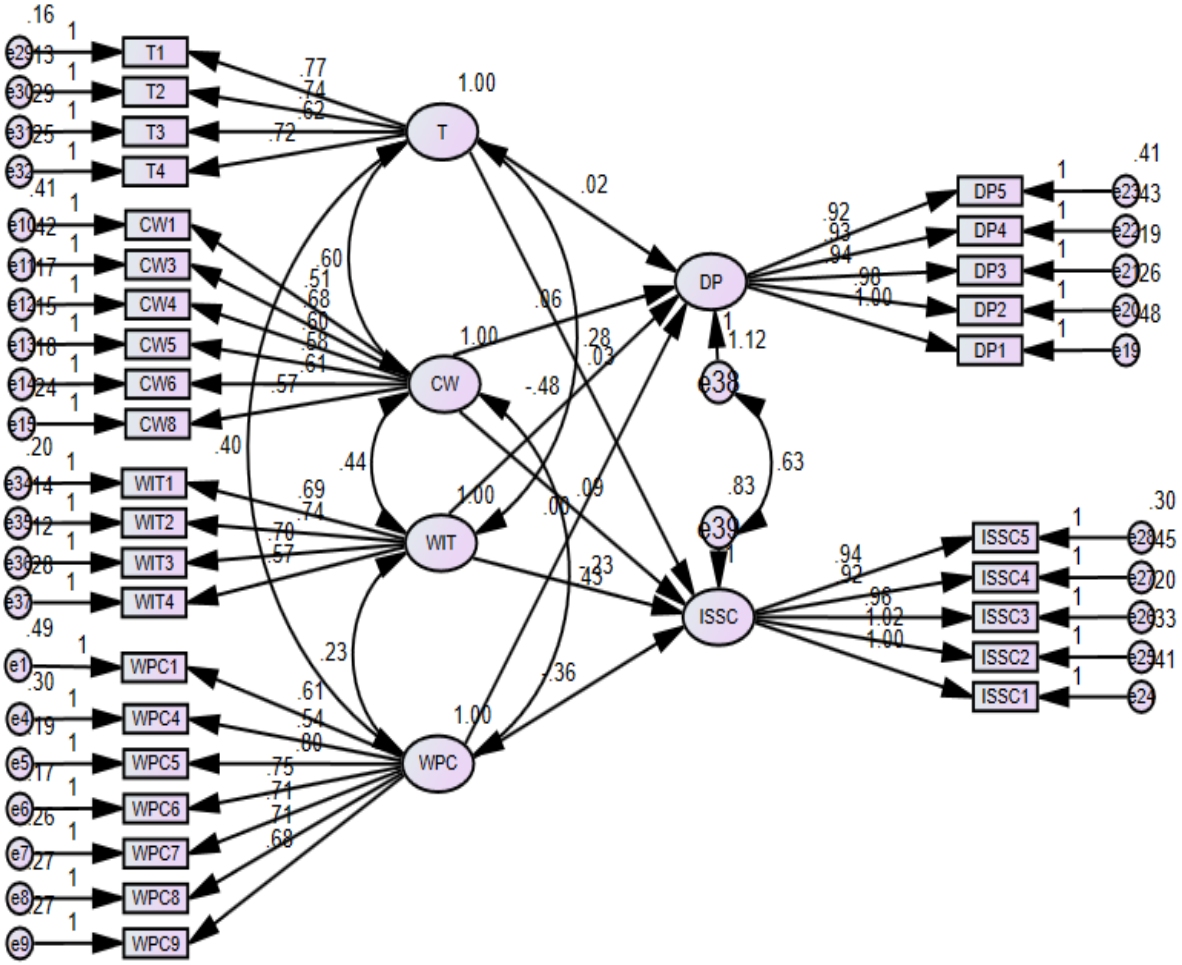

Figure 13: SEM Model fit in AMOS

The model output shown in (figure 13) above has revealed a good fit measurement as indicated in table 39 below.

	CMIN/DF	SRMR	CFI	TLI	RMSEA
Model fit	2.163	.05	.921	.913	.06

Table 39: SEM Result

Table 39 is shown above presents a CFA result of all factors used in the research. These factors indicated in figure 13 above has shown a model fit with CFI value > 0.900 and RMSA .06. As a result of a good model fit, the research now proceeds with further analysis such as regression linear and path analysis to test our research hypothesis. The regression analysis test was conducted using one independent variable and one dependent variable at time, then all independent variables were grouped to get accumulated effect on the dependent variables.

5.4.1 Simple Linear Regression Analysis

Hypothesis 1: Trust predict information System Security Compliance and Data Privacy in the Saudi Oil Company.

The research hypothesis seeks to evaluate the influence of Trust on both dependent variables namely data privacy (DP) and Information system security compliance (ISSC) at Saudi Oil Company. The first independent variable is trust (T) which will be regressed using SPSS with two dependent variables data privacy (DP) and Information system security compliance (ISSC). The predictor Trust (T) independent variable results revealed non-statistical significance on dependent variable data privacy (DP) with a value of (Sig 0.427), $p > 0.05$, and negative unstandardized coefficient B value (-.051) indicating that the predictor is not contributing much for the statistical variation.

However, the revealed result was conducted on a single independent variable, having said that, despite that the Trust predictor statistically insignificant but it might contribute to the grouped predictor. Table 36 below shows a model summary output of Trust (T) with Data privacy (DP) explaining what the research have mentioned above. On the other hand, the independent predictor Trust has also shown a non-statistically significant influence on the dependent variable Information System Security Compliance (ISSC) with a p-value of (Sig 0.058), $p > 0.05$, and negative unstandardized coefficient B value (-0.121) indicating that the predictor is not contributing much to the statistical variation, the model summary output of Trust (T) with Information System Security Compliance (ISSC) is shown in table 40 below.

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.051[a]	.003	-.001	5.65679	0.003	0.632	1	245	0.427

a. Predictors: (Constant), Trust

b. Dependent Variable: DP

Table 40: Simple Linear Regression analysis result of Trust on Data Privacy

The table 40 shown above presents a simple linear regression analysis of independent factor namely trust and dependent factor namely data privacy using SPSS. The result shows insignificant impact with p value = .427 ($p > .005$).

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.121[a]	0.015	0.011	5.01064	0.015	3.635	1	245	0.058

a. Predictors: (Constant), Trust

b. Dependent Variable: ISSC

Table 41: Simple Linear Regression analysis result of Trust on ISSC

Table 41 is shown above presents a simple linear regression analysis of independent factors namely trust and dependent factors namely information security system compliance using SPSS. The result shows insignificant impact with p-value = .058 (p > 00.005).

Table 42 below presents the linear regression analysis using SPSS of both dependent variables Data Privacy and Information System Security Compliance. The independent single variable Trust explains 0.3% (R square) variance in the dependent variable Data privacy taking into consideration that the independent variable Trust consists of 4 items only indicating that the percentage value variation can be attributed to the dependent variable data Privacy. The overall result shows that the model of predictor Trust with Data Privacy was insignificant F (1,245) = .632, p > .005, R^2 = 0.003. Further analysis with Trust predicting Information System Security Compliance, the result revealed was also insignificant with 1.5% (R square) variance F (1,245) = 3.635, p > .005, R^2 = 0.015.

However, the result may vary in multiple regression analysis than simple regression analysis when all independent variables are grouped which will be presented as the research proceed in the hypothesis test.

Hypothesis	Regression Weights			T	R square	F	p-value	Hypothesis Supported
H1a	T	--->	DP	-0.795	0.003	0.632	0.427	No
H1b	T	--->	ISSC	-1.907	0.015	3.635	0.058	No

Table 42: Result of Hypothesis 1

Table 42 is shown above presents a simple linear regression analysis of independent factor namely trust and two dependent factors namely data privacy and information security system compliance using SPSS. The results have rejected the hypothesis H1a and H1b.

Hypothesis 2: Western IT System predict information System Security Compliance and Data Privacy in the Saudi Oil Company.

The research hypothesis seeks to evaluate the influence of the Western IT System on both Data Privacy and Information System Security Compliance at Saudi Oil Company. The output result of independent variable Western IT System (WIT) and dependent variable Data Privacy (DP) revealed a statistically significant relationship which explains 13.7% (R

square) variance in the dependent variable Data Privacy, indicating that 13.7% variation in the dependent variable Data Privacy can be attributed to Western IT. The model of single regression analysis was significant F (1,245) = 38.895, p < .005, R^2 = 0.137 as indicated in Table 43 below.

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.370[a]	.137	.133	5.26179	0.137	38.895	1	245	0.000

a. Predictors: (Constant), WIT

b. Dependent Variable: DP

Table 43: Simple Linear Regression analysis result of Western IT System on DP

Table 43 shown above presents a simple linear regression analysis of the independent factor namely Western IT system (WIT) and dependent factor namely data privacy (DP) using SPSS. The result shows significant impact with p-value = .000 (p < .005).

Furthermore, the regression analysis result of Western IT System on Information System Security Compliance has revealed statistically significant which explains 6.8% (R square) variance in the dependent variable Information System Security Compliance (ISSC), indicating that 6.8% variation in the ISSC can be attributed to Western IT System. The overall model was significant F (1,245) = 3.635, p < .005, R^2 = 0.068 as indicated in Table 44 below.

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.261[a]	.068	.064	4.87257	.068	17.925	1	245	.000

a. Predictors: (Constant), WIT

b. Dependent Variable: ISSC

Table 44: Simple Linear Regression analysis result of Western IT System on ISSC

Table 44 is shown above presents a simple linear regression analysis of independent factor namely Western IT system (WIT) and dependent factor namely Information security system compliance (ISSC) using SPSS. The result shows significant impact with p value = .000 (p < .005). Table 45 below indicates that the hypothesis test has been supported when using Western IT variable on both Data Privacy and Information System Security Compliance.

Hypothesis	Regression Weights	T	R square	F	p-value	Hypothesis Supported
H2a	WIT ------> DP	-6.237	0.137	38.895	***	Yes
H2b	WIT ------> ISSC	-4.234	0.068	3.635	***	Yes

Table 45: Result of Hypothesis 2

Table 45 is shown above presents a simple linear regression analysis of independent factor namely Western IT system (WIT) and two dependent factors namely Information security system compliance (ISSC) and Data privacy (DP) using SPSS. The result accepted the hypothesis H2a and H2b with p value = .000 (p < .005).

Hypothesis 3: The belief, Trustworthiness, and expectation of Co-Workers predict information System Security Compliance and Data Privacy in the Saudi Oil Company.

The research hypothesis seeks to evaluate the influence of belief, Trustworthiness, and expectation of Co-Workers on both Data Privacy and Information System Security Compliance at Saudi Oil Company. The output result of independent variable belief, Trustworthiness, and expectation of Co-Workers (CW) and dependent variable Data Privacy (DP) revealed statistically significant relationship which explains 1.9% (R square) variance in the dependent variable Data Privacy, indicating that 1.9% variation in the dependent variable Data Privacy can be attributed to belief, Trustworthiness, and expectation of Co-Workers. The model of simple Linear regression analysis was significant $F\ (1,245) = 4.762$, $p < .005$, $R^2 = 0.019$ as indicated in table 46 below.

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.138[a]	.019	.015	5.60983	.019	4.762	1	245	.030

a. Predictors: (Constant), CW

b. Dependent Variable: DP

Table 46: Simple Linear Regression analysis result of CW on DP

Table 46 is shown above presents a simple linear regression analysis of independent factor namely Co-worker (CW) and dependent factor namely Data privacy (DP) using SPSS. The result shows significant impact with p value = .030 (p < .050).

Furthermore, the regression analysis result of belief, Trustworthiness, and expectation of Co-Workers on Information System Security Compliance has revealed statistically significant which explains 2.3% (R square) variance in the dependent variable Information System Security Compliance (ISSC), indicating that 2.3% variation in the ISSC can be attributed to

Western IT System. The overall model was significant $F\ (1,245) = 5.742$, $p < .005$, $R^2 = 0.023$ as indicated in Table 47 below.

					Change Statistics				
Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.151[a]	.023	.019	4.98955	.023	5.742	1	245	.017

a. Predictors: (Constant), CW

b. Dependent Variable: ISSC

Table 47: Simple Linear Regression analysis result of CW on ISSC

Table 47 shown above presents a simple linear regression analysis of independent factor namely Co-worker (CW) and dependent factor namely Information security system compliance (ISSC) using SPSS. The result shows significant impact with p-value = 0.017 ($p < 0.050$).

Table 48 below indicates that the hypothesis test has been supported when using belief, Trustworthiness, and expectation of Co-Workers variable on both Data Privacy and Information System Security Compliance. However, the predictor variable will be subjected to multiple regression analysis to measure the overall independent variables coefficient and how these variables influence the dependent variables when grouped. Further analysis is presented as the research proceed in the hypothesis test to improve the output details and to provide a much better model fit picture which will then present the accumulated influence and overall results.

Hypothesis	Regression Weights		T	R square	F	p-value	Hypothesis Supported
H3a	CW	------> DP	-2.182	0.019	4.762	***	Yes
H3b	CW	------> ISSC	-2.396	0.023	5.742	***	Yes

Table 48: Result of Hypothesis 3

The table 48 shown above presents a simple linear regression analysis of independent factor namely Co-worker (CW) and two dependent factors namely Information security system compliance (ISSC) and Data privacy (DP) using SPSS. The result accepted the hypothesis H3a and H3b with p value = .000 ($p < .005$).

Hypothesis 4: Workplace Culture Alignment and supportive leadership predict information System Security Compliance and Data Privacy in the Saudi Oil Company.

The research hypothesis seeks to evaluate the influence of Workplace Culture Alignment and supportive leadership (WPC) on both Data Privacy and Information System Security Compliance (ISSC) at Saudi Oil Company. The output result of independent variable Workplace Culture Alignment and supportive leadership (WPC) and dependent variable Data Privacy (DP) revealed a non-statistically significant relationship which explains 0.5% (R square) variance in the dependent variable Data Privacy, indicating that 0.5% variation in the dependent variable Data Privacy can be attributed to Western IT. The model of simple Linear regression analysis was significant *F (1,245) = 1.138, p > .005, R ² = 0.005* as indicated in table 49 below.

					Change Statistics				
Model	**R**	**R Square**	**Adjusted Square**	**R Std. Error of the Estimate**	**R Square Change**	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.068[a]	.005	.001	5.65097	.005	1.138	1	245	.287

a. Predictors: (Constant), WPC

b. Dependent Variable: DP

Table 49: Simple Linear Regression analysis result of WPC on DP

Table 49 is shown above presents a simple linear regression analysis of independent factor namely Workplace culture (WPC) and dependent factors namely Data privacy (DP) using SPSS. The result show insignificant impact with p value = .287 (p >.005).

Furthermore, the regression analysis result of Workplace Culture Alignment and supportive leadership on Information System Security Compliance has revealed statistically significant which explains 12% (R square) variance in the dependent variable Information System Security Compliance (ISSC), indicating that 12% variation in the ISSC can be attributed to Workplace Culture Alignment and supportive leadership. The overall model was significant *F (1,245) = 33.368, p < .005, R ² = 0.120* as indicated in Table 50 below.

					Change Statistics				
Model	**R**	**R Square**	**Adjusted Square**	**R Std. Error of the Estimate**	**R Square Change**	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.346[a]	.120	.116	4.73549	.120	33.368	1	245	.000

a. Predictors: (Constant), WPC

b. Dependent Variable: ISSC

Table 50: Simple Linear Regression analysis result of WPC on ISSC

Table 50 is shown above presents a simple linear regression analysis of independent factor namely Workplace culture (WPC) and dependent factors namely Information System Security Compliance (ISSC) using SPSS. The result show significant impact with p-value = .000 (p <.005).

Table 51 is shown below indicates hypothesis test is supported when using Workplace Culture Alignment and supportive leadership (WPC) on Information System Security Compliance (ISSC).

Hypothesis	Regression Weights		T	R square	F	p-value	Hypothesis Supported
H4a	WPC	------> DP	-1.067	0.005	1.138	.287	NO
H4b	WPC	------> ISSC	-5.777	0.120	-5.777	***	Yes

Table 51: Result of Hypothesis 4

Table 51 is shown above presents a simple linear regression analysis of independent factor namely Workplace culture (WPC) and two dependent factors namely Data privacy (DP) and Information System Security Compliance (ISSC) using SPSS. The results accepted H4a and rejected H4b hypothesis.

5.4.2 Multiple Linear Regression analysis

Hypothesis 5: Trust, Workplace Culture Alignment with Supportive leadership, Western IT, and the belief, Trustworthiness, and Expectation of Co-Workers model predict information System Security Compliance and Data Privacy in the Saudi Oil Company.

This research hypothesis seeks to evaluate the overall model predictors on the dependent variables namely, Data privacy and Information system Security Compliance. The previous section has presented a simple linear regression analysis for each independent variable to assess how these predictors influence the dependent variables when conducted individually to draw a comparison between the simple and multiple regression analysis for overall result output. However, the result of multiple regression linear analysis has revealed a statistically significant influence on the dependent variables named above (DP) and (ISSC). The output explains 14% (R square) variance on the dependent variable data privacy (DP), indicating that 14% of the dependent variable data Privacy can be attributed to the model predictors mentioned above. The overall model was significant $F\ (4,242) = 9.830, p < .005, R^2 = 0.140$ as indicated in Table 52 below.

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.374[a]	.140	.126	5.28583	.140	9.830	4	242	.000

a. Predictors: (Constant), Trust, WIT, WPC, CW

b. Dependent Variable: DP

Table 52: Multiple Linear Regression analysis result of Grouped Predictors on DP

Table 52 above presents multiple linear regression for all independent factors on dependent factor Data privacy (DP) using SPSS. The results show a significant impact with p value = .000 (p > .050)

Furthermore, the multiple regression analysis was statistically significant on the other dependent variable Information System Security Compliance (ISSC). The output result explains 16.2% (R square) variation on the dependent variable ISSC, indicating that 16.2% can be attributed to the model predictors mentioned above. The overall model was significant *F (4,242) = 11.708, p < .005, R ² = 0.162* as indicated in Table 53 below.

					Change Statistics				
Model	**R**	**R Square**	**Adjusted Square**	**R Std. Error of the Estimate**	**R Square Change**	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.403[a]	.162	.148	4.64892	.162	11.708	4	242	.000

a. Predictors: (Constant), Trust, WIT, WPC, CW

b. Dependent Variable: ISSC

Table 53: Multiple Linear Regression analysis result of Grouped Predictors on ISSC

Table 53 above presents multiple linear regression for all independent factors on dependent factor Information System Security Compliance (ISSC) using SPSS. The results show a significant impact with p-value = .000 (p > .050)

Table 54 below indicates that the hypothesis test is supported when grouped independent variables used on both dependent variable which revealed the overall influence when subjected to multiple regression analysis.

Hypothesis	**Regression Weights**		**Average t**	**R square**	**F**	**p-value**	**Hypothesis Supported**
H5a	All Predictors	------> DP	-1.309	0.140	9.830	***	Yes
H5b	All Predictors	------> ISSC	-1.841	0.162	11.708	***	Yes

Table 54: Result of Hypothesis 5

Table 54 above presents a multiple linear regression analysis of all independent factors on two dependent factors namely Data privacy (DP) and Information System Security Compliance (ISSC) using SPSS. The results accepted H5a and H5b hypothesis.

The final analysis of multiple regression analysis is the coefficient table which test each variable at alpha = (.05). Table 55 below presents the coefficient table which indicates how each variable contributed to the model, in other meaning, the amount of unique variance a predictor accounts for is statistically significant.

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	24.252	1.561		15.536	.000	21.177	27.327					
	WPC	-.010	.075	-.009	-.128	.898	-.158	.138	-.068	-.008	-.008	.803	1.245
	CW	-.018	.118	-.012	-.152	.879	-.249	.214	-.138	-.010	-.009	.578	1.730
	WIT	-.758	.131	-.380	-5.789	.000	-1.016	-.500	-.370	-.349	-.345	.825	1.212
	Trust	.116	.140	.062	.833	.406	-.159	.391	-.051	.053	.050	.648	1.542

a. Dependent Variable: DP

Table 55: Coefficients Table for DP

Table 55 above indicates that when predictors grouped to predict dependent variable Data Privacy (DP), the coefficient table revealed that the amount of variance the Western IT system independent variable score accounts for predict or explains in Data Privacy unique to itself is significant with p-value < 005, it explains something in Data Privacy that other predictors did not explain. However, the p-value can be varied when these predictors are perfectly correlated which means the p-value could be greater than .005 or to a degree that none of them offer a significant amount of unique variance in explaining the dependent variable. Furthermore, when the same predictors were used to predict the other dependent variable ISS, the result revealed 2 predictors WPC p-value = 0 and WIT p-value = 0, the amount of variance these variables score accounts for is uniquely significant for predict or explain in Information System Security Compliance that other variables did not explain as shown in table 56 below.

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	26.869	1.373		19.571	.000	24.165	29.574					
	WPC	-.338	.066	-.336	-5.117	.000	-.468	-.208	-.346	-.312	-.301	.803	1.245
	CW	.072	.103	.054	.694	.488	-.132	.275	-.151	.045	.041	.578	1.730
	WIT	-.399	.115	-.224	-3.462	.001	-.625	-.172	-.261	-.217	-.204	.825	1.212
	Trust	.064	.123	.038	.521	.603	-.178	.306	-.121	.033	.031	.648	1.542

a. Dependent Variable: ISSC

Table 56: Coefficients Table for ISSC

Table 56 above indicates that when predictors grouped together to predict dependent variable Information System Security Compliance (ISSC), the coefficient table revealed that the amount of variance of both factors the Western IT system and workplace culture (WPC) independent variables score accounts for predict or explains in Information System Security

Compliance, unique to itself is significant with p-value < 005, it explains something in Information System Security Compliance, that other predictors did not explain.

5.4.3 Summary

5.5 Structural Equation Modelling

The previous section presented the results of the initial analysis test, namely the simple linear regression test, and the multiple linear regression test using SPSS. Hypotheses 1, 2, 3, 4, and 5 were tested, and the outcomes showed decent and acceptable results that contribute to the present research. Moving forward, the next section presents a test for hypotheses 6 to 12 and present the structural equation models.

Hypothesis 6: Trust is statistically significant negative relationship on Information System Security Compliance and Data Privacy at Saudi Oil Company.

The model has evaluated the influence of Trust on Information System Security compliance and Data Privacy at Saudi Oil Company, it did not reveal an adequate fit, and one item was removed from the analysis due to low CFI model fit loading then, modification indices were analyzed, and a final model showed adequate fit. The hypothesis was evaluated based on a standardized coefficient as critical ratio level. The estimation of the hypothesis demonstrated that Trust has a negative relationship with no significant influence on Information System Security compliance at Saudi Oil companies. Furthermore, the trust has also shown no significant influence on Data Privacy as shown in table 57 below.

Hypothesis	Path	CMIN/ DF	SRMR	CFI	TLI	Standardized Loading	RMSEA	C.R	p
H6a	T ---> DP	2.677	0.04	0.959	0.95	-0.081	0.08	-1.032	0.302
H6b	T ---> ISSC	2.677	0.04	0.959	0.95	-0.127	0.08	-1.847	0.065

Table 57: Hypothesis 6 Result

Table 57 above presents a confirmatory factor analysis of factor namely trust (T) on two dependent factors namely Information System Security Compliance (ISSC) and Data privacy (DP) using AMOS. The results show insignificant impact with p value >.050.

