The impact of quality control initiatives, customer integration and customer co-production on service quality performance: An empirical investigation

By

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Abstract

Delivering a high standard of services to customers is recognised as an important objective for any service provider. In order to achieve this goal employees are encouraged to go about their jobs in certain ways, comply with guidelines and in accordance with the strategy drawn by the organisation. Although service quality is difficult to define and measure, research has not stopped looking for processes, tools and business practices so as to improve service quality performance. Literature suggests both practical tools to achieve organisational goals with respect to service delivery and offers theoretical foundations to examine the interrelationships between variables that contribute to those organisational goals.

Despite an emerging interest in customer integration and customer co-production in service provision in the Marketing literature, little attention has been paid to the investigation of relationships between customer integration, customer co-production and service quality performance. Based on the facilities-transformation-usage framework of service delivery and control theory, we develop a conceptual framework that examines the impact of combining quality control initiatives (QCIs) on service quality performance. We explicitly consider formal and informal control mechanisms as well as selected elements of the organisation internal environment as antecedents of QCIs. Customer co-production is proposed as a consequence of QCIs, and it is proposed that when customer integration is high the relationship between customer co-production and service quality performance will be strengthened.

The conceptual framework is tested using data drawn from hotel managers and employees across the Kingdom of Saudi Arabia; a total of 398 usable questionnaires were analysed. The relationships between variables are tested by applying variance based structural equation modelling. Moderator effects were tested using residual centring.

The findings of this study reveal unique results. Environment characteristics positively influence controls in shaping employees' behaviour. However, contrary to expectations, environment characteristics, specifically, greater procedural knowledge, greater performance documentation and organisational commitment did not strengthen the relationship between customer co-production and service quality performance. Similarly, the notion that higher levels of customer integration enhance the relationship between customer co-production and service quality performance is not supported. Finally, when customer co-production, which

takes place when the customer takes a part in the core service provided is high, an improvement in service quality can be observed.

The results of this study would benefit service managers to gain a better understanding of how QCIs influence the relationship between customer integration and customer co-production and service quality performance.

Key words: *quality control initiatives, service quality performance, customer co-production*

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List of Publications

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1 Chapter One: Introduction

1.1 Motivation for the Study

The author's belief in the significance of services has developed through a number of factors. The first factor that drew the author's attention to this area was a summer programme in Saudi Arabia provided by the Labour Ministry for students who had passed the final secondary school examinations and wanted to join a company for temporary paid work experience. The first company the author joined on this basis was Nesmah, a sub-contractor of the Saudi Telecommunication Company (STC) whose job was to help STC to provide services to its customers. The second was Aljafaly Air conditioning Manufacturer, which consisted of two divisions the technical division which brought tools and equipment together, and the service division which received orders and dispatched items as required. The author gained valuable experience from both departments. Following these stints of work experience, the author successfully passed the High Diploma in Electrical Engineering. Thereafter, the author joined King Abdulaziz National Airport to serve the pilgrims coming to visit the holy mosques and perform religious rituals. Subsequently, he worked for Gazzaz Ltd. in their customer service department. All these experiences highlighted the importance of services, especially in the Saudi Arabia context. The second part of the author's life started in 2006 upon enrolment at Bradford University and going on to graduate with a bachelor's degree in Electrical and Electronic Engineering, then on to University of Hull to read for an MSc in Business & Management. The dissertation topic in the MSc was titled "Service Quality: Customer Retention and Customer Satisfaction in the Saudi Telecommunication Company". The first hand experiences in the real world, combined with the wider reading in academia motivated and encouraged the author to think in greater depth about services and how they could contribute to both the wider economy and society of Saudi Arabia and developing countries in general. With this in mind, this thesis addresses quality in the service sector, and takes the hospitality trade as the context, with the objective of exploring what constitutes quality in this sector, and how environmental factors and control initiatives influence the process of service quality.

1.2 Business Problem

In the majority of research on service quality, quality of service has been seen as a final destination of customer satisfaction within service industry (Sivakumar et al., 2014). However, service provision always involves a series of events or stages of interaction

between a service provider and its customers. Each stage of performance involves possibilities of meeting, exceeding or falling below customers' expectations. A significant amount of managerial research focuses on different aspects of service provision and the resultant service quality perceptions (Danaher and Mattsson, 1994; Parasuraman et al., 1994). As the variety and frequency of service encounters increase in the market place (Vargo and Lusch, 2004; Wilson et al., 2012), service organisations attempt to set standards for different aspects of their service provision, while customers form expectations of these aspects of service. With the inherent heterogeneity (Zeithaml et al., 2006) of services, performance sometimes meets expectations, sometimes falls below expectations and sometimes exceeds expectations.

In a complex service provision process, many events may essentially trigger service failures (Smith and Bolton, 1998). Likewise, opportunities arise to make customers satisfied (Rust and Oliver, 2000). Understanding these are essential since organisations recognise that delivering service quality to customers is the key to success and survival in today's global competitive market (Sichtmann et al., 2011).

Berry et al. (1994) contend, "Excellent service is a profit strategy, because it results in more new customers, more business with existing customers, fewer lost customers, more insulation from price competition, and fewer mistakes requiring the performance of services" (p.32). Providing high service quality is a critical point for organisational success, and in turn strong relationships with customers, barriers to competition, increased customer loyalty and switching costs, and more efficient market activities (Bolton et al., 2007; Parasuraman et al., 1988; Blut et al., 2014). In particular, better levels of quality of service delivery have been empirically related to a wide variety of performance-related outcomes, such as satisfaction (Brady et al., 2005; Choi et al., 2004; González et al., 2007); loyalty (Liao and Chuang, 2007); positive word of mouth (Choi et al., 2004); profit, return-on-assets, reduced employee turnover and sales performance (Portela and Thanassoulis, 2007; Zeithaml et al., 2001; Wildes, 2007; Babakus et al., 2004). Thus, organisations should find ways to improve the quality of service delivered to customers in an attempt to secure a better service quality performance (Netemeyer and Maxham III, 2007; Parasuraman et al., 1988). Quality of service has been emphasized as a significant competitive advantage for service organisations operating in international markets (Eriksson et al., 1999). This competitive advantage might be accomplished through quality management practices (input), which steer the organisation to quality of service (output) that is better than the quality of competitors in the market (Flynn

et al., 1995; Kull and Wacker, 2010; Naor et al., 2008). How to improve service quality is an issue currently attracting attention in the Gulf region and in Saudi Arabia in particular.

1.3 Identification of Research Gaps

In today's globalized and rapidly changing world, services constitute an important element of the economy in both developed and developing countries. The service sector is categorized by the international industrial standard as "wholesale and retail trade; restaurants and hotels; transport, storage and communication, financing; insurance, real estate and business services, community, social and personal services" (Van Looy et al. 2003, p. 6). Services account for 20% of the global market and the service sector plays an important role in economic growth of both developed and developing countries alike (Van Looy et al., 2003). Moreover, as the number of service organisations increases and customers become more demanding and discriminating, service organisations face mounting pressure to ensure service quality, to remain competitive. Zeithaml et al. (2006) observe service quality is more difficult to define, measure and assure than quality of manufactured goods, due to a number of distinctive characteristics of services and the way in which they are produced. These include the intangibility of much of the service offering, the heterogeneity of services, and their perishability, all of which mean that service quality depends on many uncontrollable factors (Zeithaml et al., 2006).

1.3.1 Service Quality background

At a basic level, quality of service is a comparison between the customer's expectations from a service with the perceptions of what is actually delivered by the service provider (Grönroos, 1984; Parasuraman et al., 1985). This view was challenged by scholars (Cronin and Taylor, 1992, 1994; Dabholkar et al, 2000) who argued that perception is the measure of quality of service that best explains the construct. They suggest that since perceptions include an assessment of expectations in their calculation, the use of both perceptions and expectations in quality of service calculations is superfluous. From a theoretical standpoint, however, quality of service assessment still includes both perceptions and expectations. Some researchers (Fisk et al. 1993; Brown et al.1994) recognise quality of service as the single most researched area in service marketing. Despite the volume of quality of service linked research conducted recently (Fisk et al., 1993; Brown and Peterson, 1994; Eisingerich and Bell, 2007; Liang and Wang, 2006; Ren and Zhou, 2008; Blut et al., 2014), there is no agreement on how to measure service quality.

Early work on quality originated in manufacturing industry. In that context, quality was defined as "zero defects" and "conformance to specification" (Crosby, 1980). Juran (1988) defined it as "fitness for use by the customer". By looking at the different characteristics of services and manufacturing goods, a need for a different approach to definition of quality appears when dealing with quality in the service sector. Such a broader perspective was offered by Garvin (1984) who recognised that quality can be interpreted in a variety of ways, according to the industry or service in question, and the interests of the stakeholders in question. Drawing on philosophical, economic, marketing and operations management perspectives, he identified five distinctive approaches to quality, as follows:

- **Transcendent**: quality, is innate excellence or "high" quality (Oakland, 1995), as experienced.
- **Product-based**: is based on distinctiveness in the quality of some components or features of a product (Kasper et al., 1999).
- **User-based**: means that the attributes of a product meet the customer's requirements (Oakland, 1995).
- **Manufacturing-based**: the irrespective whether that specification meets the customer's need (Moullin, 2003).
- **Value-based**: quality is focused on cost and price (Garvin 1984 cited in Moullin, 2003; Kasper et al. 1991).

Wetzels (1998) argued that a synthesis of all quality orientations is particularly required in service settings. As the perspectives on quality shift at various points in service provision, dependence on a single orientation or concept is often a source of problems (Cândido 2001; Wetzels 1998). Various researchers have argued that all the concepts of quality and perspectives referred to above are linked and should be embodied in the quality of service definition overall (Garvin 1984, 1988; Gummesson 1991; Parasuraman et al. 1985; Wetzels 1998; Zeithaml et al. 1988, 1990; Zeithaml & Bitner 2006).

In their conceptualisation of quality of service, Brady and Cronin (2001) identified three core dimensions of significance: physical environment quality, outcome quality and interactions quality. Environment quality considers the "physical or built' environment within which the service takes place, outcome quality refers to "what the customer is left with when service is rendered", and interaction quality refers to "interpersonal interactions that occur in service

delivery" (Brady and Cronin Jr, 2001: p.38-40). Of Brady and Cronin's (2001) three dimensions of quality of service, interpersonal interactions are recognised as having the greatest influence on quality of service (Bitner et al., 1994; Bowen et al., 1989; Hartline and Ferrell, 1996). This is because in many service situations, the employee is seen as representing the organisation or the service itself (Zeithaml and Bitner, 1996; Bitner, 1990). However, Brady and Cronin (2001) identify a lack of research into the interaction domain and call for more investigation in this field.

One of the factors that pose particular difficulty for the measurement and assurance of quality in service context is the high level of customer involvement in their creation (Zeithaml et al., 2006). In recent years, there has been an increasing trend for customers to be actively involved in the production of the goods and services they consume, and literature has explored such activities under the heading of customer participation (Dabholkar et al., 2000; Curran and Meuter, 2005). Others prefer the term customer integration, to reflect the fact that customer involvement is broader than activity, to include service enabling by the provision of resources such as property and information (Moeller, 2008). Extending this notion, service dominant logic proposes that customers share in creating the core offering itself, a concept termed customer co-production (Vargo and Lusch 2004). Co-production entails the integration of customer resources in creation of service (Lusch, et al., 2007), whether in the form of their physical presence, their property or information (Bitner et al., 1994; Fließ, 2004). This means employees must interact with customers to co-ordinate and integrate their contribution (Moeller, 2008), although this process varies according to the nature of the service concerned (Hsieh et al., 2004).

1.3.2 The quality of interaction

The quality of interactions between service providers and participants (customers) has generally been conceptualised, by a number of authors, as categorised of three dimensions (albeit different). Czepiel et al (1985) argued that the attitude of the providers or employees, behaviours and skills influence customers' evaluation of customers' service quality (Edvardsson et al., 2014; Czepiel et al., 1985). Similarity Bitner et al. (1990) establish three phases of employee-customer interaction: demeanour, actions and skill. Both these typologies highlighted the significance of employee attitudes and behaviours to the provision of high service quality. More recently, Brady and Cronin (2001) conceptualise interaction quality as a function of employee attitudes, behaviours and expertise.

While there is no doubt that study into the nature of employees' attitudes, behaviours and expertise is well known and continuing, there have been calls in the literature for an investigation into customer co-production and customer integration, particularly in the process of delivering services (Sichtmann et al., 2011; Moeller, 2008; Jiménez et al., 2013). In response, research on customer co-production has focused upon organisational performance or financial performance (Vickery et al., 2003). However, organisational performance or financial performance is not necessarily a suitable indicator of service quality performance (Bettencourt et al., 2005b), as service quality is characterised by the delivery of intangibles with simultaneous production and consumption (Zeithaml et al., 1996). A service employee's behaviours should be controlled and monitored in order to enable customers to evaluate the service quality performance (Jaworski et al., 1993). These characteristics mean that various behaviours may be needed of the service providers, and research into such service-specific provider behaviours is warranted (Naor et al., 2008).

The customer side of this integration is in the form of customer integration and customer co-production. Whilst it has been suggested that customer integration has impacts on various aspects of company performance, such as market share and profitability, to the best of the author's knowledge, there has been no investigation of how customer integration and co-production affect service quality. Moeller (2008) proposed a model of service delivery that takes account of customer co-production and identifies various stages (facilitation, transformation and usage) at which resource failure may occur, with a likely impact on service quality, while an extension of this notion, called control theory, proposes various quality control indicators (QCIs) for the facilitation and transformation stages. These include formal mechanisms of control: input, process and output, and informal mechanisms: self, professional and culture control, representing respectively individual objectives, the prevailing norms and interactions of a sub-group, such as marketing or sales, and the broader values and normative patterns of the organisation as a whole (Jaworski, 1988).

To summarise, there is an emerging literature on customer integration and customer co-production, but there has been no investigation of the effect of these on service quality performance, which leads this research to address this issue in order to fill the gap. This research will operationalize, customer co-production and service quality performance based on the QCIs framework. There is and has been a lack of knowledge about the formal and informal QCIs, namely input, process and output, informal self, professional and culture control that influence the performance of service quality. For this reason, this research fills

these gaps by examining the extent to which the aforementioned factors affect the performance of service quality.

1.4 Research Questions

- How do customer integration and customer co-production affect service quality performance?
- How do different formal and informal QCIs mechanisms improve service quality performance?

1.5 Objectives

In order to address aforementioned research questions, the following objectives are set:

- To develop a conceptual model through review of the relevant literature supported by a solid theoretical foundation.
- To measure the extent of customer contributions to service provision (customer integration and customer co-production) as perceived by employees in Saudi hotel.
- To measure the use of formal and informal quality control initiatives QCIs.
- To examine the possible causal relationships that link controls with service quality outcomes.
- To test the relationship between customer co-production and QCIs.

In order to address the first objective, an extensive literature review was carried out concentrating on services and service quality (including quality measurement), the service environment, controls and their consequences (see chapter two). The conceptual model developed in this thesis built on the work of Jaworski (1988, 1998) and Sichtmann et al. (2011), links selected aspects of the service environment, QCIs, customer integration and customer co-production to service quality performance (see chapter three). To address the remaining research objectives, data were collected by means of a survey of employees in Saudi hotels. The survey instrument was developed by drawing on previously validated measures (chapter 4). A detailed explanation of construct operationalization can be found in section 4.3.1. A confirmatory approach was taken to data analysis (see chapter five). Hypothesized paths between dependent and independent variables were tested using structural equation modelling, using the partial least squares technique (chapter six).

1.6 Research Context and its Importance

Data for this study were collected in the Kingdom of Saudi Arabia (KSA), focusing on the hotels sector. KSA is the largest country in the Middle East, with an area of 2.5 million km² (occupying around four-fifths of the Arabian Peninsula) and a population of 27.173 million people (Government, 2012). It is located at the south-west corner of the peninsula and borders on the north with Jordan, Iraq and Kuwait, on the south with Oman and Yemen, to its west lies the Red Sea, and to the east it borders Bahrain, the United Arab Emirates (UAE), Qatar and the Arabian Gulf. Saudi Arabia is divided into thirteen regions: Albaha, Alhudud Alshamaliyh, AlJawf, Almadinah, AlGassim, Alriyadh, Ash Shargiyah, Asir, Ha'il, Jizan, Makkah, Najran and TAbuk (Directory, 2014). Much of the land of Saudi Arabia is covered by desert, primarily the Nafud Desert in the north and the Rub al Khali in the south. The provinces of Saudi Arabia are illustrated in the following figure:

Figure 1-1 Saudi Regions

Significant factors that have shaped its culture are tribal history, Islam, and Oil (At-Twaijri, 1989). The latter enabled the launching of a programme of rapid socio-economic development since the 1960s, encompassing many free or heavily subsidized public services. In recent years, several contingencies (e.g. fluctuating oil prices, excessive spending, depleting oil reserves, WTO membership) have induced the Saudi government to embark on

a programme of privatization and deregulation. Moreover, efforts to diversify the economy from dependence on oil, a modern consumer lifestyle and increased integration into the global economy, especially since accession to the World Trade Organisation (WTO) all combine to stimulate a growing services sector. Saudi Arabia is also an interesting context because the Middle East generally and Saudi Arabia specifically, is an under-researched region in the business and quality context. Raven and Dash called for more research in this area (Dash et al., 2009; Raven and Welsh, 2004). The Arab world as a territory is generally under researched (Abu-Doleh and Weir, 2007; Hutchings and Weir, 2006) or as Rees succinctly summarised, the Middle East suffers a "dearth of academic research" (Rees et al., 2007: p.33).

1.6.1 The Saudi service sector and economy

The Saudi service sector grew dramatically in the second half of the 20th century, with the revenue derived from petroleum sales and because of high levels of government spending. About 70 percent of the labour force works in the service sector, including civil administration, defence, construction, wholesale and retail sales, and hospitality and tourism. Oil and gas production, due to their capital-intensive nature, contribute far less direct employment than their shares of the economy, making a productive services sector key to providing sufficient employment. As the Saudi economy has advanced and become more sophisticated, there has been more demand for professional services such as banking, telecommunications, information technology, legal, health care, and marketing. With the growth in Saudi median income demand for low-skilled services has also risen, in such fields as retail sales, servants, nannies, and manual labour.

The high-skilled and low-skilled parts of the tertiary sector have both presented challenges in Saudi Arabia: the former because of sometimes insufficient human capital arising from deficits in education, training, and experience; and the latter because of cultural and societal issues related to relatively poorly-paid manual labour and to appropriate roles for women. In a society that has become rich and in which extended families retain financial responsibility for other members, it is often considered inappropriate for a Saudi man to work as a manual labourer because he has few career prospects, even though he has had some education. Hence, many unskilled male labourers are imported, largely from South Asia. Women already face restrictions, even in professional work (though there has been some progress on this in the

past two decades), but conservative families often oppose a woman's employment outside of the home.

The Saudi Arabian economy is the largest in the Middle East and North Africa (MENA), holding a 25 per cent share of the total Arab GDP according to the Saudi Arabian Monetary Agency (SAMA) (SAMA, 2008, p.26). The geographic location of the country provides easy access to export markets in Europe, Asia and Africa. The investment environment in the Kingdom reflects traditions of open market private enterprise policies and its new Foreign Investment Law allows 100 per cent foreign ownership of organisations and real estate. Foreign investment is encouraged by the Kingdom has an impressive record of political and economic stability and modern world-class infrastructure.

Since the 1970s, there has also been a large expansion of government employment, due in part to the growth of the state, development of more comprehensive and sophisticated services, and the rise of a modern bureaucracy, taking the place of more traditional structures that co-existed with a largely nomadic population. Rapid population growth has also provided a continuing impetus for the growth of the state. Some of that growth has been due also to the need to provide employment for a Saudi population that is often either unqualified or unwilling to do certain kinds of private-sector work, particularly in the services sector. This means that a huge percentage of the budget is devoted to paying government wages – more than 30 percent, even approaching 40 percent. Approximately 80 percent of employed Saudis work for the government (this figure may include state-owned companies). In the researcher's view these two trends appear unsustainable in the long run.

1.6.2 Quality in the context of a state underpinned by Islamic traditions

Since the context of the current research is about Saudi Arabia, it is worth observing the cultural context of Islam, to understand the principles related to quality which may impact Saudi thinking and practice on quality problems.

The pre-Islam Arabs lacked discipline and their commitment mostly revolved around the primary group. Prophet Muhammed understood this fact and he attempted to convert the Arab communities into a functional society. The emphasis of Prophet Muhammed on discipline and commitment intended not only to highlight the necessity of work, but also to draw a link between faith and work. In this context, he reiterated, "God blesses a person who

perfects his craft (does the job right)" and "God loves a person who learns precisely how to perform his work and does it right" (Abbas, 2005: p.88).

Prophet Muhammed served as a prophet and as a statesman. Under Prophet Mohammed's leadership, philosophical, political and cultural changes took place in Arabia. He strongly believed that relationships must be based on three foundations: *rahma* (mercy), *ihsan* (kindness), and *adel* (justice) and once these foundations are met, race should not be an issue in choosing a leader (Armstrong, 1992). Muhammed considered leadership as a process of shared influence. In his general conduct of affairs, whether religious or otherwise, he utilised a public open forum where members of the community had immediate input and contributed on the spot to civic and administrative matters. He was reported to have said, "Every one of you is a leader and every one of you should be questioned about his subject". In this broad perspective of responsibilities and behaviours, Prophet Muhammed implied that shouldering responsibility is essential for smooth performance and improving work by participation (Abbas, 2005: p.137).

1.6.3 The sector focus: hotels

Within this national context, the research focuses on the hotels sector. Saudi Arabia is also an attractive location for Arab and international tourists, especially those visiting under the umbrella of what is called "religious tourism". According to the World Travel and Tourism Council (WTTC), the country is ranked on average 31st worldwide in terms of the absolute size of its tourism industry (Assaf and Barros, 2011). The hotel industry in Saudi Arabia is also well equipped to meet the expectations of religious tourists. The country is home to leading hotel chains, with the vast majority being managed and owned by international groups. Recent strategic initiatives in the country have focused on further developing some Saudi brands as leading hotel chains, with the likes of Zam Zam hotel group, which started operating in 2006.

The domestic tourism in the country is also growing rapidly as a result of all the promotional activities and discount packages from local airlines. Similar trends are also occurring in Saudi Arabia, where the government is investing heavily to improve the tourism infrastructure. The government is pushing for the rapid development of local hotel chains (Global Travel and Tourism, 2009).

Saudi Hotels and Resorts Co (SHRACO) (a joint stock company) was founded in 1976, with capital of more than 1 billion riyals. The company is engaged in the construction, ownership, management, operation and investment, procurement and participation and rent of hotels, restaurants, motels and guest houses, recreation centres and travel agencies, tourism, beaches of different types and sizes within the cities on the coast and in tourist areas, public land acquisition, the construction of buy-to-lease buildings and provision of catering.

Companies and organisations that own shares in SHRACO include Mask Base Company (26.3%), the Public Investment Fund (16.6%) and the General Organisation for Social Insurance (6.5%). Subsidiaries, associates and joint ventures, include, Makkah Hotels Co. Ltd. Tabuk Hotels Co .Ltd, AlMadinah Hotels Co. Ltd, ALkhaleej Resorts Co. Ltd, Riyadh Hotels Co. Ltd. and Annakheel Village Resorts Co. Ltd (Tadawul, 2012).

1.7 Theoretical and Practical Contributions

A key point of examination in a Doctoral thesis is some measure of 'contribution' to knowledge, yet surprisingly little discourse can be found on the subject of what constitutes a contribution. Corley and Giola classified contribution to knowledge into two theoretical dimensions, namely, utility and originality (Corley and Gioia, 2011). Originality is the idea of improving understanding of management and organisations by offering a totally new point of view on phenomena or a critical redirection of existing views (Conlon, 2002). Originality has two dimensions: incremental and revelatory. Incremental insight means progressively advancing understanding of knowledge in a scientific discipline. Increments are often made by showing how the addition of new variables somewhat enhances understanding by restructuring ideas about causation (Whetten, 1989). In contrast, revelatory insight is a theoretical contribution that reveals something creatively and unusually or even surprisingly, in a way that changes people's thoughts and understanding about a phenomenon (Mintzberg, 2005).

Incremental originality is a contribution based on an academic gap spotting approach (Alvesson and Sandberg, 2011; Sandberg and Alvesson, 2011). A number of reviewers understand this as the predominant publishing approach (Alvesson and Gabriel, 2013). A number of journal editors indicate their frustration with authors' failure to provide a clear picture or understanding to this effect (Johanson, 2007), and suggest that contributions structured in this way would make it easier for them as editors and reviewers to judge the

contribution made. For example Tadjewski and Hewer recommended that "embedding your research within the existing literature is a must and allows editors, reviewers, and readers to orient themselves" (Tadajewski and Hewer, 2011: p.450). Nevertheless, they also observed that a gap could exist but not be worth filling. Therefore a clear gap spotting strategy makes it possible to assess the utility in filling the existing gap.

Alvesson and Sandberg (2011), discuss various streams within the frame of the idea of spotting gaps. The first classification is confusion spotting. Confusion occurs when a number of published papers within a subject unsuccessful to arrive on agreement on a subject. The second is identifying a neglected or under-researched field. Neglect could apply fit to theories, variables and methodologies, but could also refer to fields where papers are basically theoretical rather than empirical. A third type of gap spotting to where a gap is offered by spotting a modern application for existing theory.

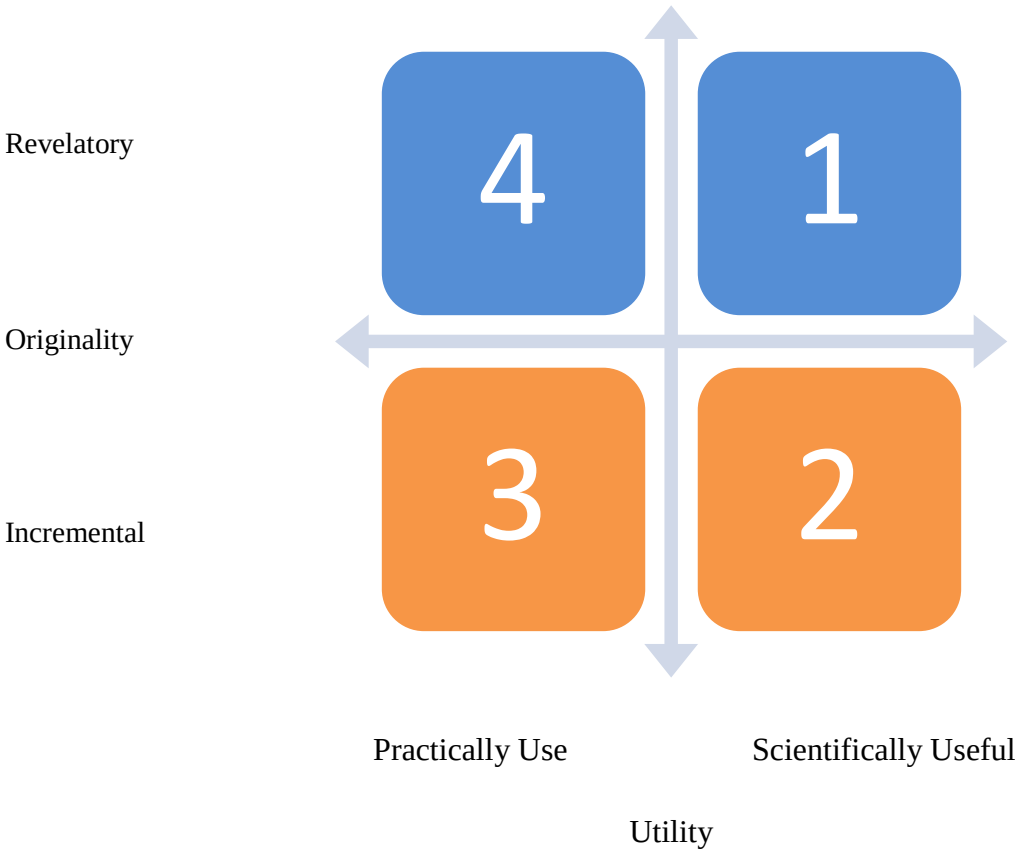
Utility has two dimensions of contribution; research insight may be scientifically useful and/or practically useful. Overall, scientific utility refers to an advance that increases conceptual rigor or specificity and/or improves operationalization and reinforces testability. Theory may have the ability to develop science by improving the cohesion, efficiency and structure of research questions and design. Practically, a thesis could contribute to determining which factors should be studied and how and why they are related, as well as providing insight into the conditions and boundaries of relationships (Smith and Hitt, 2005) . Practical utility relates to the ability of a theory to be applied to the problems faced by practising managers and organisational practitioners. Practically, such a contribution would provide recommendations for structuring and organising around a phenomenon, paying less attention to how the research aids in the defining or understanding of role of QCIs and customer co-production.

Based on the above discussion, the aim in this thesis make a contribution to theoretical knowledge in terms of both originality (incremental insight) and scientific and practical utility. In terms of theory, it offers a new way of understanding the role QCIs and customer co- production in service quality by looking at the employees' perspective. It thereby extends the work of Sichtmann et al. (2011) combining Snell's (1992) control theory and Moller's (2008) Facilitation, Transformation, Usage (FTU) framework, representing an implementation of Vargo and Luch's (2004) service dominant logic, by including informal controls. It has scientific utility in advancing operationalization of organisational culture

while these are incremental contributions, the research is also attempting a revelatory weight in its conceptualisations and theoretical insight

The research also contributes from a managerial (practical utility) perspective. It does so by providing empirical evidence of how QCIs affect customer integration and co-production, and service quality performance, and of the relative effectiveness of different QCIs which may provide pointers toward the use of QCIs to improve service quality performance.

Figure 1-2 Current Dimensions for Theoretical Contribution



Note: the Orange boxes with bold numbers (3 and 2) indicate the areas within which the contribution of this study is believed to fall.

Source: Adapted from Corley and Gioia (2011).

1.8 Organisation of the Thesis

Following this introduction, the thesis is divided into seven chapters:

Chapter Two: provides the theoretical framework for the research alongside a review of the literature. The chapter consists of two parts. The first discusses the dilemma of service quality, including the unique nature of services, conceptualisation of quality in services, and sources of service failure in the stages of service facilitation, transformation and usage (FTU). The

second part focuses on ways of addressing service quality, focusing on the service environment, implementation of formal and informal controls, and consequences in terms of customer integrator and customer co-production.

Chapter Three: this chapter develops the conceptual framework. It identifies and defines the variables under investigation. It then proceeds to the development of hypotheses as to the expect relationships between variables, based on control theory and social exchange theory.

Chapter Four: Methodology: This chapter explains the methodology of the research. The research paradigm, design and approach are identified and the target population and sample are identified. The choice of data collection techniques is described, and instrument development explained, validity and reliability are reported. The pilot and main phases of data collection are discussed and data analysis procedures are explained.

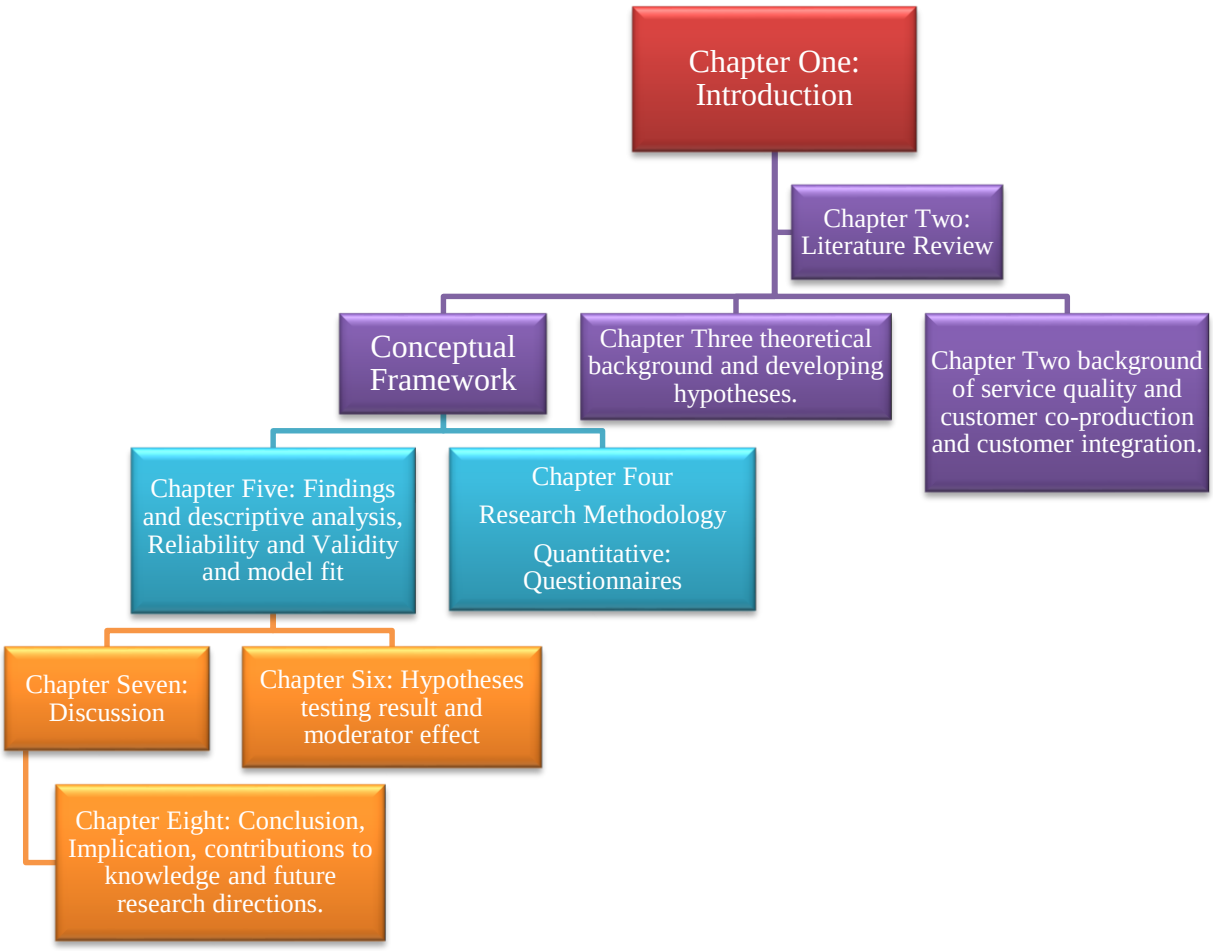
Chapter Five: presents the findings, beginning with an account of testing for the normality of the data, and a descriptive analysis of respondents. Then the chapter presents the development of the conceptual framework through exploratory factor analysis for validity and reliability testing. Confirmatory factor analysis for model assessment is reported, with consideration to the reasons for choosing the PLS-SEM methods. Discriminant validity is shown. Bias analysis and goodness of fit are also reported.

Chapter Six: Hypothesis testing of the structural model is presented. The chapter reports the expected relationships between constructs. Then the chapter presents residual centering and the effect of the three moderator variables is tested and examined.

Chapter Seven: presents the discussion of the findings of Chapter Five and Chapter Six. This chapter provides full explanation and justification for the significance or otherwise of the tested relationships, which are interpreted in the light of the literature in order to highlight similarities and differences support the evidence or not. Moderator effect discussion is highlighted.

Chapter Eight: contains a summary of the main lessons and findings of the study, its contribution to theory, and managerial implications drawn from the findings. The limitations of the research are highlighted and finally the thesis concludes with identification of possible channels for future research directions to consider. The research is summarised in Figure 1.1.

Figure 1-3. Research Structure



1.9 Summary

In this chapter, the research background is introduced and then research problem identified. It then sets out the research context, the Saudi hotels industry, with particular reference to the largest hotel company in the KSA. The key research questions and objectives are set out and the anticipated contribution to knowledge presented. In the next chapter, the literature on the research variables, customer integration and customer co-production, service quality performance is reviewed.

2 Chapter Two: Review of Literature

2.1 Introduction

The purpose of this chapter is to provide definitions and clarification of the key concepts underpinning this research, and to review relevant theories, as a foundation for the hypothesis development and empirical testing reported in subsequent chapters.

In the 1980s and 90s, important attention was paid to the issues relating to service and product quality, driven by competition and continuous attempts to satisfy customers. Whereas early work on quality was more focused on the manufacturing industry, increasing attempts to identify and understand quality of service have been undertaken in the last three decades (Kang and James, 2004; Wilkins et al., 2007), which are introduced in this chapter.

It was suggested in Chapter One that assessing the quality of services has become an imperative. Countries at all levels of development and with all types of political structure are thinking about the service sector, which has become one of the priorities for many countries. Hence, leaders and managers in service sector organisations, whether in the public or private sectors, are under increasing pressure from customers and negative media presentation (Shahin, 2002). The importance of quality of service has become one of the top priorities in hotels (Callan and Bowman, 2000; Callan and Kyndt, 2001; Min et al., 2002) and in a broader business context (Zeithaml et al., 1996; Bloemer et al., 1999), it is widely accepted that quality of service is antecedent to customer satisfaction. It is surprising that this aspect has been neglected in the extant literature. As such, the role that customer co-production plays in service quality performance is examined in this thesis. It is hoped that this examination will enhance both theoretical and practical understanding of service quality. It would be useful to find modern tools that can help in improving service quality performance.

This research also explores the role of quality control initiatives (QCIs) as significant quality management practices in the context of the organisation performance of service, that is, the results of organisation behaviour under different organisational and environmental conditions (Diamantopoulos, 1999). This chapter culminates in the presentation of a theoretical framework for the research explained in the reminder of the thesis. The chapter is divided into two main parts. In the first, the unique nature of services is explored, and the dilemma service characteristics pose for service quality is identified, in terms of what constitutes quality in services and how it can be measured, and lastly, sources of service quality failure.

In the second, theories and concepts related to the determinants of service quality are introduced, including the service environment, quality controls, and consequent employee and customer behaviours. In this way the chapter provides the foundation for Chapter Three, in which a conceptual model of service quality is proposed and hypotheses are developed.

2.2 The Nature of Service and the Dilemma of Service Quality

It was indicated in Chapter One that services have unique characteristics, which have implications for measuring and ensuring service quality. In this section, these characteristics are explored in more depth. The FTU Framework is then introduced to identify sources of failure in service quality.

2.2.1 The unique nature of services

Service delivery is different from manufacturing in several ways, and that makes the quality issues in the service sector different from the manufacturing ones. For example, overall the output of the service sector is intangible, whereas manufacturers offer visible and tangible products (see Table 2.1). The service sector usually deals with a large volume of transactions. Services are consumed as they are generated and they are impossible to be kept, like manufacturing goods. Moreover, overall services are more labour intensive, while manufacturing is capital intensive. In the service sector, providers and customers usually have to interact in order for the service to be delivered. Moreover, some may argue that the perception of service quality by customers rises or declines according to the interactions of customers with service providers.

Table 2-1 Difference between Services and Manufacturing Goods

Services	Manufacturing Goods	Resulting Quality Implications
Intangible	Tangible	Services are performed not produced, and quality depends on that performance. Service employees are viewed as signs of quality (quality depends on people). No direct quality control.
Simultaneous Production and Consumption	Production separate from Consumption	Service customers participate in and affect the service transition. Service customers affect each other in quality measures. Service employees affect service quality outcome. It is not possible to hide quality shortfalls & mistakes.
Heterogeneous	Homogenous (Standardized)	Service delivery and customer satisfaction depend on service employees' behaviors and actions. Service quality depends on many uncontrollable factors.
Perishable	Nonperishable	It is difficult to have a final quality check (delivering services right first time, every time). Service cannot be returned or resold.

Source: Adapted from Zeithaml and Bitner (2006, p.20)

Furthermore, the process of service provision often demands a higher level of customization than manufacturing of goods. The customization often gives rise to heterogeneity of the service and the possibility of problems in the performance of the service. In other words, the interaction of the customer with the services should be considered when the service is shaped, performed and provided (Cândido and Morris 2001). To summarise, these differences between manufacturing goods and service have significant implications for quality issues in the service sector. For example, the result of service simultaneity in customer service is that customers not only expect a high level of quality of service, but are also interested in the frontline employee who provides the services as well (Van Looy 2003 et al.; Zeithaml & Bitner 2003). Likewise, the simultaneous production and consumption of the service make it difficult to assess the quality of service before services are used. Thus, failure of quality cannot always be found and avoided before a customer uses the provided service.

Looking at the different characteristics of services and manufacturing goods, the difficulties of quality assurance become apparent because perspectives in quality shift at various points in service provision (Cândido and Morris, 2001; Wetzels, 1998). Scholars of marketing focus on examining the service encounter as a process where perceived quality or value has neither beginning nor end. That means many factors related to the service employees may determine perceived quality or value, while perceptions of quality and value often determine multiple outcomes such as organisational effectiveness or customer behaviours. Although the whole process of service production is quite involved, simple ways to evaluate the process may be expressed, such as performance of service cues/attributes, overall service quality/ value and customers' behavioural intention (Hartline and Jones, 1996). However, most research on service quality has focused on the customer perspective. For example, Parasuraman views service quality in terms of the difference between what customers expect from the service, and what they experience (Parasuraman et al., 1985, 1991). This gap model has been widely adopted in service quality research (Babakus and Boller, 1992). Much less consideration has been given to employees' perspective on quality, a gap which will be addressed in this research.

2.2.2 Quality in the Service Sector

Quality in service companies, as providers of service, is clearly a critical factor that the providers of the service and managers have to address in order to raise the performance of their service companies in relation to revenue and meet customer satisfaction (Cândido and Morris, 2001; Garvin, 1988; Garvin, 1984; Van Looy et al., 2003; Wilson et al.,

2012; Zeithaml et al., 2006). Furthermore, improving the level of quality of service delivery has become a significant factor for all organisations in terms of competition and global marketing. The study of quality in firms has included marketing, organisational and managerial perspectives, reflecting the several orientations occupied by researchers from various disciplines in determining the quality problem (Cândido 2001; Van Looy et al. 2003; Wetzels 1998; Zeithaml & Bitner 2003).

There are several definitions of quality. For example, Deming (2000) identifies quality as a service or product that assists someone and benefits from a good and sustainable market. Juran defined quality as "fitness for use by the customer" (Juran, 1988). There are four bases of absolute quality: firstly, quality is conformance to needs. Secondly, quality is caused by prevention. Thirdly, the level of performance is no defects. Finally, the measure of quality is the price of non-conformance (Crosby, 1980). Quality is the total combination of product characteristics, marketing, engineering, manufacture and maintenance by which the product and service used would meet consumer expectations (Feigenbaum, 1991).

Quality can be seen from several different disciplines, for instance, economic, marketing, psychology or the study of operations. Moullin and Kasper stated that the five approaches classified by Garvin (1984) (briefly introduced in Chapter One) are the best framework for the definition of quality (Moullin et al., 2011; Kasper et al., 1998). To recapitulate, these are as follows:

- **Transcendent**: quality is synonymous with innate excellence or a level of universal value, for instance, when people talk about a high level of quality (Oakland, 1995). It is based on experience. An issue linked to this approach, according to Moullin et al. (2011) is that it drives firms to focus on particular elements of the service provided by the organisation.
- **Product-based**: this type identifies quality as one dimensional and means that top quality inevitably costs more money (Moullin et al., 2011). Kasper et al. (1998) argued that this category is based on distinctiveness in some components or features of a product.
- **User-based**: quality is determined by the consumer, because the customer is always right. Quality means that the attributes of a product meet the customer's requirements (Dale et al., 2013; Oakland, 1995).

- **Manufacturing-based**: quality in this category implies conformance to specification and focuses on the supply perspective. The issue with this category is that the specification may not meet the customer's need, so a product or service can meet an organisation's specification but not the consumer's desires (Moullin et al., 2011).
- **Value-based**: quality is focused on cost and price (Moullin et al., 2011; Garvin, 1984)

Many of the quality definitions mentioned above are derived from the work of leading quality practitioners and authors , whose work has been central to the assessment of the quality definition and the way it has been operationalised (Crosby, 1979; Deming, 1986; Ishikawa and Lu, 1985; Feigenbaum, 1983).

Although the above-mentioned authors each have their own specific emphases, strengths and weaknesses, similarities or common directions in their thoughts can be identified. These can be pointed out as follows:

- It is very important to control the process, not the outcomes.
- Inspection is never the answer to quality improvement, nor is policing.
- The importance of human process is recognised.
- Quality is a long-term process and requires continuous development.
- The advantage of quality a outweighs the cost of it.
- All parts of the organisation should be involved and participate in quality.
- Quality concepts are applicable to both services and industry.
- Education and training are extremely important.

From the definitions and principles raised by the leading quality authors, it seems there are two potential fields of focus:

- Technical terms of quality management (or level one): providing services and producing products whose assessable characteristics fit a fixed set of particulars. This is a largely accomplished by statistical and quantitative approaches.
- Human dimensions of quality management (or level two): services and products that aim to satisfy customer expectations and perceptions (Hoyer and Hoyer, 2001).

The key points of these author's approaches and their levels of focus are summarised in Table 2.2

Table 2-2 Classification of quality philosophies

practitioners and authors	Definition	Salient Points	Level of focus
Deming	"Quality is multidimensional to produce a product and/ or deliver a service that meets customer's expectations to ensure customer satisfaction" (Deming, 1986, p.54)	Quality must be defined in terms of customer satisfaction Quality is multidimensional. There are a different degrees of quality because it is essential equated with customer satisfaction.	Two
Crosby	Conformance to requirements (Crosby, 1979, p.7)	It is necessary to define quality. We should know the requirements and translate them into measurable product or service characteristics. We must measure the characteristics to ensure the high quality of services or products.	Mixed
Feigenbaum	"The total composite product and service characteristics of marketing, engineering, manufacturing and maintenance through which the product and service in use will meet expectations of the customers" (Feigenbaum, 1983, p.7).	Quality must be defined in terms of customer satisfaction. Quality is multidimensional and must be defined comprehensively. Quality is dynamic since customers' needs change.	Mixed
Juran	"Quality consists of those product features which meet the needs of customers and thereby provide product satisfaction" (Juran, 1988, p.2). "Quality consists of freedom from deficiencies" (Juran, 1988, p. 2).	No practical definition of quality. Quality is apparently associated with customers' requirements and fitness suggests conformance to measurable product or service characteristics.	Mixed
Ishikawa	"We engage in quality control in order to manufacture products with the quality which can satisfy the requirements of customers" (Ishikawa, 1985, p.44).	Quality is equivalent to customer satisfaction. Quality must be defined comprehensively. Customers' needs and requirements change continuously. The price of the service or product is important in quality.	Two

It can be seen that there is no agreement on one correct approach to quality management. Nevertheless, it is demonstrated that there are two key levels to concentrate on: (1) the technical dimension of quality and (2) the human dimension of quality. Technical requirements of prediction and control are addressed largely by statistical and quantitative methods, which cover the technical demands from design via production to inspection of the final product. Management of the human dimension of organisations is not at all clearly provided for. The key quality authors commonly declare their interest in managing people in their philosophies but on analysis offer few tangible principles and virtually no usable methods.