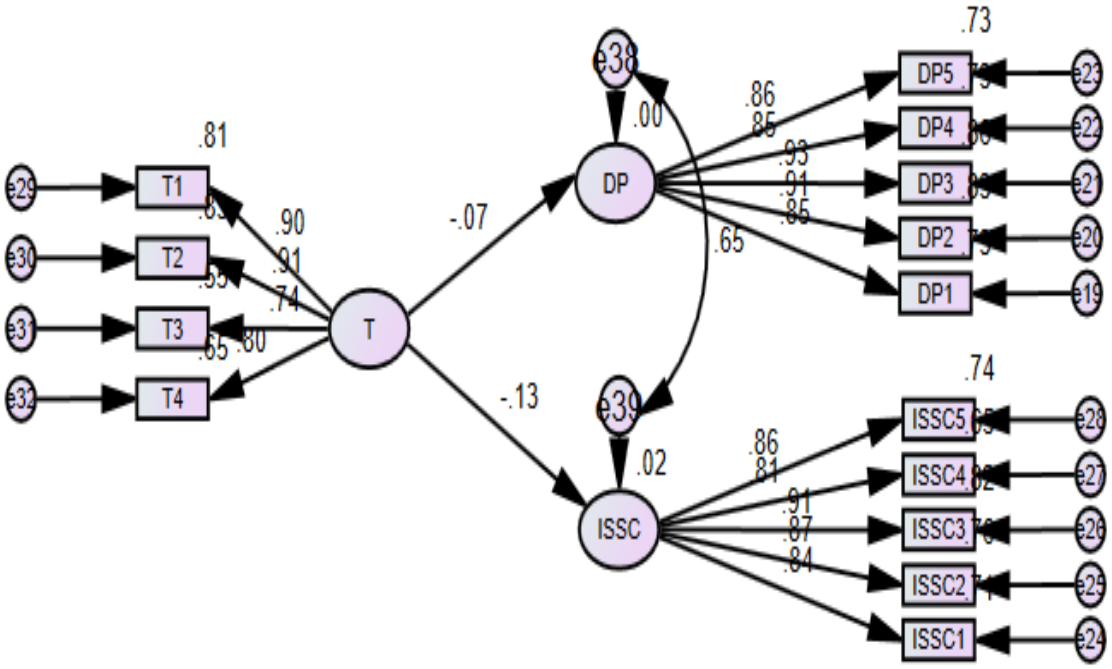

Figure 14: Structural Model of Trust, Data Privacy, and ISSC at Saudi Oil Company

Hypothesis 7: Western IT System is statistically significant negative relationship on Information System Security Compliance and Data Privacy at Saudi Oil Company.

The model has evaluated the influence of Western IT System on Information System Security compliance and Data Privacy at Saudi Oil Company, it did not reveal an adequate fit, and four items were removed from the analysis due to low CFI model fit loading, then modification indices were analyzed, and the final model showed adequate fit. The hypothesis was evaluated based on a standardized coefficient as critical ratio level. The estimation of the hypothesis demonstrated that Western IT System has a negative significant influence on Information System Security compliance at Saudi Oil companies. Furthermore, the Western IT System has also shown a negative significant influence on Data Privacy as shown in table 58 below.

Hypothesis	Path	CMIN/DF	SRMR	CFI	TLI	Standardized Loading	RMSEA	C.R	P
H7a	WIT ---> DP	2.645	0.04	0.960	0.951	-0.644	0.05	-5.769	0.000
H7b	WIT ---> ISSC	2.645	0.04	0.960	0.951	-0.381	0.05	-3.840	0.000

Table 58: Hypothesis 7 Result

Table 58 above presents a confirmatory factor analysis of factor namely Western IT (WIT) on two dependent factors namely Information System Security Compliance (ISSC) and Data

privacy (DP) using AMOS. The results show significant impact with p-value =.000 (p <.050).

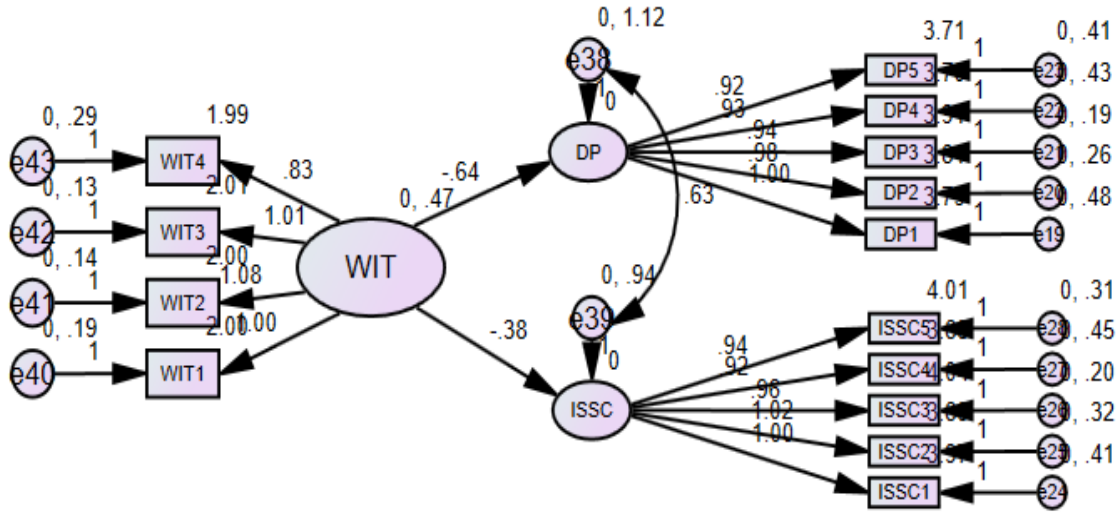

Figure 15: Structural Model of WIT, Data Privacy, and ISSC at Saudi Oil Company

Hypothesis 8: Workplace Culture Alignment and supportive leadership is statistically significant negative relationship on Information System Security Compliance and Data Privacy at the Saudi Oil Company.

The model has evaluated the influence of Workplace Culture Alignment and supportive leadership on Information System Security compliance and Data Privacy at Saudi Oil Company, it did not reveal an adequate fit, and two items were removed from the analysis due to low CFI model fit loading, then modification indices were analyzed, and the final model showed adequate fit. The hypothesis was evaluated based on a standardized coefficient as critical ratio level. The estimation of the hypothesis demonstrated that Workplace Culture Alignment and supportive leadership is statistically significant and has an influence on Information System Security compliance at Saudi Oil Company. However, it has shown a non-statistically significant influence on Data Privacy as indicated in table 59 below.

Hypothesis	Path	CMIN/DF	SRMR	CFI	TLI	Standardized Loading	RMSEA	C.R	P
H8a	WPC ---> DP	2.580	0.05	0.949	0.940	-0.068	0.08	-1.000	0.317
H8b	WPC---> ISSC	2.580	0.05	0.949	0.940	-0.364	0.08	-5.202	0.000

Table 59: Hypothesis 8 Result

Table 59 above presents a confirmatory factor analysis of factor namely workplace culture (WPC) on two dependent factors namely Information System Security Compliance (ISSC) and Data privacy (DP) using AMOS. The results show insignificant impact on (DP) with p value >.050 and significant impact on (ISSC) with p-value <.050.

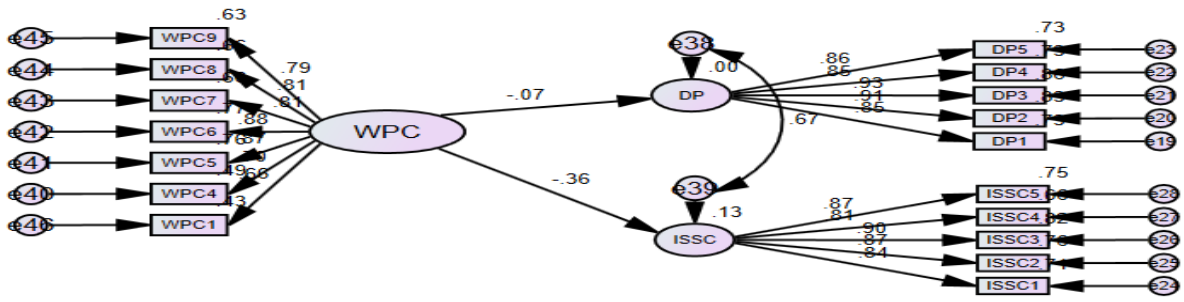

Figure 16: Structural Model of WPC, Data Privacy, and ISSC at Saudi Oil Company

Hypothesis 9: The belief, Trustworthiness, and Expectation of Co-Workers is statistically significant negative relationship on Information System Security Compliance and Data Privacy at Saudi Oil Company.

The model has evaluated the influence of belief, Trustworthiness, and Expectation of Co-Workers on Information System Security compliance and Data Privacy at Saudi Oil Company, it did not reveal an adequate fit, and five items were removed from the analysis due to low CFI model fit loading then a final model showed adequate fit. The hypothesis was evaluated based on a standardized coefficient as critical ratio level.

The estimation of the hypothesis demonstrated that belief, Trustworthiness, and Expectation of Co-Workers variable is statistically significant and has an influence on Information

System Security compliance at Saudi Oil Company. Furthermore, the same variable has shown no significant influence on Data Privacy as shown in table 60 below.

Hypothesis	Path	CMIN /DF	SRMR	CFI	TLI	Standardized Loading	RMSEA	C.R	p
H9a	CW ---> DP	2.477	0.05	0.953	0.944	-0.122	0.07	-1.779	0.075
H9b	CW ---> ISSC	2.477	0.05	0.953	0.944	-0.149	0.07	-2.155	0.031

Table 60: Hypothesis 9 Result

Table 60 above presents a confirmatory factor analysis of factor namely Co-worker (CO) on two dependent factors namely Information System Security Compliance (ISSC) and Data privacy (DP) using AMOS. The results show insignificant impact on (DP) with p value >.050 and significant impact on (ISSC) with p-value <.050.

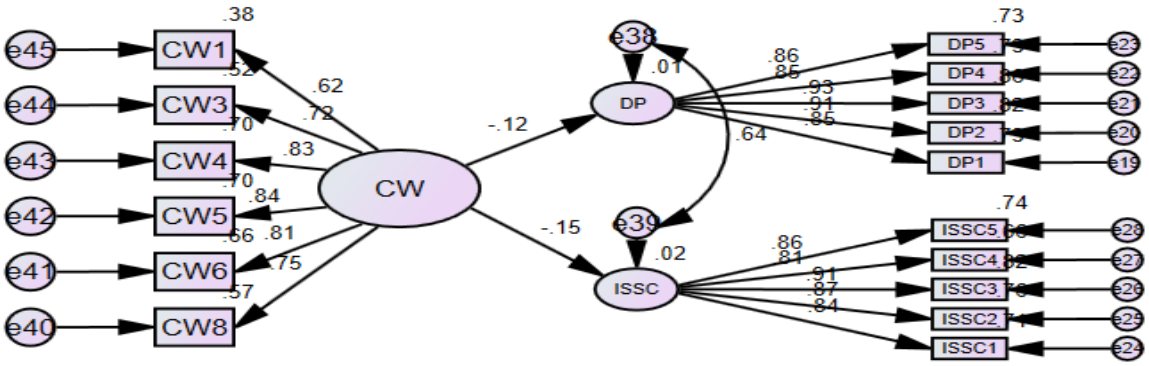

Figure 17: Structural Model of CW, Data Privacy, and ISSC at Saudi Oil Company

Hypothesis 10: The Workplace Culture Alignment and supportive leadership fully mediate the relationship between belief, Trustworthiness, and Expectation of co-workers and Information System Security Compliance at Saudi Oil Company.

Mediation analysis was performed using Baron and Kenny's (1986) causal approach. The mediation analysis can be partial, or a complete mediation. The independent variable belief, Trustworthiness, and Expectation of co-workers (CW), and the dependent variable was Information System Security Compliance (ISSC), and the mediating variable was Workplace Culture Alignment and supportive leadership (WPC).

Hypothesis	Direct Effect	Indirect Effect	Result
CW---> WPC---> ISSC	0.977(ns)	-0.16***	Complete Mediation

Table 61: Hypothesis 10 Result

Table 61 shown above presents the result that the direct effect of belief, Trustworthiness, and Expectation of co-workers (CW) on Information System Security Compliance (ISSC) was insignificant at .977, p> .005, and the indirect effect of belief, Trustworthiness, and Expectation of co-workers (CW) on Information System Security Compliance (ISSC) was significant at .001, p< .005 and the direct effect of Culture Alignment and supportive leadership (WPC) on Information System Security Compliance (ISSC) was also significant at .001, p< .005 and the direct effect of belief, Trustworthiness, and Expectation of co-workers (CW) on Workplace Culture Alignment and supportive leadership (WPC) was also significant at .002, p< .005, so the research conclude that there is a full mediation, based on bootstrap estimation the entire amount of variance the CW explained the ISSC is explained through WPC as indicated in table 61 above.

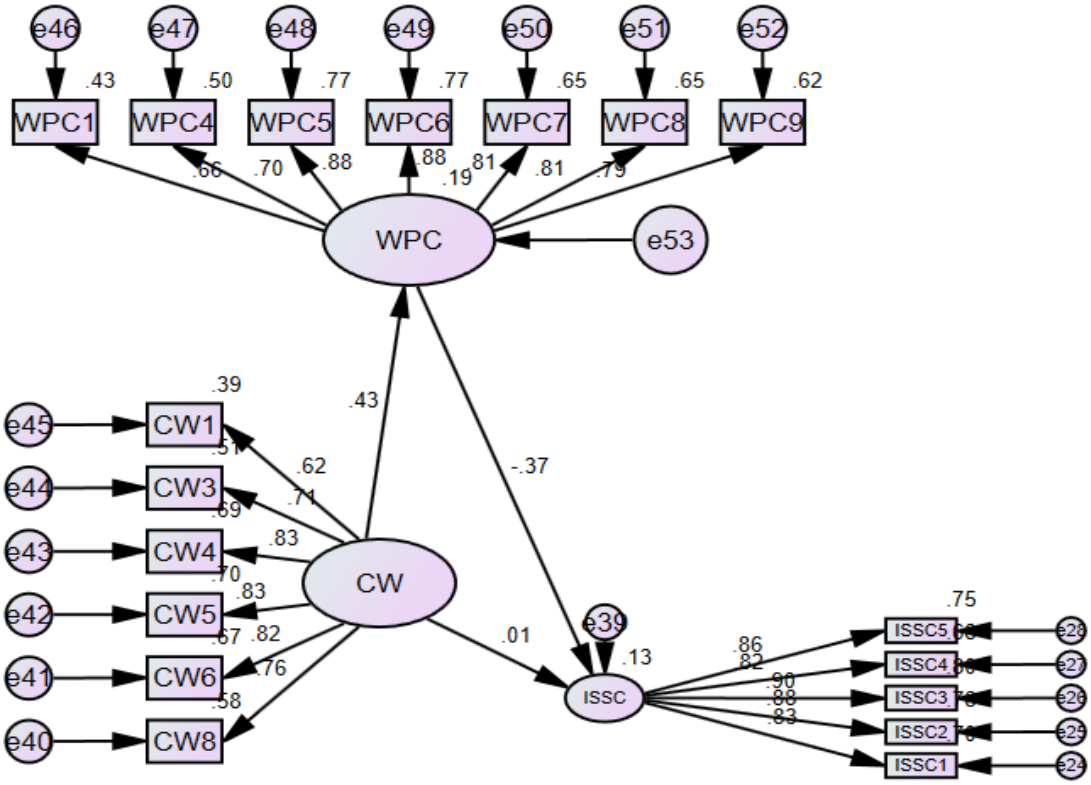

Figure 18: Mediation of CW, WPC, and ISSC

Hypothesis 11: Western IT System fully mediate the relationship between belief, Trustworthiness, and Expectation of co-workers and Information System Security Compliance at Saudi Oil Company.

The independent variable was belief, Trustworthiness, and Expectation of co-workers (CW) and the dependent variable was, and Information System Security Compliance (ISSC) and the mediating variable was Western IT System (WIT).

Hypothesis	Direct Effect	Indirect Effect	Result
CW---> WIT---> ISSC	-0.042(ns)	-0.109***	Complete Mediation

Table 62: Hypothesis 11 Result

Table 62 shown above presents the result that the direct effect of belief, Trustworthiness, and Expectation of co-workers (CW) on Information System Security Compliance (ISSC) was insignificant at .632, p> .005, and the indirect effect of belief, Trustworthiness, and Expectation of co-workers (CW) on Information System Security Compliance (ISSC) was significant at .001, p< .005 and the direct effect of Western IT System (WIT) on Information System Security Compliance (ISSC) was also significant at .001, p< .005 and the direct effect of belief, Trustworthiness, and Expectation of co-workers (CW) on Western IT System (WIT) was also significant at .001, p< .005, so the research conclude that there is a full mediation, based on bootstrap estimation the entire amount of variance the CW explained the ISSC is explained through WIT as indicated in table 62 above.

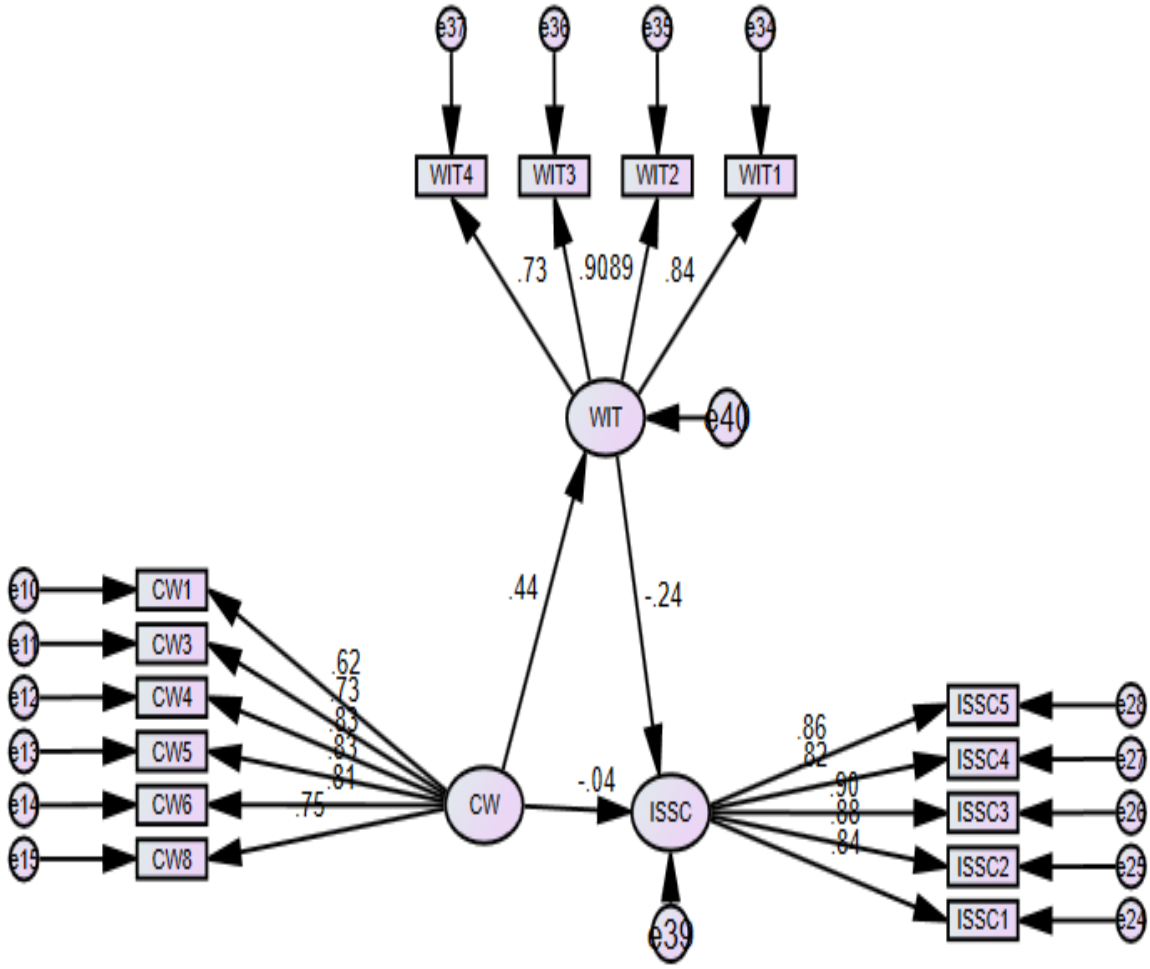

Figure 19: Mediation of CW, WIT, and ISSC

Hypothesis 12: Workplace Culture Alignment and supportive leadership fully mediate the relationship between Trust and Information System Security Compliance at Saudi Oil Company.

The independent variable was Trust (T), and the dependent variable was Information System Security Compliance (ISSC), and the mediating variable was Workplace Culture Alignment and supportive leadership (WPC).

Hypothesis	Direct Effect	Indirect Effect	Result
T---> WPC---> ISSC	-0.021(ns)	-0.148***	Complete Mediation

Table 63: Hypothesis 12 Results

Table 63 shown above presents result revealed that the direct effect of Trust (T) on Information System Security Compliance (ISSC) was insignificant at .021, p> .005, and the indirect effect of Trust (T) on Information System Security Compliance (ISSC) was

significant at .001, p< .005 and the direct effect of Western IT System (WIT) on Information System Security Compliance (ISSC) was also significant at .001, p< .005 and the direct effect of Trust (T) on Workplace Culture Alignment and supportive leadership (WPC) was also significant at .001, p< .005, so the research conclude that there is a full mediation, based on bootstrap estimation the entire amount of variance the Trust (T) explained the ISSC is explained through WPC as indicated in table 63 above.

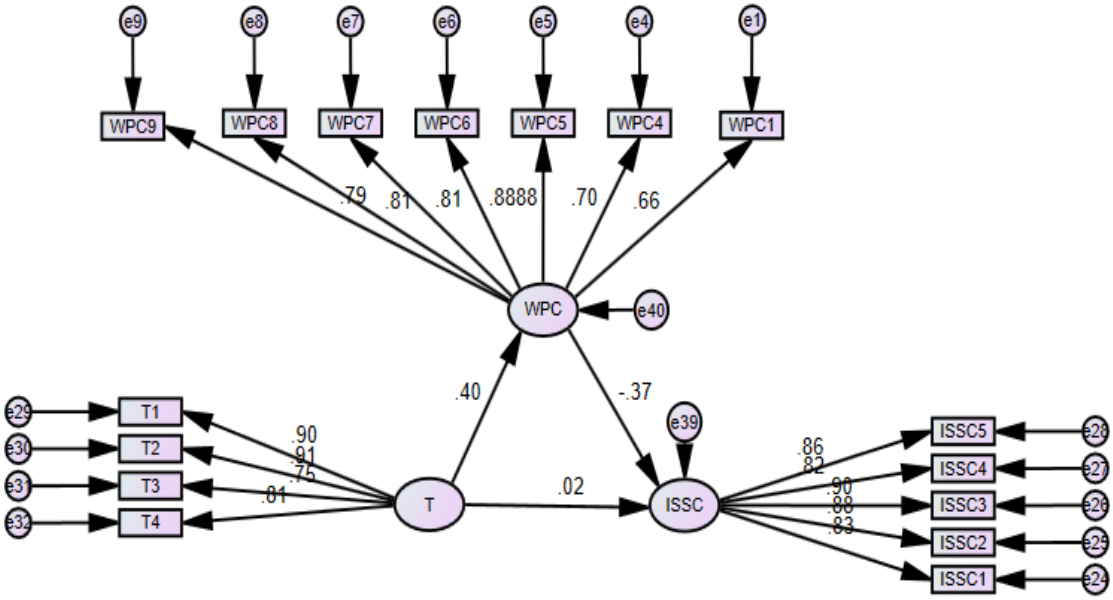

Figure 20: Mediation of T, WPC, and ISSC

5.5.1 Summary

Table 61 shown above presents the result that revealed that the direct effect of the overall research study results is remarkably clear; however, they raise some questions that could be discussed in further research endeavors. The chapter has presented the research results including various labeled tables and figures. Based on the results presented, there is a clear delineation that the presented variables in the literature review such as Trust, Culture, Workplace Culture, and Western IT System have demonstrated a strong correlation when put together and how these variables impact the Information System Security Compliance and Data Privacy. Following the conducted literature review and the research objectives and aims, the hypothesis was developed, presented, and tested through simple and multiple regression analysis, path analysis, and structural equation model to maximize the model output. A summary model figures, and table of the hypothesis tests are shown below.