The fast increase of the service sector has raised different perspectives on quality issues and the meaning of service quality. Service companies (e.g. banks, hospitals and hotels) do not

provide tangible goods. The interaction between providers and customers is crucial in such companies. Lehtinen and Lehtinen (1991) proposed that quality of service is an outcome of the interactions between the customer and the agents of the service company. They described that the quality of service has three dimensions as follows: material quality, organisation quality, and interactive quality. Interactive quality recognises that quality of service is created from the interaction among the provider of the service and customers, a perspective which is necessary to complement the receiver-focused view of quality of service which has been the dominant pattern until now (Svensson, 2006).

In their conceptualisation of quality of service, Brady and Cronin (2001) identified three core dimensions of significance: physical environment quality, outcome quality and interactions quality. Environment quality considers the "physical or built' environment within which the service takes place, outcome quality refers to "what the customer is left with when service is rendered", and interaction quality refers to "interpersonal interactions that occur in service delivery" (Brady and Cronin, 2001: 38-40). Of Brady and Cronin's (2001) three dimensions of quality of service, interpersonal interactions are recognised as having the greatest influence on quality of service (Bowen and Schneider, 1985; Bitner et al., 1994; Hartline and Jones, 1996; Hartline and Ferrell, 1996). This is because in many service situations, the employee is seen as representing the organisation or the service itself (Bitner, 1990; Zeithaml and Binter, 1996). However, Brady and Cronin (2001) identify a lack of research into the interaction domain and call for more investigation in this field.

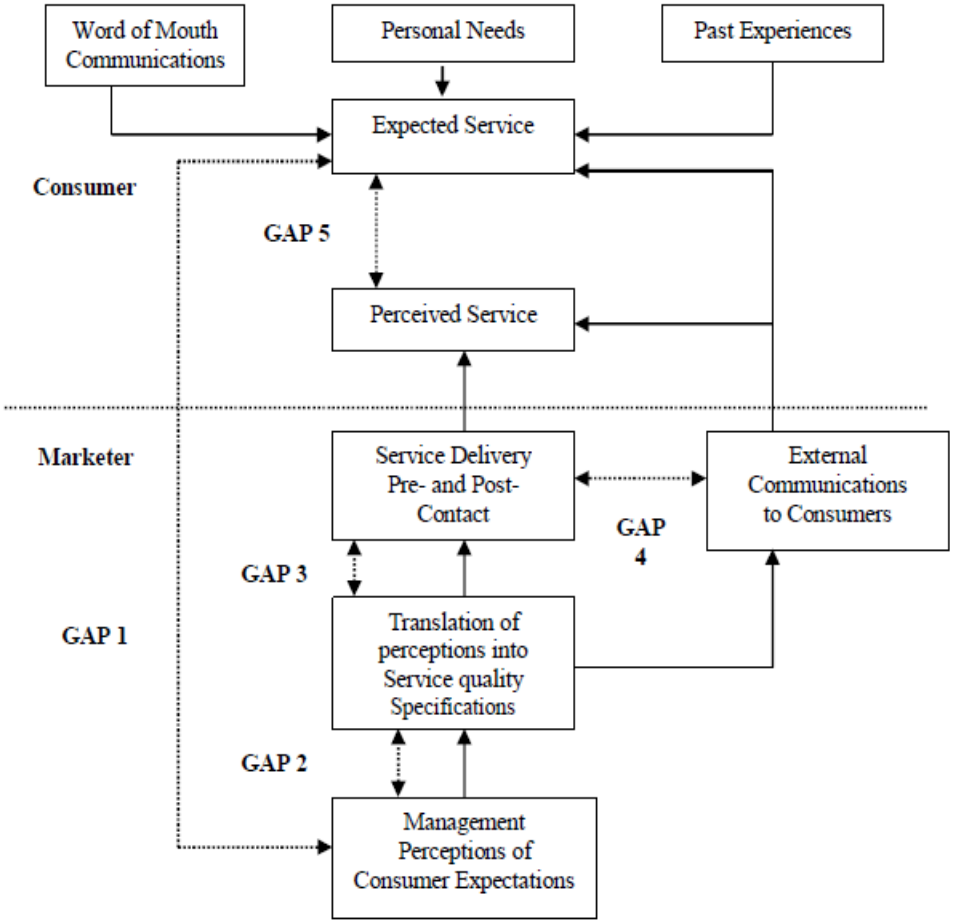
According to Lucas (2005), what customers want is value for their money and effective, efficient service. Customers also expect to obtain intangible things while in a service encounter. Lucas has listed a few significant matters that customers expect and need to be provided in order to induce them to continue to do business with a company:

- Personal recognition: this might be shown in a variety of ways such as posting thank you cards or notes, or birthday cards, returning calls in a timely fashion, taking the time to find information that may be useful even if the customers do not ask for it. An easy way to demonstrate recognition to a customer who enters the company, even if the staff cannot immediately stop doing what they are doing to serve him or her, is to welcome, smile, and acknowledge the customer's presence.

- Courtesy: simple courtesy including expressions such as please and thanks. There is no place or excuse for rude behaviour in a customer service area. It might be true to say that customers may not always be right, but they must be treated with full respect.
- Timely service: most customers do not mind being kept waiting a short time for service if there is reasonable cause, such as another customer or serving another customer on the phone. However, if staff keep the customer waiting for no reason, such as staff talking to each other or do not care about customer, that may affect perceived service quality and customers will be dissatisfied.
- Professionalism: customers expect to receive all sorts of skills such as knowledgeable response to their questions, and service that meets their requirements.
- Enthusiastic service: customers come to the company for one reason, to satisfy their needs. Delivering service with good will, offering additional services and information and exerting maximum effort in every service encounter will help a company to ensure a positive service experience for its customers.
- Empathy: customers wish to be understood. This is especially true when the customers face a language barrier or have some kind of disability that reduces their communication effectiveness. When a customer has a complaint or believes that he or she was not satisfied with the service, it is the job of the customer service staff to make an effort to understand him/her.
- Patience: a customer might be unhappy about the service that the company provides which may cause a customer to become enraged. This may require customer service staff to be able to keep calm and control their feelings while talking to the customer.

Lucas's list can be seen as an attempt to operationalize the concept of service quality in terms of specific attributes, although he did not offer a developed measurement instrument, nor did he explain the cognitive process by which such attributes are evaluated in order to form perceptions of service quality. However, a cognitive explanation was provided in one of the most widely adopted and operationalized approaches to service quality measurement, the "Gap" model developed by Parasuraman et al. (1985). Based on in-depth interviews and focus groups in several service industries, they identified five potential "gaps" in service quality, as follows:

Figure 2-1 The conceptual Gap Model of Service Quality



Source: Parasuraman et al. (1985)

The first gap: is between the expectations of customers and perception of management of the expectations of customers. According to Parasuraman et al. (1985), the scholars discovered that the confidentiality and privacy of operations appeared as key quality attributes in the banking and securities focus group: nevertheless, this was rarely considered by the executives. The authors summarised that weakness in understanding this gap will have an effect on the customer's perception of the quality of service.

The second gap: is between the perception of management of consumer expectation and quality of service specifications. Even when executives try to meet the expectations of consumers, they face some difficulties in providing what the consumer expects (Parasuaman et al, 1985). The researchers mentioned that the reason for that is the difficulty in finding ways to provide a rapid response continually, due to the weakness of training of service personnel and the wide range of functions in demand. Another reason which increases the gap is the low commitment of management to quality of service. This discrepancy among the

perception of management of consumer expectations and the service specifications of an organisation has an impact on quality of service from the perspective of consumers.

The third gap: is between the specifications of quality of service and the actual service that delivered. The best quality of service may not be guaranteed, even if there is a blueprint for accomplishing excellent services. According to Parasuraman et al. (1985), service providers play a significant role in service quality as their performance may not always adhere consistently to the formal specifications of service quality. This causes a gap between the specifications of service quality and its delivery.

The fourth gap: is between the delivery of service and the communications to customers about service. Since the advertising and other media by an organisation may impact the expectations of customers, the organisation must not promise more that it can provide. Parasuraman et al. (1985) argued that when the service delivered to the customer is less than the organisation promised, it has a harmful impact on consumers because the promises increase the initial expectations and then quality perception is lower by comparison. Furthermore, an organisation should also keep customers informed and updated of special efforts to guarantee quality that are not visible to consumers, because the external media or communications may impact both the expectations of customers toward the service and the perceptions of customers of the service delivered.

The fifth gap: is between the consumer expectations and perceptions of service quality. According to Parasuraman et al. (1985), the point of quality of service is to meet or exceed the consumer's expectations. They argued that the rating of the quality of service is as good or bad is defined by customers, which means customers compare between the service performance experienced and what was expected. To conclude, "The quality that a consumer perceives in a service is a function of the magnitude and direction of the gap between expected service and perceived service" (Parasuraman et al. 1985 p46).

Wetzels (1998, p.21) described this expectation of the concept of service quality as an "extremely user-based perspective" which matches with the concept of quality and orientations of Garvin (1984, 1988). Accordingly, from the point of view of customers, quality of service is often explained as the difference between the expectation and perception of services. Although quality of service is difficult to control due to the intangibility, heterogeneity, pershability and simultaneity of services, good perceived service quality (or "right" quality in Edvardsson's (1994) term) might be accomplished if customer expectations

are met, whereas poor perceived service quality happens if the expectations of the customer are not met (Parasuraman et al. 1985; Zeithaml et al. 1988, 1990).

In other words, customer service is measured and perceived quality of service, assessed by comparing the expectations customers had before they used the service with their perceptions of the actual service (Parasuraman et al., 1985, 1988; Wetzels 1998; Zeithaml & Bitner 2006, Zeithaml, et al., 1988, 1990). When the service perceived equals the service expected, the service customer's expectations have indeed been met. In this particular situation, quality of service is satisfactory to that specific service customer (Cândido 2001; Grönroos 1990; Parasuraman et al. 1985; Wetzels 1998; Zeithaml et al. 1988). Moreover, when service perceived is better than service expected, the provided service quality exceeds what the customer expected and the customer would be satisfied. Finally, when the service expected exceeds service perceived, then the expectations of quality of service are not met and the actual quality of service provided is perceived as disagreeable.

This approach to measuring service quality is operationalized in the widely used SERVQUAL instrument (Parasuraman et al. 1985) discussed next.

2.2.2.1 Measuring Service Quality

Quality in service industries cannot be objectively measured as it can in manufactured goods and therefore it remains a relatively elusive and abstract concept (Akbaba, 2006; Zeithaml et al., 1990; Khan and Shaikh, 2011). The assessment of quality performance for services is more complex than for products because of their inherent nature of heterogeneity, inseparability of production and consumption, perishability and intangibility (Frochot and Hughes, 2000). Quality of service was defined by Parasuraman et al. (1988) in terms of the gap between the expectations of customers of a service and their perceptions of the actual service provision by an organisation. They developed the SERVQUAL scale, a survey instrument which is intended to measure the service quality in any kind of service organisation based on five dimensions, namely: Reliability, Tangibles, Assurance, Responsiveness and Empathy (Parasuraman et al. 1988).

Initially, Parasuraman et al. (1985) classified ten key factors to measure quality of service, which are described as quality of service dimensions, as follows:

- Reliability: the firm should perform the services to its customers at the exact time. Moreover, the firm should abide by its promises to customers, for instance, accuracy in billing and keeping records accurately.
- Responsiveness: the employees of the firm should be able to perform the full service according to the plan of the firm, for instance, react to customers and understand customers' needs. Moreover, employees should answer all customer questions.
- Competence: the employees of the firm should have ability and high skills to perform the service, for instance, knowledge and skills of the contact personnel and knowledge and skills of operational support personnel.
- Access: the customers should be able to contact the firm in various ways, for instance, by telephone, internet and fax. Waiting time impacts the service quality as well.
- Courtesy: the employees of the firm should be friendly, polite and respectful. The team who face the customers should be neat in appearance.
- Communication: keeping the customers informed and providing clear and understandable information. For instance, inform the customers how the service works, inform the customers how much the service will cost and guarantee the customers that a problem will be solved.
- Credibility: the firm should gain the credibility of the customers, specifically in cost, time, delivery, dates etc; this will elevate the reputation of the firm with their customers and also will lead the firm to gain new customers.
- Security: the firm should be able to keep customer information, including financial accounts, confidentially.
- Understanding: the company should be able to understand the customer's needs and learn how to provide these needs to its customers.
- Tangibles: the company should provide all kind of services and materials such as equipment and instruments.

According to Parasuraman, Zeithaml, and Berry (1985, 1988; Zeithaml, Parasuraman, & Berry, 1990) the process of development of their SERVQUAL scale started with generation of a large number of items representing different aspects of the ten quality of service dimensions. Each item was divided into two statements, firstly, to measure expectations about companies overall within a service type being examined and secondly, to measure perceptions about the specific company whose quality of service was being assessed. Analysis of extensive data from five groups of respondents produced a highly reliable and valid measure of quality of service. Factor analysis resulted in grouping the items into five

distinct dimensions: Tangibles, Reliability, Responsiveness, Assurance and Empathy. Tangibles, Reliability and Responsiveness correspond to three of the original 10 dimensions. Assurance was formed by the consolidation of competence, courtesy, credibility and security from the initial 10-dimensions structure, while access, communication and understanding were combined to form the Empathy dimension.

The instrument's designers suggested that "when expected service (ES) is greater than the perceived service (PS), perceived quality is less than satisfactory and will tend towards totally unacceptable quality, with an increased discrepancy between ES and PS; when ES equals PS, perceived quality is satisfactory; when ES is lower than PS, perceived quality is more than satisfactory and will tend toward ideal quality, with increased discrepancy between ES and PS" (Parasuraman et al. 1988 p.48-49). This quotation implies that the scale was developed to measure how satisfied the customer is with perceived quality of service based on unacceptable to ideal, rather than the level of quality of service itself, from low to high (Augustyn and Seakhoa-King, 2005).

SERVQUAL has attracted criticism on various grounds. For example, it is noted that the SERVQUAL scale was based on defining quality of service as meeting or exceeding customer expectations (Parasuraman et al. 1985), but defining quality in this way is the most complex definition of quality and hence, the most difficult to measure (Reeves and Bednar, 1995). A major concern with the use of SERVQUAL is regarding whether expectations and perceptions should be measured separately, before and after experience of the service, respectively, or whether it is acceptable to collect both sets of data at a single administration. From a practical point of view, Carman (1990) argued that it is not easy to expect that a customer would fill in the questionnaire on expectations when they visit a service provider and afterwards fill in the questionnaire on perceptions when they leave. In answer to this particular criticism, Parasuraman et al. (1991) indicated, that customers who have already recently dealt with the service can be asked to fill in both perceptions and expectations sections at the same time. However, in Carman's (1990) view, expectation responses obtained in this way have little value, since they are gathered ex post and so are not genuine expectations but are affected by experience and memory. The authors asserted that the gap model (variance scores) offers information encouraging the essential role of expectations in measuring quality of service as well as demonstrating excellence in identifying weak areas. They also argued that the difference limitations might be an issue only when the variance measure is applied as the dependent variable in a multivariate analysis.

The majority of criticisms of the SERVQUAL i) the number and nature of the quality dimensions, ii) the argument that gap scores are driven by high expectation scores, and iii) reliability. Firstly, as regards the dimensionality of the scale, authors have challenged the 5 dimension structure, suggesting that both the number and content of dimensions may differ according to context. For instance, Carman (1990) discovered that SERVQUAL was not a comprehensive, generic measure for all services. He proposed that more replication and examination of the dimensions are required before approving it. Applying the instrument in four different service settings, Carman (1990) argued that each service has different dimensions. Crompton and Mackay (1989) also deemed that the dimensions would differ for different kinds of service. Scott and Shieff (1993) suggested that the five dimensions only apply to the services in which SERVQUAL was developed. Furthermore, Finn and Lamb (1991) advised that theoretical constructs should be researched in the field of an industry and the basis of the industry considered, determining if the label comprehensive is justified.

Babakus and Managold (1992) identified a factor which measured quality of service in an organisation. Their findings "basically produce an individual model" of quality of service, explaining 66.3% of the differences. They suggested some clarifications for this one-dimensional structure, including the standard of the service, non response bias and the application of individual perceptions and expectations gap scales. The authors summarised that the results of the five dimensions of quality of service proposed by Parasuraman et al. (1988) did not support the expectations. Babakus and Boller (1992) suggested that the number of dimensions of service quality differ depending on the industry in question. They found, for example, that for utility services, perceived quality appeared to be essentially one-dimensional; an overall abstraction of "quality" in which different aspects or elements are not distinguished. They attributed this to the fact that basic services such as gas and electricity are delivered on a continuous basis, normally without contact between customers and providers. Moreover, the monopoly status of the company in this study meant an absence of competition that might have affected customer awareness. In other industries, they suggested, perceived service quality may be a more complex and multidimensional domain. However, the possibility that the number and configuration of quality dimensions differ for different industries calls into question the universal applicability of the scale. Parasuraman et al. (1988) proposed that the SERVQUAL instrument might be "applied as necessary" to particular study circumstances. In relation to this criticism, they proposed that essentially, every single researcher who tries to use SERVQUAL should adapt it according to the situation. Although no-one has raised a problem of the meaning of the label "generic" SERVQUAL, a

fundamental problem in the research of those who criticise this label is that many adaptations to the survey elements were necessary and the number of dimensions and the configuration of the dimensions were not similar.

Application of the SERVQUAL scale regularly yields inconsistent results in terms of the number and the sort of quality dimensions, depending on the service sector investigated (Augustyn and Seakhoa-King, 2005). In a business-to-business context Jayawardhena found that "SERVQUAL's five dimensions could be reduced to a smaller number", and claimed that "other research is needed to determine if the SERVQUAL scale can be reduced to a more parsimonious structure" (Jayawardhena, 2004: p.140).

However, several authors (Crompton and Mackay, 1989; Luk et al., 1993; Patton et al., 1994; Johns and Tyas, 1996; Suh et al., 1997; Ekinci and Riley, 1998; Juwaheer and Ross, 2003; Getty and Getty, 2003; Atilgan et al., 2003; O'Neill and Palmer, 2001; Fu and Parks, 2001; O'Neill et al., 2000; Frochot and Hughes, 2000; Juwaheer, 2004; Nadiri and Hussain, 2005; Marković, 2006; Kvist and Klefsjö, 2006; Ramsaran-Fowdar, 2007; Narayan et al., 2008; Wang et al., 2008; Filiz, 2010; Qin et al., 2010; Hsieh et al., 2008; Bastič and Gojčič, 2012; Han and Hyun, 2015) measured quality in service industries using either the service quality (SERVQUAL) scale in its original form (as developed by Parasuraman et al., 1988), or modified the SERVQUAL to reflect some of the unique characteristics of the context of the investigated study or to avoid some of the inherent weaknesses of the original SERVQUAL scale (Augustyn and Seakhoa-King, 2005) (See Table 2.3).

Because of the arguments about the number of dimensions in the SERVQUAL scale, several authors have suggested alternative or additional dimensions to capture some of the unique features of the service sector investigated (see table). As a result, many other modified scales to measure quality of service in different context have emerged. The proliferation of quality measurement scales may be due to a lack of a standardized operational definition of quality of service (Augustyn and Seakhoa-King, 2004). Difficulty of definition is a particular problem in the hotel industry, where other attributes, such as short distribution channel, imprecise standards, face to face interaction and information exchange, reliability and consistency claimed have been identified and further complicate the task of measuring the quality of service performance (Akbaba, 2006).

Table 2-3 Examples of Application of the SERVQUAL Scale in Leisure, Tourism and Hospitality.

Reference	Object of Evaluation	Scale Used
Crompton and MacKay (1989)	Recreational services	
Knutson et al. (1991)	Hotels and motels	Modified SERVQUAL scale called LODGSERV (26 items)
Saleh and Ryan (1991)	Hotels	Modified SERVQUAL scale (33 items)
Luk et al. (1993)	Organised tour services	Modified SERVQUAL scale (19 items)
Bojanic and Rosen (1994)	Restaurants	
Getty and Thompson (1994)	Lodging industry	Modified SERVQUAL scale called LODGQUAL
Patton et al. (1994)	Hotels	Application of LODGSERV
Akan (1995)	Hotels	Modified SERVQUAL scale (30 items)
Gabbie and O'Neill (1996, 1997)	Hotels	
Johns and Tyas (1996)	Foodservice outlets	Modified SERVQUAL scale – perceptions only
Ryan and Cliff (1997)	Travel agencies	
Suh et al. (1997)	Hotels	
Ekinci et al. (1998)	Resort hotel	Modified SERVQUAL and LODGSERV scale; (18 items
Wong et al. (1999)	Hotels	
O'Neill et al. (1999)	Surfing event	Modified SERVQUAL scale (21 items)
Ingram and Daskalakis (1999)	Hotels	Modified SERVQUAL scale (27 items)
Frochot and Hughes (2000)	Historic houses	Modified SERVQUAL scale called HISTOQUAL (24 items) perceptions
O'Neill et al. (2000)	Dive tour operator	Modified SERVQUAL scale called DIVEPERF – importance/performance
Fu and Parks (2001)	Restaurants	
O'Neill and Palmer (2001)	Accommodation facilities, water based adventure theme park	Modified SERVQUAL scale – importance/performance
Atilgan et al. (2003))	Tour operators	Modified SERVQUAL scale (26 items)
Getty and Getty (2003)	Lodging industry	Development of new scale based on Parasuraman et al. (1985) ten original dimensions
Juwaheer and Ross (2003)	Hotels	Modified SERVQUAL scale (39-items)
Juwahee, 2004	Hotels	Modified SERVQUAL scale (36-items
Nadiri and Hussain, 2005	Hotels	SERVPERF scale (only two dimension : tangibility (4) and intangibility(18 item)
Markovic, 2006	Tourism higher education	Modified SERVQUAL scale (40-items
Kvist and Klefsjo, 2006	inbound tourism in Sweden	Modified SERVQUAL scale contains 10 dimensions
Ramsaran-Fowdar, 2007	Hotel industry	Modified SERVQUAL scale (58-items)
Narayan et al., 2008	Tourism industry	New scale contains 10 dimension
Wang et al., 2008	Hotels	Modified SERVQUAL scale (35-items)
Filiz, 2010	Travel agents	Modified SERVQUAL scale (26-items)
Qin et al., 2010	fast-food restaurants	SERVQUAL scale +the dimension of recoverability,

Hsieh et al., 2008	hot spring hotels in Taiwan	Modified SERVQUAL scale contains 23 dimensions
Han & Hyun (2015)	Medical tourism Quality	Modified SERVQUAL scale
Bastič & Gojčič (2012)	Hotel	Modified SERVQUAL scale contains 28 dimensions

Another criticism related to the instrument concerns the basic notion of operationalizing service quality in terms of the difference between expectation and perceptions, since it is claimed that the gap scores are essentially driven by one component. The notion of applying the difference between expectations and perceptions is rejected by Carman (1990), from the theoretical point of view, because expectations differ among settings. He cites as an example the differing expectations of an expensive restaurant, compared to a pizza parlour. Where expectations are lower, the customer is likely to be more easily satisfied, so the gap between expectation and perception scores is likely to be smaller. This means perceptions of quality are affected by expectation (Carman 1990). Carman (1990) also raised the possibility that if expectations and perceptions are measured on separate occasions, the cognitive structure of the respondent may differ from one administration to another.

Babakus and Boller (1992) recognised that applying a difference score to quality of service measurement is "intuitively appealing". However, they expressed doubts whether the difference scores offer any additional information beyond that already contained in the perception elements of the SERVQUAL. They emphasized that the dominant contributor to the gap was the perceptions score because there is a common tendency to rate expectations high. Peter et al. (1993) and Brown et al. (1993) were also interested in the problem of using difference scores. They argued that difference scores should not be applied in customer studies because problems may arise regarding reliability, discriminant validity, false relations and difference limitations. In terms of discriminant validity, the authors suggested that difference scores are often less reliable than non-separation scores (performance-only). Moreover, difference limitation was considered as an issue with the use of two score elements in SERVQUAL.

Even if the validity of using difference scores is accepted, Babakus and Boller (1992) doubted the reliability of individual items, and the discriminant and convergent validity of the SERVQUAL elements. Their reason for criticising these elements is that the factor loadings reported by Parasuraman et al. (1985; 1988) were lower than desirable and less than half of item variances, in most cases, was explained by the underlying factor. Carman (1990) also raised doubts about reliability and suggested that items may need to be added to or removed

from dimension sub-scales according to context, and that all items be subject to reliability checks.

Brown et al. (1993) questioned the meaning of gaps, because different scores may show the same quantitative gap scores (e.g.4-7=-3; 2-5=-3). Some researchers argued that care needs to be taken when applying quantitative data and follow-up study should be of a qualitative nature (Mels et al., 1997; Taylor et al., 1993). In the past decades, the questions about SERVQUAL as a measure of the theoretical construct of quality of service have increased. Nevertheless, despite the many deficiencies of the SERVQUAL model, as a universal measure of quality of service, it is still widely applied these days.

The debate on whether perceptions minus expectations or only perceptions measures quality of service dominated in the services marketing literature in the 1990s (Parasuraman et al., 1994; Cronin Jr and Taylor, 1992, 1994). There is evidence that the perceptions only measure is more psychometrically robust (Dabholkar et al., 2000; Cronin Jr and Taylor, 1992). A few scholars have argued that perceptions are the measure of quality of service that best explains the construct. They suggest that since perceptions include an assessment of expectations in their calculation, the use of both perceptions and expectations in quality of service calculations is superfluous. Hence, the perceptions-only subset of the SERVQUAL battery has been widely used in business research (Jayawardhena, 2004).

A variety of rationales have been given for measuring performance only. Respondents may feel bored if asked to complete SERVQUAL because it has two sections and is very long. Two responses are needed for each question: a report of expectations of service quality and a perception of the actual performance of service quality. It has been suggested that expectations might not be present or be clear enough in respondents' minds to act as a benchmark against which perceptions are evaluated (Iacobucci et al., 1994). Hence, respondents have a tendency to tick "strongly agree" for all aspects. It is also argued that expectations are established only as a result of previous service interactions (Kahneman and Miller, 1986). Carman suggested that expectations might not be particularly significant in the establishment of customers' development of service quality impressions (Carman, 1990). Bitner (1990) hypothesized that quality of service is essentially an attitude rather than a disconfirmation between customer expectations and perceptions. empirical study confirmed this hypothesis by demonstrating that quality of service is strongly affected by performance

and the effect of disconfirmation between customer expectations and perceptions is temporary and weak (Bolton et al., 2007).

Cronin and Taylor (1992) investigated the advantage of measuring quality of service simply in terms of customer perceptions of service provider performance. The authors accepted the five-dimensional structure of quality of service and 22 individual performance scale items that made up the SERVQUAL scale (Parasuraman et al., 1988). That is, they originally used the same 22 performance items defined by Parasuraman and his colleagues (1988) in their study of suitable measurement tools of quality of service. They compared four alternative quality of service models including the SERVQUAL model in the four industries of banking, pest control, dry cleaning and fast food. The findings demonstrated that the performance-only (SERVPERF) model accomplished the best fit in the four industries in contrast to the (P-E) SERVQUAL. Hence, SERVPERF explained more of the variance in quality of service than did SERVQUAL. Furthermore, Cronin and Taylor (1992) concluded that administering only the performance-based scale (SERVPERF) is more efficient in terms of the number of items, validity and reliability issues. According to Hope and Muhlemann, this approach of performance-only (SERVPERF) overcomes some of the problems raised by SERVQUAL, namely: raising expectations, administration of the two parts of the questionnaire, and the statistical and measurement problems that emerge from analysing and explaining various scores. Using a single measure of service performance is seen to circumvent all of these issues (Hope and Mühlemann, 1997).

2.2.3 Sources of Quality failure: The FTU framework

In order to manage the process of delivering service effectively, an organisation that supplies service must be aware of any inadequacy of quality of service. A framework for service delivery which is suitable and helpful in regard to services, is the FTU (Facilitation, Transformation and Usage) framework. Vargo and Lusch's (2004) interpretation of the FTU framework enhances service-dominant logic (SDL) through the provision of an implementing perspective in which customer co-production is explicitly considered. From this perspective the framework categorises three levels of service delivery. The first level of the FTU framework is facilitation, which is concerned with a conducive environment and contains all organisation resources, employees, know-how and other facilities that should be visible and available before delivering the service (Möller, 2008) and constitute the basis of any value creation (Fließ and Kleinaltenkamp 2004). These include organisation resources, for instance,

human resource management and availability of the data needed in order to succeed in delivering service, and customer resources, including customers' material goods, rights and nominal goods (Bitner, et al. 1994). According to SDL, organisational and customer resources can be segmented into operand resources "on which an operation or act is performed to produce an effect" and operant resources, which are vital resources that are used to act on operand resources and other operant resources (Vargo and Lusch 2004, p.2).

SDL views usage of operant resources in relation to competencies (knowledge and skills) that are critical for accomplishing competitive advantages (Lusch et al., 2007). Consequently, service employees and customers who are capable of acting on other operant and/or operand resources as cooperative co-partners, who co-create value within the organisation (Lusch et al., 2007), are necessary operant resources for delivering services. Service failure might happen in the first stage of FTU, facilitation, due to insufficient competencies of both the organisation and customer (Fließ and Kleinaltenkamp, 2004). Hence, this research will focus on "Quality control initiatives" (QCIs), which will be discussed later in this chapter. QCIs are measures intended to manage customer and organisation resources in a manner leading to delivery of high service quality.

The second stage of service delivery is the transformation level, in which organisation resources are exchanged with the resources of the customer that are incorporated into the delivery of service for the purpose of transformation (Möller, 2008). This level includes knowledge implementation which, according to SDL, shapes delivery of service (Möller, 2008). Here, service employees and customers function as resource integrators (Lusch and Vargo 2006). While the service organisation usually has the role of the main integrator coordinating the delivery of service, the customers effectively take part in the transformation process by transferring their resources to the organisation and sharing in the creation of a main offering (Lusch et al., 2007). Customers act as co-producers in the delivery of service. Hence, the service provider has to deal with the customers to coordinate and integrate them into the transformation process (Möller, 2008). However, the process of integration and coproduction might depend on which particular service employees and/or customers are involved (Hsieh et al. 2004). Service failures might happen because service employees are not capable of integrating themselves and/or customer resources into the process of transformation. They might also happen because the quality of customers' coproduction is not enough (Sichtmann et al., 2011).

The last level of the FTU framework is usage. Usage or delivery of a service begins when "customer resources exit the company sphere and customers or their belongings are no longer integrated into the transformation process" (Möller 2008, p. 204). At this stage, the delivery of service is achieved, and the customer makes an independent decision towards the usage of the service (Möller 2008). Notice that because the process of service is achieved, the service provider is unable to control service quality (process) at the usage stage; in fact at this stage "there is no mechanism for preventing mistakes until after they occur" (Snell, 1992: p.296). Hence, QCIs that are intended to guarantee quality of service are not effective anymore; instead, the focus is on strategies of service recovery, which are applicable in the situation of failure of service (Sichtmann et al., 2011).

For each of these three stages of service delivery, Vargo and Lusch (2004) offer corresponding perspectives of customer integration and co-production linked to resources, decisions and value. The FTU framework (see Table 2.4) is based on the distinction between direct and indirect service delivery (Vargo and Lusch, 2004).

From the resources perspective, the FTU framework discloses the moment of change from organisations to customers as prime resource integrators. It further aids in determining whether the service organisation or the customer encourages the process of direct or indirect service delivery. Moreover, the framework enables identification of situations in which customers act essentially as operant resources and those in which they act as operand resources (Constantin and Lusch, 1994). From the decision perspective, the framework illustrates the interdependency of organisations and customers in decision-making and demonstrates how this interdependency differs by stage of service delivery. Finally, from the value perspective, use of the framework facilitates determination of when customers are co-producers of value. Moreover, the stage of service delivery that displays real value, as opposed to those that displays only possible value is highlighted.

From the FTU framework, the possibility if identifying potential antecedents or determinants of quality at each stage of service delivery can be inferred, including aspects of the service environment, quality controls operated by the service organisation, and consequent behaviours, including customer co-production. The nature of these factors, and their role in the creation of quality, will be explored in the next section.

Table 2-4 FTU Framework: Stages of Service Provision

Facilities ①	**Transformation ②**	**Usage ③**
Resources perspective: company resources act as prerequisite to any transformation	2a Company-induced transformation Resources perspective: companies act as prime resource integrators. Transformation is induced by companies and includes only company resources. The transformation intends to end with a marketable good. Decision perspective: company autonomous decisions Value perspective: company-induced transformation only exhibits potential value for customers	Resources perspective: customers act as prime resource integrators and operant resources producing effects.
Decision perspective: company autonomous decisions	2b Customer-induced transformation Resources perspective: companies act as prime resource integrators. Transformation is induced by customers integrating their resources (as operand resources) and acting as co-producers and co-creators. Decision perspective: integrative decisions for customers and companies Value perspective: customer-induced transformation can exhibit value in transformation for customers, customers act as co-producers and co-creators of value	Decision perspective: Customer autonomous decisions.
Value perspective: facilities only exhibit potential value for customers		Value perspective. Customers act as co-creators of value in use: 1) Customers benefit from company induced transformation (2a) by consuming a good (distribution mechanism) 2) Customers benefit from customer induced transformation (2b)

2.3 Determinants of Service Quality

In the light of the service quality issues discussed in section 2.2, and particularly the FTU framework this section lays the theoretical foundation for the identification of conditions and behaviours their contribute to determine service quality.

2.3.1 The service environment

There are various aspects of the environment that can affect service quality. As indicated previously, for example, Parasuraman et al. (1988) identified “Tangibles” as an influencing factor in their SERVQUAL model. “Tangibles” are physical features of the location where the service is provided, which are observable by the customer. They can be considered external to the service itself. Service provision may also be affected by the wider

environment, e.g. the economic situation, or consumer legislation. This research will focus on two different environmental factors, namely, task characteristics, including procedural knowledge and performance documentation, and organisational commitment. Both these elements are associated with the internal environment, and are of interest here specifically in relation to their effect on the use of specific types of controls.

2.3.1.1 Task Characteristics

Task characteristics are performed by marketing personnel, and affect the use of specific kinds of marketing controls. Task characteristics refer to different dimensions such as attributes of a specific position within the firm or description. The two main characteristics tested in this research are, as indicated above, procedural knowledge and the availability of documentation regarding job performance (Ouchi, 1979; Jaworski and MacInnis, 1989).

Procedural knowledge refers to "the degree to which managers can specify clearly the activities an individual must perform to achieve a desired outcome" (Jaworski and MacInnis, 1989: p.408). Knowledge should be clearer in situations in which the relevant task is highly routinized. For instance, salespersons might have developed clear written targets for sales performance (Leigh and McGraw, 1989; Weitz et al., 1986) and might be able to illustrate these actions in writing to new salespersons. In contrast, a marketing director who requests a subordinate to develop a new environmental scanning system might have little knowledge of what the marketing employee needs to do in order to develop such a system. Procedural knowledge is likely to differ from position to position, task to task and organisation to organisation (Peterson, 1984).

The second task characteristic examined is performance documentation,"Performance documentation reflects the extent to which marketing superiors have available forms of documentation to assess a marketing employee's performance (similar in spirit to Ouchi's "measurability" variable)" (Jaworski and MacInnis, 1989: p.408). Such documentation is anticipated to be most common in situations in which the organisation can simply measure the contributions of individual employees. Hence, documentation of performance is more likely to be evident for low level marketing research positions than for senior market planners (Ouchi, 1979).

2.3.1.2 Organisational Commitment (OC)

The second aspect of the environment investigated in this study is organisational commitment. Commitment has become an important notion in organisational studies and in understanding workers' attitudes and behaviours in the workplace. As such behaviours and attitudes have been investigated in different ways; commitment has been defined and measured from different perspectives (Becker, 1960, Meyer and Herscovitch, 2001, Mowday et al., 1979). In order to define commitment it is very important to clarify the long-standing distinction between attitudinal commitment and behavioural commitment (Meyer and Allen, 1997). Mowday et al. (1982) explain that attitudinal commitment focuses on the process by which people come to think about their relationship with the organisation. In many ways it can be thought of as a mind set in which individuals consider the extent to which their own values and goals are congruent with those of the organisation. Meanwhile behavioural commitment relates to the process by which individuals become locked into a certain organisation and how they deal with this problem. Salancik (1977, p.62) defines commitment as "a state of being in which individual becomes bound by his action and through his actions to beliefs that sustain the activities of his own involvement". Meyer and Herscovitch (2001, p.301) define commitment as a force that binds an individual to a course of action of relevance to one or more targets. As such, commitment is distinguishable from exchange based forms of motivation and from target-relevant attitudes, and can influence behaviour even in the absence of extrinsic motivation or positive attitude.

O'Reilly and Chatman (1986, p.493) define commitment as the psychological attachment felt by the person for organisations. It will reflect the degree to which the individual internalizes or adopts characteristics or perspectives of the organisation. They argue that commitment is a multi-dimensional construct consisting of identification, compliance and internalisation. Identification occurs when a person accepts influence to set up or maintain a satisfying relationship, based on a need for affiliation. Compliance occurs when attitudes and behaviours are adopted as involvement to gain specific benefits or rewards. Finally, internalisation is involvement that occurs based on the convergence between the individual's attitude and behaviours and organisational objectives and values. Moreover, it has been argued that compliance is not only different from the other two dimensions (internalisation and identification), but also different in its relation with turnover. Although organisational commitment is correlated negatively to turnover (Meyer and Allen, 1997), it has been found that compliance is correlated positively to turnover (O'Reilly and Chatman, 1986). Tayyab

(2006) suggests that the items measuring compliance could include day to day pressures for performance, not pressure to remain in the organisation. Compliance in O'Reilly and Chatman's (1986) measurement assesses commitment to perform rather than measuring commitment to remain. Thus, this compliance commitment is similar in conceptualisation to Meyer and Allen's continuance commitment.

High quality services are the result of employee dedication and commitment. Organisational commitment is the combination of the employees' conviction in the objectives and aims of the organisation along with readiness to contribute fully to those goals. With organisational commitment, employees relate to the principles and aims of the organisation and endeavour to preserve their place.

2.3.2 Controls

Overall, control is recognised as an essential management activity, but historically the problem of control has received less attention in the marketing management literature. Likewise, despite the increase of strategic marketing, few scholars have undertaken past market planning and portfolio assessment to consider in detail the control of strategy. Hence, the increase of knowledge in the fields of analysis and planning goes far beyond the increase of control knowledge. Due to this inequity, any positive impact that may happen as an outcome of successful analysis or planning might be imbalanced by a misleading control process.

The control theory is a bridge for completing the FTU framework by suggesting QCIs for the facilitation and transformation stages of service provision. Scholars have used it widely as a conceptual model in some disciplines such as human resource management, for instance, (Turner and Makhija, 2006), and personal selling, for instance (Baldauf, 2005; Bello and Gilliland, 1997). Generally, "control" refers to "any process that helps align the actions of individuals to ensure a consistent high service quality" (Snell 1992, p. 293). Controls in this study are referred to as quality control initiatives (QCIs), which Sichtmann et al (2011) defined as "specific service provider initiates directive aimed or influencing both employees and customers to perform service delivery in ways that positively affect the quality of the service outcome" (p2). Two types of control mechanisms can be identified within marketing units: formal and informal controls.

2.3.2.1 Formal controls

Formal controls are identified as "written, management-initiated mechanisms that influence the probability that employees or groups will behave in ways that support the stated marketing objectives" (Jaworski, 1988: p.26). Formal controls are classified into three mechanisms: input, process and output. These formal controls are differentiated from each other by the timing of management intervention, for instance, input to output. In order to assist and ensure that employees are achieving desired outcomes, management may manipulate inputs (for instance training programmes) the process (for instance, standard operating procedures), or outputs (for instance, performance standards). Input controls are assessable actions taken by the organisation before implementing an action. Common input controls include selection criteria, recruitment and training programmes, manpower deployment, strategic plans and other resource allocation (Anthony, 1952; Jaworski, 1988; Flamholtz et al., 1985).

A number of input controls reflect the idea of employee-environment fit. As Schneider notes, there is a distinction between the organisation itself and the particular job tasks expected of an employee (Schneider et al., 1997). Accordingly, overall, prior approaches to employee-environment fit can be divided into two categories: (A) fit between the employee and the particular organisation and (B) fit between the employee and the tasks associated with a specific job. The second category of fit is usually known as person-job (P-J) fit. On the basis of a P-J fit mechanism, those service employees who have a higher degree of customer orientation will express higher levels of job perfromance (Edwards, 1999; Super, 1953). In contexts in which the primary task is the serving of customer needs, customer-orientated employees fit the service setting better than employees who have lower customer orientation because they are predisposed to enjoy the work of serving customers. As a result, service employees who have higher degrees of customer orientation will be more satisfied with their jobs than the employees who have less customer orientation (Donavan et al., 2004). Scholars have investigated the possibility of a relationship between job perfromance and customer orientation (Hoffman and Ingram, 1991, 1992; Pettijohn et al., 2007). Increasing the levels of satisfaction produces higher levels of customer orientation. It is been argued that as a characteristic of the employee, dispositional customer orientation will lead to job perfromance, not vice versa. That is, a customer-oriented service employee is a more natural fit in a service job and, as a consequence, will experience better job perfromance. The direction of causality is a key problem because of the recruiting implications for services

managers. If customer orientation is a result of job performance, less emphasis can be placed on identifying customer-oriented candidates. However, if the causality is reversed, organisations should devote effort to hiring employees who possess a customer-oriented personality and/or training employees to adopt a customer-oriented approach.

Process control is exercised when the organisation tries to impact the means to achieve desired ends. It therefore centres on assessing an individual in relation to the means, behaviour, or activities that are thought to lead to a given result (Ouchi, 1979).. It differs from output control in that the focus is on behaviour and/or activities rather than the end outcomes. In regard to "complete" process control, management holds the employee responsible for following the prearranged process but it does not hold the individual responsible for the result. If management informs a sales representative to follow certain prearranged procedures for new market development, and it holds the individual responsible for following the procedures, but not for the extent of new business generated, in this case "complete" process control is exercised. Output control, in contrast, is exercised when a given individual is assessed in relation to the outcome of his or her behaviour relative to set standards of performance (Merchant, 1985). Output control means that behaviours are influenced by defined targets and rewards. Behaviour that is motivated by attaining specific performance targets is an indication that outcome control is operating (Choudhury and Sabherwal, 2003).

There is an argument about the relationship between the structure of the organisation and process/behaviour. A number of scholars support the view that organisational structure represents a control mechanism. Nevertheless, this view is not shared by everyone (Flamholtz et al., 1985; Ouchi, 1979). For instance, Flamholtz argues that "organisation structure has significant implications for controls, but is still not a control mechanism per se"(Flamholtz et al., 1985: p.45). Ouchi considered organisational structure as vertical and horizontal integration, centralization and formalization. In contrast he considered the control system as a process of monitoring, comparing results with standards, rewarding and adjusting strategy. The problem with Ouchi's categorization is that although structure is distinct from traditional management controls, for example, output monitoring, it still represents a control mechanism in so far as it directs, impacts and shapes individual and group behaviour. "Since formal control consists of efforts by the firm to impact the behaviour of individuals, organisation structure is, by definition a control mechanism" (Jaworski, 1988: p.28). This categorization does not mean structure is part of the traditional management output system, but that it is an additional control mechanism present in firms.

2.3.2.2 Informal controls

Informal controls are "unwritten, typically worker-initiated mechanisms designed to influence behaviour" (Jaworski, 1988: p.27). Informal control includes three mechanisms, self, social or professional and cultural, the three mechanisms referring to "the level of aggregation (i.e., self to small group to large social unit)" (Jaworski, 1988, p. 27).

With regard to self-control, for instance, Dalton and Hopwood suggested that the personal objectives of individuals influence people and they monitor their achievement and control behaviour to keep it on the right track (Dalton and Lawrence, 1971; Hopwood, 1973). Behaviour that is motivated by self-set goals, self-monitoring, and self-rewarding is an indication that self control is operating (Kirsch, 1996; Kirsch et al., 2002). It is important to bear in mind that self-control should not be equated with no control (Lawler, 1976). Rather, although evidence is mixed, self-control may avoid many of the problems associated with traditional management controls (Lawler 1976). Lawler (1976) concluded that self-control may be related to positive managerial outcomes such as satisfaction, although other managerial outcomes, for instance, performance might suffer (Miner, 1975). Also Kerr and Slocum concluded that while self-control has been successful, external incentives, for example other forms of control, are usually necessary for the required behaviour to be performed (Kerr and Slocum, 1981).

The second category of informal control is variously described as "social", "small group" (Dalton and Lawrence, 1971), "clan" (Ouchi, 1979), or "professional" (Waterhouse and Tiessen, 1978) control. Same behaviour that is influenced by shared norms, values, and a common vision, and reflects attempts to be "regular" or accepted members of a group by behaving in a manner that is cooperative, collegial, and consistent with group expectations, can be taken as evidence of clan control (Kirsch et al. 2002). Thus, the mere existence of shared norms, values, vision, or agreed-upon behaviours does not indicate clan control; however, when actual behaviour is influenced by those shared norms, values, vision, or agreed-upon behaviours, clan control is operating. In the context of marketing, work units establish certain standards (norms), monitor compliance and take action when deviations happen. Social control might be defined more formally as the prevailing social views and patterns of interpersonal interactions within a subgroup in the organisation. This form of control comes from the absorption of values and a sense of mutual obligation towards some common targets referring to established performance norms. When deviations happen, for instance, a performance standard is infringed, the group will initially try to get the behaviour

back on the normal track by hidden forms of control such as hinting, humour or kidding (Dalton and Lawrence, 1971). Nevertheless, when the norms are frequently infringed, ostracism is likely. In a marketing unit, social control will probably develop in different subunits in the marketing function, for example, marketing research, sales and advertising. For instance, salespersons may establish norms for expenses, volume of sales ceilings, or informal typing dates for paperwork. Once the norms are infringed, the group exerts subtle pressure on the "deviant" group member (Jaworski, 1988).