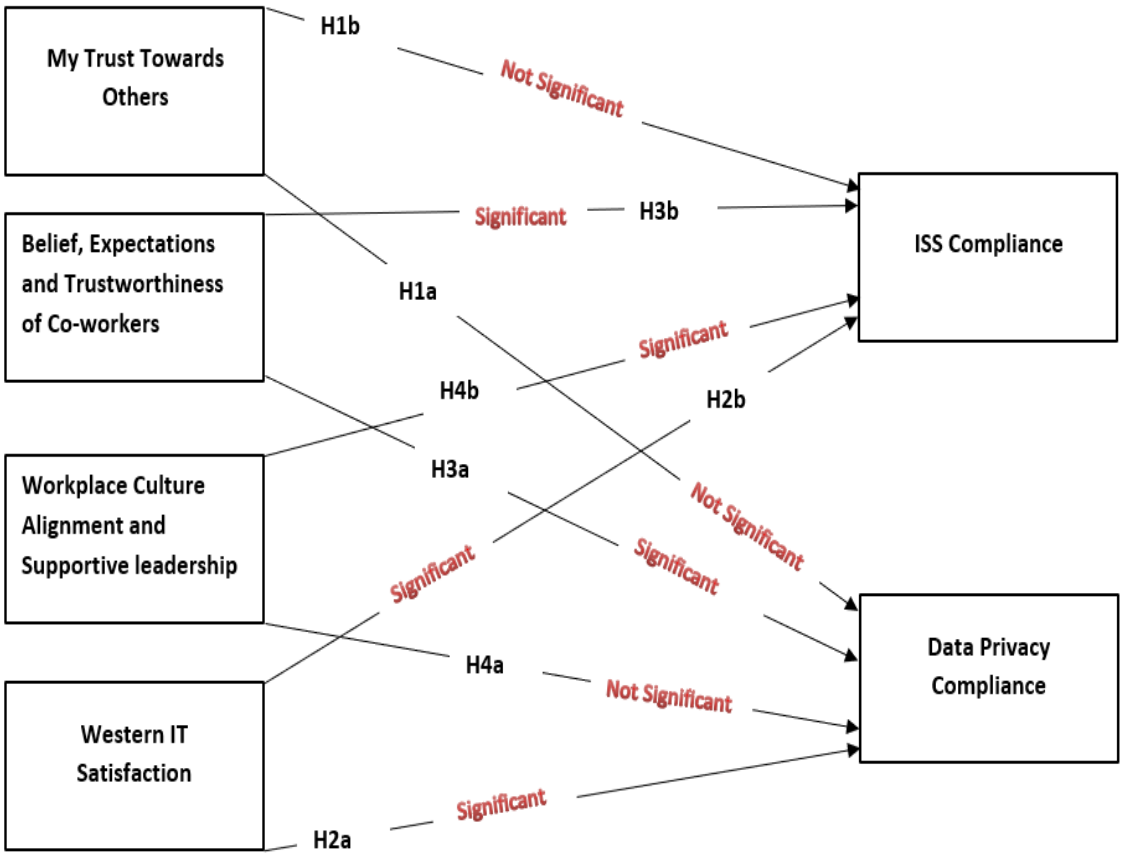

Figure 21: Summary of Regression Analysis Hypothesis Test

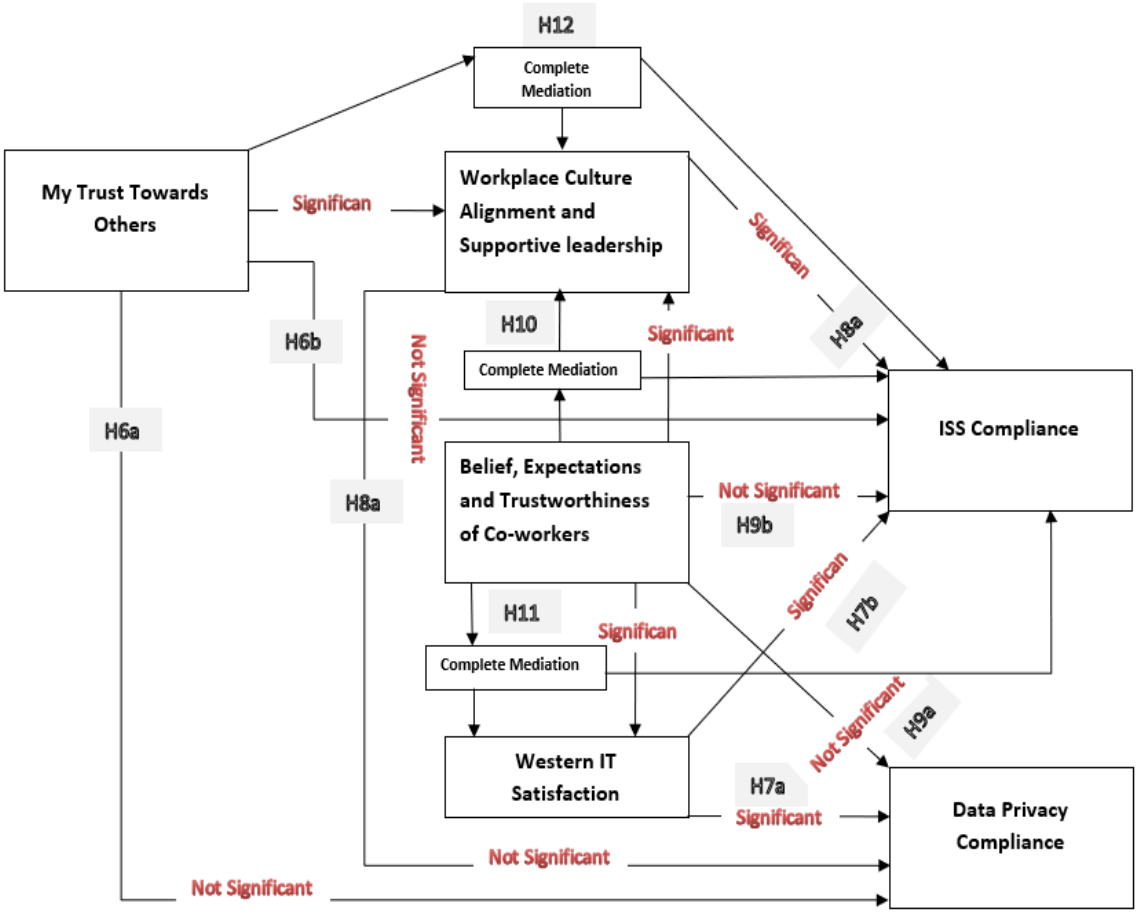

Figure 22: Summary of Structural Equation Model Hypothesis Test

Table 64 shown below presents results of all research hypothesis.

The main aim of the presented chapter was to uncover the underlying factors that have been significant to this research. The chapter was divided into various sections, namely descriptive analysis, descriptive statistics, factor analysis, confirmatory factor analysis, regression analysis, and structural equation modelling. Moving forward, the next chapter presents the discussion chapter and the findings conclusion which covers, Achievement of Aim and Objectives, Factors defining Internal and External Concurrent Validity, the Questionnaire Generalizing, the Methodology Discussion of the Model, novel contribution made by the researcher, where the research was taken, limitation of the Sample Questioning, the research weakness of the research, recommendation concerning the methodology and methods, recommendation for the future research, application of the research, implication for Policy and Practice, and finally Implication for Theory.

No	Hypothesis	Result
H1a	Trust predicts information System Security Compliance in the Saudi Oil Company.	Rejected
H1b	Trust predicts Data Privacy in the Saudi Oil Company.	Rejected
H2a	Western IT System predict information System Security Compliance in the Saudi Oil Company.	Accepted
H2b	Western IT System predict Data Privacy in the Saudi Oil Company.	Accepted
H3a	The belief, Trustworthiness, and expectation of Co-Workers predict information System Security Compliance in the Saudi Oil Company.	Accepted
H3b	The belief, Trustworthiness, and expectation of Co-Workers predict Data Privacy in the Saudi Oil Company.	Accepted
H4a	Workplace Culture Alignment and supportive leadership predict information System Security Compliance in the Saudi Oil Company.	Accepted
H4b	Workplace Culture Alignment and supportive leadership predict Data Privacy in the Saudi Oil Company.	Rejected
H5a	T, WIT, WPC, and CW model predict Data Privacy in the Saudi Oil Company.	Accepted
H5b	T, WIT, WPC, and CW model predict information System Security Compliance in the Saudi Oil Company.	Accepted
H6a	Trust has a statistically significant negative relationship on Information System Security Compliance at Saudi Oil Company.	Rejected
H6b	Trust is statistically significant negative relationship on Data Privacy at Saudi Oil Company.	Rejected
H7a	Western IT System has a statistically significant negative relationship on Information System Security Compliance at Saudi Oil Company	Accepted
H7b	Western IT System is statistically significant negative relationship on Data Privacy at Saudi Oil Company	Accepted

Table 64: Summary of Research Objectives and Findings

No	Hypothesis	Result
H8a	Workplace Culture Alignment and supportive leadership is statistically significant negative relationship on Data Privacy at Saudi Oil Company.	Rejected
H8b	Workplace Culture Alignment and supportive leadership is statistically significant negative relationship on Information System Security Compliance at Saudi Oil Company.	Accepted
H9a	The belief, Trustworthiness, and Expectation of Co-Workers is statistically significant negative relationship on Data Privacy at Saudi Oil Company.	Rejected
H9b	The belief, Trustworthiness, and Expectation of Co-Workers is statistically significant negative relationship on Information System Security Compliance at Saudi Oil Company.	Accepted
H10	The Workplace Culture Alignment and supportive leadership fully mediate the relationship between belief, Trustworthiness, and Expectation of co-workers and Information System Security Compliance at Saudi Oil Company	Accepted
H11	Western IT System fully mediate the relationship between belief, Trustworthiness, and Expectation of co-workers and Information System Security Compliance at Saudi Oil Company	Accepted
H12	Workplace Culture Alignment and supportive leadership fully mediate the relationship between Trust and Information System Security Compliance at Saudi Oil Company	Accepted

Table 65: Summary of Research Objectives and Findings (continued)

6. Discussion

6.1 Introduction

6.2 Achievement of Aim and Objectives

The overall picture of the research results has shown several areas of interest which can be drawn out from the research analysis which can help sketch out the conclusion of the present study to be presented. This chapter intended to offer an extensive discussion of the presented statistical results of the previous chapter in which they are contextualized within a wider understanding of the Arab region in terms of culture and trust and how various factors such as workplace culture alignment, supportive leadership, and the different scale of trust towards co-workers impact the Information Security Compliance when they put together at Saudi Oil Company. The chapter will also address what this means for the research objectives identified earlier in this research.

Furthermore, the chapter will also present an examination of the research descriptive statistics as well as structural equations to determine any relationship between the presented variables namely, Trust, the belief, trustworthiness, and expectation of co-workers, workplace culture alignment with supportive leadership, Western IT System, Data Privacy, and Information security compliance. Additionally, it will explain the mediation role played by these variables and then proceed with the results stages to develop an understanding of the association between variables as well as the development of the model. The chapter also presents overall key findings of the descriptive statistics and hypothesis tests offered in the earlier chapter to set out the platform with all information provided in all chapters.

The discussion will be split out into several sections, it starts by presenting the overall summary of the research objectives and aim achieved in this study. The results from the collected data via the developed research questionnaire are covered to offer insights into the obtained results. Finally, the research proceeds with where the research took place, novel contribution by the researcher, implication of policy and theory, application, recommendation, weakness of the research, and limitation.

Extracted from the outcomes, the key findings of this research study are that the overall Information Security Compliance at Saudi Oil Company significantly impacted by the presented variables in this study such as workplace culture alignment and supportive leadership, the belief, expectation, trustworthiness of co-workers, and the use of Western IT system. The aim and objectives have been investigated using quantitative research method, a summary of the analysis results is illustrated in table 66 below.

Research Objectives	Results and Analysis Outcome
Identify possible factors that are important to the study and have an impact on information security and are latent to the literature and other factors that are extant to the literature.	The presented factors in this research have been developed through a serious of phases, the selection of these variables derived based on the possible impact on the information security. The factors were found to be latent to the literature and are also extent and can be developed for further future research.
Model trust and other factors that impact significantly on Information Systems Security (ISSC): ISS Compliance and Data Privacy Compliance.	Trust Factor and other related variables have been framed. A new theoretical framework model was established showing the significant relationship towards the research dependent variable Information System security compliance (ISSC). The model has been validated and tested for model fit.
Conduct the final study using the final instrument with an appropriate sample (target sample size n=250).	A pilot study has been conducted using a series of pilot phases. Each phase was carefully refined based on exploratory factor analysis and reliability test. A final instrument was presented and administrated to a targeted sample size of 300. Responses of 247 employees were collected and subjected to case and data screening for any missing data.
Analyse the data from the final study to model Information Security in the context of a Saudi Arabian Oil Company using SPSS/AMOS methods.	Collected Data was analysed and tested using statistical analysis software namely SPSS and AMOS. The result revealed adequacy and a good model fit that contributed to model the information security compliance in the context of Saudi Oil Company
Confirm the significance or insignificance of presented hypotheses indicated in the final model.	The final model has been established and developed a total of 12 research hypothesis, they were tested based on the significance of the presented variables. The test was performed using direct and indirect effect. The revealed results indicated both significant and non-significant relationship. A Summary model of the tested hypothesis was presented.
Write-up: present and discuss the findings of the research.	The overall findings were presented and discussed in the result chapter.

Table 66: Research Objectives Summary

Table 66 shown above presents the aim and objectives that have been investigated using the quantitative research method. The aim of the research as presented in chapter 1, was to model Information Security in the Arab Region in the context of a Saudi Arabian Oil Company. The final outcomes have fulfilled the research aim and objectives as illustrated in the results chapter. A final model was presented in chapter 6, indicating that the objectives and aim were achieved using the quantitative method.

6.3 The Fulfilment of Research Questions

During the progress of this study, the revealed results have meaningfully answered the derived research questions, these research questions are explained below to illustrate how well these questions are met by the research study. Before start engaging in the discussion, based on the analysis results above, it is important, to sum up, the findings of the results on how various variables impacted Information System Security Compliance and some did not impact at Saudi Oil Company. Since most employees within Arab culture enforce the growth of trust and loyalty to each other, it is normally keeping them in the comfort zone. When

introducing Information security compliance policies, it is somehow taking them from their comfort zone which therefore affects their alignment within the workplace.

Putnam and Nicotera (2009) claimed that one of the vital cultural factors is trust. Existing research in this area seems to indicate that members of Arab communities tend to have a high level of trust based on shared values. In the views of Chrysostome (2014), trust is considered as one of the important aspects in the Arab region as it helps in developing relationship marketing among the Arab countries. A study by Ganesan and Hess (1997) in the Emirati clients of a banking institution, the study indicated that the similarity between bankers and clients significantly initiated empathetic feelings. Additionally, this outcome indicates the significant role of shared values in building trustworthy relationships. Block and Walter (2017) believed the convergence of several cultures results in certain issues among the varying culture within the workplace creating several challenges for the local Individual. However, the Arabs trust the loyalty of the different cultures and respect their ideologies to maintain harmony within the workplace and society.

Based on the above claims, this research study explained that in a close relationship you tend to be (Trustworthy) however, you expect the others to be the same that means you will be trusting others. On the other hand, being trustworthy doesn't mean that others will trust you. Even though trust is driven by culture, the similarity between individuals in terms of trust indicates that a shared values-based relationship builds trustworthiness. moreover, trust sometimes is forced by the local culture to maintain harmony within the workplace which leads to certain expected behaviour. The results of the descriptive analysis reflected the answers to the questions above. The outcomes revealed a significant relationship between these variables. The discussion begins with explaining in detail these relationships by addressing each question, at first, the variable trust has shown no direct impact on the information security compliance, however, it did reveal a significant impact when mediated through other variables as shown in (Table 57), the variable was tested by SPSS using simple linear regression analysis and shows no impact on information security, however, the variable was also tested in AMOS using structural equation model and was mediated through workplace culture alignment and supportive leadership, the outcome revealed a significant impact with full mediation on Information System Security Compliance as indicated in (table 57). Since trust is a general term, a trust scale was developed and tested to measure how different scales of trust such as trust towards co-workers, trust in a close relationship, trust in leaders, and trust towards family members have been used in the final survey. The output

revealed a significant impact on information security compliance when the trust scale was introduced.

In the perspective of Lunt, Horsfall, and Hanefeld (2015), In Arab countries, trust is dependent on the relationships between the Individual or the company. On the other hand, in western countries trust can be found based on the contracts and agreements made between individuals or companies. According to research by Putnam and Nicotera (2009), the findings indicated that shared values constitute the major components in building unconditional trust among diverse experiences of individuals. Abualhamael (2017) stated That leaders of various organizations take decisions depending upon the belief of the great leaders of the society. The roots established, and the attitude displayed by the great leaders are used as a medium by the leaders to implement strategies and ensure the success of the individual institutions. According to research by Putnam and Nicotera (2009), the findings indicated that shared values constitute the major components in building unconditional trust among diverse experiences of individuals.

This research study belief that trusting others is the belief that other co-workers will cause no harm to me which shows a strong collective bond-based relationship. This indicates a high certainty and confidence knowing that the future is uncertain. However, since this is within the same workplace then trust towards others should be maintained because you do not want to break the belief of others' trust in you. since making decisions depends on the belief between individuals then building trust among them is easy. Moreover, the belief of other individuals especially the close ones will allow the sharing of information to be exchanged between us knowing that this will cause no harm based on the belief, but it can be against Information Security Compliance.

The following research questions on the impact of factors namely, the belief, trustworthiness, and expectation of co-workers, and workplace culture alignment with supportive leadership on the Information System Security Compliance revealed a significant relationship. In the views of Chrysostome (2014), it is found that trust is deep-rooted in the Arab region and is reflected through the businesses running across the countries. Al-Kandari and Gaither (2011) stated about Cultural backgrounds, it has been analyzed that the Individuals living in Arab Region tend to follow Arab Culture and language, which creates a strong bond between these individuals based on their culture. As stated by Hammoud et al. (2017), the Arabians consider family as one of the vital aspects of the society and loyalty towards the close ones is one of the major aspects of the society. As opined by Dirani and Hamie (2017), the workplace culture of the Arabian regions involves the Individuals defining themselves with

their culture and values and motivating each other utilizing the cultural similarities and differences. Trust is based on the expectation developed from long relationships. However, the presented factor in the survey namely, the belief, trustworthiness, and expectation of co-workers measured different trust scale relationship which focused more on local culture shared values which mean I expect you to do to best for me because I trust you and you trust me.

Stebbins (2017) stated that trust is the factor that has been given importance in the workplace. Individualists are hardworking individuals who tend to achieve the objectives of the business but fail to work as a team in situations of group activities. However, the group of individuals are loyal towards the achievement of business objectives and do not harm the workplace culture. Cuthbert, 2017, stated that leadership factors of the managers of the firm, the workplace, compensation packages, and work infrastructure of the firm are dependent upon the attitude of the leaders towards the individuals. Abualhamael (2017) stated That positive leadership style, such as transactional and transformational leadership techniques motivate the individuals and contributes to organizational energy. Organizational energy is achieved through the adequate motivation of the individuals such as job security, fair wages, incentives, recognition, motivation provided by the leaders. Altbach and Knight, (2007); Saleh, (1986); Smith and Abouammoh, (2013) stated that the leadership style adopted in Saudi Arabia is considered being traditional based on customs, religion, and culture.

Bjerke and Al-Meer (1993) stated that Leadership style is even considered to be highly affected by Islam, which makes the risk-taking abilities of the people extremely low, and the decision-making style becomes completely consultative in nature (Bjerke and Al-Meer, 1993). This presented research study explained that it is obvious that the Arab workplace culture is affected by the leaders for many reasons. The positive leader's attitude motivates workers more which leads to proactivity at work which in turn increase the trust between them to maintain the positivity relationship. in the other hand, negative leaders can do the opposite and that tells us something since individuals' alignment is impacted by the leaders so the workplace is impacted by individuals attitude based on their job satisfaction and the positivity of the culture so you can imagine how the Arab leadership style looks like when it's based on traditional culture, and shared values. The factor workplace culture alignment with supportive leadership outcomes revealed a statistically significant negative impact on Information Security Compliance as indicated in (table 49). The output indicates that employees are willing to comply with information security standards and compliance in the presence of supportive leadership at the workplace which interns improve the workplace

culture alignment. However, leaders tend to be affected by local tradition and custom. leaders promote trust among their teams, so they share information. When breaking the trust between leaders and individuals, negative decisions and attitudes might occur. the relationships between leaders and individuals depend on integrity when it goes up the trust goes up with it. Positive leaders and motivation present a positive individual's alignment which therefore promotes a high level of trust within the workplace to maintain the harmony of their relationships which sometimes improves Information security compliance. However, more research is needed in this area.

Hill et al. (1998) stated that Transferring Information Technology (IT) to bring it into practice is difficult for many countries, and they even fail to transfer it. The major obstacles that are faced while transferring IT into practices are the cultural and social norms of a developing country. It has been identified that in Arab society the cultural beliefs of the individuals of various occupational groups differ based on the construct of the technology in their daily lives. A study conducted in Saudi Arabia by Al-Otaibi et al. (2018) on the use of online banking application satisfaction. the study found that information quality and interface design have significant effects on user satisfaction in both UK and Saudi Arabia. the overall findings suggest that all respondents are more satisfied with online banking app in the UK than in Saudi (Straub et al., 2001).

Hill et al. (1998) also stated that it has been identified that in Arab society the cultural beliefs of the individuals of various occupational groups differ based on the construct of the technology in their daily lives. As stated by Al-Otaibi, et al. (2018), Previous studies found that the social and cultural differences between Saudi Arabia and other developed countries, like the United Kingdom, for example, had a significant impact on adoption and satisfaction of using technology such as mobile banking. However, in this research study, western IT satisfaction was presented as a factor that could possibly impact information security compliance as well as data privacy compliance. when it comes to transferring IT technologies, typically the decision is often negotiated by the upper-level managers who have probably spent time or worked at these ITT-developed countries while it is the lower-level managers and workers who have the responsibility to interact with these technologies without the diverse cultural experience.

The outcome results revealed a statistically significant negative impact on both Information security and data privacy compliance. Furthermore, western IT satisfaction has also shown significant impact when used as a mediator with the belief, trustworthiness, and expectation of co-workers towards information security compliance as indicated in (table 62), which

means that the Western IT satisfaction contributed to the relationship between belief, trustworthiness, and expectation of co-workers and information security compliance as a direct effect in full mediation analysis. Overall, the aim and objectives were achieved by the presented model, the model has been designed and developed through a series of phases. The objectives were conducted and explained through the chapters presented in this research, the objectives were met by this study and contributed to the success of the main research aim.

6.4 About the Factors

The research study has addressed various factors that are latent to this study, each factor has shown a correlation to each other which helped produce the overall outcomes and contributed to the achievement of the research aim. Furthermore, these factors were not selected randomly but they were derived from literature and observation based on the connection that these factors will have to the main focused area of this research which is modelling the information security in the Arab region in the context of Saudi Oil Company.