The third category of informal control is culture control. Culture control involves complete segmentation or organisation (Wilkins and Ouchi, 1983). Culture is defined as "the broader values and normative patterns that guide worker behaviour within the entire organisation" (Ouchi, 1979, p. 96). Culture has been studied as a structural variable and analogy. Some researchers pointed out that the organisational culture will have important influences on marketing performance (Deshpande and Webster Jr, 1989; Cherian and Deshpande, 1985; Deshpande and Parasuraman, 1986; Parasuraman and Deshpande, 1984). Cultural control can be achieved by the slow accumulation of stories, legends and norms of social interaction (Meyer and Rowan, 1977; Smith and Steadman, 1981). When an individual has internalized the goals of the company, the acculturation time is completed (Ouchi, 1979). Cultural control is seen to be the dominant control criterion in management positions demanding non-routine, non-programmatic decisions. For instance, organisations that provide customized services might find it more useful to rely on professional standards and group obligation more than "objective" performance indicators or formal operating procedures (Mills, 1985).

Surveys of work values in the past decades indicate that today's workforce seems to value more freedom on the job and to desire more opportunity to participate in the decision making process (Hackman and Suttle, 1977; O'Toole and Meier, 1999). This emerging need for active involvement and increased responsibility may be fruitfully channelled in pursuit of organisational objectives.

The growth of professionalism in many occupations may be a potential mechanism of control. According to Filley et al. (1979), professionals hold the values of autonomy, authority of expertise, high ethical standards, collegial evaluation of performance, and service to society rather than personal or organisational interests. Many of these characteristics are ascribed to individuals who are capable of and desire self control. This may relieve the hierarchical

managers from close managerial activities of feedback and frequent evaluation, leaving them to concentrate instead on promoting goal congruence between the professionals and the organisation (Nahavandi et al., 2014; Hogg and Terry, 2014; Filley et al., 1976).

2.3.3 Consequences

The theoretical framework provided by the FTU model and control theory suggests that the application of quality control initiatives in the facilitation and transformation stages of service delivery can influence employees' and customers' attitudes and behaviours. This in turn is likely to influence the nature of the interaction between them, which forms an important part of the way the service is provided and its quality perceived. For this reason, the following consequences of QCIs in service delivery, specifically, customer co-production and customer integration are investigated in this research.

2.3.3.1 Customer co-production

Service dominant logic proposes that customers and organisations cooperate in creating value (Vargo and Lusch 2004). Such cooperation entails co-production (Lusch and Vargo, 2006), which means that the customer shares in creating the core service offering via innovation and co-design (Lusch, et al., 2007). Organisations that reinforce the experience of customers by providing opportunities to co-produce in line with customers' wishes are claimed to have a competitive advantage (Lusch, et al., 2007). "Co-production involves the participation and integration of resources in the creation of the core offering itself" (Lusch, et al., 2007, p. 11). The resources that may be integrated into organisation processes by customers are named the customer resource. These include the individuals themselves as customers, for instance, in a surgery; their material property, for example, in maintenance services; their nominal goods, for example in banking services and/or individual information, for example in tax advice (Fließ and Kleinaltenkamp, 2004).

The core offering created can be intangible, tangible, or both (Lusch and Vargo, 2006; Etgar, 2008). Customer co-production resulting in an intangible offering has been widely considered in the domain of services (Mills and Morris, 1986; Bowen, 1986; Lovelock, 1983), where it is often referred to as customer participation, attention is also emerging to the customer's involvement in co-production of tangible offerings (Etgar, 2008), i.e. co-production of goods, is a process in which customer organisation interactions transform the organisation's resources (rather than customer resources) into the customer's product. The emerging

literature on the domain of co-production of goods is extensive, although several articles in the field of goods, nevertheless, have concentrated on particular sub-fields within the larger domain. For instance, research has examined co-design of products (Berger et al., 2005), mass customization (Piller, 2004), and product co-manufacturing (Dahl and Moreau, 2007).

The majority of research on customer-organisation interactions has however, been carried out in the context of services (Bendapudi and Leone, 2003), where customer participation, the customer's engagement in the creation and delivery of a service, has long been acknowledged (Mills and Morris, 1986; Bowen, 1986; Lovelock, 1983). This stream of study links customer-organisation interactions to the service domain (Wikström, 1996; Bowen, 1986). For example, Bowen argued that customer participation applied only to the services world, and not to the industrialized manufacturing world in which "customers are typically distant spectators" (Bowen, 1986: p.373). However, customers can now choose to participate in the creation of many intangible and tangible goods (Sheth et al., 2000; Sharma and Sheth, 2004). Thus, authors have started to conduct more research on customer organisation interactions in the domain of production of goods and services (Jiménez et al., 2013).

The research on co-production of service is significant because, as seen earlier, service differ from goods in terms of tangibility, perishability, variability and inseparability of service performance and consumption. This gives an indication of the importance of co-production of services and draws attention to the difficulties that might face the customers in order to be a part of the core service as well as the interactions with employees or providers of the service (Solomon et al., 2012).

It can be seen that there is confusion in the literature regarding terminology, definitions, the resources involved and co-production outcomes (tangible or intangible). Some scholars have tried to differentiate between types of co-production. Others emphasize that despite the confusion as to whether co-production produces tangible or intangible outcomes, participation in the process of service provision may lead to satisfactory outcomes which would improve performance and make the customers satisfied. The following table illustrates the range of terms used to discuses co-production and the differences between them.

Table 2-5 Terms and definitions related to co-production

Author	Term	Meaning / Definition
Fuchs, Prandelli, and Schreier (2010)	Empowerment	Empowerment "(co) creative force that structures the possible field of interaction and exchange of free agents" (p. 68).

Etgar (2008)	Co-production	Consumers participate in the performance of various operational activities of a company resulting in valuable outcomes to be consumed.
	Customization	Customer participation in the creation of unique products by choosing product features or providing information to the company about idiosyncratic needs.
Lusch, Vargo, and O'Brien (2007)	Co-creation of value	"There is no value until an offering is used experience and perception are essential to value determination" (p. 7).
Lusch, Vargo and O'Brien (2007)	Co-production	A company producing an offering interacting with the customer.
Lusch and Vargo (2006)	Co-creation	"The product is a result of cooperation between each single customer and the manufacturer, not only providing benefits, but also demanding input from both sides" (p.71).
Piller (2004)	Mass Customization	"Customer co-design process of products and services, which meet the needs of each individual customer with regard to certain product features. All operations are performed within a fixed solution space, characterized by stable but still flexible and responsive processes" (p. 315).
Prahalad and Ramaswamy (2004)	Value co-creation	Interaction between companies and customers to design, develop production processes, crafting marketing messages, and controlling sales channels. The interaction during these activities generates experiences which become the very basis of value.
Wind and Rangaswamy (2001)	Customerization	"A buyer-centric company strategy that combines mass customization with customized marketing" (p.14).
Prahalad, Ramaswamy, and Krishnan (2000)	Consumer empowerment	Firms consider customers as partners, give them control over information and decision making at a certain degree, and co-opt their competence in ways that are mutually beneficial.
Sheth, Sisodia, and Sharma (2000)	Co-creation marketing	Co-creation marketing involves both the marketers and the customer who interact in aspects of design, production, and consumption of the product or service.
Youngdahl and Kellogg 1997	Customer participation	Customers prepare for the service, and interact with service providers to obtain the best outcome.

Source: Adapted from Jiménez et al. (2013: p.28)

It is important to observe some basic distinctions between the terms (refer to table 2.5). Empowerment is an attitude of the organisation towards customers and a willingness to view them as partners, without specifying the form(s) such partnership may take. Customer participation refers to customer integration with service employees in the performance of a service without specifying the nature of the participation or the stage at which it occurs. In the case of customization (more applicable to tangible offerings), customer participation takes the form of provision of information on the basis of which providers design product features, and/or the selection of desired features, so that the product offering is flexibly tailored to meet specific needs. Thus, the emphasis is on customer inputs, which are acted upon by the provider. Both co-production and co-creation of value, in contrast, imply both more intensive and extensive involvement of customers in the process of delivering the service (nor just designing the product). They imply input of resources (whether tangible or intangible) from

both sides, and cooperative interaction. The term value co-creation, however, places emphasis on the output of the process, suggesting that the value of the product is realized only in its use by the consumer. In this sense, it might be suggested that customer co-production is a means towards the co-creation of value and conversely, co-creation of value is the result of co-production.

Work on co-production and related terms draws our attention to the importance of the customer's input in the process of the service delivery. Customer input means any type of customer contribution during the service process that influences the final intangible outcome. Jiménez argued that if the customer input does not directly affect the final intangible outcome during its production or interactions between customers and providers, then there is no co-production of services or of goods (Jiménez et al., 2013). It can be said that customer co-production has a positive influence on outcomes. In this research, the focus is on intangible outcomes, i.e. service. However, an example of participation during the production process of a tangible product may illustrate the relationship between co-production and similar terms. A customer at The Quilting G (www.thequiltingg.com), a store specializing in quilting, is able to select a design to make. The store then dispatches a kit to the customer and the customer starts quilting. Then, the customer can return the quilt back to the store for completing. The example illustrates the customization of service when the customer selects by selecting product features from a catalogue. At the same time, the customer participates in limited co-manufacturing by engaging in hands-on co-production before the production process is finished by the store. This means the customer participates in both goods and services, which leads to a satisfactory outcome, the finished quilt, which provides value to the customer (Jiménez et al., 2013).

Research on consumer behaviour has restricted its attention to the stages culminating in a transaction (Gardial et al., 1994). Nevertheless, as the above example illustrates, and in line with the idea of presumption (Kotler, 1986; Xie et al., 2008), customer participation in co-production, the emergent service-dominant logic, self design, customer creativity and empowerment strategies in product development (Fuchs et al., 2010), consumers' involvement in the value chain is not restricted to their obtaining and subsequent consumption of goods and services provided by organisations. Van Raaij and Pruyn suggest that in terms of services, customers participate in stages that cover (1) specification or design; (2) use of input production and realization (process); and (3) consumption of outcome (Van Raaij and Pruyn, 1998). Participation is involved with most offerings, whether goods or

services, which need some activity on the customer's part to provide value. For instance, vehicles require to be driven, maintained and serviced to provide the advantages desired and food items must be assorted, combined, transformed and presented so that nutritional and psychosocial values can be produced (Troye and Supphellen, 2012). Troye and Supphellen proved through empirical evidence that self-production influences outcome evaluation positively. Manipulating self-production by having participants prepare a meal using a dinner kit in a test kitchen, they found that participants who assumed that they prepared the food themselves were more satisfied with the quality of the meal produced than those who perceived they had invested less personal effort. This supported the theory that a high level of participation would influence service performance positively.

Customer co-production represents a fundamental source of quality uncertainty in relation to the unpredictable nature of the customer's resources and behaviour (Bateson, 2002), because the contribution of customers to the delivery of service might be variable and unpredictable, which can affect the effectiveness and efficiency of the process of service delivery (Kelley et al., 1990) and hence, the quality of the outcome.

The quality of customers' coproduction depends on their ability and willingness to participate in the service provision process (Lengnick-Hall, 1996). In an organisation setting, the latter might differ across cultural borders (Stauss and Mang, 1999). For instance, in a comparison of 11 countries across cultural borders, Schumann et al. (2009) found important country differences in customers' willingness to coproduce in financial service delivery. Certainly, it is possible "that the service cannot be fulfilled at the usual performance level because the foreign customers do not maintain the role behaviour expected by the domestic supplier" (Stauss and Mang, 1999: p.6; Schumann et al., 2009).

2.3.3.2 Customer integration

It was highlighted in section 2.2.1 that services are characterized by involvement of customers in the process of service production. These production-enabling contributions of customers may take the form of activities, or provision of resources (Moeller, 2008). "Customer integration" refers to the organisation's use of these customer contributions in the service delivery process.

It should be noted that customer coproduction and customer integration are distinct (Moeller, 2008). Customer coproduction concentrates on the customer's co creation of value (Vargo and Lusch, 2004) and, therefore, on the density and quality of customers' contribution to

service delivery. In contrast, customer integration is defined as "combining customer resources (persons, possessions, nominal goods, and/or personal data) with the company resources in order to transform customer resources" (Moeller, 2008: p.202); it refers to the organisation's role as a major resource integrator (Lusch et al., 2007). Particularly, customer integration is related to the customer resources that are combined with organisation resources in service delivery (Moeller, 2008). Customer co-production of goods is different from customer participation. The concept of co-production focuses, as indicated earlier, on the input of resources from both customer and organisation, and interaction in the outlined creation of the core offering, i.e. some degree of simultaneity. Thus it can be argued that co-production is a wider concept than co-integration. The latter is seen more from a company perspective, and the consumer involvement may be little more than the provision of information. Customer and company contributions are seen as sequential; the customer provides resources which the company acts on. Customer integration refers to service delivery designed to transform the customer's resources (Moeller, 2008). Service designs that need a higher level of customer integration are more complicated to control than those with low customer integration (La et al., 2005).

2.4 Summary

This chapter has provided a foundation for the research by discussing the key theories that supply its framework, and identifying the main constructs to be investigated. It was shown that service delivery is complex and challenging due to the special characteristics of services, particularly the high level of customer involvement in their creation. A variety of theoretical attempts to explore what constitutes quality in a service context were introduced, and the measurement of service quality was discussed with particular reference to the SERVQUAL and SERVPERF scales. The FTU framework identifies how failures can occur at each stage of service delivery, beginning with the characteristics of the service enviroment, while control theory offers insights into the formal and informal controls that may be applied in the facilitation and transformation stages, which may reduce the likelihood or extent of such failures. Application of such QCIs may influence employees' and customers' attitudes and behaviours with the aim of meeting the objective of fulfilling customers' requirements of service quality performance. While previous research has done much to increase our understanding of service quality, a number of gaps and areas of confusion have been identified. Previous research has predominantly investigated service quality from the customer perspective and the perspective of organisations that provided services has been

neglected. Moreover, although customer co-production has been recognised as one of the unique features of services, the nature of the interactions involved and how they affect quality have received little research attention. There is confusion as to the definition and types of customer co-production, and its relation to tangible and intangible outcomes. As a result, the human dimension of quality is relatively little provided for compared to the technical dimensions. Accordingly, the main constructs investigated in this study are Environmental inputs, QCIs (formal and informal), Customer Co-production, Customer Integration and Service Quality Performance. In the next chapter, a conceptual model of relationships between these variables will be presented, and hypotheses developed.

The present research addresses these research gaps by developing and empirically testing a conceptual framework of both formal and informal controls QCIs by the service provider on Saudi hotel service quality performance. From a theoretical perspective, it builds on Sichtmann et al.'s (2011) work and combine Snell's (1992) control theory with Moller's (2008) facilities-transformation-usage (FTU) framework, representing an implementation perspective of Vargo and Lusch's (2004) service dominant logic (albeit selecting a different combination of environment characteristics and QCIs), examining the influence of QCIs on customer co-production and in turn, service quality performance. It also compares the relative effectiveness of different QCIs. From a managerial perspective, the results provide empirically based insight on which particular QCIs influence hotel performance most through their influence on service quality. Such insights emphasize the crucial role that QCIs have in service hotels' overall strategy and their implications for hotel performance

3 Chapter Three: Development of Hypotheses

3.1 Introduction

In the previous chapter, the main research constructs were defined and discussed, and the theoretical foundation of this work was presented. Based on that discussion, in this chapter the conceptual model developed to guide the empirical work is introduced. Then a set of hypotheses developed on the basis of the foregoing theory is introduced, with the rationale for each.

3.2 Conceptual Model

In this section, a model of the conceptual framework is outlined. This was developed on the foundations of Jaworski (1998, 1998) and Jaworski and MacInnis' (1989) work on the relationship between characteristics of the service environment and the types of control in use, and the work of Sichtmann et al (2011), which proposed relationships between QCIs, customer integration and service quality. As will be demonstrated in the ensuing discussion, the model adopts Jaworski et al.'s (1989) task characteristics as antecedents (adding an additional antecedent, Organisational Commitment). It further adopts (formal) process and output controls, to which are added customer-oriented training of service employees, as an Input control (Sichtmann et al. 2011) to influence customer integration and, in turn, service quality performance. The model also incorporates insights from the FTU framework and control theory, introduced in Chapter Two.

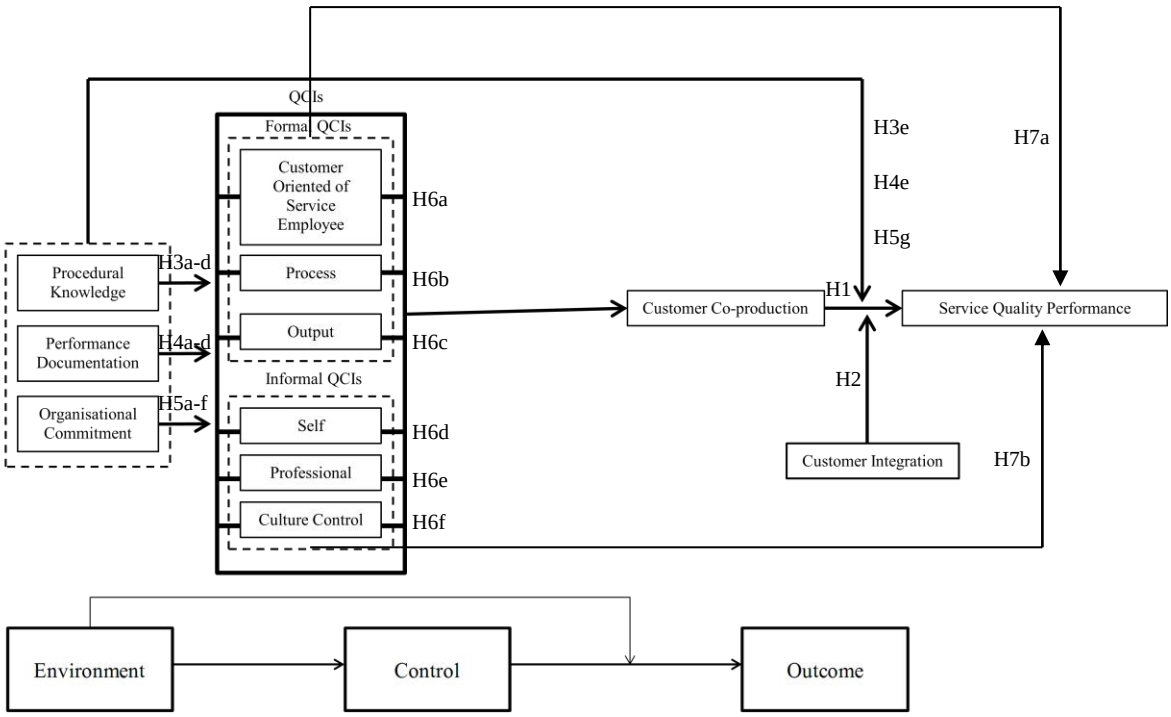
Drawing on the FTU framework, the model depicts a process in which operant resources of the organisation are transformed into a service performance. The implementation of QCIs is assumed to influence this process, through the impact on employee and customer attitudes and behaviour, reflected in customer integration and customer co-production. Drawing on control theory, the model takes, as examples of the organisation's operant resources, selected environmental characteristics, which are assumed to influence the types of control in use. Combining these elements, the model consists of three sets of variables: Environment, Control and Outcomes (see Fig. 3.1). The individual variables are specified and the rationale for their inclusion is explained in the following paragraph.

According to Brady and Cronin (2001), Environment is the physical context in which the service exchange takes place. In terms of the FTU framework, it represents operant resources

embedded in the service organisation, which are likely to affect the choice and functioning of controls in use and, in turn, the integration between employees and customer.

Controls are referred to in this study are Quality Control Initiatives (QCIs) (Sichtmann et al. 2011) as defined in section 2.3.2. As indicated in the previous chapter, control theory suggests various types of measures that can be implemented to enhance the facilitation and transformation stages of service delivery, reducing the likelihood of service failures that would otherwise undermine quality. Two types of controls, formal and informal controls; are relevant for the FTU framework. Formal controls include input control, process control and output control. Input control influences the conditions that affect performance, such as the knowledge, skill, and attitudes of employees and is therefore suitable to the facilitation stage of the FTU framework, in which the quality of operant resources (service employees and customers) should be controlled. In contrast, process control regulates the operations by which the transformation process takes place. Therefore, process control (which features in both Jaworski and MacInnis (1989) and Sichtmann et al. (2011) wok) links to the transformation stage of the FTU framework, controlling the operant resources in action. Output control (adopted from Jaworski and MacInnis, 1989) also relates to the transformation stage of the FTU framework, and is used where ambiguity or flexibility of the transformation process does not permit process control. When formal process or output controls are not possible due to ambiguity of the transformation process and low measurability of output, informal controls may be used. Informal controls include self, professional and culture control (Jaworski and MacInnis, 1989). Both formal and informal controls were examined in this research. Environmental factors and QCIs are assumed to be related to outcomes reflecting the quality of interaction as perceived by employees and customers and in turn to perceptions of service quality.

Figure 3-1 Conceptual model: linking environment, controls and consequences



NOTE: H3a-d: Process; Self; Professional; Culture controls.

H4a-d: Output; Self; Professional; Culture controls.

H5a-f: Input; Process; Output; Self; Professional; Culture controls.

In general, it is assumed that the environment affects the QCIs in use, and in turn the service outcomes. Individual variables are defined and specific hypotheses on relationships between them are developed in the next section.

3.3 Developing of Hypotheses

3.3.1 Service quality performance and customer co-production

Service quality performance in this thesis is defined as customer perceptions of the technical and human quality of the service received. Customer co-production is defined as customer participation and integration of resources in creation of the core service offering (Lusch et al., 2007). In the facilitation stage, in addition to the service provider's resources, organisation customers and their resources are significant input elements for the service transformation process (Fließ and Kleinaltenkamp, 2004). Nevertheless, providers of service cannot independently organize customers and their resources (Moeller, 2008); in other words, the

service provider cannot impact the resources of the organisation customers before the service transformation process actually begins. The most frequently applied option to control for the quality of the customer's resources in the facilitation stage is to communicate what, where and when the customer should contribute. If "the customer does not know why, where, when and how to participate in the service process"(Fließ and Kleinaltenkamp, 2004: p.398), organisation customers might be incapable of completely accomplishing the expectations of the service organisation regarding their own contribution (Stauss and Mang, 1999). As a result, the perceived clarity of the task, defined as "the extent to which customers understand what is required of them in service production"(Auh et al., 2007: p.360), is commonly highlighted as one of the key elements of effective customer coproduction (Bettencourt et al., 2005a; Lengnick-Hall, 1996). The clearer an organisation customer's role expectations, the more he or she can contribute effectively to service delivery and impact service quality positively. Because effective information management helps to improve task clarity (Fließ and Kleinaltenkamp, 2004) customer coproduction instructions improve task clarity (Auh et al., 2007) and assist to standardize the organisation customer's behaviour as an operant resource. Such instructions help to ensure that the required customer inputs are available for the service delivery at the assigned time and at the appointed place and are of a suitable quality (Fließ and Kleinaltenkamp, 2004). It should be noted that the implied moderating effect of 'task clarity' on the relationship between customer co-production and service quality is not tested in this thesis. This is because the thesis is concerned with employees' perspective, whereas task clarity as defined here is viewed from the customer perspective, since only customers can assess their understanding of co-production instruction given to them. The point here is rather to emphasize that, if the customers know how to contribute to the production of a service and to what extent they should coproduce, they are more motivated to coproduce and more likely to meet the demands of the service provider (Bowen, 1986). This should enhance the availability and utilization of operant resources as per the FTU framework and lead to higher service quality (Bowers et al., 1990). Therefore we are expecting the following:

H1: Customer co-production is positively related to service quality performance.