However, to justify the selection of these factors, it is important to explain each factor's influence and the rationale behind it. At first, the research started with a factor called Trust, this factor is a general term that measures people's trust towards others but is not specified by a certain scale which shows only general trust which led us to the second-factor specific trust. The second factor has merged different trust scales which measures trust in a close relationship, the belief of others, the expectation of trust, trustworthiness, trust towards a family member, and trust towards leaders, these measurement scales were introduced in the research questionnaire, the usefulness of these factors helped to reveal a much broader picture of how people trust each other differently based on their local culture which in our case here is the Arab region. Since Arab region culture is based on tradition and custom as well as shared values, it was useful to include trust scale in this research study as the outcomes have revealed a significant impact on the overall expected results and proven to be different from the general trust scale.

The following factor called workplace culture alignment with supportive leadership has been refined through a series of phases, the initial phase started with three scales namely, workplace culture, supportive leadership, and employee’s alignment at the workplace. Surprisingly, during dimensional factor analysis, these scales loaded as one factor with some deleted items based on the loading values, later, the scales emerged to form the final factor mentioned above. The usefulness of this factor is varied, firstly, it measures certain sub-scale that has the same effect as other sub-scales on the same scale, in another word, this scale

combined sub-scales that measure first, the workplace culture and how this impact the overall information security compliance. It has been discussed in this research that local culture influences people's behaviours towards information and data privacy compliance, since Arab local culture is driven by trust, it was important to investigate the impact of local culture and the correlation with other factors presented in this study. Furthermore, within the same scale, supportive leadership has been also included as part of the local workplace culture which has revealed a correlation with workplace culture and employee's alignment which, therefore, loaded as one factor. The usefulness of these sub-scales merged has shown a significant impact on Information security compliance which was predicted at the beginning of this research. However, the rationale behind the selection of this factor was derived from the literature based on the relationship these sub-scales have so when combined, the results revealed a significant impact on the expected outcomes and contributed to the final research model.

The next factor is called the Western IT system, the rationale behind the selection of this factor was to assist how the transfer of IT technology that was developed and invented in the western countries could have an impact on the compliance of Information security as well as Data Privacy. The local Arab culture tends to resist changes as it is not within their comfort zone. Arab culture was found to limit the use of some technologies at work and prefer to deal with each other face to face. Furthermore, the information security compliance guidelines come with some restrictions to the use of such technologies, in another word, the information security awareness level needs to be elevated to use these technologies safely without compromising the information security. The usefulness of this factor illustrated the level of satisfaction at the workplace whether they resist these changes and how this can impact the overall information security compliance. The result however revealed a significant negative relationship towards information security and data privacy compliance as indicated in table 58, which fulfil the research expected outcomes. The factor also contributed as a mediator with other factors such as the belief, trustworthiness, and expectation of co-workers and indicated in table 62, in which it has contributed to the final research model outcomes which interns fulfil the research objectives and aim.

Lastly, the research introduced a factor called Information Security Compliance which consisted of two sub-scales namely information Security and Data Privacy Compliance. These subscales were subjected to dimensional factor analysis and reliability test, the output result has split out the sub-scales into factors, these factors were the main focused area of this research and were indicated in the result chapter as independent variables. The

usefulness of these factors was to assist how employees behave when subjected to overall information security compliance which measures the level of information security awareness and how that is reflected in the model when other factors mentioned above used as a predictor as well as the influence that these dependent variables could have on the Information Security Compliance in general. The overall results revealed a significant impact and correlation as indicated in tables 52, 53, and 54. The factors have shown adequacy model fit and objectives and aim were achieved.

6.5 The Questionnaire

The initial questionnaire was custom developed and designed based on the focused area of interest. The main aim of this research was to model information security compliance in the Arab region. The customization of the questionnaire derived from the literature review is based on various influential factors that have led to this study. Furthermore, the customization has been established based on a certain area of interest that required the research variable to be measured, with that been said, variables such as Culture, Trust, Western IT Satisfaction, workplace, and supportive leadership were customized using scale measurement that reflects each variable data individually where data can be collected and measured to meet the research study aim and objectives and finally to establish the research theoretical framework.

The questionnaire has been refined through a series of phases, the first phase questionnaire consisted of 93 items with 7 demographics items included dispersed across 4 main scales and 12 sub-scales as indicated in (Table 7). The pilot study has been conducted using a phase one questionnaire and was administered to 25 employees as indicated in (Appendix A) then the data was collected for internal consistency and reliability test where several sub-scales have been reduced as explained in the questionnaire design chapter. The 93 items represented 4 main scales namely, Trust, Specific trust, Western IT System, and Organization where the 13 sub-scales represented General trust, Specific trust, Trust in a close relationship: Belief, Expectation, and Trustworthiness, Trust words others, Western IT System Satisfaction, Perceived ease of use, Perceived usefulness, Employee's Alignment, Workplace Culture, and Leadership.

The pilot study phase 2 was also conducted using the refined questionnaire from phase one and has been subjected to internal consistency where numbers of sub-scales and items were reduced. The phase two questionnaire consisted of 80 items excluded the demographics items and 13 sub-scales where a new sub-scale was introduced called Information Security and Data Privacy Compliance as indicated in (Appendix B). The refined phase 2

questionnaire was then validated for the final phase where a web-based questionnaire was designed and administered to 300 employees.

The final phase consisted of 9 factors and 67 items excluded the 7 demographics items as indicated in (Table 10) then, it was subjected to exploratory factor analysis, confirmatory factor analysis, and structural equation modelling using SPSS and AMOS. Moreover, the revealed results indicated a low loading in AMOS which required some factors and items to be removed, the final model was ultimately established 6 factors with 31 items, the results reveal adequate model fit as indicated in (Figure 13). However, the questionnaire could have implemented other variables that are not used in this research study such as attitude, behaviour, personality, and custom-designed survey based on personality type that could improve the level of awareness at the targeted focused area the Arab region. The overall questionnaire has shown reflected data to each measured variable where the correlation between these factors was validated and contributed to the achievement of the research aim and objectives.

6.6 Novel Contribution Made by the Research

This study is the first to investigate the impact of Trust and the relationship of other related variables such as culture, workplace, the use of western IT, the belief in co-workers, and Information security compliance. in the perspective of the Arab region. Furthermore, the study will contribute to Model Information Security in the context of a Saudi Arabian Oil Company and to better understand what variables could have an impact on IT compliance standards. It will also address issues revealed in the Literature about the associated risk that comes with trust but in the lens of Arab culture and narrow down the context of an Oil company as the main targeted industry by cybercrime. Now the research fills three main gaps that were in the literature: The gap between Organizations and their trusted employees, the gap between workplace culture and Information security compliance, and the effect of Employees awareness on workplace Oil companies which covers Theoretical Contribution, Methodological contribution, and Practical contribution.

The research will contribute to knowledge by Modelling Information Security in the context of a Saudi Arabian Oil Company. Research connecting trust and other cultural concepts towards ISS Compliance and Data Privacy Compliance in the Arab Region will be enhanced. Several relationships between the main factors within the model have been identified and their significances were tested, using partial SPSS AMOS methods. A new survey instrument was produced, developed, and custom-designed for use in the Arab Region and that instrument may then be used to assess and profile other oil companies in the Arab

Region. The tables (67, 68 and 69) below elaborate on the contributions made by this study and how is it differentiates itself from other studies.

Authors	Research Context	Methods
Putnam and Nicotera (2009)	Analysed numerous instruments used in their quantitative research in measuring culture.	Qualitative Research Approach
Claims that one of the vital cultural factors is trust. Existing research in this area seems to indicate that members of Arab communities tend to have a high level of trust based on shared values. **Contribution:** Al-Shammari (2021) has focused on this area in a different prospective by creating a custom-designed Likert-scale questionnaire that measures trust through the lens of local Arab Culture using quantitative approach method and interconnected it with other factors presented in the frame model.		
Lunt et al. (2015)	Measuring the decisions of the leaders of various organizations	Qualitative Research Approach
Lunt et al. (2015) **c**laimed that in Arab countries, trust is dependent on the relationships between the Individual or the company. On the other hand, in western countries trust can be found based on the contracts and agreements made between individuals or companies Contribution made by this research: Al-Shammari (2021) has looked at various trust scale dynamics and has created an instrument that measures trust scale towards leaders and new instrument has been presented in the model		
Abualhamael (2017)	A study of positive leadership style in the Kingdom of Saudi, such as transactional and transformational leadership	Quantitative Research Approach
Abualhamael (2017**)** claims that the leadership style adopted in Saudi Arabia is traditionally based on customs, religion, and culture. Contribution made by this research: Al-Shammari (2021) has presented leadership as a factor integrated in the Individual's Workplace Alignment scale. A new instrument scale measuring leadership factor was presented in the framework model and established a relationship on how it impacts information security compliance.		
Al-Kandari and Gaither (2011)	Cultural-economic model of international public relations.	Qualitative Research Approach
Al-Kandari and Gaither (2011) used critical/cultural perspective to examine Arab culture. The study tested the cultural-economic model to identify orientations that influence Arab culture. Contribution made by this research: Al-Shammari (2021) used a quantitative method using a new model that focuses on Trust and cultural factors. The study has measured the workplace culture using custom-designed Likert-scale questionnaire to measure culture through the lens of local Arab culture then it established a correlation between other factors and their impact on Information security compliance		

Table 67: Contributions Made By This Research In Relation To Other Studies

Authors	Research Context	Methods
Waldron (2017)	The Influence of Leadership Emotional Intelligence on Individual Engagement.	Quantitative Research Approach
Waldron (2017) the level of employee engagement within the organization and the level of emotional intelligence of its leaders using Q12 engagement and Schutte self-report emotional intelligence (SSEIT) surveys respectively. These two constructs were then related to each other using the survey data as well as a focus group of company employees. There findings stated that there is a need for the managers to identify the potential of the individuals and guide them in a direction within the organization to achieve the goals of the business. The findings have also revealed that there is no direct correlation within the data obtained from the surveys, employees do understand the effect of leader emotional intelligence in the workplace. Contribution made by this research: Al-Shammari (2021) has presented leadership as a factor integrated in the Individual's Workplace Alignment scale. A new instrument scale measuring leadership factor was presented in the framework model and established a relationship on how it impacts information security compliance.		
Ključnikov et al. (2019)	Investigation of cultures and Information Management in a medium-sized company.	Questionnaire Based method using DEMATEL technique (Decision making trial and evaluation laboratory)
Ključnikov et al. (2019) identified 4 main factors of success of information security management, including the Compliance of information security management with the company's business activities, Support of top management, Security controls and Organizational awareness. Contribution made by this research: Al-Shammari (2021) has investigated trust and other related cultural factors through local Arab culture and established a new model and its correlation towards Information Security Compliance which can assist to profile organization in the Arab sector.		
Olah et al. (2019)	Study on service quality dimension effectiveness on customers satisfaction in banking sector.	Quantitative Research Approach using modified SERVQUAL model
Olah et al. (2019) **f**ocused on how Western IT satisfaction can impact Information security compliance and data privacy in the local Arab culture. Contribution made by this research: Al-Shammari (2021) has focused on how Western IT satisfaction can impact Information security compliance and data privacy in the local Arab culture.		
Zamman and Razali (2016)	An empirical study of information security management success factors in (Malaysia)	Qualitative Research Approach with a semi-structured interview
Zamman and Razali (2016) used a qualitative method where it adopted semi-structured interviews involving nine practitioners. The data were analysed using content analysis technique. This study has identified three aspects of information security management factors based on experts' points of view. Where these factors include people, process, and organization. Contribution made by this research: Al-Shammari (2021) used a quantitative method using a new model that focuses on Trust and cultural factors namely Trust, Co-workers, Individual's Workplace Alignment and Supportive Leadership, and Western IT satisfaction in the local Arab Culture.		

Table 68: Contributions Made By This Research In Relation To Other Studies

Authors	Research Context	Methods
Mahardika et al, (2020)	Measuring the information security awareness level of the employees	Quantitative Research Approach.
Mahardika et al, (2020) administered a questionnaire to 25 employees and interviewed three information security experts. The results of the questionnaire were evaluated using The Human Aspects of Information Security Questionnaire (HAIS-Q) and the Analytic Hierarchy Process (AHP) method. This study has implemented a used model. Contribution made by this research: Al-Shammari (2021) was conducted using a custom-designed Survey instrument administrated to 300 employees and was analysed using Structural Equation Modelling AMOS and SPSS. This research has presented a new model that has not been used before in any research paper.		
Sari et al. (2014)	Information security awareness study on a smartphone (Indonesia)	Quantitative Research Approach. Theory and Model comparison.
This research was conducted by using the Kruger and Kerney Model that focuses on 3 dimensions namely knowledge, attitude and behaviour and five focused area extracted from theories such as adhering to security policies, protecting personal data, fraud/spam SMS, mobile applications, and reporting security incidents. Contribution made by this research: Al-Shammari (2021) implemented a custom-designed questionnaire and produced a model that focused on Trust and cultural factors impacting Information security compliance in Arab Culture		
Kusumawati (2018)	Information security awareness study on a smartphone	KAB and AHP methods and multiple-criteria decision analysis (MCDA)
Kusumawati (2018) used human resources information security awareness measurements using a model developed by Kruger and Kearney in 3 dimensions, namely knowledge, attitude and behaviour. Contribution made by this research: Al-Shammari (2021) used a targeted sample size of 300 employees from various work experience in information security compliance and data privacy using a custom-designed model in 5 dimensions namely Trust, Co-workers, Individual's Workplace Alignment and Supportive Leadership, and Western IT satisfaction.		
Puspitaningrum et al. (2018)	Evaluate the security awareness of the employees at Ministry of Communications and Information of the Republic of Indonesia.	The study has used AHP calculations and Human Aspects of Information Security Questionnaire (HAIS-Q) framework
Puspitaningrum et al. (2018) performed structured interviews with senior management and distributing questionnaires to 28 employees of SDPPI related to security awareness. Contribution made by this research: Al-Shammari (2021) used a custom-designed Survey instrument administrated to 300 employees and was analysed using Structural Equation Modelling AMOS and SPSS.		

Table 69: Contributions Made By This Research In Relation To Other Studies

Theoretical contributions

In the present study and the assessment of the literature, the literature review chapter has demonstrated the nature of Arab rooted culture and trust which altered the research problem (Section 1.3) and presented a gap concerning different contexts and backgrounds which required further research to address and measure different identified variables that were found to be influential on the focused area presented in this research study.

However, the most distinguished contribution to knowledge was the examination of the variable's relationship and their impact on Information Security Compliance in the context of Saudi Oil company that is driven by a very complex local culture that was very challenging to this research study. Moreover, the research has provided a wide discussion on several scales and levels of trust as well as the Arab local culture behaviour. It also developed a custom-designed measurement scale for each variable and assisted the outcomes to draw a correlation and relationship which contribute to establishing the theoretical framework model that can be applied and used to assist the profile of other Oil sectors within the Arab region.

Most importantly, the research has presented a theoretical framework that fulfilled the gap in the literature and contributed to examining the relationship of various variables such as Trust, the belief, trustworthiness, expectation of co-workers, Western IT system, Workplace culture alignment with supportive leadership, and finally, the Information Security and Data privacy compliance supported by a tested hypothesis presented in this research. This is the first attempt to examine such variables in the context of a Saudi oil company. In summary, the presented theoretical contribution in this study is stated below.

•Trust predicts information System Security Compliance and Data Privacy in the Saudi Oil Company.

• Western IT System predict information System Security Compliance and Data Privacy in the Saudi Oil Company.

• The belief, Trustworthiness, and expectation of Co-Workers predict information System Security Compliance and Data Privacy in the Saudi Oil Company.

• Workplace Culture Alignment and supportive leadership predict information System Security Compliance and Data Privacy in the Saudi Oil Company.

• Trust, Workplace Culture Alignment with Supportive leadership, Western IT, and the belief, Trustworthiness, and Expectation of Co-Workers model predict information System Security Compliance and Data Privacy in the Saudi Oil Company.

• Trust is a statistically significant negative relationship on Information System Security Compliance and Data Privacy at Saudi Oil Company.

• Western IT System is a statistically significant negative relationship with Information System Security Compliance and Data Privacy at Saudi Oil Company.

• Workplace Culture Alignment and supportive leadership is a statistically significant negative relationship with Information System Security Compliance and Data Privacy at Saudi Oil companies.

• The Belief, Trustworthiness, and Expectation of Co-Workers is a statistically significant negative relationship between Information System Security Compliance and Data Privacy at Saudi Oil Company.

• The Workplace Culture Alignment and supportive leadership fully mediate the relationship between belief, Trustworthiness, and Expectation of co-workers and Information System Security Compliance at Saudi Oil Company.

• Western IT System fully mediates the relationship between belief, Trustworthiness, and Expectation of co-workers and Information System Security Compliance at Saudi Oil Company.

• Workplace Culture Alignment and supportive leadership fully mediate the relationship between Trust and Information System Security Compliance at Saudi Oil Company.

Methodological contributions

After highlighting the focus on theoretical contribution, it is important to underline the methodological contribution, at the beginning, the custom-designed questionnaire was validated and tested in the various context in the Saudi Oil Company which contributed to the overall measurement of the presented factors. The methodological contribution was made by using analytical software that suits the numerical quantitative data namely, SPSS and AMOS which was proposed by the researcher. The data analysis was conducted to build a structural equation model that supported the design of a thermotical framework, the variables were subjected to a correlation test to assist the study of the relationship between independent and dependent variables. Furthermore, the adoption of AMOS has helped to build a structural equation model an adequate model fit that contributed to achieving the research objectives and aim as well as the success of the hypothesis test. Finally, the use of both software SPSS and AMOS contributed to the success of building cultural trust studies in the Saudi Oil company as mentioned previously to the best of the researcher knowledge, this research is considered the first to be conducted in the context of Arab region at Saudi Oil Company.

Practical contributions

The final contribution is made to the Information Management department. The present research can be utilized to spot the weaknesses within the existed Information security

Awareness as well as to encourage the need for more supportive leadership and positive workplace culture alignment which lead to better information security Compliance adoption. Moreover, to overcome challenges associated with the trust towards others as found in the local culture and perhaps isolate this issue.

Finally, to give the top management leaders a better understanding of what impacts the employee's alignment within the workplace and what kind of leadership style and motivation should be applied to create a better organizational culture that promotes the importance of teamwork in building better information security compliance environment

6.7 Research Limitations

As with every research study, a limitation somehow comes along in theoretical, methodological, and practical areas which therefore led to highlighting these limitations in our case study. In the beginning, it was hard to find relative articles that measure such variables in the context of the Arab region which limited the research resources, nevertheless, the researcher was able to incorporate various articles that led to achieving the study aim. The main aim of the presented research was to model Information Security in the Arab Region in the context of a Saudi Arabian Oil Company, in another word, to examine the relationship between various variables, with a particular focus on local cultural behaviour towards Information Security Compliance and Data privacy. Much research in this area was focused on defining the variables rather than measuring them statistically. The researcher adopted the fact that in the reality of the world, is not simply the interpretation or perception of people's minds which was a challenge for several authors who emphasized the importance of humans and that their perception and feelings can prevent frequently superficial results.

Furthermore, the complexity of the chosen variables in this research such as culture and Trust, the combination of bias in the literature review is inevitable. The presented literature review in the current research has shown commonly diverse interpretations and arguments, particularly when it comes to Arab culture context, and yet there was no clear definition of the presented variables when conducted in the Arab region culture, however, the merger of the extracted framework from the literature review and empirical results have strengthened the research process by defining the aspects of the analysis outcomes to address the research gap.

On the other hand, in the methodological point of view, the primary alignment of this research study was an academic exercise where inaccuracy of the data analysis could occur which might impact the interpretation of the results. However, all measures were in place to ensure minimizing the impact as well as to keep it within an acceptable range. Nevertheless,

there are some limitations or slight issues which could have affected the overall data collection process, for instant, the reliability of collected information, the dynamics of different organizations, and questionnaire conduction and the estimated time was taken by the respondents to complete the survey but since the sample size was large, this helped to reduce at least this issue.

In most doctorate projects, the sample size is a common limitation due to time constraints and data access process, so this research is no exclusion. The data was generally collected from Saudi Oil private sector with a multicultural environment where most employees resist changes that are not within their comfort zone. The generalization of the research findings is limited as a larger sample size could improve the insight of the local culture perhaps research two different organizations one is the private sector and the other public sector where you can draw a comparison between them. Additionally, the demographics aspects could include male and female as this study was limited to male gender only, however, other demographics such as education, age, and experience were included but were not taken into consideration, so further research can consider them as a control variable which could present further outcomes.

The significance of the research context, based on epistemological, ontological, and methodological positions, is applicable in the context of Saudi Oil Company. On the other hand, knowledge can be also expanded by adopting contrasting methodological such as qualitative by looking at why Trust has been a big part of the Arab culture and how can the research differentiate between Arab traditional environment and its impact on organization security guidelines.

The findings of overall research showed that predicting behaviour based on culture is more complex than expected, the Arab region. It is found that Arab regions have more loyalty to their local culture which is based on shared values, tradition, and religion where these factors present obstacles when conducting a traditional approach such as inconsistent findings, and the level of measurement, so the present study focused on multiple factors such as Trust, Culture, Workplace, Western IT, and supportive Leadership but emphasized more focus on the Information Security Compliance and data privacy where future study could focus of local culture attitude that is driven by tradition, custom, and religion.

Furthermore, major gaps were found in the current literature and studies which have focused on Trust and culture found in the Arab region in the context of Saudi Oil Company. The study aimed to model information Security in the Arab region which aims to bridge the gap in the literature, which may lead to enhance future research and recommendations for other

Oil sectors within the Arab region to improve the overall level of awareness as well as other countries following similar shared values and culturally based environment.

A quantitative method approach was used as well as an extensive literature review. The approach included gathering data by utilizing the questionnaire survey that was accomplished by 247 respondents and other 50 in the pilot study questionnaire at the Saudi Oil company at the private sector where data analysis was subjected to various stages of analysis. The first one was the descriptive statistical approach, data analysis including case screening, a summary of respondent's demographics such as age, experience, frequency, and other related characteristics such as standard deviation, reliability test, mean, skewness, and kurtosis. In the second stage, the researcher elevated the analysis to use SPSS analysis which included internal consistency, dimensional factor analysis, and Cronbach's alpha, and lastly the use of AMOS where structural equation model (SEM) has been conducted, exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and the testing of the hypothesis of this research.

The research conclusion was developed for presented variables, where there is a delineation between the predictor's variables and the independent variables, the variables have shown a significant influence on Information Security and Data privacy compliance as a grouped variable where two individual variables revealed a non-significant. Furthermore, three variables were contributed to a full mediation in a non-direct path analysis where the direct effect of predictors revealed non-significant.

In contrast to the private sector of the Oil Company, it is my argument that local culture has more effect on Information Security than just a general trust as trust was found to be driven by local culture. As one of the limitations to this study is a lack of literature to support cultural behaviour that is driven by tradition, custom, and religion, so this is an opportunity for future research, consequently, scholars within the same region could conduct further studies to determine and examine the cultural barrier based on tradition and religion that influence the Information security Compliance as well as Data Privacy.

6.1.7.1 Limitation of Literature Review as Secondary Data Collection Method

The literature review method is useful in research studies to gain knowledge regarding the research topic, but at the same time, it can be said that there are certain limitations of using literature review in research work. The data obtained with the help of literature review are subjective, and it may sometimes confuse the researcher as to selecting which studies according to the subject of the research study (Denzin and Lincoln, 2005). Therefore, it can also be said that in some cases researchers may fail to get to the conclusions with the help

of the studies selected. Further, the researcher may also face difficulty in integrating the different components that have been identified in the data collection through literary sources. To compensate for the limitations of data collection, this research study will include primary and secondary data collection methods. It will also help in getting to the conclusion easily by comparing the findings of both the data collection methods (Denzin and Lincoln, 2005).