According to Sichtman et al. (2011), what they call relative service quality, and in turn, service performance, are influenced not only by employee contributions, but also by the contributions of customers, in the form of customer co-production. In their model, they reflect this by including in their QCIs two what are intended to control customer

contributions to service delivery as an operant resource. As an input control, they include customer co-production instructions, there is, commitment as to what, where and when the customer should contribute. Such commitment is expected to enhance customers' task clarity (Fliess and Kleinaltenkamp, 2004) and hence, their ability to contribute effectively in service provision and influence service quality. Regarding the service process, Sichtman et al. (2011) highlight the important role played by the levels of customers' competence and motivation to participate in coproduction, and argue the service provides anticipation of an adaptation to this factor is a key aspect of process control. Their results revealed a positive relationship between customer coproduction instructions and service quality, but not between adaptation to customers' coproduction competence and motivation and service quality. Sichtman et al (2011) did not measure customer coproduction itself. However, it could be argued that the inclusion of customer coproduction-related QCIs implies a subsequent stage of customers' actual coproduction behaviour, at least in the case of customer coproduction instructions as an input control the relationship is more uncertain for their process control variable, which is more related to service providers' behaviour than that of customers. Given that a significant, positive relationship was found between customer coproduction instructions and service quality, it may be suggested that this effect occurred through the "hidden" and uncertain construct of customer coproduction behaviour. We therefore considered the possibility that customer coproduction might influence the way QCIs operate towards service quality. Thus, it is hypothesised that:

H1a: Customer co-production mediates the relationship between QCIs and service quality performance.

3.3.2 Moderating effect of customer integration

An important aspect of customer co-production is customer integration, that is, the organisation's use of customers' activities and resources such as information and property in the service delivery process (Moeller, 2008). Indeed, Lusch defined co-production in terms of participation and integration of resources in the creation of the core offering (Lusch et al., 2007). Customer integration is related to the amount of customer resources a service organisation (as a main resource integrator) has to integrate into service provision (Moeller, 2008). Service forms that need high customer integration are more complex, lengthy and intense, hence more difficult to control than those associated with low customer integration (Fließ and Kleinaltenkamp, 2004). Service providers' and customers' roles and expectations in terms of the service provision may vary substantially (Winsted, 1997) Since a high level of

customer integration leads into a stronger social interaction during service encounters (Bowen and Ford, 2002), misunderstandings between service providers and organisation customers as a consequence of different cultural backgrounds are more likely. Therefore, when service providers interact with organisation customers during service delivery (La et al., 2008), they should become skilled at handling organisation customers and managing organisation customer resources. Hence, organisations should train their service providers (employees) in order to meet customers' needs when the service is characterised by a high level of customer integration (Eriksson et al., 1999).

Literature also suggests that the quality of customers' resources is more important as the level of customer integration increases, and hence these customer resources should be controlled more strongly (Lengnick-Hall, 1996). Therefore, a higher level of customer integration makes service delivery more difficult, for not only the service providers but also the customer, as a high degree of knowledge is needed for customers to be entirely aware of the implications of their involvement. Service organisations can ensure that customers (and providers) adhere to their predefined roles and responsibilities by clearly conveying the expected task, the timing, and the quality of the customer's resources through unambiguous customer co-production instructions. A higher level of customer integration also increases task uncertainty, which is a challenge to service providers. The ability to predict process flow decreases insofar as the service employees cannot clearly determine the interaction with the customer and the quality of their contribution before the service encounter (Kelley et al., 1990). The percentage of process which may be planned and performed independently from the customer is reduced with high customer integration. In such a case, following standard operating procedures might be a suitable recourse for the service provider (Hsieh and Hsieh, 2001). Through the process and with better information, a service organisation can carefully select when, how and where it is most beneficial to integrate customer resources.

In contrast, in service designs characterised by low customer integration, standardization might reduce the attraction of job tasks because service providers' work is not challenging enough and they have less decision-making power. Because work process standardization might lead to job dissatisfaction, it night contribute to poor job performance and ultimately reduce quality of service (Hsieh and Hsieh, 2001). A higher level of customer integration means a higher level of interaction between customers and service providers; thus, quality of service becomes more dependent on customers' resources and co-production behaviour (Sichtmann et al., 2011). More recently, scholars have highlighted the importance of internal

integration as a part of a complete conceptualization of supply chain integration and emerging literature provides empirical evidence to indicate that internal integration positively impacts outcomes related to logistical performance, supply chain agility, operational and business performance and quality, delivery, flexibility and cost (Braunscheidel and Suresh, 2009; Flynn et al., 2010; Wong et al., 2011). Customer co-production and customer integration take part in the context of an environment containing various internal and external factors that may affect each other and, hence service quality performance. Of particular importance are the mechanisms applied by the organisation to control service failure. Therefore we expect the following:

H2: Customer integration will moderate the relationship between customer co-production and service quality performance. Specifically, if customer integration is high, the relationship between customer co-production and service quality performance will be stronger.

3.3.3 Environment and Quality Control Initiatives

Literature (Jaworski, 1988, 1989; Sichtmann et al. 2011) suggests that aspects of the organisational environment influence the use of formal and informal control mechanisms, and the types of controls utilized. The following relationships are examined in this research. "Environment" can encompass both the external and internal context in which service takes place. This research is concerned with aspects of the internal environment. In this research, three environment variables were tested, namely: Procedural knowledge: the degree to which the activities that must be performed to achieve a desired outcome can be clearly specified. Performance documentation: the level of availability of documentation to assess an employee's performance. Organisation commitment: an aspect of the internal environment representing employees' identification with the values and goals of the organisation and their willingness to remain in the organisation and contribute towards those values and goals. Procedural knowledge (PK) is one of the task characteristics included in Jaworski and MacInnis' (1989) model, which was one of the foundations on which the present work is based. It refers to the degree to which managers can specify clearly the activities on individual must perform to active a desired outcome (Ouchi, 1969) Jaworski and MacInnis (1989) hypothesised that greater availability of PK would lead to greater organisational reliance on formal process controls. Their survey of 500 senior marketing executive across the USA yielded support for their hypothesis, at the 0.001 level. Moreover, PK is associated with routinized, standardized tasks (Leigh and McGraw, 1989; Jaworski and MacInnis, 1989),

which Sichtmann et al. (2011) regarded as a form of process control and found to be positively related to relative service quality.

The inclusion of performance documentation (PD), too, is influenced by Jaworski and MacInnis' (1989) model, in which it appears as a feature of the organisation's internal environment. The rationale is that the availability of PD enables the assessment of individual performance it is similar to Ouchi's (1969) "measurability" variable. It should be noted that PD is not a control in itself, but a facilitator or pre-requisite for the implementation of certain forms of control. The control lies in how managers use the documented information to monitor performance, and act on the result. Availability of PD has been found to be positively associated with organisations' use of output controls.

The third aspect of the internal environment included in the model is organisation commitment (OC). Sichtmann et al. (2011), in their model related to service quality and export performance included export commitment in their model (under the heading of firm characteristics) as an antecedent to use of QCIs. They assumed that such commitment would influence allocation of resources, willingness to expend time and effort, and the value priorities transmitted by managers to employees. Whilst Sichtmann et al. (2011) focused on organisations' export goals, it is assumed in this study that employees' commitment to other organisational goals, similarly, constitutes a resource (in term of the FTU framework) that will influence the transformation process, including controls in use.

Those service employees who have a high commitment to an organisation are more willing to give extra of themselves in order to contribute to the organisation's success (Brief and Motowidlo, 1986; MacKenzie, Podsakoff and Ahearne, 1998; Mowday, Porter and Steers, 1982; Parker, Williams and Turner, 2006). With this in mind, organisational commitment should have a positive relationship with organisational citizenship behaviours and customer-oriented boundary-spanning behaviours, because highly committed service employees can be expected to perform at higher levels than their counterparts (Mowday, Steer and Porter, 1979). When an organisation can develop greater commitment among its employees, customers report higher levels of service quality (Schneider, 1980).

Generally, positive relationships between organisational commitment and service employee job performance have been theorised (Williams and Anderson, 1991) and empirically verified in previous research (Mathieu and Zajac, 1990). Both formal and informal controls were examined, as follows:

Formal QCIs

Input Control: represented by employee-training in customer service orientation, in order to control employees as an aspect of operant resource and obtain input from customers, as an operant resource (Sichtmann et al. 2011).

Process Control: defined as managers' close monitoring and assessment of what and assessment of what employee do (Ouchi, 1969).

Output Control: defined as evaluation of the outcomes of employees' activity against pre-determined standards (Merchant, 1985).

Informal QCIs

Self-Control: The individual's demonstration of obligation and willingness to take responsibility for his/her job (Jaworski and MacInnis, 1989).

Professional Control: Informal assessment and direction of an employees work by peers through team interaction and discussion (Peter, 1981a).

Culture Control: Normative pressure to conform to the values of the organisation and achieve its objectives (Flamholtz et al., 1985; Malmi and Brown, 2008).

Procedural knowledge and type of control

The particular tasks needed of the marketing manager are hypothesised to impact the types of controls the firm emphasises. When managers can specify clearly the transformation process for a given activity position, rules and procedures are likely to be developed to monitor an individual's performance in that position (Peterson, 1984; Ouchi, 1979). Ouchi (1979) indicates that under the condition of perfect knowledge on the transformation process, for example, "clear understanding of the means-ends relationship", control may be accomplished simply by monitoring the behaviours of the employees. If the behaviours match with the desired transformation steps, then the outcome of the work behaviour is certain, even without assessment of outcomes.

Hence, presuming a rational form of organisational development, that would lead us to expect a linear relationship between the extent of procedural knowledge and the use of formal process controls. Such a relationship has been supported in the management literature (Eisenhardt, 1985; Jaworski and MacInnis, 1989). Hence we hypothesize:

H3a: Procedural (transformation process) knowledge is positively related to use of formal (process) control.

The knowledge of the transformation process might partially influence the nature of work aims that can be established for the individual or the work-group. As suggested above, clear and specific work aims which concentrate on the work behaviours (i.e. the process or means to achieve end goals) might be established when the knowledge of the transformation process is clear. When such knowledge is imperfect yet the output can be assessed, result-oriented work aims, along with the desired level of standards, may be meaningfully founded. When both the knowledge of the transformation process is clear and the measurability of output is clear, work aims that cover both the means and ends of performance expectations might be established. (See performance documentation, in 3.3.2.2, below). However, when both the transformation process is ambiguous and the output measurability is low, when neither behavioural nor output feedback is possible, under this condition, other means of control, e.g. professional or self control may be necessary (Flamholtz et al., 1985). In the setting where tasks cannot be programmed and hence behaviour cannot be controlled by applying procedures which pre-specify desired actions or by managers monitoring individual actions, professional or collegial structural arrangements are necessary. The collegial model of control regulates behaviour primarily via self and peer group (e.g. professional) (Perrow, 1977; Schmitz and Ganesan, 2014; Abernethy and Brownell, 1997) control. Organisations may operationalize these self and group controls through the use of selection and training policies/procedures which ensure that people who have been exposed to appropriate training and socialization processes are employed (Cravens et al., 2004; Abernethy and Brownell, 1997).

Hence, procedural knowledge could be hypothesized to affect the relative use of informal professional, self and culture controls. If the task is mechanized, that would lead us to expect the individual to take less responsibility for the work produced. Therefore we are expecting that:

H3b: Procedural (transformation process) knowledge is negatively related to use of self-control.

Moreover, to the extent that the task is routinized and managers can identify the activities that must be performed to produce a desired result, the individual might rely less on peers for job related discussion or evaluation of his or her work. Certainly, for these types of positions the

organisation may actively discourage fraternization (Jaworski and MacInnis, 1989). However, Jaworski and MacInnis' (1989) survey of more than 300 marketing managers did not support their expectation that procedural knowledge predicted the use of professional control. In a later study, Jaworski et al. (1993) examined the relationship between routines and control systems in use. Bearing in mind Jaworski and Maclnnis' (1989) statement that procedural knowledge is likely to be most clear where the job is highly routnized, Jaworski et al.'s (1993) findings regarding routineness may suggest some inferences for procedural knowledge. They found that the highest levels of routineness were associated with what they call low control systems, where the use of both formal and informal (such as professional) controls is low, followed by bureaucratic systems (where formal controls are high but informal controls are low). The lowest routineness was associated with a high control system, in which use of all kinds of control, formal and informal, was high. Building on Ouchi's (1979) argument that informal control will be used in the absence of knowledge of the transformation process, Kirsch posited that such knowledge interacts with behaviour observability to differentially affect the type of control utilized (Kirsch, 1996). He, considering the exercise of control in the IS project context, reasoned that lack of IS domain knowledge combined with high levels of behaviour observability would be associated with the use of clan control. In a study of how business managers exercise control over IS project leaders, Kirsch and his colleaques found support for this argument: they observed a negative interactive effect between behaviour observability and knowledge of the transformation process (Kirsch et al., 2002). Explaining this interaction, they argued that business managers who lack knowledge about systems development methods and tools, but who interact regularly with IS development teams through observation, meetings, and chance encounters, are promulgating a vision of the project as well as specific values and norms, building a common understanding about client needs, and promoting common problem-solving approaches. In turn, team members (including the manager) identify with each other and work collegially and cooperatively to ensure client needs are met and forward progress on the project is maintained. Abernethy and Brownell (1997) describe how in non-programmable work settings, instead of behaviour (process) and accounting (output) controls, personnel controls are used, which operate without imposing formal bureaucratic forms of control. Instead, they influence the types of individuals who interact in the work group, the kind of professional activity undertaken by group members, and the level of peer-group self-regulation, via strict personnel selection, and perhaps placement policies. Encouraging a collegial culture, the organisation can rely on the professionalism of group members and the sharing of common values. The operation of self-

and group controls has been described by others as "clan" control (Ouchi, 1979; Govindarajan and Fisher, 1990; Nahavandi et al., 2014) as "social control" e.g. (Merchant, 1985; Rockness and Shields, 1988; Simons, 2013) and as "professional control" (Orlikowski, 1991; Abernethy and Stoelwinder, 1995). This leads to the supposition that

H3c: Procedural (transformation process) knowledge is negatively related to use of professional control.

Moreover, given that culture control is a wider-scale form of professional control and that the organisation can foster collegial cooperation, it is likely that in conditions where professional control must substitute for formal controls (such as in situations where lack of procedural knowledge precludes process control), culture control will also be employed to institutionalize self and professional controls through collegial structures and organisational values. Conversely, such informal mechanisms will be unnecessary and even counter productive in more routinized situations. In routinized situation, where boundaries are regulated, cause/effect relationships are known, and the organisation's purposes are clear, that is, where procedural knowledge is high, internal interdependence such as occurs in professional and culture control is a potential source of uncertainty. Hence, the organisation will seek formal control through coordination of the actions of its components, through subordinating each component to a monolithic authority network with centralized decision making (Abernethy and Brownell 1997), rather than through collegial structures. Jaworski and Maclnnis did not measure culture control separately from self and professional control. As Jaworski et al. (1993) noted, culture control and professional control are distinguished by their level of congregation, professional control relating to the department in work unit, while culture control refers to the pattern of shared values and beliefs at organisation level. Both levels were encompassed in the single concept of informal controls applied in their typology of control systems. As indicated above, with regard to professional control, they found low use of informal controls in the most routinized job situations, and high use in the situation of lowest routineness. Such findings are consistent with Mills contention that culture control is more appropriate to management positions demanding non-routine, non-programmatic decisions (Mills, 1985; Sandelin, 2008). Consequently we anticipate

H3d: Procedural (transformation process) knowledge is negatively related to use of culture control.

It also seems likely that in the presence greater procedural (transformation process) knowledge on the part of organisation members will enhance their understanding of the role of customers in this process and, in turn, their ability to provide clear instructions regarding the customer inputs expected will increase. It will also enhance member's grasp of and when and where they can participate in the service process. As indicated in section 3.3.1, this is crucial to effective customer co-production (Bettencourt et al., 2005a; Lengnick-Hall, 1996). Therefore, we predict the following:

H3e: Procedural (transformation process) knowledge moderates the relationship between customer co-production and service quality performance: specifically, when procedural knowledge is high, the relationship between customer co-production and service quality performance will be stronger.

Performance documentation and types of control

When the knowledge on the transformation process is imperfect and the means-ends relationship is unclear, output control is suitable when the outcomes may be assessed with certainty. For instance, there is no overall set of behaviours for successful fashion buyers or for automobile sales agents. Nevertheless, the outcome of their work behaviour may be obviously assessed. Therefore, output control is suitable under this condition. Behaviour can be impacted by providing feedback on the individual's output performance, provided the assessment system is valid and reliable.

If the firm has documented ways to evaluate the individual's performance, determination of ways to control the individual's output may be achieved. For instance, if the managers can develop precise and accurate measures of a salesperson's or marketing professional's performance, the manager is likely to use those documents to assess the effectiveness of the subordinate's work (Jaworski and MacInnis 1989). Consequently, that would lead to the expectation that as the ability to document or measure individual performance increases, managers will be more likely to use output control systems (Anderson, 2008; Anderson and Oliver, 1987; Peterson, 1984). Jaworski and MacInnis (1989) found a strong positive relationship between performance documentation and use of output controls, supporting pronouns findings by (Ouchi and Maguire, 1975; Eisenhardt, 1985; Anderson and Chambers, 1985). We therefore anticipate that

H4a: The availability of performance documentation is positively related to use of output control.

Moreover, given that the firm has the ability to evaluate performance, this would lead us to expect the manager to take more responsibility for work produced. Consequently, self controls should be higher, especially if the standards are reasonable and the marketing manager has participated in objective setting (Jaworski and MacInnis, 1989). Jaworski and MacInnis (1989) found their hypothesis to this effect was supported. Therefore, we are expecting the following,

H4b: The availability of performance documentation is positively related to use of self-control.

When performance documentation is available, that would lead us to expect the use of professional controls to increase. This is because, presuming the organisation may develop documents specifying desired performance, it is to be expected that marketing personnel will engage in activities that increase the probability of achieving relevant objectives. These actions include interaction, communication and feedback from other marketing professionals. Jaworski and MacInnis (1989) found that the availability of performance documentation predicts use of professional controls. Hence, we anticipate that

H4c: The availability of performance documentation is positively related to use of professional control.

In situations where formal controls are difficult and informal self and professional controls are favoured, culture control is also likely to be employed. Ouchi defined culture as the broader values and normative patterns which guide employees' behaviour, practices and policies (Ouchi, 1979). Katz & Khan (1978) refer to system norms and values as providing a set of suitable forms of behaviour for members and the justifications for them. Employees adopt and internalize such values and normative patterns through the process of socialization. Control of individual or group behaviour toward the achievement of organisational aims via organisational culture is most suitable when the knowledge of the transformation process is imperfect and the ability to measure output is low (Katz and Kahn, 1978; Carlson, 2013). A detailed, extensive assessment system, in this technological condition, becomes an ineffective mechanism of control. In this case, culture provides information in the form of rituals, stories and ceremonies necessary to prescribe the behaviour desired of members for achieving the collective goals (Ouchi, 1979; Martinez, 2011).

Organisational culture represents a form of social or professional control at a wider level. The process of socialization facilitates the internalization of organisational values and goals by

organisational members (Collins, 1982). Goal congruence then increases the possibility that individual and group behaviours will lead to the achievement of organisational objectives (Flamholtz et al., 1985; Kirsch et al., 2010). It also seems likely that the availability of performance documentation among employees will encourage and increase their effectiveness in interaction with their own customers in the service provision, and in turn, their ability to provide feedback and ability to assess their performance after the activity is accomplished, given a summary of their performance in the service process. That would lead employees to move forward in participating with customers, as indicated in section 3.3.2. This is crucial to effective customer co-production. It is therefore hypothesised that

H4d: The availability of performance documentation is positively related to use of culture control.**H4e:** The availability of performance documentation moderates the relationship between customer co-production and service quality performance: specifically, when performance documentation is high, the relationship between customer co-production and service quality performance will be stronger.

Organisational commitment and QCIs

Organisational commitment is viewed as a significant component that creates pride and a desire to perform the job in a good manner for the organisation (Katzenbach and Santamaria, 1999).

There is an argument that it is not difficult to create commitment when the person behind an initiative is clearly identifiable (Imran et al., 2014). In this regard, when a manager sets out an organisational vision, he or she is clearly identifiable as the person behind the initiative (Avolio et al., 2004; Kirkman and Shapiro, 2001; Becker, 1960; Joo, 2010; Katz and Kahn, 1978). Many organisations are run by powerful, visionary and visible managers (Lieber, 1998). Managers such as Southwest Airlines and AT&T (Kirkpatrick, 1993; Saporito and Solo, 1993) are clearly identifiable as the people behind the initiatives in their organisations, and their employees respond with commitment to their organisations (Levering and Moskowitz, 1998).

Organisational commitment represents the willingness of a company's management to assign organisational, managerial and financial resources to deliver ventures (Cadogan et al., 2005). Previous research has clarified that managers committed to delivering service may accept the extra effort and complexity that is associated with organisation operations (Lages and

Montgomery, 2004) and successfully implement resource strategy in service markets (Navarro et al., 2010). As a result, they might provide managerial and non managerial resources that are required for planning and implementing service QCIs in the service market. Cadogan et al. (2005) highlighted that senior managers with established and continuing organisation commitment have a stronger impact on employees because they identify the relevance of the service venture and put more effort into it. Sichtmann et al (2011) found a relationship between an organisation managers' export commitment (export performance was the specific focus of their study) and export customer oriented training of service employees With organisation customer-oriented training, a service firm may enhance the organisation commitment that management adopts and support organisation service personnel. Hence, we anticipate that

H5a: Organisational commitment is positively related to use of input control (training employees)

Since organisational commitment involves employees' commitment to fulfilling organisational goals, it is likely to be enhanced by clarity about these goals. Johnston conceptualizes a positive relationship between a management-control system with high clarity for example, a formal, well-specified system and salesperson commitment. Formal forms of control are expected to provide high clarity for salespeople (Johnston et al., 1990b). Michaels and Futrell suggest through empirical evidence that a salesperson's organisational commitment increases with higher levels of formalization in the sales-force (Michaels and Dixon, 1994; Futrell et al., 1976). They propose a supporting logic that more direct management supervision might be valuable for boundary spanning sales professional. Churchill et al. (1974) also propose that salespeople demonstrate dissatisfaction toward their managers when they do not provide enough direction to salespeople. Cravens et al. (2004) found that high levels of formal (process and output) management control will increase employees' commitment to the organisation by providing supportive feedback, for example, monitoring directing and evaluating (Lages and Montgomery, 2004). While the above-mentioned such as Churchill et al. (1974) and Cravens et al. (2004) proposed a relationship from use of controls towards organisational commitment. Sichtman et al. (2011) proposed and found empirical support for a relationship in the opposite direction, from commitment to process control. The process controls considered included work process standardization defined and measure similarly to Procedural Knowledge in this study. Their rationale was that commitment to organisational goals increases opportunity for interfunctional contact and

co-operation (Cadogan et al., 2005) which may facilitate the development of such standardization. Whilst Sichtman et al. (2011) did not explicitly consider output controls, it may be suggested that logically, commitment to specific goals would be likely to encourage monitoring of the extent to which such goals are achieved through employee performance. Hence, we anticipate that

H5b: Organisational commitment is positively related to the use of process control.