6.1.7.2 Limitations of Survey Methods as Primary Data Collection Methods

It has been observed that the questionnaire survey method is helpful in this research study to gain primary data regarding the research topic. At the same time, it can also be said that there are certain limitations of using the questionnaire survey method for primary data collection (Thomas, Nelson and Silverman, 2011). It can be said that while responding to the questionnaire, the respondents may not always be truthful, which can get the researcher in the incorrect direction. Further, it is also possible that the respondents do not read the question completely before answering it and thus, provide wrong information, which will further affect the result of the research study. It is also observed that through interviews, the research can communicate with the respondents face-to-face and can analyze their emotions while gaining information, but in surveys, the research cannot gain their emotional views regarding the research study. It is also possible that while answering the questions, respondents feel difficulty in analyzing the questions as survey questions are multiple-choice questions. Therefore, respondents may skip some of the questions due to the difficulty that they face while answering the questions (Thomas, Nelson, and Silverman, 2011).

6.1.7.3 Limitation of Phase 1

There are certain limitations of each research and data collection method used in a research study. Data collection in phase 1 was done by using the library research method, which is an efficient method to gather data from reliable sources on the research topic. The library research method comes under the secondary data collection method which has its limitations. Secondary data collection is difficult as the researcher must search for reliable sources of information regarding the research topic (Mann, 2015). Therefore, the researcher must search for sources that are authentic and provide a good source of information regarding the research topic.

Another limitation of secondary data collection is that the researcher cannot completely rely on the secondary data as the data cannot be as per the needs of the study and the researcher. Therefore, the researcher must find sources that are presented as per the requirement of the study and as desired by the researcher. It is also found that in secondary data collection sometimes, the researcher cannot get complete access to a book, and due to which the

researcher may get incomplete information regarding the research topic (Mann, 2015). Therefore, it can be said that the researcher must ensure that the sources used by the researcher must provide complete information regarding the research topic. Lastly, secondary data can be outdated and provide outdated information regarding the research topic which can affect the results of the study. Thus, it can be said that the sources used by the researcher should be the latest and provide current information regarding the research topic so that the findings of the study are reliable and can be used by future researchers (Mann, 2015).

In the library research method, secondary data is collected by the researcher with the help of an online search. An online search can be performed by searching different sources using keywords regarding the research study (Mann, 2015). It is found that the library research method is comparatively easier for the researcher as they can search for the data from anywhere and at any time. It is also found that in the library research method, researchers get confused as to use which information source and which source will provide a good source of information. In an online search, the researcher should also search reliable sources which will provide data as per the need of the study and as desired by the researchers. It is further found that the internet is a system, where the researcher can find a variety of information regarding the research topic and the search can be performed based on convenience and priority (Mann, 2015). It is found that the internet is a pool of information, but at the same time, it can be said that the information gathered from the internet is not always true. Various web pages are designed by different Individuals, but those web pages do not provide authentic information regarding the research topic. Therefore, it can be said that the information provided by the internet is not always true and authentic, so the researcher should try to search for authentic sources of information that can be used in the completion of the research work (Mann, 2015).

While conducting a research study it is essential that the researcher accomplish the research aims and objectives, to complete the study successfully. Therefore, it can be said that conducting a study correctly is a difficult task and requires effective planning for the research work. The planning helps the researcher in providing a proper structure to the research study and selecting methods that can help the researcher in accomplishing the aims and objectives of the study. It is found that the researchers conducting studies apply a wide range of tools and techniques with appropriate methods to conduct the research work in the correct direction and get to the conclusion easily (Creswell, 2003). It is also found that while conducting a research study, the researcher faces certain limitations which are handled by

the researcher during the completion of the research work. The limitations that are faced by the researcher while conducting the research study are known as research limitations. The research limitations can be said as a feature of research methodology, which influences the research findings. Research limitations can also be considered as the constraints which occur due to the chosen framework or method to conduct the study, which eventually impacts the research and the validity of the research work. Therefore, it can be said that the research limitations are essential to state in a dissertation so that the overall impact of the research limitations can be evaluated for the validity of the research findings (Creswell, 2003).

In this research study, certain limitations have been identified which are needed to be considered by the researcher to improve the validity of the study. The first limitation that has been identified is related to the conduction of online surveys among the general Individual of the Arab region. In this research study, the major focus of the researcher to collect the information regarding the study was through the primary method of data collection, which is the questionnaire survey method (Creswell, 2003). In comparison to the questionnaire survey method of primary data collection method, the interview method is more reliable, as the interview method provides more accurate results. It is found that in the interview method, the researcher can also analyze the correct situation and emotions of the participants responding to the question, while during the survey face-to-face interaction is not possible. In this research study, the survey method is chosen for collecting the information regarding the research work because of the time constraint (Creswell, 2003). In this study, the sample size to collect the information is large; therefore, it is difficult to interview all the Individuals for collecting information regarding personality, trust, and culture within the Arab region. The second research limitation that may be faced by the researcher in this research study, while conducting the research is that the respondents may not provide accurate information regarding the questions. It is also found that respondents are not cooperative sometimes while responding to the survey questions, which may give rise to issues for the researcher while collecting the information regarding the research study. Concerning the respondents in the study, it is also found that the respondents may not agree to answer the questions which may delay the research work and at the same time create difficulty for the researcher to get to the conclusion. Thus, it can be said that the survey method can create an issue due to the respondents in a research study and the interview method is better than the survey method to gather information regarding a research study.

Thirdly, concerning the survey questionnaire with open-ended questions, is it possible that the respondents do not provide their responses as intended by the researcher. The unintended

responses from the respondents in a study can impact the research work as a researcher may misinterpret the information that is collected from various participants of the study. Further, it can also lead to a negative influence on the research findings by the researcher (Creswell, 2003). The fourth research limitation occurred during the research work when the researcher collected the information with the help of a questionnaire survey method. In this research study, it was observed that the respondents delayed in responding to the questionnaire; thus, the researcher took more time in gathering all the information regarding the topic (Creswell, 2003). This research limitation affected the timeline developed for the research study and the study was delayed. The last research limitation that was faced by the researcher was regarding the collection of information with the help of a secondary data collection method. It was found that it was difficult for the researcher to gather secondary data regarding personality, trust, and culture within the general Individual of the Arab region. It was also difficult for the researcher to find reliable sources regarding the research study, as there are limited sources which present information regarding the research topic. Therefore, more time was spent by the researcher to find reliable sources for the research study (Creswell, 2003).

6.8 Recommendations for the Future Research

As this study highlighted and examined the relationship between Information Security Compliance and the various factors such as Trust, Culture, Workplace Culture, and Western IT System in the lens of the Arab region, it would be an obvious extension to suggest other variables, such as attitude, tradition and custom, environmental stress, depression, and organizational culture could improve the current study. Furthermore, since the research are dealing with Arab culture and based on the researcher observation it is recommended to investigate the local culture behaviour by observing the power over authorities that is exists within Arab countries for many years which refers to Wasta see (Section 1.4). An overview of Wasta as found in the Arab region has been presented in the research as a non-focused area for future research suggestion which indicates a potential influence on the overall Information Security and Data privacy, in addition, Arab local culture was found to adopt such behaviour at a workplace which can present a fundamental piece of work. Also, a non-focused area of personality factors was presented that can be extremely useful for future research see (Section 2.10), and as extra credit, this section has developed and established several hypotheses that could be potentially significant to this research study area.

Moreover, interviewing with the targeted sample size would help confirm the quantitative data besides interviewing subject matter experts in the field of Information Security, Management, and leaders. Finally, choosing more private oil sector with a larger sample size

by extending the research further to cover other Arab countries within the Gulf region, and to focus more on gender issues in how different gender leadership can affect the Arab local workplace culture.

Following recommendations are made for the use in the Oil Sector at Arab region research:

- A clear understanding of the influential constructs towards Information Security Compliance is key to establishing a theoretical framework.
- It is necessary to review literature that is not confined to only culture and trust and to be more on other cultural traditions and customs.
- Relationship between supportive vs negative leadership and workplace culture alignment should be explored in further detail to help frame the critical path towards Trust and its impact on Information Security Compliance.
- Further specific research could be explored to include a personality test which will contribute to custom design Security Awareness program that can be used in the Arab region, which will help improve the level of Awareness towards Data Privacy and sharing conditional information.
- A questionnaire could be custom designed that focuses more on attitude, stress, anxiety, and job satisfaction that would develop extremely useful knowledge for the local culture workplace.
- Finally, expanding the current research to cover the public sector with a large sample size with a multicultural environment that includes diverse non-Arab nationalities could present a better understanding of how the adoption of Arab culture can impact western culture.

6.9 Where The Research Was Undertaken

The research took place in a private sector at Saudi Oil Company (Chevron) located in the Kuwait region. Chevron is the only global energy company to have a continuous upstream presence in the Kingdom of Saudi Arabia for more than seven decades. Through our subsidiary Saudi Arabian Chevron (SAC) Inc., it is engaged in a wide range of petroleum-related interests in the kingdom. SAC is the operating company of Chevron's Saudi Arabia/Partitioned Zone business unit located in south Kuwait near the Saudi border. Saudi Arabian Chevron (SAC) has two office facilities: the main SAC office facility is located in the SAC Camp at Mina Saud while the other facility is located at our joint operations in Wafra. The joint operations in Wafra are about a 45-minute commute from the SAC Camp. The main SAC office facilities are comprised of several buildings that

house Administration, Technology, Training, and Engineering. The office facilities at the Wafra Joint Operations provide direct support to the operations asset. The buildings are single and multi-level structures. The total workforce including nationals, expatriates, and contractors is more than 1,500 people.

Saudi Arabian company (SAC) consists of employees and contractors working in partnership with Kuwait Gulf Oil Company (KGOC), the operator for Kuwait's equal interest in the area, through Wafra Joint Operations. This organization, staffed and funded equally by SAC and KGOC, explores for, develops, and produces oil in the PZ. It operates four fields: Wafra, South Umm Gudair, South Fuwaris, and Humma. Chevron is leading the world in steam flood technology. It has 50 years plus experience in Kern River, California, and Duri, Indonesia, and it applies its experience at Wafra PZ.

The information management department mission is to develop the skills and qualities needed to accomplish the involved role of Information Management and to develop the attitudes and principles, which will encourage continuing growth in a profession that is rapidly expanding in scope. The IT goal is to maximize the value of information over its lifecycle by managing and protecting information assets to ensure their reliability, ease of use, and support effective decision making, and by being highly responsive to Chevron's IT strategy, direction, and global needs. The aim is to do this by leveraging information technology for high performance and cost-effectiveness in Saudi Arabian Chevron Partition Zone Business Unit.

However, this organization has been chosen as it has been found that it will perfectly fit this research and will satisfy the research objectives for many reasons. First, the organization consists of 1500 plus employees of mixed nationality, more than 80% are Saudi nationals. The employees' educational level is varying, some of them study abroad some are not, the experience range between 2 years up to 35 years of service. The workplace is more likely family-oriented culture which means it is a trust-based environment. Some of the family members and close friends with loyal to each other. They speak the Arabic language in their communication, and some speak English non-Arab fellows. They like to deal with each other face-to-face and share the same values and beliefs within the workplace. Individuals tend to do business based on trust and loyalty to each other. The organization has implemented guidelines for all members of the workforce to comply with applicable privacy laws and company policies and to take reasonable and appropriate steps to protect the confidentiality and privacy of data. However, the trust-based cultural triggers an alert that there is unwanted social behaviour compromising the

confidentiality of the employees' data as well as resisting the adoption of new IT technologies. The case study is based on information derived and developed from various literature related to phycology, culture, Information system as well as self-observation as an IT data privacy and cyber security member, the IT department is experiencing challenges to mitigate these behaviours or to find a proper awareness training that suits the local culture or maybe at least to isolate such issue or implement a new strategy to remediate it. Such attitude is not limited to workers only but also should cover the Management level.

6.10 Weaknesses of The Research

The weaknesses of this research included the sample size, the timing when the survey was conducted, the procrastination of employees completing the questionnaire, the gender population at the workplace environment, and the language barrier. First, the sample size could have been expanded to a larger number of respondents which could potentially present a better insight into how the workplace culture looks like. The survey questionnaire was administrated to 300 employees and 247 responses were gathered and which presented a challenge to the researcher. Therefore, future research with a similar culture should allow an extended time frame with a larger sample size which could help support the research outcome. Secondly, the time when the survey was conducted, the researcher come across a challenge where there was a production shutdown due to political issues between Kuwait and the Saudi government which led to cost reduction by sending 40% of the employee's homes for almost 3 years which complicated the research overall, but the researcher was able to carry on gathering the data by communicating with all departments leaders in order to complete the survey questionnaire on time.

Moreover, the employees were distracted by the political issues taking into consideration that the production shutdown will take years to come back so that affected their focus and caused to delay the completion of the survey. Finally, most employees were male so having equal gender of females could change the overall results as females tend to have a higher level of Awareness than males. Finally, the English language was found to be an issue with the selected sample size so future research could focus on the native Arabic language for a better valid response to avoid repeated answers. However, the collected data was carefully subjected to data screening to spot any duplicated answers and the data has revealed a non-repeated answer as indicated in the results chapter.

6.11 Research Implications

The generalizability of the results is limited because the sample of the study was drawn from private sectors company in Saudi. Therefore, plausible future research could be testing the proposed model and Survey in many different countries within the Arab countries/Asia. Also, personality factors can be tested and added for better Information Security Awareness. The paper includes practical implications for developing and implementing security procedures and strategies in various work environments within the Arab region.

7. CONCLUSION

7.1 Introduction

The final chapter presents the research conclusion and a concluding view of the research.

7.2 Thesis Summary

First, chapter one has pointed out the research rationale for conducting this research and highlighted the focus on the role of trust as found in the Arab region and how trust is driven by local culture. It also presented the preamble on the nature of Arab trust and the rooted culture as well as the shared values and how this could impact Information Security and Data privacy compliance. Furthermore, the chapter has presented the research problem and emphasized the need for a better understanding of the Arab local culture and how such behaviour led to a decrease in the level of awareness towards the organization's security guidelines. Moreover, a non-focused area of this research has been presented that highlights the impact of the power of authority which refers to a term called Wasta which can be conducted in future research. A different level of trust was presented in detail which covers various trust scale that was derived from a general trust that has been shown a significant impact on the overall research outcomes. A research aim was presented to examine the relationship of various factors and information security compliance which highlighted the overall research key objectives points as follows.

- To Examine trust and other factors that significantly impact Information Systems Security Compliance.
- To refine the initial custom-designed instrument through pilot phases by confirming the internal consistency and Uni-dimensionality of each of the sub-scales.
- To Conduct the final study using the final instrument with an appropriate sample size.
- To Analyse the collected data from the final study.
- To present the findings and fulfilment of the research gap.

Chapter two discussed the literature review and how trust has developed and evolved. The study has explored the meaning of trust and culture as the two main constructs being studied throughout this research. The chapter has also provided a literature background on other various factors such as workplace culture, different level trust scale, the importance of Information security compliance, the belief, expectation, trustworthiness of co-workers, Western IT system. Employee alignment, and supportive leadership. It also addressed the nature of Arab trust as a rooted culture and a need for further investigation to measure these

variables and how they impact information security compliance. Furthermore, the chapter discussed the Arab cultural antecedent of trust and how trust is driven by culture to establish a relationship and this relationship led to sharing information. It also discussed the Arab culture's resistance to transferring western IT systems to Arab culture as well as the individual's alignment and how this affects the workplace culture. In addition, a leadership style of management and leaders are driven by tradition and local culture which has shown an impact on job satisfaction and employee's workplace alignment which has revealed a significant impact on information security compliance. Finally, a non-focused area on personality factors was presented for further future research and five hypotheses were developed which were not intended to be tested but to give an overview on how also personality could impact Information security compliance in terms of the level of Awareness at the workplace.

Chapter 3 presented the research methods conducted for achieving the research aim and objectives. The discussion of logical stances and research approach were discussed. The research justified the use of quantitative research that bonded with the research approach and positivism epistemology. A custom-designed Likert scale was presented as a web-based survey administrated to 250 employees at Saudi Oil Company to analyze the gathered data to test our developed research hypothesis. The chapter also presented the data collection method, sample size, the chosen population, and strategy.

Chapter 4 presented the questionnaire design development phases, the sample size, and the sample questionnaire used in the pilot study. The questionnaire design was subjected to a series of refining phases to reduce the number of items based on internal consistency which has helped to build a valid and reliable model that can be measured to assist our research findings. A description detail was presented for each phase showing the structure of the scales and sub-scales as well as the development of each phase analysis towards the final questionnaire that was used to conduct the study and the established research model.

Chapter 5 presented the results of gathered data from the Saudi Oil Company, the chapter presented the research variables definitions, descriptive statistics analysis for each variable, factor analysis, assumptions, reliability, structural equation model, path analysis, linear regression analysis, skewness, and kurtosis. Numerous tables and figures were presented to answer research questions as well as to test the research hypothesis. The first section tested the collected data of 247 respondents and was subjected to data screening, dimensional factor analysis, reliability, and validity test. The questionnaire items and scales were then refined and reduced based on the low loading, the extracted output revealed 6 clean factors with no

crossing over using SPSS software. The output was subjected to further analysis using AMOS, confirmatory factor analysis was presented to draw the model correlation and path analysis. Each variable namely, Trust, Western IT system, the belief, expectation, trustworthiness of co-workers, and workplace culture alignment with supportive leadership were tested with the independent variables Information Security System and Data privacy compliance. A final mode was confirmed with adequacy model fit. A developed hypothesis was tested and conducted using the final model. The results were statistically significant for most variables, and other variables presented a full mediation result. The analysis output is summarised as follows.

- Trust did not predict information System Security Compliance and Data Privacy in the Saudi Oil Company.
- Western IT System predicted information System Security Compliance and Data Privacy in the Saudi Oil Company.
- The belief, Trustworthiness, and expectation of Co-Workers predicted information System Security Compliance and Data Privacy in the Saudi Oil Company.
- Workplace Culture Alignment and supportive leadership predicted information System Security Compliance and Data Privacy in the Saudi Oil Company.
- Workplace Culture Alignment and supportive leadership did not predict Data Privacy in the Saudi Oil Company.
- Trust, Workplace Culture Alignment with Supportive leadership, Western IT, and the belief, Trustworthiness, and Expectation of Co-Workers model predicted information System Security Compliance and Data Privacy in the Saudi Oil Company.
- Trust is not a statistically significant negative relationship on Information System Security Compliance and Data Privacy at Saudi Oil Company.
- Western IT System is a statistically significant negative relationship with Information System Security Compliance and Data Privacy at Saudi Oil Company.
- Workplace Culture Alignment and supportive leadership is a statistically significant negative relationship with Information System Security Compliance at Saudi Oil company
- Workplace Culture Alignment and supportive leadership are not statistically significant negative relationships on Data Privacy at Saudi Oil Company.

- The belief, Trustworthiness, and Expectation of Co-Workers is a statistically significant negative relationship on Information System Security Compliance at Saudi Oil Company.
- The belief, Trustworthiness, and Expectation of Co-Workers is not a statistically significant negative relationship on Data Privacy at Saudi Oil Company.
- The Workplace Culture Alignment and supportive leadership fully mediate the relationship between belief, Trustworthiness, and Expectation of co-workers and Information System Security Compliance at Saudi Oil Company.
- Western IT System fully mediates the relationship between belief, Trustworthiness, and Expectation of co-workers and Information System Security Compliance at Saudi Oil Company.
- Workplace Culture Alignment and supportive leadership fully mediate the relationship between Trust and Information System Security Compliance at Saudi Oil Company.

Chapter 6 has presented an overall discussion on the fulfilment of the research questions and the achievement of objectives and aims. The research questions were fully answered and justified through the analysis output. The research was conducted based on the presented variables on each research question. The objectives were also fulfilled and evident with the presented results, tables, and figures which led to the achievement of the research aim. The chapter also has addressed various factors that are latent to this study, each factor has shown a correlation to each other which helped produce the overall outcomes and contributed to the achievement of the research aim. Furthermore, these factors were not selected randomly but they were derived from literature and observation based on the connection that these factors will have to the main focused area of this research which is modelling the information security in the Arab region in the context of Saudi Oil Company.

A summary of the questionnaire design was presented that highlighted the development of each phase towards the final phase. A contribution to knowledge has been made, justified, and explained by achieving the main research aim which is modelling Information Security in the context of a Saudi Arabian Oil Company. The contribution to knowledge has covered theoretical contribution, methodological contribution, and practical contribution. A research limitation and recommendation for future research were also presented which presented the challenges encountered by the researcher, the method used to conduct the research, and the suggested future research that can improve the research output including proposed constructs

that can be potentially significant to the current research study. The weakness of the research, application, and implication was also presented. And finally, the appendices include questionnaire phase one, phase two, and final phase. It also comprises descriptive statistics for respondents for each phase and lastly the reliability test for each phase and the final web-based survey.

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9. Appendices

Appendix A: Questionnaire Phase One (Pilot Study)

Trust Towards IT/IS Survey

I value and pay close attention to your Answers and comments. All responses will remain confidential.

Q1	**Have you ever taken Information Security awareness Training?**	YES	NO			
Q2	**Date**					
Q3	**Age (in Years)**					
Q4	**Educational Status**					
Q5	**Have you done your degree out of country?**	HOME COUNTRY	ABROAD			
Q6	**Occupation**					
Q7	**Work Experience (In years)**					

SCALE INSTRUCTIONS

	For the following scales please CIRCLE the score that shows how much you agree or disagree with the statements:	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
		1	2	3	4	5

General Trust scale

	The 6 items questionnaire below shows the general statements that measure the trust, beliefs, and honesty of others.	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
Q8	Most employees are honest.	1	2	3	4	5
Q9	Most employees are trustworthy.	1	2	3	4	5
Q10	Most employees are kind and good.	1	2	3	4	5
Q11	Most employees are trust to each other	1	2	3	4	5
Q12	I am trustful person	1	2	3	4	5
Q13	Most employees will respond in kind when others trusted them.	1	2	3	4	5

Specific Trust Scale

Questionnaire of 5 items designed to measure a general level of trust towards other employees. It focuses on two different factors that form general trust: 1. the belief that other people are honest and 2. Belief that trusting others are risky; these factors will measure Anxiety scale and trust scale.

		Strongly Agree	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
Q14	People tell a lies when the can benefit in return.	1	2	3	4	5
Q15	Those dedicated to unselfish causes are frequently exploited by others.	1	2	3	4	5
Q16	Some people can do things well but because others pursue their own self-interest and cooperation often fail	1	2	3	4	5
Q17	People are considered honest most of the time.	1	2	3	4	5
Q18	Community security system can affect the people work if developed further	1	2	3	4	5

Trust in Close Relationships Scale

Expectedness, trustworthiness and Belief be combined to create overall trust in close relationships.

	Belief	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
Q19	Even when I don't know how my coworker will react, I feel comfortable: telling him/her anything about myself, including those things of which I am ashamed.	1	2	3	4	5
Q20	Though times may change and the future is uncertain, I know my coworker will always be ready and willing to offer me strength and care.	1	2	3	4	5
Q21	Whenever we have to make an important decision in a situation we have never come across before, I know my coworker will be worried about my welfare.	1	2	3	4	5
Q22	Even if I have no reason to expect my coworker to share things with me, I still feel confident that he/she will.	1	2	3	4	5
Q23	I can trust on my coworker to react in a positive way when I uncover my weaknesses to him/her.	1	2	3	4	5
Q24	When I share my problems with my coworker, I know he/she will respond in a caring way even before I say anything.	1	2	3	4	5
Q25	When I am with my coworker, I feel safe in facing unknow	1	2	3	4	5

	Expectedness	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
Q26	I sometimes avoid my coworker because he/she is unpredictable and I fear saying or doing something which might generate conflict.	1	2	3	4	5
Q27	I am never certain that my coworker won't do something that I dislike or will embarrass me.	1	2	3	4	5
Q28	My coworker is very unpredictable. I never know how he/she is going to act from one day to the next day.	1	2	3	4	5
Q29	I feel very uncomfortable when my coworker has to make decisions which will have impact on my personally.	1	2	3	4	5
Q30	My coworker acts in a very dependable manner.	1	2	3	4	5

	Trustworthiness	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
Q31	My coworker has proven to be trustworthy and I am willing to let him/her involve in actions which other coworkers find too threatening.	1	2	3	4	5
Q32	I have found that my coworker is unusually dependable, especially when it comes to things which are significant to me.	1	2	3	4	5
Q33	I am certain that my coworker would not cheat on me, and there was no chance that he/she would get caught.	1	2	3	4	5
Q34	I can trust on my coworker to keep the promises he/she ma	1	2	3	4	5
Q35	Even when my coworker creates excuses which sound somewhat unlikely, I am self-assured that he/she is telling the truth.	1	2	3	4	5

Trust Towards Others

	A designed questionnaire of 3 items presented to measure the level of people trust towards each other.	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
Q36	Generally speaking, I would say that most people can be trusted.	1	2	3	4	5
Q37	Most of the time, people try to be helpful to others.	1	2	3	4	5
Q38	Most people would try to be fair with me whenever they can be	1	2	3	4	5

	Western IT Technology system Satisfaction	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
Q39	Overall, I am satisfied with how easy it is to use this system	1	2	3	4	5
Q40	It was simple to use this system	1	2	3	4	5
Q41	I can efficiently complete my work using this system	1	2	3	4	5
Q42	I am able to complete my work quickly using this system	1	2	3	4	5
Q43	I am able to efficiently complete my work using this system	1	2	3	4	5
Q44	I feel comfortable using this system	1	2	3	4	5
Q45	It was easy to learn to use this system	1	2	3	4	5
Q46	I believe I became productive quickly using this system	1	2	3	4	5
Q47	The system gives error messages that clearly tell me how to fix problems	1	2	3	4	5
Q48	Whenever I make a mistake using the system, I recover easily and quickly	1	2	3	4	5
Q49	The information (such as online help, on-screen messages, and other documentation) provided with this system is clear	1	2	3	4	5
Q50	It is easy to find the information I needed	1	2	3	4	5
Q51	The information provided for the system is easy to understand	1	2	3	4	5
Q52	The information is effective in helping me complete the tasks and scenarios	1	2	3	4	5
Q53	The organization of information on the system screens is clear	1	2	3	4	5
Q54	The interface of this system is pleasant	1	2	3	4	5
Q55	I like using the interface of this system	1	2	3	4	5
Q56	This system has all the functions and capabilities I expect it to have	1	2	3	4	5
Q57	Overall, I am satisfied with this system	1	2	3	4	5

	Perceived Usefulness	*Very Unlikely*	*Unlikely*	*Neither Likely nor Unlikely*	*Likely*	*Very Likely*
Q58	Using the system in my job would enable me to accomplish tasks more quickly	1	2	3	4	5
Q59	Using the system would improve my job performance	1	2	3	4	5
Q60	Using the system in my job would increase my productity	1	2	3	4	5
Q61	Using the system would enhance my effectiveness on the job	1	2	3	4	5
Q62	Using the system would make it easier to do my job	1	2	3	4	5
Q63	Overal I find the system useful in my job	1	2	3	4	5
	Perceived Ease Of Use	*Very Unlikely*	*Unlikely*	*Neither Likely nor Unlikely*	*Likely*	*Very Likely*
Q64	Learning to operate the system would be easy for me	1	2	3	4	5
Q65	I would find it easy to get the system to do what I want it to do	1	2	3	4	5
Q66	My interaction with the system would be clear and understandable	1	2	3	4	5
Q67	I would find the system to be flexible to interrelate with	1	2	3	4	5
Q68	It would be easy for me to become skilled at using the system	1	2	3	4	5
Q69	I would find the system easy to use	1	2	3	4	5

People, Culture, and Leadership

This is not a test. There is no right or wrong answers. Answer how you personally feel about the statement in your present job, not how you think it "should" be. Your answers are confidential.

	People	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
Q70	I feel valuable and creative	1	2	3	4	5
Q71	I can be inventive	1	2	3	4	5
Q72	I see limitles opportunities for development	1	2	3	4	5
Q73	I know how I fit into the big picture	1	2	3	4	5
Q74	I feel I belong	1	2	3	4	5
Q75	I am valued for my work and my contributions	1	2	3	4	5
Q76	I am exciting	1	2	3	4	5
Q77	I am successful	1	2	3	4	5
Q78	My relationships are mature and non-political	1	2	3	4	5
Q79	I have enough information to make decisions	1	2	3	4	5
	Culture	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
Q80	People bring their energy and full creativity to work	1	2	3	4	5
Q81	Relationships and communications are fine.	1	2	3	4	5
Q82	Senior managers remember what it was like being an employee.	1	2	3	4	5
Q83	Power and control is widely shared.	1	2	3	4	5
Q84	I am engaged in decisions that affect me.	1	2	3	4	5
Q85	The company is open to challenges, suggestions, and change.	1	2	3	4	5
	Leadership	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
Q86	Leaders here put people first.	1	2	3	4	5
Q87	Leaders here are good trainers.	1	2	3	4	5
Q88	Leaders here ask people how they can help them.	1	2	3	4	5
Q89	Leaders here set a clear direction — "This is where we are going."	1	2	3	4	5
Q90	Leaders here recognise and reward preferred behavior.	1	2	3	4	5
Q91	Leaders here give everyone background information: the big picture.	1	2	3	4	5
Q92	Leaders here protect people from abuse from the system above them.	1	2	3	4	5
Q93	Leaders here make supportive, team decisions.	1	2	3	4	5

Thank you for completing the questionnaire:

Any further comments:

Appendix B: Questionnaire Phase two (Pilot Study)

Trust Towards IT/IS Survey

I value and pay close attention to your Answers and comments. All responses will remain confidential.

Q1	**Have you ever taken Information Security Awareness Training?**	
Q2	**Date**	
Q3	**Age (in Years)**	
Q4	**Educational Status**	
Q5	**Have you done your degree out of country?**	HOME COUNTRY / ABROAD
Q6	**Occupation**	
Q7	**Work Experience (In years)**	

SCALE INSTRUCTIONS

For the following scales please CIRCLE the score that shows how much you agree or disagree with the statements:

	General Trust scale	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
Q8	Most employees are honest.	1	2	3	4	5
Q9	Most employees are trustworthy.	1	2	3	4	5
Q10	Most employees are kind and good.	1	2	3	4	5
Q11	Most employees are trust to each other	1	2	3	4	5
Q12	Most employees will respond in kind when others trusted them.	1	2	3	4	5

Questionnaire of 5 items designed to measure a general level of trust towards other employees. It focuses on two different factors that form general trust: 1. the belief that other people are honest and 2. Belief that trusting others are risky; these factors will measure Anxiety scale and trust scale.

	Specific Trust Scale	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q13	People tell a lies when the can benefit in return.	1	2	3	4	5
Q14	Those dedicated to unselfish causes are frequently exploited by others.	1	2	3	4	5
Q15	Some people can do things well but because others pursue their own self-interest and cooperation often fail because of them.	1	2	3	4	5
Q16	People are considered honest most of the time.	1	2	3	4	5
Q17	Community security system can affect the people work if developed further	1	2	3	4	5

Trust in Close Relationships Scale

Expectedness, trustworthiness and Belief to be combined to create overall trust in close relationships.

	Belief	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q18	Though times may change and the future is uncertain, I know my coworker will always be ready and willing to offer me strength and care.	1	2	3	4	5
Q19	Whenever we have to make an important decision in a situation we have never come across before, I know my coworker will be worried about my welfare.	1	2	3	4	5
Q20	Even if I have no reason to expect my coworker to share things with me, I still feel confident that he/she will.	1	2	3	4	5
Q21	When I share my problems with my coworker, I know he/she will respond in a caring way even before I say anything.	1	2	3	4	5
Q22	When I am with my coworker, I feel safe in facing unknown new situations	1	2	3	4	5

	Expectations of co-workers	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q23	I always trust my co-workers to do the best	1	2	3	4	5
Q24	I expect my co-workers to always support me.	1	2	3	4	5
Q25	My co-workers are very predictable.	1	2	3	4	5
Q26	I feel very comfortable when my co-workers make decision.	1	2	3	4	5
Q27	My co-workers are always very dependable.	1	2	3	4	5

	Trustworthiness	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q28	My coworkers have proven themselves to be trustworthy and supportive.	1	2	3	4	5
Q29	I have found that my coworkers are very dependable, especially when it comes to things which are significant to me.	1	2	3	4	5
Q30	I am certain that my coworkers will not cheat on me.	1	2	3	4	5
Q31	I can trust on my coworkers to keep the promises they make.	1	2	3	4	5
Q32	I am self-assured that my coworkers are always tell the truth.	1	2	3	4	5

A designed questionnaire of 3 items presented to measure the level of people trust towards each other.

	Trust Towards Others	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q33	Generally speaking, I would say that most people can be trusted.	1	2	3	4	5
Q34	Most of the time, people try to be helpful to others.	1	2	3	4	5
Q35	Most people would try to be fair with me whenever they can be	1	2	3	4	5

	Western IT Technology system Satisfaction	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q36	The system gives error messages that clearly tell me how to fix problems	1	2	3	4	5
Q37	Whenever I make a mistake using the system, I recover easily and quickly	1	2	3	4	5
Q38	The information (such as online help, on-screen messages, and other documentation) provided with this system is clear	1	2	3	4	5
Q39	The information provided for the system is easy to understand	1	2	3	4	5

	Perceived Usefulness	Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
Q40	Using the system would improve my job performance	1	2	3	4	5
Q41	Using the system in my job would increase my productity	1	2	3	4	5
Q42	Using the system would enhance my effectiveness on the job	1	2	3	4	5
Q43	Using the system would make it easier to do my job	1	2	3	4	5
Q44	Overal I find the system useful in my job	1	2	3	4	5

	Perceived Ease Of Use	Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
Q45	Learning to operate the system would be easy for me	1	2	3	4	5
Q46	I would find it easy to get the system to do what I want it to do	1	2	3	4	5
Q47	My interaction with the system would be clear and understandable	1	2	3	4	5
Q48	I would find the system to be flexible to interrelate with	1	2	3	4	5
Q49	I would find the system easy to use	1	2	3	4	5

This is not a test. There is no right or wrong answers. Answer how you personally feel about the statement in your present job, not how you think it “should” be. Your answers are confidential.

	Employees's Alignment	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q50	I feel valuable and creative	1	2	3	4	5
Q51	I can be inventive	1	2	3	4	5
Q52	I know how I fit into the big picture	1	2	3	4	5
Q53	I am valued for my work and my contributions	1	2	3	4	5
Q54	I am successful	1	2	3	4	5

	Workplace Culture	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q55	People bring their energy and full creativity to work	1	2	3	4	5
Q56	Relationships and communications are fine.	1	2	3	4	5
Q57	Senior managers remember what it was like being an employee.	1	2	3	4	5
Q58	Power and control is widely shared.	1	2	3	4	5
Q59	I am engaged in decisions that affect me.	1	2	3	4	5
Q60	The company is open to challenges, suggestions, and change.	1	2	3	4	5

	Leadership	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q61	Leaders here put people first.	1	2	3	4	5
Q62	Leaders here are good trainers.	1	2	3	4	5
Q63	Leaders here ask people how they can help them.	1	2	3	4	5
Q64	Leaders here set a clear direction — “This is where we are going.”	1	2	3	4	5
Q65	Leaders here recognise and reward preferred behavior.	1	2	3	4	5
Q66	Leaders here give everyone background information: the big picture.	1	2	3	4	5
Q67	Leaders here protect people from abuse from the system above them.	1	2	3	4	5
Q68	Leaders here make supportive, team decisions.	1	2	3	4	5

	Information Systems Security	Very Llikely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
Q69	Always log off when computer unattended	1	2	3	4	5
Q70	Refuse emails from unknown or untrusted source.	1	2	3	4	5
Q71	Use software with valid license	1	2	3	4	5
Q72	Shredding or destroying confidential documents that needs to be disposed	1	2	3	4	5
Q73	Share user name and passwords	1	2	3	4	5
Q74	Open untrusted emails attachments	1	2	3	4	5
Q75	Access suspicious websites	1	2	3	4	5
Q76	Leaving workstation unattended	1	2	3	4	5
Q77	Not reporting security breaches or incidents	1	2	3	4	5
Q78	Leaving media devices such as DVD, USB that contain sensitive information on desks	1	2	3	4	5
Q79	Hacking into other user's accounts	1	2	3	4	5
Q80	Sending and creating spam emails	1	2	3	4	5
Q81	Downloading files and video through peer-to-peer file sharing	1	2	3	4	5
Q82	Configuring wireless gateway to give unauthorised access to company network					

	Data Privacy	Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
Q83	Leave SmartBadge Unattended	1	2	3	4	5
Q84	Laptop not locked to docking station	1	2	3	4	5
Q85	PD/SPD exposed (unlocked cabinet, or left in workarea	1	2	3	4	5
Q86	Laptop has keys in it	1	2	3	4	5
Q87	Laptop not locked to docking station	1	2	3	4	5

Thank you for completing the questionnaire:

Appendix C: Questionnaire Phase three

Trust Towards IT/IS Survey

I value and pay close attention to your Answers and comments: All responses will remain confidential

Q1	**Have you ever taken Information Security Awareness Training?**		
Q2	**Date**		
Q3	**Age (in Years)**		
Q4	**Educational Status**		
Q5	**Have you done your degree out of country?**	HOME COUNTRY	ABROAD
Q6	**Occupation**		
Q7	**Work Experience (In years)**		

SCALE INSTRUCTIONS

For the following scales please CIRCLE the score that shows how much you agree or disagree with the statements:

	My Trust Towards Others	*Strongly Agree*	*Agree*	*Neutral*	*Disagree*	*Strongly Disagree*
Q8	Most employees are honest	1	2	3	4	5
Q9	Most employees are trustworthy	1	2	3	4	5
Q10	Most employees are kind and good	1	2	3	4	5
Q11	Most employees are trust to each other	1	2	3	4	5
Q12	Generally speaking, I would say that most people can be trusted	1	2	3	4	5
Q13	Most of the time, people try to be helpful to others	1	2	3	4	5
Q14	Most people would try to be fair with me whenever they can be	1	2	3	4	5

	My belief in co-workers	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q15	I know my co-workers are always concerned about my welfare	1	2	3	4	5
Q16	I feel confident that my co-workers will share things with me	1	2	3	4	5
Q17	I feel safe with my co-workers even in new situations	1	2	3	4	5
Q18	My co-workers are very preditable	1	2	3	4	5
Q19	I always trust my co-workers to do the best for me	1	2	3	4	5
Q20	I expect my co-workers to always support me	1	2	3	4	5
Q21	I can trust my co-workers to keep promises they make to me	1	2	3	4	5
Q22	I am sure that my co-workers will always tell me the truth	1	2	3	4	5
Q23	My co-workers are always very dependable	1	2	3	4	5
Q24	My co-workers have proven themselves to be trustworthy and supportive	1	2	3	4	5
Q25	I have found that my co-workers are very dependable, especially when it comes to things which are significant to me	1	2	3	4	5
Q26	Though times may change and the future is uncertain, I know my co-workers will always be ready and willing to offer me strength and care	1	2	3	4	5
Q27	I always have confidence in my co-workers	1	2	3	4	5
Q28	I am certain that my co-workers will not cheat on me	1	2	3	4	5

	Western IT Systems Feedback (Technology Invented in non-Arab region)	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q29	The system gives error messages that clearly tell me how to fix problems	1	2	3	4	5
Q30	The information (such as online help, on-screen messages, and other documentation) provided with this system is clear	1	2	3	4	5
Q31	The information provided for the system is easy to understand	1	2	3	4	5
Q32	Using the system in my job would increase my productity	1	2	3	4	5
Q33	Using the system would enhance my effectiveness on the job	1	2	3	4	5
Q34	Using the system would make it easier to do my job	1	2	3	4	5
Q35	Learning to operate the system is easy for me	1	2	3	4	5
Q36	My interaction with the system is clear and understandable	1	2	3	4	5
Q37	I find the system to be flexible to relate to	1	2	3	4	5
Q38	I find the system easy to use	1	2	3	4	5
	Indivdual's Workplace Alignment	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q39	I feel valuable and creative	1	2	3	4	5
Q40	I am valued for my work and my contributions	1	2	3	4	5
Q41	I am successful	1	2	3	4	5
Q42	Management understand the differences in employees	1	2	3	4	5
Q43	In my organization people have room to experiment with better practices	1	2	3	4	5
Q44	New tasks are assignwith personal differences in mind	1	2	3	4	5
Q45	My organization balances the needs of different groups of people who use our services	1	2	3	4	5
Q46	People are encouraged to share what they learn	1	2	3	4	5
Q47	Mistake made by individuals are used constructively	1	2	3	4	5
	Supportive Leadership	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Q48	Leaders here are good trainers	1	2	3	4	5
Q49	Leaders here ask people how they can help them	1	2	3	4	5
Q50	Leaders here recognise and reward preferred behavior	1	2	3	4	5
Q51	Leaders here give everyone background information: the big picture	1	2	3	4	5
Q52	Leaders here protect people from abuse from the system above them	1	2	3	4	5
	Information Systems Security Compliance	Very Llikely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
Q53	Share user name and passwords	1	2	3	4	5
Q54	Open untrusted emails attachments	1	2	3	4	5
Q55	Access suspicious websites	1	2	3	4	5
Q56	Leaving workstation unattended	1	2	3	4	5
Q57	Not reporting security breaches or incidents	1	2	3	4	5
Q58	Leaving media devices such as DVD, USB that contain sensitive information on desks	1	2	3	4	5
Q59	Hacking into other user's accounts	1	2	3	4	5
Q60	Sending and creating spam emails	1	2	3	4	5
Q61	Downloading files and video through peer-to-peer file sharing	1	2	3	4	5
Q62	Configuring wireless gateway to give unauthorised access to company network	1	2	3	4	5
Q63	Leave SmartBadge Unattended	1	2	3	4	5
Q64	Laptop not locked to docking station	1	2	3	4	5
Q65	PD/SPD exposed (unlocked cabinet, or left in workarea)	1	2	3	4	5
Q66	Laptop has keys in it	1	2	3	4	5
Q67	Laptop left logged in and Unattended	1	2	3	4	5

Thank you for completing the questionnaire:

Appendix D: Questionnaire Phase One Reliability Test

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ISAT	279.48	446.093	.054	.	.688
Age	243.92	452.827	-.191	.	.811
Work Experience	269.92	385.493	.132	.	.720
Q8	277.92	419.743	.604	.	.670
Q9	278.00	424.583	.507	.	.673
Q10	278.20	438.000	.256	.	.683
Q11	277.76	426.690	.498	.	.675
Q12	278.88	444.943	.055	.	.687
Q13	278.60	429.083	.538	.	.676
Q14	278.12	449.693	-.128	.	.691
Q15	278.16	448.390	-.082	.	.690
Q16	278.00	436.583	.226	.	.683
Q17	278.12	429.777	.447	.	.677
Q18	277.96	453.790	-.192	.	.695
Q19	277.04	444.290	.022	.	.689
Q20	277.92	427.493	.636	.	.675
Q21	278.00	437.083	.374	.	.682
Q22	277.84	438.057	.310	.	.682
Q23	277.84	438.473	.207	.	.683
Q24	278.04	432.623	.453	.	.679
Q25	278.00	430.167	.537	.	.677
Q26	277.32	444.810	.019	.	.689
Q27	277.76	456.690	-.322	.	.696
Q28	277.36	455.407	-.241	.	.696
Q29	277.56	448.423	-.073	.	.691
Q30	277.56	444.673	.039	.	.688
Q31	278.08	447.160	-.036	.	.689
Q32	277.60	433.500	.368	.	.680
Q33	277.60	429.250	.465	.	.676
Q34	277.76	431.440	.419	.	.678
Q35	277.76	431.773	.409	.	.678
Q36	277.92	423.577	.590	.	.672
Q37	278.24	431.440	.442	.	.678
Q38	277.88	423.610	.537	.	.673
Q39	277.92	428.410	.518	.	.676
Q40	277.92	431.910	.483	.	.678
Q41	278.24	440.940	.205	.	.685
Q42	278.20	441.500	.159	.	.685
Q43	278.08	439.993	.226	.	.684
Q44	278.08	430.827	.516	.	.677
Q45	278.12	432.443	.575	.	.678
Q46	278.20	432.167	.413	.	.679
Q47	277.80	441.083	.136	.	.685
Q48	278.08	431.410	.399	.	.678
Q49	278.12	434.360	.398	.	.680
Q50	278.24	439.607	.257	.	.684
Q51	278.28	442.043	.167	.	.685

Q52	278.32	438.643	.315	.	.683
Q53	278.24	432.523	.612	.	.678
Q54	278.00	434.167	.400	.	.680
Q55	277.88	440.777	.181	.	.685
Q56	277.80	438.500	.225	.	.683
Q57	278.12	438.027	.231	.	.683
Q58	276.92	460.993	-.359	.	.700
Q59	276.72	460.043	-.428	.	.699
Q60	276.72	459.793	-.376	.	.699
Q61	276.88	466.277	-.464	.	.704
Q62	276.84	453.640	-.205	.	.695
Q63	276.92	455.327	-.200	.	.697
Q64	276.84	445.640	.002	.	.689
Q65	276.72	449.210	-.099	.	.691
Q66	276.80	451.083	-.172	.	.692
Q67	276.96	448.790	-.090	.	.691
Q68	276.80	443.583	.054	.	.688
Q69	277.00	446.333	-.014	.	.689
Q70	278.52	446.510	-.008	.	.688
Q71	278.56	436.423	.384	.	.681
Q72	278.20	441.583	.111	.	.686
Q73	278.40	446.250	-.006	.	.689
Q74	278.20	445.000	.028	.	.688
Q75	278.52	437.010	.383	.	.681
Q76	278.28	431.793	.438	.	.678
Q77	278.48	443.260	.115	.	.686
Q78	278.56	431.923	.400	.	.678
Q79	278.44	457.840	-.342	.	.697
Q80	277.68	436.227	.291	.	.682
Q81	277.88	443.110	.076	.	.687
Q82	277.80	427.583	.495	.	.675
Q83	277.32	436.560	.216	.	.683
Q84	277.56	433.340	.318	.	.680
Q85	277.64	432.240	.332	.	.679
Q86	277.64	425.073	.540	.	.673
Q87	277.60	423.083	.576	.	.672
Q88	277.80	420.333	.697	.	.669
Q89	277.72	417.793	.603	.	.669
Q90	277.84	427.473	.492	.	.675
Q91	277.84	426.223	.596	.	.674
Q92	277.56	432.590	.357	.	.679
Q93	277.84	431.640	.463	.	.678

Appendix E: Descriptive Statistic for Respondents (Pilot Study Phase One)