H5c: Organisational commitment is positively related to the use of output control.

Informal management control should also encourage organisational commitment through the setting and monitoring of work unit standards and the pattern of shared values and beliefs present in the organisational environment. In this respect, much has been written about so-called clan culture, although the team is used in two different ways. In Jaworski et al.'s (1993) conceptualization of control combinations, clan control refers to an organisation context in which use of formal controls is low, while use various kinds of informal controls is high, other writers use the team synonymously with professional control in particular (Ouchi, 1979).

When service employees have an affective response to the organisation, rather than merely a need to work, this produces a sense of cohesion, interdependence and social engagement that enhances commitment (Hargreaves and Harris, 2011; Hrebiniak and Alutto, 1972; Mowday et al., 1982; Armenakis and Bedeian, 1999). Managers can enhance a sense of personal engagement, and it is not difficult to create commitment towards something that an employee feels involved in (Malhotra and Mukherjee, 2004; O'Reilly and Chatman, 1986; Mowday et al., 1979; Salancik, 1977b). One way to do this is through self-control, which are based on helping individuals perform their tasks by building on their natural tendency to control themselves (Cravens et al., 2004). Personal involvement may be created by an increased sense of participation and independence, leading to a greater feeling of commitment (Mathieu and Farr, 1991; Meyer and Herscovitch, 2001; Riordan et al., 1997; Salancik, 1977a). When service employees feel that they are necessary to fulfilment of the organisation's goals, their commitment increases (Cummings and Worley, 2014; Meyer and Allen, 1997; Mowday et al., 1982; Armstrong and Taylor, 2014), reflected in an alignment of their goals with those of the organisation and a willingness to exert effort to fulfil those goals. Hence, we anticipate

H5d: Organisational commitment is positively related to the use of self-control.

Moreover, strong levels of organisation commitment provide a cohesive force that binds members of a team, department or organisation According to Ouchi (1979, 1980), a clan can implement control over its members. Clan control needs a deep level of agreement among members of the clan on what constitutes suitable behaviour, and a high level of commitment among members to those socially determined behaviours (Ouchi, 1979; Ouchi, 1980). Moreover, understood knowledge and disciplined work process assist define acceptable behaviour and foster learning. Behaviour that is consistent with group expectations, norms and values will be rewarded (Fortado, 1994). When collective norms or values are violated, however, social sanctioning, such as ostracism or distancing oneself from the individual exhibiting deviant behaviour might be used (Westphal and Khanna, 2003; Kirsch et al., 2010). This form of control operates by leveraging relational social capital, an important resource for individuals because it facilitates participation and cooperation within the collective (Kankanhalli et al., 2005). When team members (including managers) trust in each other's competency, expect everyone to behave in a professional manner, and rely on each other to perform their assigned tasks conscientiously, they are more likely to behave in a cooperative and collegial manner that reflects their agreement about appropriate behaviour. Moreover, it is likely that when team members are dedicated to their work and are professional, competent, and trustworthy, their job behaviour will reflect their shared norms and values, as well as the vision they have all embraced of the project (Kirsch et al. 2002). In effect, the project team leverage their trust in each other to behave in a cooperative and collegial manner that reflects their shared values and norms. The relationships of mutual trust and obligation that comprise relational social capital make team members more likely to attempt to influence each other to behave in ways consistent with their shared norms, values, and vision, and also more likely to respond to such attempts by other team members. This is consistent with Ouchi's (1979) argument that clan control has social prerequisites, in particular, the idea that clan members hold legitimate authority over each other, shared values and beliefs, a common agreement as to what constitutes proper behaviour, and a commitment to uphold those behaviours.

Previous study has shown that employees with managers who communicate effectively report higher levels of organisational commitment (Dubinsky et al., 1995; Niehoff et al., 1990; Shamir et al., 1993). Through communication, managers can create emotional commitment to values, beliefs and goals (Bass, 1985; Ashforth and Mael, 1989; Meyer and Allen, 1997; Yukl, 1989). Service employees who are inspired and supported by a manager

should become more committed to the organisation (Bateman and Strasser, 1984; Boshoff and Mels, 1995; Johnston et al., 1990a; Armstrong and Taylor, 2014). Listening to employees, valuing them and making them feel of a group increases commitment (Meyer and Allen, 1997; Meyer et al., 2004). Based on the discussion in the previous chapter, culture control operates in the same way as professional control, the difference essentially being one of scale. While professional control refers to control at work unit level, cultural control represents a set of values, social norms and beliefs that are shared by members of the organisation and that influence their actions. It is based on the belief that by fostering a sense of solidarity and commitment towards organizational goals, individuals can become immersed in the interests of the organization (Merchant, 1998; Ouchi, 1979). We therefore hypothesize that:

H5e: Organisation commitment is related to use of professional control.
H5f: Organisation commitment is related to use of culture control.

Moreover, since organisation commitment is said to align individuals' goals, it seems that it is likely to affect behaviour towards customers. Specifically, it appears likely that individuals who are more committed to the organisation and its goals will be more inclined to engage with customers and encourage or direct their coproduction contribution in a way that is consisted with the organisation's objectives. Sichtmann et al. (2011) found a positive relationship between commitment and performance which in turn were positively related to service quality, presumably through on (unmeasured) effect on customer coproduction behaviour, hence we hypothesise that:

H5g: Organisation commitment moderates the relationship between customer co-production and service quality performance: specifically, when Organisation commitment is high, the relationship between customer co-production and service quality performance will be stronger.

3.3.4 Quality controls initiatives and customer co-production

This section is concerned with the hypothesized relationships between the QCIs discussed above and the employee related outcome. To ensure permanently a higher quality of service in the facilitation stage, control theory suggests standardizing organisation resources (Jaworski, 1988). Nevertheless, given that service employees are the significant resource for most professional service organisations as they both manufacture the service and

concurrently deal with customers (La et al., 2005), providers of service face the difficulties of standardizing the abilities and skills of the service employees, which differ because of changing capabilities, experiences, attitudes and behaviours. In this regard, control theory suggests training employees as a key input QCI that assist to ensure that employees comply with the standards the firm has set (Jaeger and Baliga, 2006; Ouchi, 1979). Likewise, service dominant logic recommends that service employees be helped by training and educational programmes to improve and expand new competencies (Lusch et al., 2007). Previous study has demonstrated that training employees, particularly with a customer focus, increases a firm's inter-functional interdependence and reduces inter-functional conflict, thus impacting organisation performance positively (Cadogan et al., 2005). Firms also use employee training to reinforce the values and culture they adopt and to communicate the organisation's commitment to its employees (Pfeffer, 1996). In addition, scholars have emphasized that employee training is a precondition for employees' behaviour (Kirca et al., 2005). Training employees of the organisation in customer orientation increases service employees' sensitivity to customer needs and improves their capabilities to adapt to and deal with organisational customers in an overseas environment, so that they may better cope with uncertainty in the task environment generated by organisation customer integration (Skaggs and Youndt, 2003). More specifically, employees are better able to deal with different cultures in service expectations and perception of quality of their organisation customers (Sizoo et al., 2005). Schmidt (2007) has shown a significant relationship between employee training programmes and overall performance of employee (Schmidt, 2007). Therefore we are expecting the following

H6a: Input control is positively related to customer co-production.

Less work has addressed the negative outcomes of controls in use. Jaworski and Macihnis (1989), however, hypothesized that greater reliance on formal output controls increases job tension, which means employee tension would increase in the way that the interaction between employees and customers would be weak, although their empirical study provided no evidence that process and output controls predict the extent of job tension. To shed further light on this issue, therefore, we will test the following hypotheses:

H6b: Use of process control is positively related to customer co-production.

H6c: Use of output control is negatively related to customer co-production.

Moreover, classic work in the fields of organisations and sociology suggested that informal controls might have a powerful, lasting impact on the responses of employees (Jaworski and MacInnis, 1989), suggesting that greater worker control over their work is associated with, higher morale and higher employee performance in the service (Jaworski et al., 1993). As managers change from hierarchical controls to more decentralized controls, for example, professional and self controls, employee performance will increase. Jaworski and MacInnis (1989) found that employee satisfaction, which was translated into employee performance, was greater in systems with high levels of informal control. Therefore we anticipate

H6d: Self control is positively related to customer co-production.

H6e: Professional control is positively related to customer co-production.

Moreover, there is empirical evidence that employee satisfaction is higher in organisations with a clan culture (culture control) (Jaworski et al., 1993). Therefore, we wish to confirm that:

H6f: Culture control is positively related to customer co-production.

QCIs and service quality performance

As noted in the previous chapter, Sichtmann et al (2011) view QCIs as directives aimed at influencing service delivery in ways that affect the quality of outcomes. In their model, they include formal input and process controls in employees' contribution to service delivery, represented by customer-oriented training of service employees and work process standardisation, respectively. The first of these has been used in this study also, while the second has links with two process controls included in our model, namely Procedural Knowledge and Performance Documentation. Regarding employee training, Sichtmann et al. (2011) argued that it plays as important role in standardizing the capabilities and skills of employees; thereby reducing the risk of quality failure caused by differences in employees' abilities, experiences, attitudes and behaviours'. Such training is seemed to increase service employees' sensitivity to customer needs and enhance their ability to adapt to the uncertainties that customers being to the task environment. The findings of Sichtmann et al. (2011) study supported the significance of such a relationship. Regarding process control Sichtmann et al. (2011), drawing Hsieh and Hsieh (2001) and Fliess and Kleinaltenkamp (2004) suggest that clear definition of transformation process and setting of quality standards leading to implantation of standard operating procedures, rules and norms are important for

managing service employees' behaviour in the transformation stage. Without such standardization variables in service process may occur, giving rise to negative perceptions of service quality. Work process standardization facilities control of the nature of interactions between service customers, reducing service variation and uncertainty (Bowen and Ford, 2002) and leading to more consistent service quality (La et al, 2005). Such relationship between process control and service quality was verified empirically by Sichtmann et al. depending, however, such factors as the main-environment, the operating environment and the internal including task characteristics, the types of controls in use in organisations vary. As noted previously, where tasks are less routnized, the application of formal controls may be difficult and informal controls such as professional and self-control are used instead (Jaworski, 1988). The former involves peer pressure and evaluation directed towards enforcing agreed standards of work and behaviour, while the latter reflects the individual's commitment and willingness to task responsibility for his job (Jaworski and McInnis, 1989). The operation of such controls at group and individual level, albeit informal, may be suggested to be conducive towards maintaining quality standards. In the light of the above discussion, therefore, we propose that:

H7a: Formal control is positively related to service quality performance.

H7b: Informal control is positively related to service quality performance.

3.4 Summary

This chapter has outlined the conceptual model, based on Jaworski (1988) that guided this research, and discussed the development of a set of hypotheses on anticipated relationships between the main constructs. In the next chapter, the methods adopted to test these relationships and validate or amend the model are explained.

4 Chapter Four: Methods and Methodology

4.1 Introduction

In the previous chapter the research issues, questions and importance of the research were discussed. A theoretical foundation for the research has been shown in terms of the concepts of quality control initiatives, customer co-production, customer integration and service quality performance, relative to this study in the Saudi hotels industry. The concept of quality control initiatives was represented as formal and informal controls within the hotels industry in the Kingdom of Saudi Arabia, as reflected in the involvement and contribution by customers to the core service provided by the organisation and the behaviour of employees in the organisation toward the tasks of their jobs, as well as the abilities of the managers to identify the jobs and make tasks very clear to the employees. Hypotheses and a conceptual framework have been formulated for the purpose of this study.

In this chapter, the philosophy and methods applied to collect empirical evidence are explained. The parameters of the study are described and essentially this chapter spells out two main issues: the reason for choosing specific methods; and how the selected methods were carried out. The research methodology was constituted through two phases:

- First phase: A theoretical study was carried out, based on a comprehensive literature review of quality control initiatives, customer co-production, customer integration, and service quality performance. This phase was discussed in Chapters Two and Three.
- Second phase: Questionnaires were developed to fit the hotels industry service providers and an Islamic country (Saudi Arabia). The questionnaire was directed towards employees and managers.

The chapter is divided into four main sections. The first concerns the foundations of the research design, including the philosophical underpinnings, the population and sampling procedures, and the choice of data collection method. The second explains the questionnaire design, including scale development, response form, question sequence and layout. Then, the data collection process is described, from pre-testing and pilot study through to the main study, ending with a description of the data collected. The final section details the analytical procedures employed.

4.2 Research Design

4.2.1 Philosophical foundation

Kuhn (2012) announced that "what we see depends on what we look at and what previous visual conceptual experiences' have taught us to see. While a sociologist and a psychologist may observe the same reality, the former may focus on the social structure and the latter may focus on interpersonal differences. It is important, therefore, for an investigator to be aware of his or her theoretical perspectives (Kuhn, 2012).

One of the significant problems for a researcher to address is to identify the philosophical assumptions that constitute the foundation of his or her research. Predominant among these are assumptions about ontology-views about the nature of 'reality', and epistemology, concerned with how reality can be apprehended and what constitutes acceptable knowledge (Saunders et al., 2009). As regards ontology, a distinction is made between objectivist and subjectivist positions. Objectivists assume a single reality, external to and independent of the researcher, whereas subjectivists conceive of multiple realities, since they assume 'reality' is subjectively constructed by individuals, based on their perceptions, experiences and interactions. These assumptions have implications for epistemology. Researchers who adopt an objectivist ontology assume that valid knowledge is obtained by observation and measurement. In contrast, subjectivist researchers assume that understanding 'reality' in the social world necessitates close integration between researcher and participants in order to gain insight into their perceptions. These contrasting positions are also associated with differing stances toward axiology, or the role of values in research. The former is associated with a belief that research can and should be value-free, while the latter assumes research will inevitably be influenced by the researcher's values (Guba and Lincoln, 1994).

Sets of assumptions that constitute a particular 'world-view' are often referred to as paradigms. Creswell announced that "Stating a knowledge claim means that researchers start a project with certain assumptions about how they will learn and what they will learn during their inquiry. These claims might be called paradigms" (Creswell, 2008: p.6). Collis and Hussey defined a paradigm as "the progress of scientific practice based on philosophies of people and assumptions about the world and the nature of knowledge and how the research should be conducted" (Collis and Hussey, 2009: p.46). It is very important for the researcher to have an understanding about his personal paradigm as this will frame the research design.

Writers on research methodology differ in the number of paradigms they identify, and the terminology used to denote them. Many make a broad distinction between two main paradigms. The first, based on an objectivist ontology, controlled systematic observation and measurement by a value-free observer, has variously been called "conventional" (Guba and Lincoln, 1988), 'analytic' (Salomon, 1991), add paradigm (Wadsworth, 1998) and 'positivist' (Guba and Lincoln, 1994; Neuman, 2005; Saunders et al., 2009). The other main paradigm, rooted in a subjectivist ontology, concerned with understanding the lived experience of social actors and accepting the influence of the researcher's values, has been denoted 'naturalistic' (Guba and Lincoln, 1988) 'systemic' (Solmen, 1991), 'new paradigm' (Wadsworth, 1998) 'constructivist' (Guba and Lincoln, 1994) 'interpretive' (Creswell, 2013; Hussey and Hussey, 1997; Saunders et al., 2009) and 'phenomenological' (Collis and Hussey, 2009). Here, the terms 'positivist' and 'interpretive' are used, since they are in widespread current use among methodology writers. Neuman announced that "the method of investigation used depends on the investigator's assumptions about society. A considerable body of social science is directed by research methods drawn from natural science. This approach is known as positivism" (Neuman, 2005: p.120). The main concern of positivist research is to formulate and test laws via quantitative methods. According to positivists, laws provide the basis of clarification. Explanation consists of finding causal relationships between variables (Hussey and Hussey, 1997). In the interpretivist paradigm, in contrast, the research intent is to make sense of (or interpret) the meanings others have about the world, which follow from their own personal, cultural and historical experience. Rather than starting with a theory, as in positivism, researchers generate or inductively develop a theory or patterns of meaning (Creswell, 2008: p.9). Interpretive researchers, then, look for understanding of the context or setting of the participants via visiting the context and collecting information personally, after which they interpret what they have found. The interpretation is influenced by the researcher's experience and his background.

The selection of paradigm has implications for the selection of research methodology (in general, approach to the research process) and to a lesser extent, the research methods (the way of collecting data). The selection of the paradigm also will be partly governed by the nature of the research problem and by the assumptions of a particular researcher. In selecting a paradigm the first consideration was the nature of the study. In this respect, a useful typology is offered by Zikmund (2003).

Zikmund (2003) identified that business research follows three categories, according to the purpose of the research and the nature of the problem investigated:

Exploratory research: is intended to clarify vague and not so vague problems. Management might identify an overall problem, but research is needed to gain a better understanding of the dimensions of the problems, to be easier.

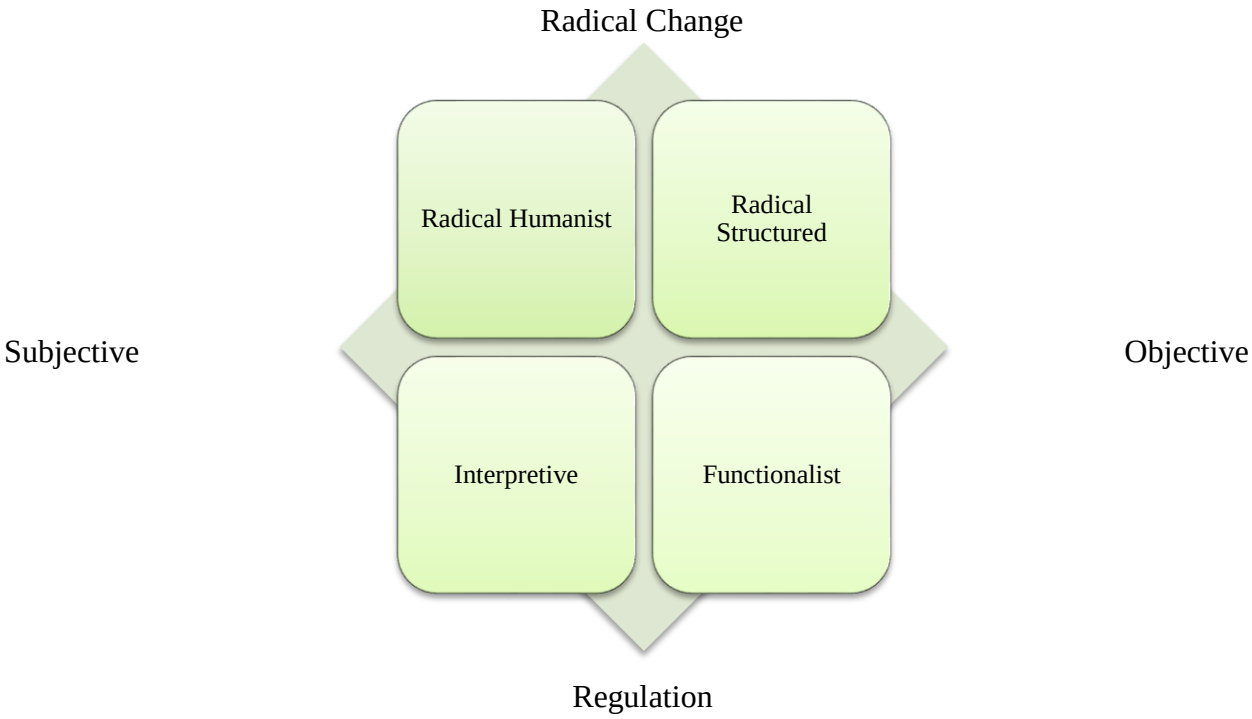
Descriptive research: the objective of this type of research is to find out the characteristics of individual opinions, needs and attitudes of a population and discover the differences among them.

Causal research: the basic goal of such research is to identify cause and effect relationships between variables.

This study concentrates on the employees of the Saudi hotel industry to identify the relationship between customer integration and co-production, informal QCIs and service quality performance. Its purpose is to describe the status quo and to measure relationships between variables. Hence, the positivistic paradigm was used in this research to examine the theory (Bryman and Bell, 2007). Positivist research investigates the evidence of or reasons for social phenomena, taking little account of the personal situation of the individual. Moreover, it provides a chance of measuring various variables and looking at relationships between them (Brady and Cronin Jr, 2001).

Burrell and Morgan (1979) conceptualized research paradigms in a slightly different way. They categorised social science research along two axes: objectivist vs. subjectivist, discussed above, and regulation vs. radical change. Radical change relates to a critical perspective on organisation affairs that seeks fundamental changes to the existing order (Burrell and Morgan, 1979). Regulation, by contrast, is a perspective that seeks to explain how organisational affairs are conducted and to offer suggestions for improvement within the existing state of affairs. Combining these dimensions results in a four-called matrix, as shown in figure 4.1

Figure 4-1 Four Paradigms in Social Theory



Source: Adapted from Burrell and Morgan (1979).

From this perspective, the present research can be categorised as functionalist. The research adopts an objectivist ontology, assuming the existence of regularities in patterns of organisational interactions with customers, and in the nature of the relationships between variables, which exist independent of the researcher and can be systematically measured. Such measurement is carried out from a regulatory standpoint, since the aim is to describe the process whereby environment and QCIs influence customer co-integration and, hence, service quality, and to draw implications for improvement within the existing framework-not to overturn the present state of affairs.

In line with its positivist underpinnings, this research is deductive, a logic defined by Hussey and Hussey (1997) as one in which a conceptual and theoretical structure is developed and then tested by empirical observation; thus, particular instances are deduced from the general inferences. For this reason, the deductive logic is referred to as moving from the general to the particular. In this respect it differs from inductive research, in which theory is developed from the observation of empirical reality; thus general inferences are induced from particular instances, which is the reverse of the deductive method. Similarly, Becker and Bryman (2004) explained that the deductive logic starts with theory and progresses to forming hypotheses and collecting data to evaluate the theory, whereas, in the inductive approach to research,

theory is developed by beginning with observations and then developing hypotheses (Becker and Bryman, 2004). The deductive research logic is appropriate in this research, as it began with the theories of customer integration, co-production, and quality of service. Then data were collected in order to evaluate the theories. It was decided to adopt a quantitative approach to investigate Quality Control Initiatives and their effect on service quality performance through customer co-production and customer integration. A deductive logic would also enable measurement of the service provided by the Saudi hotels industry as perceived by customers and employees and to what extent customer co-production and integration improve service quality performance.