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
ISAT	25	1	2	1.04	.200	5.000	.464	25.000	.902
Age	25	24	60	36.60	7.292	1.304	.464	3.277	.902
Work Experience	25	2	21	10.60	5.649	.551	.464	-.855	.902
Q8	25	1	5	2.60	1.041	.434	.464	-.237	.902
Q9	25	1	4	2.52	1.005	.342	.464	-1.007	.902
Q10	25	1	4	2.32	.748	.030	.464	-.151	.902
Q11	25	1	4	2.76	.926	-.506	.464	-.329	.902
Q12	25	1	3	1.64	.569	.135	.464	-.684	.902
Q13	25	1	4	1.92	.759	.759	.464	1.062	.902
Q14	25	1	4	2.40	.645	.404	.464	.260	.902
Q15	25	1	3	2.36	.638	-.473	.464	-.538	.902
Q16	25	1	4	2.52	.963	.243	.464	-.852	.902
Q17	25	1	4	2.40	.866	.753	.464	-.104	.902
Q18	25	1	5	2.56	1.003	.763	.464	.069	.902
Q19	25	2	5	3.48	1.122	.054	.464	-1.337	.902
Q20	25	2	4	2.60	.707	.769	.464	-.538	.902
Q21	25	2	4	2.52	.586	.592	.464	-.540	.902
Q22	25	2	4	2.68	.627	.345	.464	-.527	.902
Q23	25	2	5	2.68	.852	1.138	.464	.735	.902
Q24	25	2	4	2.48	.714	1.195	.464	.145	.902
Q25	25	1	4	2.52	.714	.297	.464	-.052	.902
Q26	25	1	5	3.20	1.000	-.163	.464	-.306	.902
Q27	25	1	4	2.76	.779	-.112	.464	-.250	.902
Q28	25	1	5	3.16	.943	-.343	.464	-.255	.902
Q29	25	2	4	2.96	.790	.073	.464	-1.351	.902
Q30	25	1	4	2.96	.790	-.479	.464	.170	.902
Q31	25	1	4	2.44	.712	.605	.464	.225	.902
Q32	25	1	4	2.92	.812	-.354	.464	-.214	.902
Q33	25	1	5	2.92	.862	.162	.464	.658	.902
Q34	25	2	4	2.76	.831	.495	.464	-1.368	.902
Q35	25	2	4	2.76	.831	.495	.464	-1.368	.902
Q36	25	1	5	2.60	.913	.929	.464	.679	.902
Q37	25	1	4	2.28	.792	1.079	.464	1.019	.902
Q38	25	1	5	2.64	.995	.820	.464	-.260	.902
Q39	25	2	5	2.60	.816	1.398	.464	1.749	.902
Q40	25	2	4	2.60	.707	.769	.464	-.538	.902
Q41	25	1	4	2.28	.614	.952	.464	1.547	.902
Q42	25	1	4	2.32	.690	1.128	.464	1.347	.902
Q43	25	2	4	2.44	.651	1.227	.464	.507	.902
Q44	25	2	4	2.44	.712	1.359	.464	.525	.902
Q45	25	2	4	2.40	.577	1.130	.464	.439	.902
Q46	25	1	4	2.32	.802	.909	.464	.593	.902
Q47	25	1	4	2.72	.843	.141	.464	-.769	.902
Q48	25	1	4	2.44	.870	.612	.464	-.301	.902

Q49	25	1	4	2.40	.707	.769	.464	.490	.902
Q50	25	1	4	2.28	.614	.952	.464	1.547	.902
Q51	25	1	4	2.24	.597	1.168	.464	2.344	.902
Q52	25	1	4	2.20	.577	1.412	.464	3.445	.902
Q53	25	2	4	2.28	.542	1.864	.464	2.938	.902
Q54	25	1	4	2.52	.714	.297	.464	-.052	.902
Q55	25	2	4	2.64	.700	.643	.464	-.641	.902
Q56	25	2	4	2.72	.792	.564	.464	-1.139	.902
Q57	25	1	4	2.40	.816	.599	.464	.015	.902
Q58	25	2	5	3.60	1.000	-.435	.464	-.794	.902
Q59	25	2	5	3.80	.764	-.854	.464	1.128	.902
Q60	25	2	5	3.80	.866	-.837	.464	.490	.902
Q61	25	1	5	3.64	1.036	-.652	.464	.371	.902
Q62	25	2	5	3.68	.900	-.405	.464	-.360	.902
Q63	25	1	5	3.60	1.190	-.902	.464	.078	.902
Q64	25	1	5	3.68	.945	-1.534	.464	2.082	.902
Q65	25	2	5	3.80	.764	-.854	.464	1.128	.902
Q66	25	2	5	3.72	.678	-.461	.464	.656	.902
Q67	25	2	5	3.56	.712	-.605	.464	.225	.902
Q68	25	1	5	3.72	.936	-1.367	.464	2.240	.902
Q69	25	2	5	3.52	.872	-.476	.464	-.443	.902
Q70	25	1	3	2.00	.500	.000	.464	1.723	.902
Q71	25	1	3	1.96	.611	.015	.464	.013	.902
Q72	25	1	4	2.32	.900	.405	.464	-.360	.902
Q73	25	1	4	2.12	.726	.522	.464	.789	.902
Q74	25	1	4	2.32	.802	.909	.464	.593	.902
Q75	25	1	3	2.00	.577	.000	.464	.439	.902
Q76	25	1	4	2.24	.779	.687	.464	.657	.902
Q77	25	1	3	2.04	.611	-.015	.464	.013	.902
Q78	25	1	4	1.96	.841	.994	.464	1.186	.902
Q79	25	1	5	2.08	.812	1.874	.464	6.451	.902
Q80	25	2	4	2.84	.800	.307	.464	-1.344	.902
Q81	25	2	4	2.64	.860	.807	.464	-1.156	.902
Q82	25	1	4	2.72	.891	-.158	.464	-.597	.902
Q83	25	1	5	3.20	1.000	-.163	.464	-.306	.902
Q84	25	1	5	2.96	.935	.084	.464	-.254	.902
Q85	25	1	5	2.88	.971	.850	.464	1.234	.902
Q86	25	1	5	2.88	.927	.254	.464	-.132	.902
Q87	25	1	5	2.92	.954	.483	.464	.471	.902
Q88	25	1	5	2.72	.891	.612	.464	.546	.902
Q89	25	1	5	2.80	1.118	.428	.464	-.595	.902
Q90	25	1	5	2.68	.900	.713	.464	.541	.902
Q91	25	1	5	2.68	.802	.671	.464	2.021	.902
Q92	25	1	5	2.96	.889	.082	.464	.275	.902
Q93	25	1	4	2.68	.748	-.030	.464	-.151	.902
Valid N (listwise)	25								

Appendix F: Questionnaire Phase Two Reliability

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
ISAT	279.48	446.093	.054		.688
Age	243.92	452.827	-.191		.811
Work Experience	269.92	385.593	.132	.	.720
Q8	209.44	477.673	.477		.860
Q9	209.68	482.560	.385	.	.862
Q10	209.84	479.807	.442	.	.861
Q11	209.40	478.333	.493	.	.860
Q12	210.40	497.917	-.006	.	.865
Q13	210.00	493.583	.085	.	.865
Q14	209.92	498.077	-.016	.	.866
Q15	209.96	495.623	.061	.	.865
Q16	209.56	498.423	-.029	.	.867
Q17	209.84	480.807	.375	.	.861
Q18	209.88	496.027	.040	.	.865
Q19	209.04	484.290	.242	.	.863
Q20	209.60	482.667	.408	.	.861
Q21	209.68	485.560	.381	.	.862
Q22	209.52	491.177	.188	.	.864
Q23	209.52	491.760	.136	.	.865
Q24	209.60	485.667	.324	.	.862
Q25	209.56	489.173	.227	.	.863
Q26	209.36	483.073	.399	.	.862
Q27	209.60	497.333	.004	.	.866
Q28	209.36	499.740	-.061	.	.867
Q29	209.48	492.593	.135	.	.864
Q30	209.32	484.560	.321	.	.862
Q31	209.76	483.857	.333	.	.862
Q32	209.36	479.407	.472	.	.861
Q33	209.28	480.127	.420	.	.861
Q34	209.40	483.583	.405	.	.862
Q35	209.36	475.907	.566	.	.859
Q36	209.44	479.757	.449	.	.861
Q37	209.88	484.527	.438	.	.862
Q38	209.36	478.657	.492	.	.860
Q39	209.64	477.573	.591	.	.860
Q40	209.76	476.607	.547	.	.860
Q41	210.04	486.373	.349	.	.862
Q42	210.04	486.123	.329	.	.862
Q43	210.00	478.333	.511	.	.860
Q44	209.76	486.607	.249	.	.863
Q45	209.96	483.623	.448	.	.861
Q46	209.84	482.057	.408	.	.861
Q47	209.64	483.073	.350	.	.862
Q48	209.68	472.477	.620	.	.859
Q49	209.80	478.333	.578	.	.860
Q50	209.80	474.917	.597	.	.859

Q51	210.00	486.667	.360	.	.862
Q52	210.00	488.667	.293	.	.863
Q53	209.80	472.417	.666	.	.858
Q54	209.68	483.560	.382	.	.862
Q55	209.64	479.157	.506	.	.860
Q56	209.60	481.167	.379	.	.861
Q57	209.48	477.510	.433	.	.861
Q58	208.88	491.943	.112	.	.865
Q59	209.00	499.583	-.056	.	.867
Q60	209.12	487.943	.184	.	.864
Q61	209.08	493.743	.075	.	.865
Q62	209.00	492.250	.104	.	.865
Q63	209.12	494.027	.048	.	.867
Q64	209.00	491.333	.118	.	.865
Q65	208.92	482.410	.302	.	.862
Q66	208.92	490.410	.176	.	.864
Q67	208.96	483.957	.298	.	.863
Q68	209.16	487.307	.192	.	.864
Q69	209.44	489.257	.137	.	.865
Q70	210.16	496.890	.021	.	.865
Q71	210.40	488.250	.320	.	.863
Q72	210.00	484.333	.327	.	.862
Q73	209.56	497.590	-.018	.	.867
Q74	209.40	496.167	.003	.	.868
Q75	209.56	503.757	-.131	.	.869
Q76	209.44	493.090	.062	.	.866
Q77	209.76	490.940	.118	.	.865
Q78	209.60	495.000	.020	.	.868
Q79	209.44	507.923	-.190	.	.871
Q80	209.04	482.957	.268	.	.863
Q81	209.16	489.140	.118	.	.866
Q82	208.96	481.123	.287	.	.863
Q83	208.64	484.907	.262	.	.863
Q84	208.80	478.917	.382	.	.861
Q85	208.72	486.043	.227	.	.864
Q86	208.92	475.327	.453	.	.860
Q87	208.92	477.243	.429	.	.861

Appendix G: Descriptive Statistics for Respondents (Pilot Study Phase Two)

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Q.8	25	1.00	5.00	2.6000	1.04083	1.083	.434	.464	-.237	.902
Q.9	25	1.00	4.00	2.5200	1.00499	1.010	.342	.464	-1.007	.902
Q.10	25	1.00	4.00	2.3200	.74833	.560	.030	.464	-.151	.902
Q.11	25	1.00	4.00	2.7600	.92556	.857	-.506	.464	-.329	.902
Q.12	25	1.00	3.00	1.6400	.56862	.323	.135	.464	-.684	.902
Q.13	25	1.00	4.00	1.9200	.75939	.577	.759	.464	1.062	.902
Q.14	25	1.00	4.00	2.4000	.64550	.417	.404	.464	.260	.902
Q.15	25	1.00	3.00	2.3600	.63770	.407	-.473	.464	-.538	.902
Q.16	25	1.00	4.00	2.5200	.96264	.927	.243	.464	-.852	.902
Q.17	25	1.00	4.00	2.4000	.86603	.750	.753	.464	-.104	.902
Q.18	25	1.00	5.00	2.5600	1.00333	1.007	.763	.464	.069	.902
Q.19	25	2.00	5.00	3.4800	1.12250	1.260	.054	.464	-1.337	.902
Q.20	25	2.00	4.00	2.6000	.70711	.500	.769	.464	-.538	.902
Q.21	25	2.00	4.00	2.5200	.58595	.343	.592	.464	-.540	.902
Q.22	25	2.00	4.00	2.6800	.62716	.393	.345	.464	-.527	.902
Q.23	25	2.00	5.00	2.6800	.85245	.727	1.138	.464	.735	.902
Q.24	25	2.00	4.00	2.4800	.71414	.510	1.195	.464	.145	.902
Q.25	25	1.00	4.00	2.5200	.71414	.510	.297	.464	-.052	.902
Q.26	25	1.00	5.00	3.2000	1.00000	1.000	-.163	.464	-.306	.902
Q.27	25	1.00	4.00	2.7600	.77889	.607	-.112	.464	-.250	.902
Q.28	25	1.00	5.00	3.1600	.94340	.890	-.343	.464	-.255	.902
Q.29	25	2.00	4.00	2.9600	.78951	.623	.073	.464	-1.351	.902
Q.30	25	1.00	4.00	2.9600	.78951	.623	-.479	.464	.170	.902
Q.31	25	1.00	4.00	2.4400	.71181	.507	.605	.464	.225	.902
Q.32	25	1.00	4.00	2.9200	.81240	.660	-.354	.464	-.214	.902
Q.33	25	1.00	5.00	2.9200	.86217	.743	.162	.464	.658	.902
Q.34	25	2.00	4.00	2.7600	.83066	.690	.495	.464	-1.368	.902
Q.35	25	2.00	4.00	2.7600	.83066	.690	.495	.464	-1.368	.902
Q.36	25	1.00	5.00	2.6000	.91287	.833	.929	.464	.679	.902
Q.37	25	1.00	4.00	2.2800	.79162	.627	1.079	.464	1.019	.902
Q.38	25	1.00	5.00	2.6400	.99499	.990	.820	.464	-.260	.902
Q.39	25	2.00	5.00	2.6000	.81650	.667	1.398	.464	1.749	.902
Q.40	25	2.00	4.00	2.6000	.70711	.500	.769	.464	-.538	.902
Q.41	25	1.00	4.00	2.2800	.61373	.377	.952	.464	1.547	.902
Q.42	25	1.00	4.00	2.3200	.69041	.477	1.128	.464	1.347	.902
Q.43	25	2.00	4.00	2.4400	.65064	.423	1.227	.464	.507	.902
Q.44	25	2.00	4.00	2.4400	.71181	.507	1.359	.464	.525	.902
Q.45	25	2.00	4.00	2.4000	.57735	.333	1.130	.464	.439	.902
Q.46	25	1.00	4.00	2.3200	.80208	.643	.909	.464	.593	.902
Q.47	25	1.00	4.00	2.7200	.84261	.710	.141	.464	-.769	.902
Q.48	25	1.00	4.00	2.4400	.86987	.757	.612	.464	-.301	.902
Q.49	25	1.00	4.00	2.4000	.70711	.500	.769	.464	.490	.902
Q.50	25	1.00	4.00	2.2800	.61373	.377	.952	.464	1.547	.902
Q.51	25	1.00	4.00	2.2400	.59722	.357	1.168	.464	2.344	.902
Q.52	25	1.00	4.00	2.2000	.57735	.333	1.412	.464	3.445	.902
Q.53	25	2.00	4.00	2.2800	.54160	.293	1.864	.464	2.938	.902
Q.54	25	1.00	4.00	2.5200	.71414	.510	.297	.464	-.052	.902

Q.55	25	2.00	4.00	2.6400	.70000	.490	.643	.464	-.641	.902
Q.56	25	2.00	4.00	2.7200	.79162	.627	.564	.464	-1.139	.902
Q.57	25	1.00	4.00	2.4000	.81650	.667	.599	.464	.015	.902
Q.58	25	2.00	5.00	3.6000	1.00000	1.000	-.435	.464	-.794	.902
Q.59	25	2.00	5.00	3.8000	.76376	.583	-.854	.464	1.128	.902
Q.60	25	2.00	5.00	3.8000	.86603	.750	-.837	.464	.490	.902
Q.61	25	1.00	5.00	3.6400	1.03602	1.073	-.652	.464	.371	.902
Q.62	25	2.00	5.00	3.6800	.90000	.810	-.405	.464	-.360	.902
Q.63	25	1.00	5.00	3.6000	1.19024	1.417	-.902	.464	.078	.902
Q.64	25	1.00	5.00	3.6800	.94516	.893	-1.534	.464	2.082	.902
Q.65	25	2.00	5.00	3.8000	.76376	.583	-.854	.464	1.128	.902
Q.66	25	2.00	5.00	3.7200	.67823	.460	-.461	.464	.656	.902
Q.67	25	2.00	5.00	3.5600	.71181	.507	-.605	.464	.225	.902
Q.68	25	1.00	5.00	3.7200	.93630	.877	-1.367	.464	2.240	.902
Q.69	25	2.00	5.00	3.5200	.87178	.760	-.476	.464	-.443	.902
Q.70	25	1.00	3.00	2.0000	.50000	.250	.000	.464	1.723	.902
Q.71	25	1.00	3.00	1.9600	.61101	.373	.015	.464	.013	.902
Q.72	25	1.00	4.00	2.3200	.90000	.810	.405	.464	-.360	.902
Q.73	25	1.00	4.00	2.1200	.72572	.527	.522	.464	.789	.902
Q.74	25	1.00	4.00	2.3200	.80208	.643	.909	.464	.593	.902
Q.75	25	1.00	3.00	2.0000	.57735	.333	.000	.464	.439	.902
Q.76	25	1.00	4.00	2.2400	.77889	.607	.687	.464	.657	.902
Q.77	25	1.00	3.00	2.0400	.61101	.373	-.015	.464	.013	.902
Q.78	25	1.00	4.00	1.9600	.84063	.707	.994	.464	1.186	.902
Q.79	25	1.00	5.00	2.0800	.81240	.660	1.874	.464	6.451	.902
Q.80	25	2.00	4.00	2.8400	.80000	.640	.307	.464	-1.344	.902
Q.81	25	2.00	4.00	2.6400	.86023	.740	.807	.464	-1.156	.902
Q.82	25	1.00	4.00	2.7200	.89069	.793	-.158	.464	-.597	.902
Q.83	25	1.00	5.00	3.2000	1.00000	1.000	-.163	.464	-.306	.902
Q.84	25	1.00	5.00	2.9600	.93452	.873	.084	.464	-.254	.902
Q.85	25	1.00	5.00	2.8800	.97125	.943	.850	.464	1.234	.902
Q.86	25	1.00	5.00	2.8800	.92736	.860	.254	.464	-.132	.902
Q.87	25	1.00	5.00	2.9200	.95394	.910	.483	.464	.471	.902
Q.88	25	1.00	5.00	2.7200	.89069	.793	.612	.464	.546	.902
Q.89	25	1.00	5.00	2.8000	1.11803	1.250	.428	.464	-.595	.902
Q.90	25	1.00	5.00	2.6800	.90000	.810	.713	.464	.541	.902
Q.91	25	1.00	5.00	2.6800	.80208	.643	.671	.464	2.021	.902
Q.92	25	1.00	5.00	2.9600	.88882	.790	.082	.464	.275	.902
Q.93	25	1.00	4.00	2.6800	.74833	.560	-.030	.464	-.151	.902
Valid (listwise)	N 25									

Appendix H: Web-Based Questionnaire Phase Three Item Statistics

Trust and Culture Towards IS Compliance

1. **Have you ever taken Information Security Awareness Training?**
   ❍ Yes ❍ No

2. **Age (in year)**

   _____

3. **When did you take the last Awareness Training (year only)?**

   _____

4. **Educational Status (example high school, Bachelor, Master, PhD)**

   _____

5. **Have you done your degree out of country?**
   [--Please Select--]

6. **Occupation (example Management ,IT, Engineering an so on)**

   _____

7. **Total Work Experience (in year)**

   _____

8. **Most employees are honest**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

9. **Most employees are trustworthy**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

10. **Most employees are kind and good**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

11. **Most employees are trust to each other**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

12. **Generally speaking, I would say that most people can be trusted**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

13. **Most of the time, people try to be helpful to others**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

14. **Most people would try to be fair with me whenever they can be**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

15. **I know my co-workers are always concerned about my welfare.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

16. **I feel confident that my co-workers will share things with me.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

17. **I feel safe with my co-workers even in new situations.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

18. **My co-workers are very predictable.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

19. **I always trust my co-workers to do the best for me.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

20. **I expect my co-workers to always support me.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

21. **I can trust my co-workers to keep promises they make to me.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

22. **I am sure that my co-workers will always tell me the truth.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

23. **My co-workers are always very dependable.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

24. **My co-workers have proven themselves to be trustworthy and supportive.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

25. **I have found that co-workers are very dependable, especially when it comes to things which are significant to me.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

26. **Though times may change and the future is uncertain, I know my co-workers will always be ready and willing to offer me strength and care.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

27. **I always have confidence in my co-workers**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

28. **I am certain that my co-workers will not cheat on me.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

29. **The western system gives error messages that clearly tell me how to fix problems.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

30. **The information (such as online help, on-screen messages, and other documentation) provided by Western system is clear.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

31. **The information provided for the system is easy to understand.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

32. **Using the system in my job would increase my productivity.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
○	○	○	○	○

33. **Using the system would enhance my effectiveness on the job.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
○	○	○	○	○

34. **Using the system would make it easier to do my job.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
○	○	○	○	○

35. **Learning to operate the system is easy for me.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
○	○	○	○	○

36. **My interaction with the system is clear and understandable.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
○	○	○	○	○

37. **I find the system to be flexible to relate to.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
○	○	○	○	○

38. **I find the system easy to use.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

39. **I feel valuable and creative.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

40. **I am valued for my work and my contributions.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

41. **I am successful.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

42. **Management understand the differences in employees.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

43. **In my organization people have room to experiment with better practice.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

44. **New tasks are assign with personal differences in mind.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

45. **My organization balances the needs of their different groups of people who use our services.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

46. **people are encouraged to share what they learn.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

47. **Mistake made by individuals are used constructively.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

48. **Leaders here are good trainers.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

---

49. **Leaders here ask people how they can help them.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

---

50. **Leaders here recognise and reward preferred behavior.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

---

51. **Leaders here give everyone background information: the big picture.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

52. **Leaders here protect people from abuse from the system above them.**

Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
○	○	○	○	○

53. **People Share user name and passwords.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
❍	❍	❍	❍	❍

54. **Open untrusted emails attachment.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
❍	❍	❍	❍	❍

55. **Access suspicious websites.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
❍	❍	❍	❍	❍

56. **Leaving workstation unattended.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
❍	❍	❍	❍	❍

57. **Not reporting security breaches or incident.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
❍	❍	❍	❍	❍

58. **Leaving media devices such as DVD,USB that contain sensitive information on desks.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
❍	❍	❍	❍	❍

59. **Hacking into others user's accounts.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
❍	❍	❍	❍	❍

60. **Sending and creating spam emails.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
❍	❍	❍	❍	❍

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
❍	❍	❍	❍	❍

62. **Configuring wireless gateway to give unauthorized access to company network.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
❍	❍	❍	❍	❍

63. **Leave access credential (Login cards)Unattended.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
❍	❍	❍	❍	❍

64. **Laptop not locked to docking station.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
❍	❍	❍	❍	❍

65. **Personal Data/Sensitive personal data exposed (unlocked cabinet, or left in work area).**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
❍	❍	❍	❍	❍

66. **Laptop locked to docking station but has key in it.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
❍	❍	❍	❍	❍

67. **Laptop left unlocked or logged in.**

Very Likely	Likely	Neither Likely nor Unlikely	Unlikely	Very Unlikely
❍	❍	❍	❍	❍

Any other comments you would like to be considered concerning Information Security.

_____

_____

Appendix I: Final phase Questionnaire Respondents Reliability Tests

Item-Total Statistics

	Scale Mean if Item	Scale Variance if Item	Corrected Item-Total	Squared Multiple	Cronbach's Alpha if Item Deleted
Q8	160.20	422.657	.429	.	.901
Q9	160.23	421.665	.482	.	.901
Q10	160.33	421.358	.492	.	.901
Q11	160.06	417.635	.563	.	.900
Q12	160.22	422.734	.390	.	.902
Q13	160.49	426.385	.385	.	.902
Q14	160.30	426.462	.386	.	.902
Q15	160.35	423.741	.452	.	.901
Q16	160.26	422.867	.448	.	.901
Q17	160.38	423.178	.486	.	.901
Q18	160.27	426.878	.369	.	.902
Q19	160.20	420.671	.446	.	.901
Q20	160.39	422.046	.540	.	.901
Q21	160.35	421.162	.593	.	.900
Q22	160.21	419.559	.613	.	.900
Q23	160.21	424.127	.437	.	.902
Q24	160.36	420.753	.600	.	.900
Q25	160.23	420.079	.580	.	.900
Q26	160.20	419.629	.527	.	.901
Q27	160.37	421.830	.520	.	.901
Q28	160.21	422.595	.441	.	.901
Q29	159.96	429.087	.292	.	.903
Q30	160.13	428.472	.317	.	.903
Q31	160.23	428.497	.342	.	.902
Q32	160.64	429.871	.242	.	.903
Q33	160.63	429.444	.250	.	.903
Q34	160.62	429.077	.280	.	.903
Q35	160.65	430.876	.225	.	.903
Q36	160.62	430.413	.242	.	.903
Q37	160.60	427.930	.366	.	.902
Q38	160.48	427.528	.326	.	.902
Q39	160.66	430.158	.250	.	.903
Q40	160.69	429.374	.257	.	.903
Q41	160.82	430.734	.278	.	.903
Q42	160.29	424.065	.360	.	.902
Q43	160.38	424.599	.406	.	.902
Q44	160.18	427.666	.316	.	.903
Q45	160.31	425.835	.445	.	.902
Q46	160.42	424.219	.440	.	.902
Q47	160.16	427.454	.329	.	.902
Q48	160.24	420.563	.460	.	.901
Q49	160.30	423.648	.407	.	.902
Q50	160.24	422.073	.439	.	.901
Q51	160.17	422.370	.431	.	.901
Q52	160.25	422.567	.439	.	.901
Q53	158.87	420.475	.299	.	.903
Q54	158.85	421.358	.315	.	.903
Q55	158.74	422.405	.317	.	.903
Q56	158.94	423.181	.272	.	.904
Q57	158.94	423.173	.278	.	.903
Q58	158.74	425.737	.249	.	.904
Q59	158.35	426.446	.280	.	.903
Q60	158.33	427.163	.266	.	.903
Q61	158.60	426.072	.253	.	.904
Q62	158.41	427.519	.251	.	.903
Q63	158.67	426.659	.221	.	.904
Q64	158.77	428.710	.182	.	.905
Q65	158.62	425.465	.281	.	.903
Q66	158.82	432.610	.105	.	.905
Q67	158.64	431.812	.130	.	.905

Appendix J: Descriptive Statistics For Web-Based Survey Respondents

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Q1	247	0	1	.89	.313	.098	-2.519	.155	4.383	.309
Q2	247	0	9	8.50	1.216	1.479	-4.155	.155	20.726	.309
Q3	247	22	76	41.08	7.745	59.985	.869	.155	1.537	.309
T1	247	1	5	2.43	.866	.751	.548	.155	.392	.309
T2	247	1	5	2.40	.825	.681	.570	.155	.359	.309
T3	247	1	5	2.30	.822	.676	.625	.155	.613	.309
T4	247	1	5	2.57	.880	.774	.197	.155	-.444	.309
T5	247	1	5	2.41	.941	.885	.635	.155	.104	.309
CW1	247	1	5	2.37	.820	.673	.696	.155	.770	.309
CW2	247	1	5	2.37	.742	.551	.551	.155	.386	.309
CW3	247	1	5	2.43	.938	.880	.862	.155	.663	.309
CW4	247	1	4	2.24	.729	.532	.484	.155	.252	.309
CW5	247	1	4	2.28	.703	.495	.396	.155	.178	.309
CW6	247	1	4	2.42	.739	.546	.305	.155	-.170	.309
CW7	247	1	4	2.27	.705	.497	.551	.155	.395	.309
CW8	247	1	4	2.40	.757	.574	.213	.155	-.243	.309
CW9	247	1	5	2.44	.848	.719	.440	.155	.106	.309
CW10	247	1	4	2.27	.761	.579	.346	.155	-.077	.309
CW11	247	1	5	2.42	.846	.716	.547	.155	.192	.309
WIT1	247	1	4	2.00	.819	.671	.589	.155	-.053	.309
WIT2	247	1	5	2.00	.831	.691	.770	.155	.749	.309
WIT3	247	1	4	2.01	.783	.614	.541	.155	.058	.309
WIT4	247	1	4	1.99	.783	.614	.635	.155	.265	.309
WIT5	247	1	5	2.15	.788	.621	.691	.155	.662	.309
WIT6	247	1	5	1.97	.775	.601	.690	.155	.719	.309
WIT7	247	1	5	1.94	.819	.672	.910	.155	1.161	.309
WPC1	246	1	5	2.35	.929	.864	.889	.155	.742	.309
WPC2	247	1	5	2.25	.803	.644	.799	.155	1.059	.309
WPC3	247	1	5	2.34	.678	.460	.967	.155	2.131	.309
WPC4	245	1	5	2.22	.772	.596	.629	.156	.587	.310
WPC5	247	1	5	2.39	.913	.833	.726	.155	.373	.309
WPC6	247	1	5	2.33	.852	.727	.853	.155	.919	.309
WPC7	247	1	5	2.40	.877	.769	.848	.155	1.036	.309
WPC8	247	1	5	2.46	.882	.778	.614	.155	.406	.309
WPC9	247	1	5	2.38	.856	.734	.814	.155	1.077	.309
DP1	247	1	5	3.79	1.346	1.811	-.601	.155	-1.160	.309
DP2	247	1	5	3.81	1.237	1.531	-.572	.155	-1.014	.309
DP3	247	1	5	3.91	1.167	1.361	-.638	.155	-.934	.309
DP4	247	1	5	3.70	1.261	1.591	-.616	.155	-.817	.309
DP5	246	1	5	3.71	1.240	1.538	-.541	.155	-.993	.309
ISC1	245	1	5	4.30	.994	.989	-1.509	.156	1.692	.310
ISC2	247	1	5	4.31	.989	.978	-1.361	.155	.901	.309
ISC3	246	1	5	4.23	1.010	1.020	-1.222	.155	.525	.309
ISSC1	247	1	5	3.97	1.194	1.426	-1.028	.155	-.036	.309
ISSC2	247	1	5	3.89	1.174	1.377	-.904	.155	-.169	.309
ISSC3	247	1	5	4.04	1.062	1.128	-1.066	.155	.384	.309
ISSC4	247	1	5	3.83	1.143	1.307	-.674	.155	-.571	.309
ISSC5	247	1	5	4.01	1.093	1.195	-.995	.155	.160	.309
Valid N (listwise)	240									

Appendix K: Refined Web-Based Survey

Item-Total Statistics

	Scale Mean if Item	Scale Variance	if Corrected	Item- Squared	Multiple Cronbach's	Alpha
T1	122.38	264.363	.400	.	.876	
T2	122.41	263.632	.450	.	.875	
T3	122.52	263.355	.463	.	.875	
T4	122.24	260.192	.543	.	.873	
T5	122.40	264.116	.374	.	.876	
CW1	122.45	264.341	.426	.	.875	
CW2	122.45	267.638	.339	.	.877	
CW3	122.38	263.073	.410	.	.875	
CW4	122.58	264.078	.499	.	.874	
CW5	122.53	263.154	.561	.	.874	
CW6	122.39	262.072	.575	.	.873	
CW7	122.55	262.901	.566	.	.874	
CW8	122.42	262.361	.548	.	.874	
CW9	122.38	262.203	.490	.	.874	
CW10	122.55	263.822	.484	.	.875	
CW11	122.40	264.516	.405	.	.875	
WIT1	122.82	270.482	.197	.	.879	
WIT2	122.82	270.343	.199	.	.879	
WIT3	122.80	269.673	.240	.	.878	
WIT4	122.83	271.662	.163	.	.879	
WIT5	122.67	269.587	.242	.	.878	
WIT6	122.85	270.982	.192	.	.879	
WIT7	122.88	270.093	.211	.	.878	
WPC1	122.48	265.179	.342	.	.876	
WPC2	122.57	265.945	.374	.	.876	
WPC3	122.49	266.820	.414	.	.876	
WPC4	122.61	265.344	.417	.	.875	
WPC5	122.43	262.254	.449	.	.875	
WPC6	122.49	264.586	.399	.	.876	
WPC7	122.42	263.232	.435	.	.875	
WPC8	122.35	263.527	.424	.	.875	
WPC9	122.43	263.803	.428	.	.875	
DP1	121.06	259.955	.339	.	.877	
DP2	121.03	260.639	.361	.	.876	
DP3	120.93	261.902	.354	.	.876	
DP4	121.13	262.049	.315	.	.877	
DP5	121.12	261.990	.325	.	.877	
ISC1	120.53	265.715	.305	.	.877	
ISC2	120.51	266.268	.292	.	.877	
ISC3	120.59	266.051	.291	.	.877	
ISSC1	120.87	265.355	.250	.	.879	
ISSC2	120.95	266.687	.222	.	.879	
ISSC3	120.80	264.490	.316	.	.877	
ISSC4	121.01	269.774	.146	.	.880	
ISSC5	120.83	269.155	.172	.	.880	

Appendix L: Factors' Structure Loadings

Pattern Matrix

	Factor 1	2	3	4	5	6	7
T1						.906	
T2						.950	
T3						.680	
T4						.684	
T5						.619	
CW1	.625						
CW2	.564						
CW3	.691						
CW4	.684						
CW5	.835						
CW6	.677						
CW7	.625						
CW8	.676						
CW9	.730						
CW10	.870						
CW11	.853						
WIT1				.831			
WIT2				.985			
WIT3				.915			
WIT4				.735			
WIT5				.552			
WIT6				.514			
WIT7				.557			
WPC1		.704					
WPC2		.659					
WPC3		.737					
WPC4		.687					
WPC5		.847					
WPC6		.895					
WPC7		.838					
WPC8		.787					
WPC9		.784					
DP1			.856				
DP2			.908				
DP3			.933				
DP4			.797				
DP5			.787				
ISC1							.842
ISC2							.836
ISC3							.724
ISSC1					.656		
ISSC2					.849		
ISSC3					.764		
ISSC4					.929		
ISSC5					.776		

Appendix M: Non- Focused Area of The Research

Possible Personality Factors: Effects On Attitude Towards Information Security

"Personality" was outside the scope of this thesis, however an overview of and a brief reflection on personality is presented here for the interested reader to consider and along with a brief bibliography that introduces the topic further. The term personality is defined as a pattern of characteristic thoughts, feelings, and behaviours that distinguishes one person to another. It has also been defined as a sum of biological based and learnt behaviour which forms the unique responses of Individual to environmental stimuli. The structure of personality is stable and can be predicted throughout different time and conditions. However, personality traits have different depth and significance such as innermost layer and outermost layer. The innermost layer is the basis while outermost is situation-bound that depends on situation. For example, a person who feels tired will behave accordingly which does not reflect the real personality of that person and that is resulted from tiredness. Personality is an important psychological mechanism which guides behaviour. Everyone has a unique pattern of feelings, thoughts, and behaviours that is formed by a stable combination of personality traits. Attitudes and behaviours are likely seen to be influenced by personality traits as personality forms an inclination towards certain characteristic responses in any given condition. Age and maturity have an impact on the expressions of personality.

Through the centuries, a range of theories and models have described the personality seek to clarify the dynamics of personality. The notion of different levels of consciousness was one of the basic concepts presented in Freud's theories. The theory of three levels of consciousness stated that "the research are aware of the phenomena on the conscious level, able to reach the pre- conscious but unaware of the Unconscious level issues". Personality and reactions are influenced by all these levels. However, individuals are unique which makes it impossible to predict the reactions with certainty due to the complexity system of the individual's character. Throughout 50 years of personality research, five basic dimensions of personality have been commonly agreed upon. These dimensions were found to be used to describe differences in cognitive, affective, and social behaviour. Based on previous personality scales, these dimensions are Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. These dimensions are stable through a lifetime and the evolvement of the five-factor model was originated from the analysis of the terms which was used to describe the personality.

Since these factors have become a robust taxonomy of personality then understanding these personality factors dimensions and their effects towards attitude may lead us to more

effective responsiveness of users towards information security awareness. To extend more on this research, this study intends to examine these five factors separately as they may relate to the effect of attitude towards the responsiveness of users towards information security awareness training. So, hypotheses for the relationships of these factors with attitude towards information security are proposed foreach factor as below.

Neuroticism

The term neuroticism is a measurement of affect and emotional control where low level of neuroticism indicates that person is emotionally stable unlike person with high level of neuroticism which indicates an increasing of negative emotions experience. Since neuroticism may reflect a person's tendency to experience psychological distress is it expected that a person with high score in neuroticism would have negative emotion towards information security awareness training? Do Individual with high neuroticism present higher risk? If yes then, more focus is needed for this type of personality. Previous studies have shown a significant relation between personality and attitude such as information seeking behaviour. Individual with high level of neuroticism tend to have feelings of being anxious because of being put in stressful situation. It was noted that Individual with high emotion instability experienced lack of time as barrier when seeking information for example a research student at the university seeking information in the library database. In the other hand, the research has shown also that performance by Individual with high level of neuroticism drop in stressful situations.

Individual with high level of neuroticism is more vulnerable to the strain of many conflicting messages and prefer less confusing information. Therefore, it is expected that there is an inverse relationship between accepting information security training and neuroticism. However, customising the training by making it simple, relevant, short, and less timed, could possibly give positive results. This is a way of increasing control and confidence for

Self-doubting persons so the more secure they are the more active and able to accept new information as well as accepting information security training.

H1: There is an inverse relationship between neuroticism and acceptance of information security training?

Extraversion –Introversion

The extravert person tends to be physically and verbally active while introvert person is likely to be more independent. Extraverted Individual have an enthusiastic, active, and confident character for example students seeking information wanted to find more

information without being methodical in their search for it. This reflects their attitude toward information seeking behaviour as energetic and outgoing students. Previous research has shown a common resistance to "bother" librarians with information queries. However, this unwillingness is improbable to restrain outgoing students as a social interaction is an important part of their information behaviour.

However, Individual with high extroversion tend to have big influence on others which could be a positive or negative in IT security for example "Leaders" or senior management.

H2: there is a positive relationship between extraversion and the responsiveness towards information security training?

Openness

The term openness or openness to experience is a measure of Individual's imagination such as depth, breadth, and unpredictability. Those Individual are open to new idea, have cultural interest, educational aptitude, and creativity. However, Individual can have different level of openness reaction. High level openness Individual are open minded, have deep interests, and like novelty while low level Individual tend to be traditional, conservatives, and prefer familiarity. How openness affects user's willingness to follow information security guidelines?

H3: There is a positive relationship between openness Individual and the willingness to follow information security guidelines?

Agreeableness

Agreeableness is a scale that is linked to altruism, nurturance, emotional support and caring (Howard and Howard, 1995). Individual who tends to have low level of agreeableness are competitiveness, hostility, selfish, and jealousy. In the other hand, Individual with high level of agreeableness is gentle, kind, and warm.

Knowing person with high agreeableness, should the research expect such a person to have the highest level of acceptance of information security awareness and improvement of awareness?

H4: There is a positive relationship between agreeable person and the level of acceptance of information security awareness?

Conscientiousness

Individual with goal-directed behaviour is measured by the level of conscientiousness and it is linked to educational achievement or to the will be achieved. Individual with high level of conscientious are more competent, dutiful, orderly, and responsible.

Based on the term defined above, would it be reasonable to expect the person with high level of conscientiousness to be more willing to learn and follow information security training with minimal awareness training? Since the person is dutiful, and competent does he or she need awareness training? Would brief training be sufficient for this type of personality?

H5: There is a positive relationship between conscientious person and the acceptance of information security awareness training?

Personality traits, Information sharing, and Trust

Sharing knowledge and enabling the knowledge creation is essential to innovation and the managerial success. The fear of criticism and the fear of misleading others can inhibit knowledge sharing. Therefore, it is important to understand the factors that hinder knowledge sharing in particularly at the individual level aspects. Recent research has not established a connection between knowledge sharing and contemporary theories of personality. However, they addressed that need by explicating and testing of a model linking that covers the understanding of the hierarchical structure of the personality, interpersonal trust, and knowledge sharing. Personality has been found as an important factor that influences the behaviour of individuals when it comes to sharing knowledge. The personality is best described by the big five personality over.

Individual's behaviours can be changed by targeting their assumptions, values, and beliefs. Most users of social sites are too trusting to a point that majority of them trust by default; thereby exposing themselves and their organizations to numerous and serious security threats. Parsons and colleagues found that a significant percentage of users of social networking sites assume that they are adequately protected on these sites, hence fail to exercise the same degree of common sense they would practice in the real world. Differences in Individual's beliefs, perceptions and assumptions define how they react to information-security threats such as spam emails from phishers; screen pop-ups; as well as messages sent to them on social networking sites from unknown sources or from friends but containing questionable contents and tones such as asking for money or logins and passwords. In addition, since individuals' degree of assumptions and perception defines how they trust the presented situations, persons with a tendency to trust sites and strangers easily are likely to

set weak passwords and expose their confidential information to the public, thus making them more vulnerable to cyber criminals and hackers.

Human mental behaviours and functions (psychology) also play a leading role in protecting confidential information of an entity and that of an individual. focusing on changing Individual's behaviours through initiatives such as security awareness programs can play an instrumental role in enhancing information security. Programs aimed at changing Individual's behaviours should focus on both cognitive psychology (a study of Individual's behaviours in relation to their reasoning, perceptions, and memory); and social psychology (a study of Individual's behaviours and mental processes such as peer influence). Programs that can help Individual change their Ideal Self to make it more security friendly can significantly help in making network users adopt the relevant measures to adequately protect their personal information.

Information security also became a major issue in social networking sites, and there are numerous security vulnerabilities that are linked to the use of social networking sites. Users of social sites are too trusting to a point that most of them trust by default, exposing themselves and their organizations to numerous and serious security threats. Many users assume that they are adequately protected on these sites, thereby failing to exercise the same degree of common-sense they would practice in the real world. Individuals usually share a lot of information through social networking sites without taking adequate measures to protect the privacy and security of the shared information. For example, most of the social site users reveal information that criminals or persons with malicious intentions can use to engage in a cybercrime. A key factor that jeopardizes information security in the social networking sites is the fact that a significant percentage of the users of these sites are very trusting in relation to the persons they want to add as their friends.

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Appendix N: Definitions of Key Research Terms

Terminology	Definition	How this is applied in this research
Internal Reliability (Cronbach Alpha)	All items in a scale are connect with each other in the minds of respondents	A Cronbach's alpha test was used to test the reliability of the variables. The range was between 0.925 and 0.839. the results indicated that all variables were above (0.8). which shows good reliability was attained.
Sample	Sampling is the process of selecting a representative group from the population under study. The target population is the total group of individuals from which the sample might be drawn. A sample is the group of people who take part in the investigation.	Used in this research to conduct a web-based survey to gather data for further analysis.
Sample Size	The number of subjects in a study.	The sample size was used in this research to indicate that this research has used and exceeded the recommended sample size with a response rate of 82.33% (247/300)
Population	A theoretically defined, complete group of objects (people, nonhuman animals, institutions) from which a sample is drawn to obtain empirical observations and to which results can be generalized. Also called universe.	The total number individuals were selected for a targeted population within the Arab region as the focus of this research. A sample is drawn to obtain empirical observations and to which results can be generalized as well as to test the correlation between the presented factors.

Terminology	Definition	How this is applied in this research
Structural Equation Modelling (SEM)	A broad range of multivariate analysis methods, including factor analysis and path analysis	This analytical software AMOS SEM was used to test the model fit as well as to test the presented hypothesis.
Factor Analysis	Mathematical procedures for reducing a set of interrelations among manifest variables to a smaller set of unobserved latent variables or factors	Used in this research to identify any underlying factors. Factor analysis aims to determine what teams should be included in or excluded. Factor analysis is used as a collection of methods to explain the correlations among variables in terms of more fundamental entities called "factors". The role of exploratory factor analysis has been there for more than 100 years as an important role to conduct a research study in the social sciences (Fabrogar and Wegener, 2011).
Response Rate	The percentage of people who responded to the survey	Used in this research to compare the sample size of similar studies and to see if the figures enough for reliable analysis
Bartlett's Test	A non-paraametric test of statistical significance appropriate when the data are in the form of frequency counts; it compares frequencies observed in a study with expected the form of frequency counts; it compares frequencies observed in a study with expected frequencies to see if they are significantly different.	Used in this research to examine the correlation matrix. This test indicates that the correlation matrix is significantly different from the identity matrix.

Terminology	Definition	How this is applied in this research
Likert Scale	A method used to measure attitudes, which involves respondents indicating their degree of agreement or disagreement with a series of statements.	A custom-designed questionnaire used to gather information about various factors scale and sub-scale in order to achieve the research aim and objectives.
p-value	The probability that the results of a statistical test were due to chance. A p-value greater than .05 is usually interpreted to mean that the results were not statistically significant.	Used in this research to test the significance of the relationship between variables directly and indirectly.
r-squared	A measure of how well the independent, or predictor, variables predict the dependent, degree of agreement or disagreement with a series of statements.	Used in this research to measure independent and dependent variables for a better model fit.
Exploratory Factor Analysis (EFA)	A statistical technique that is used to reduce data to a smaller set of summary variables and to explore the underlying theoretical structure of the phenomena	Used in this research to be performed on all variables to check for any low loading factor which should shows a good model fit before further analysis in AMOS SEM. The factor structure illustrated a clean loading factor when subjected to the EFA test, which indicates a good convergent and discriminant validity with no major cross-loadings between factors.
Statistical Package for the Social Science (SPSS)	One of several commercially available statistical packages	This software was used to seek to evaluate the relationship of the variables and to test our research hypothesis, reliability analysis, exploratory factor analysis, and regression analysis.

Terminology	Definition	How this is applied in this research
Kaiser-Meyer-Olkin (KMO)	a statistical measure to determine how suited data is for factor analysis. The test measures sampling adequacy for each variable in the model and the complete model	The method was used to check the sample adequacy is the Kaiser-Meyer-Olkin (KMO). The KMO was factorable as the measure of sampling adequacy is greater than 0.60 as suggested by (Huck,2012). The KMO range between 0-1 and any value below .6 is regarded as this value would not be able to account for much variability in the data
Confirmatory Factor Analysis (CFA)	a statistical technique used to verify the factor structure of a set of observed variables	CFA is used to allow the researcher to test the hypothesis that a relationship between observed variables and their underlying latent constructs exists. The study presents different research variables, this section involves each variable to confirmatory factor analysis (CFA) to model fit these variables and to test data fitting as well as a structural model. As the number of factors determined through (CFA) and reliability and validity of data has been tested, the research then confirm the fitness of the theoretical model to the data (Long and Perkins, 2003).
AMOS	Structural equation modelling (SEM) software helping support your research and theories by extending standard multivariate analysis methods, including regression, factor analysis, correlation, and analysis of variance	This software was used in the research to model fit the factors as well as to conduct a confirmatory factor analysis to test the research proposed hypothesis.
Case Screening	A validation method used in excel to find any missing data in rows, Variable screening, unengaged Responses, and Outliers on continuous variables	This research has used this method to validate that no missing data rows before conducting the actual data analysis in SPSS and AMOS.

Terminology	Definition	How this is applied in this research
Maximum Likelihood (ML)	A method of estimating the parameters of an assumed probability distribution, given some observed data	Maximum Likelihood (ML) has been used as a method to make sure to maximize differences between factors and to provide a model fit estimate (Satorra and Saris, 1985). In addition, this is the approach used in AMOS, so AMOS uses CFA and structural modelling, during the EFA
Mediation	A mediation is a way in which an independent variable impacts a dependent variable. It's part of the causal pathway of an effect, and it tells you how or why an effect takes place	Used in this research to support the hypothesis test in which an independent variable impacts a dependent variable.