From the above discussion, a quantitative approach was used in this study for the following reasons:

1- The researcher suggested a set of research questions and hypotheses on quality control initiatives, represented as formal and informal control and customer co-production, customer integration and service quality performance in the Saudi hotels industry and testing of these hypotheses required quantitative data.
2- Recognizing factors expected to be significant is critical to the research questions and hypotheses, including the relationships between variables that should be tested systematically and statistically.
3- It was important to collect data from a large sample of employees and customers in order to use sophisticated statistical techniques in the data analysis,

From the above discussion the following table summarises the research classification that was used in this study.

Table 4-1 The research classification of this study

Basis of classification	**Type of research**
Ontological assumption	Objectivist
Epistomological assumption	Scientific inquiry
Research tradition/paradigm	Positivist/Functionalist
Aim of this research	Descriptive and analytical research
Outcome of the research	Empirical research
Logic of the research	Hypothetic-deductive
Methods	Quantitative

4.2.2 Cross sectional versus longitudinal design

Churchill (2009) highlights the two main types of descriptive study available to researchers: cross-sectional design and longitudinal design. A cross-sectional design involves the collection of information from any given sample of population elements only once. In a longitudinal design, information is collected from a fixed sample (or samples) of the population repeatedly.

The advantages longitudinal design offers over cross sectional design are the quality of data collected and that it can be subjected to more rigorous analysis. One acknowledged weakness of the cross sectional approach, however, when compared with the longitudinal, is that it is difficult to establish time order; i.e., the sequence of occurrence of observed phenomena, which is an important prerequisite for inferring causality (Bollen, 1998). Longitudinal design on the other hand affords the researcher the opportunity to assess changes over time, and therefore, to more easily infer causal effects.

The major drawbacks of a longitudinal design are that it is not representative, is more expensive and it also requires that the study be conducted over a long time period (Bryman and Bell, 2007). The financial and time constraints of this study meant that a longitudinal study design was not feasible and therefore a cross-sectional design was adopted. In choosing a cross-sectional design, consideration was given to mitigating potential disadvantages. For example, it has been suggested that use of longitudinal analysis may help to overcome issues associated with method bias influence (Podsakoff et al., 2003; Podsakoff and Organ, 1986). One way to avoid the potential harmful effects of method bias in a cross-sectional design is to collect data using a variety of survey design (MacKenzie et al., 2005). Some of these issues are addressed in later discussion of the survey design. This is an important consideration, since Podsakoff and Organ (1986: p.540) "strongly recommended the use of procedural or design remedies for dealing with the common method variance problem as opposed to the use of statistical remedies or post-hoc patching up." Research fields have also shown that cross sectional data may not be as susceptible to method bias problems as first thought, given certain conditions. More specifically, it has been noted that where relationships between constructs are expected to be quite large in magnitude, method bias may not be as much of a factor under cross-sectional research conditions (Rindfleisch et al., 2008).

Regarding the problem of time order, in cross-sectional research, the sequence of occurrence of observed phenomena can be partially established through theory and through past research findings (Rindfleisch et al., 2008). In addition, it is possible, through careful design of the

questionnaire, that a researcher can obtain current as well as historical data so that inferences about causality can be made. This to some extent might mitigate some of the disadvantages cited earlier.

The appropriateness of cross sectional data for this study is based on the fact that organisational culture develops over a long time and changes slowly (Schein, 1996). In fact, cross sectional design seems by far to be the most common method for generating data in research on service quality. Through cross sectional studies, researchers are able to assess patterns of association between variables of interest, to see if they are in line with theory.

4.2.3 Sampling process

Sampling is the "selection of those elements from which the information will be collected in order to reach a general conclusion about the entire population" (McDaniel and Gates, 1996: p.71). The need to sample is almost always encountered and extremely important in quantitative research (Bryman and Bell, 2007; Ghauri and Gronhaug, 2005). Determining the relevant population is a difficult process, as the sample to be defined should be representative of the population from which it was drawn (Bagozzi, 1995).

According to Bryman and Bell, "Population – basically, is the universe of units from which the sample is to be selected" (Bryman and Bell, 2007: p.93). Polland pointed out that populations are groups of people allocated on the basis of common characteristics (Polland, 1998). On the other hand, a sample is the segment of the population that is selected for investigation. The target, therefore, is to design a sample that represents the population on all relevant and significant characteristics. A typical sample is one that varies from its population only in size. According to Rea and Parker (2012), "Sampling is used to decide who will be included in a survey because gathering information in a population is beyond the scope and resources of most researchers" (Rea and Parker, 2012: p.115). Sampling makes gathering data on a population of interest more manageable and more affordable, whereas at the same time it allows the characteristics of a large body of people to be deduced, with the least error, from data collected on relatively few of them. Nevertheless, generalisability of the results from the selected sample requires that it is representative. Following Churchill (1995), the procedures for designing the sample were as follows: defining the population, identifying the sampling frame, selecting a sample procedure, determining the sample unit and finally gathering data from sample units.

4.2.3.1 Target population

The target population for a survey is the set of people about whom the researcher wishes to collect data. This is sometimes referred to as the study universe (Rea and Parker, 2012). That means the members to which the researcher desires to generalise or make conclusion from the questionnaire sample. The population of this study is marketing department managers and employees in Saudi hotels. For the purpose of this study, large hotel chains (both Saudi and international) were targeted for reasons of accessibility. Such hotels constitute the majority in Saudi Arabia and have branches large cities in Saudi Arabia such as Riyadh, Jeddah, Makkah and Almadinnah. Albaha and Taif. The hotels were initially approached by e-mail and followed-up with telephone calls inviting them to participate in the study. A manager is defined as an individual with responsibility for managing/supervising other employees within the organisation.

4.2.3.2 Choice of respondents

Managers were targeted becaus they supervise employees, observe the service they provide and experience issues regarding the dimensions investigated in this study. Employees were targeted as they are very close to the daily life of customers and they are active participants in providing services. In fact, both managers and employees are considered as primary customers and therefore, their views of service quality performance were of interest, because of their possible influence on service quality performance.

4.2.3.3 Sampling frame

"The sample frame is the list of the target population from which the sample will actually be drawn. It is, in effect, the operational definition of the study universe (target population), the designation in concrete terms of who will be included, where they can be located, and when the data will be collected" (Aday and Cornelius, 2011: p.114).

A distinction is occasionally made between the intended or target population and the actual research population; hence the limitation of some sampling frames. Nevertheless, the researcher attempts to correspond the basis and process of choosing the sample as closely as possible to the target population or universe of interest for the research. This sampling frame should match well with the sampling population because the reliability of the sample depends first on the sampling frame. In fact, every part of the sampling design, the population covered, the phases of sampling and the realistic selection process, is impacted by the sampling frame (Frankfort-Nachmias and Nachmias, 2007).

The sampling frame was a list of marketing department managers in each branch provided by the hotels' management. These managers were the initial point of contact with their departments; however, employees in the same department were also targeted.

4.2.3.4 Sampling technique

Sampling procedures can be divided into two basic kinds of sampling classes, probability and non probability samples. Clearly, the basic distinction between the two classes is that the former relies on the regulations of opportunity for choosing the sampling components, while the latter relies on human judgment (Aday and Cornelius, 2011; Bryman, 2004; Ghauri and Gronhaug, 2005). Probability samples include simple random, systematic, stratified and multi-stage cluster samples, whereas non-probability samples include convenience, quota and snowball samples. Non-probability samples are easy to draw, but they might give misleading findings. Given the large number (68) and geographical spread of the hotels a non-probability sample was applied for reasons of accessibility. Such an approach is justified on the grounds that the sample covered every branch of all the major hotel chains operating in Saudi Arabia. Moreover, as indicated below, a large sample was drawn in order to reduce sampling error. The sample is, therefore, considered reasonably representative of the target population.

4.2.3.5 Sampling and non-sampling error

Sampling error is the difference between the observed values of a variable and the long-run average of the observed values in repetitions of measurement (Churchill, 1999). In survey research, sampling error is the difference between the population defined by the researcher and the population as implied by the sample used in research (Malhotra and Birks, 2006). In this specific instance, it is the difference between the potential answers of the total population of hotel industry in the Kingdom of Saudi Arabia, and the answers obtained from respondents. Sampling error is normally found to decrease as sample size increases because as the sample size increases, the sample becomes more representative of the population (Churchill, 1999a; Hair et al., 2006a). The goal of the research was therefore to try and generate as large a respondent sample as possible.

Nonsampling errors are those errors that do not relate to the sampling method or the sample size (Churchill, 1999). Nonsampling errors can arise in four main ways: respondent errors, measurement/design errors, faulty problem definition, or project administration errors (Hair et al, 2006a). While sampling error decreases as sample size increases, nonsampling errors

may actually increase (Churchill, 1999). Respondent errors most often take the form of non-response bias, which is when potential respondents do not complete or return the questionnaire (Malhotra and Birks, 2006). Non-response error is discussed in greater detail below. Measurement and design errors can take the form of construct development error, scale measurement error, survey instrument error, or data analysis error (Hair et al, 2006a). Measurement error will be discussed in more detail later in this chapter. Survey instrument error involves misinterpretation of questionnaire items (Hair et al, 2006). Adequate pretesting procedures indicated that survey instrument error would not be a problem. Data analysis error is most often generated by the selection of an inappropriate analytical procedure (Hair et al, 2006a). Another section of this thesis discusses in detail the choice of SEM for this project. Faulty problem definition is reduced by the comprehensiveness of the literature review, enabling relevant constructs and relationships between constructs to be identified (Hair et al, 2006a). Finally, the likelihood of project administration errors was reduced by keeping detailed records of project stages, such as questionnaire distributed dates, return dates, and entry of data into relevant software application.

4.2.3.6 Non-response error

Non-response bias is defined as "a type of non sampling error which occurs when some of the respondents included in the sample do not respond" (Malhotra, 2010: p.106). This issue is a concern for social science researchers who strive for representativeness from their chosen sample. As this research is based on a carefully selected sampling frame, that provides an appropriate context for testing a model of service culture and performance, non-response bias is not considered a major issue. However, non-response error was still assessed. The way in which non-response error is accounted for in this thesis is covered in more detail later in this chapter (section 4.4.3.2).

4.2.4 Choice of data collection method

One of the main methods in quantitative approach is survey, which is the main method in this research. According to Babbie, survey is a method of empirical verification (Babbie, 2012: p.44) . There are three essential reasons for survey design: (1) description, where the researcher is concerned not with why an observed distribution exists but the concern is about what the distribution is; (2) explanation, which is intended to figure out a relationship between variables and multivariate analysis is needed; (3) exploration, which is described by Babbie (2012, p.53) as a “search device”, when the researcher is just starting to investigate a

particular subject. This research is descriptive and explanatory in purpose, making survey an appropriate design. It was selected as a means of answering questions about behaviours, attitudes, knowledge, beliefs, opinions and characteristic (Babbie, 2012; Neuman, 2005; Ghauri and Gronhaug, 2005; Babbie, 2001). Surveys can employ questionnaire and interview techniques for recording the verbal behaviour of respondents (Ghauri and Gronhaug, 2005). According to Oppenheim (2000) a questionnaire is a form of planning data collection for the purpose of description or prediction, as direct to actions or for the purpose of analysing the relationships between certain variables.

In this research, questionnaires were applied, which allowed the research questions to be answered and hypotheses to be examined. In addition, as the targeted samples were employees and managers, it was expected that questionnaires would be the most effective and efficient way to elicit their perceptions regarding service quality performance in their hotels and employees' behaviour. There are two additional reasons for applying questionnaires as the main method. Firstly, some experienced researchers in Saudi Arabia have stated that culturally, people do not demonstrate their emotions and perceptions verbally and they prefer to answer questionnaires, anonymously (Bin Saeed, 1997). Second, and more importantly, the only way that the researcher could acquire the data from the target sample was while they were at work. In this situation questionnaires were more appropriate, as they would cause less disruption to the participations' work and to their organisations (hotels).

4.3 Questionnaire Design

The method of application depends on the definition of the questionnaire and, therefore, in this research, the definition of a questionnaire by Sekaran was adopted; "a pre formulated written set of questions to which respondents record their answers, usually within rather closely defined alternatives" (Sekaran, 2006: p.232). Many points were considered when designing the questionnaire. Questionnaire should be adapted to suit service or the organisation this study applies to such hotels. Questionnaire design should be clear in order to gather the right information and be easy to analyse. In addition, questionnaire design will impact the rate of response and validity and reliability. Nevertheless, Babbie (1990, 2001) and Saunders, et al (2003) state that success in these fields can be maximised by clear and careful design of each question, clear layout of the questionnaire form, obvious purpose of the questionnaire, pre-testing, pilot testing and carefully planned and executed administration. The latter points are discussed in section 4.4.

To enable hypotheses to be examined, a structured questionnaire was taken as appropriate. One questionnaire was developed for respondents in the hotels in Saudi Arabia.

4.3.1 Construct operationalization and scale development

There is a real art in designing clear well-written questionnaire items. Unfortunately, there is no clear fixed rule that can guide this process but there are some things the author might do to improve the quality of his instrument questions, and therefore the quality of the data (Pallant, 2010). It is important to pay attention to how the questionnaire can answer the research questions and facilitate hypothesis examination and more importantly, how the data can be analysed statistically. Three essential suggestions by Cohen and Manion (1994) were considered in designing surveys: first, the exact target of the inquiry, second, the population on which it was to be focused, third, the availability of resources. In this research, as in other studies, time and money were limited, but these constraints do not undermine the reliability of the study.

The first step in the design process was operationalizing the research constructs. In the early stages of designing the questionnaires the literature was reviewed and ideas were discussed with interested parties. In addition, questionnaires published in high ranking journals and related to service quality performance, customer co-production and customer integration through the mechanisms of formal and informal controls were examined in order to gain insights into questionnaire design, the advantages and disadvantages of kinds of questions and the kind of analysis applied. The following paragraphs explain the development of scales drawing on well-established scales used by previous researchers to capture the constructs in the conceptual model in Chapter Three. A full list of constructs, with their origins in the literature, definitions and measurement items (including adaptations to the original, if any is provided in Appendix E).

4.3.1.1 Environment

Procedural knowledge was measured though two items from Jaworski and MacInnis (1989) related to the existence of a clear specification of the activities middle managers and employees must perform to achieve the desired outcome: since the questionnaire targeted middle managers and employees each was required to answer in relation to task clarity in their own areas of activity.

(1) There exists a clearly defined body of knowledge or subject matter that can guide managers/employees in doing their work;
(2) The possibility of existing procedures and practices to do their work.

Performance documentation was measured through two items about from Jaworski and MacInnis (1989) whether the supervisors of marketing have availability of forms or documentation to assess a marketing employee's performance:

(1) Documents exist to measure their performance after activities are completed;
(2) Their performance can be adequately assessed using existing documents.

Organisational commitment was measured through nine items based on Agarwal and Ramaswami (1993), adapted to refer specifically to the hotel rather than the organisation.

(1) The Employees are willing to put more effort beyond that normally expected in order to help the hotel be successful;
(2) Employees talk the hotel up to their friends as a great hotel to work for;
(3) Employees would accept almost any type of job assignment in order to keep working for the hotel;
(4) Employees find their values and the hotel's values are very similar;
(5) Employees are proud to tell others that they are part of the hotel;
(6) The hotel really inspires the very best in employees in the way of job performance;
(7) Employees are extremely glad that they selected the hotel to work for;
(8) Employees care about the fate of the hotel;
(9) The hotel is the best possible for which to work.

4.3.1.2 Controls

Employee customer-oriented training of service employees was measured through four items from the validated set of scales by Sichtmann et al. (2011).

(1) Staff of hotel delivering the service are told that serving hotel customers is an extremely important priority;

(2) The hotel encourages training for the employees delivering the service;
(3) The hotel tells employees delivering the service to act according to the customers' needs;
(4) The hotel supports its employees in delivering the service with innovative communication and information technology.

Self-control was measured through three items from Jaworski and MacInnis (1989)

(1) The main satisfaction of staff in their life comes from their job;
(2) The work staff do on their job is very meaningful to them;
(3) Staff feels they should take credit or blame for the results of their work.

Culture control was measured through two item Jaworski and MacInnis (1989)

(1) The work environment encourages marketing professionals to feel a part of the division;
(2) The work environment encourages marketing professionals to feel a sense of pride in their work.

Process control was measured through five items Jaworski and MacInnis (1989)

(1) The manager or boss monitors the extent to which I follow established procedures;
(2) The manager or boss evaluates the procedures I use to accomplish a given task;
(3) The manager or boss modifies my procedures when desired results are not obtained
(4) I receive feedback on how I accomplish my performance goals.

Output control was measured through five items Jaworski and MacInnis (1989)

(1) Specific performance goals are established for staff jobs;
(2) The manager or boss monitors the extent to which I attain their performance goals;
(3) If staff performance goals were not met, I would be required to explain why;
(4) I receive feedback from my immediate supervisor concerning the extent to which achieve my goals;
(5) Staff pay increases are based upon how their performance compares with their goals.

Professional control measures how peers in a department are involved in team interaction, discussion and informal assessment of each other's work (Jaworski and MacInnis 1989). Based on Jaworski and MacInnis' (1989) well-established scale, this was measured by five items.

(1) The department encourages cooperation between marketing professionals;
(2) Most of the marketing professional in staff department are familiar with each other's productivity;
(3) The department fosters an environment where marketing professionals respect each other's work;
(4) The department encourages job-related discussion between marketing professionals;
(5) Most marketing professionals in the department are able to provide accurate appraisals of each other's work.

4.3.1.3 Consequences

Customer co-production was measured through three items based on Sichtmann et al. (2011)

(1) We tell our hotel customers to participate in the service delivery process;
(2) We tell our hotel customers where and when they have to participate in the service transformation process;
(3) We tell our hotel customers which inputs and resources they have to provide in the service transformation process.

Customer integration was measured through four items. Two of these items were adapted from the work of Lau et al. (2010). The two remaining items were developed by the researcher in the light of customer integration literature.

(1) The hotel shares the service plans with our customers;
(2) The hotel shares information and data with customers in service process delivery;
(3) The hotel integrates resources with customers' resources;
(4) The quality of our service is highly dependent on contributions provided by the customers.

Service quality performance was mainly based on the SERVPERF instrument developed by . Corin and Taylor et al. (1993). It covers five dimensions: Tangibles, Reliability, Responsiveness, Assurance and Empathy. However, it was necessary to modify them by deleting or adding or changing the words to fit the hotels context. The modifications were made in line with (Hsieh et al., 2008). Appendix E shows similar items from Corin and Taylor (1993) and Hsieh et al. (2008) worded for the hotel context, from which the selected items were drawn.

The *Tangibles* dimension consisted of 6 items adapted from SERFPERF (Corin and Taylor, 1993) for hotel service quality.

These six items were:

(1) Equipment and technology are up to date
(2) Convenient parking
(3) Style of interior decoration is attractive
(4) Convenient location
(5) Food and beverages in this hotel are of a high standard
(6) Additional facilities and activities, e.g. gym.

In this study, since the target sample was managers and hotel staff, more items needed to be added to this dimension to cover all aspects of the actual service provided, i.e. convenient parking, the quality of food and the style of decoration, additional facilities and activities, e.g. gym and the location of the hotel. These were included based on various suggestions in the literature (Hsieh et al., 2008).

Reliability was measured through three items:

(1) The hotel safeguards customers' privacy;
(2) Services personnel in this hotel have specialized skills;
(3) This hotel promises to do something by a contain time, it does so.

Responsiveness was measured through two items based on Hsieh et al. (2008).

(1) The quick problem-solving ability of the service personnel is a good opportunity to impress the customer;
(2) A courteous and friendly attitude by the service personnel.

Assuranc***e*** was measured through three items:

(1) Staff are willing to help customer and guarantee the process of performing services;
(2) The hotel offers convenient ways of providing service such as an on-line reservation procedure;
(3) The hotel is good value for its price level.

Empathy was measured through eight items:

(1) The hotel has a safe privacy of transaction;
(2) Employee personnel get adequate support from the hotel to do their job;
(3) The hotel has things such as special promotions;
(4) The hotel provides customers with tourism information;
(5) The hotel gives individual attention to its customers;
(6) The staff employees of the hotel know the customer's needs;
(7) The hotel cares about its customers;
(8) The hotel has convenient opening hours.

4.3.2 Response form

Marshall (2014) asserted that there are various categories of questions, such as closed questions, open questions and multiple choice answers. Closed and open questions were applied in this study because they were suitable for the research methodology. Closed questions are typically used in the positivistic approach (Marshall, 2014). Easterby-Smith et al. (2012) asserted that closed questions are quick to complete and analyse. Although there are advantages for both open and closed questions, closed questions were predominantly applied in this research because they are commonly applied in quantitative research and accomplish the objectives with minimum cost (Easterby-Smith et al., 2012). Nevertheless, an open-ended question was added at the end of the questionnaire as recommended by (Baldwin

and Sohal, 2003; Rose et al., 2004). Although the analysis of open-ended questions is not easy (De Vaus, 2002) the major reason for the open-ended question was to allow managers in Saudi hotels freedom to express their ideas regarding service quality performance, including aspects that pleased or displeased them, and to make suggestions to improve service quality performance.

The response format for the closed questions was a Likert-style scale in which "the researcher asks the respondents how strongly they agree or disagree with a statement or series of statements, usually in four, five or seven-point rating scale" (Saunders et al., 2011a: p.296). The reason for using the Likert scale is that most authors argue that it is the most commonly used in studying attitudes (Hussey and Hussey, 1997: p.170; Saunders et al., 2011a: p.259). For most variables, a five-point scale ranging from 'strongly disagree' (1) to 'strongly agree' (5) was selected, based on (Taylor et al., 1993), argued that it is easier for respondents to respond on a five point scale compared to a seven-point scale. They also argue that a shorter liker scale would decrease their frustration level and hence increase the response rate and the quality of responses. A five point scale also allows a neutral middle opinion, unlike the four-point scale. Four and five point scales have been applied widely in the literature (Roberts et al., 2003). A five point scale (Never, Rarely, Sometimes, Most of the time and Always) was used to collect data on the process control and output control variables that measured the intervention of the managers in employees' performance and to what extent they met the aims and objectives of the hotel.

An open-ended question was also included, asking respondents whether they had any comments, feedback, complaints or suggestions to improve the service quality performance of the hotel. It was considered that some respondents may like the chance to make further comments or feedback and that would assist the researcher in the pre-testing and piloting stage, to recognize where changes in the draft questionnaire might be needed. Also, after the main study was conducted, some illustration or clarification of the findings might be found, from any such comments.

4.3.3 Question sequence

The questionnaire was divided into two main sections. The first section contained a mixture of constructs in order not to create common methods bias that could affect the result (Malhotra et al., 2006). Another reason for grouping them was that the constructs used the same Lickert scale. The section contained 54 statements, of which 22 items were related to

service quality performance dimensions: Tangibles, Reliability, Responsiveness, Assurance and Empathy. It also contained the Environment variables, PK and PD, three control-related variables (customer-oriented training, self control and culture control) and the consequences variables, customer integration and customer co-production. The second section was aimed at determining how employees are monitored and receive feedback from their managers and how the behaviour of employees is impacted by defined targets and rewards. It contained the output control and process control scales.

In addition to the sections capturing the model constructs, a third section was added; this was a demographic profile and contained eight questions. This section was placed at the end of questionnaire, according to the argument raised by some researchers that placing personal questions in the beginning of the questionnaire might influence the respondents' answers. According to Oppenheim, "Whether questions seeking personal information should appear in the beginning or at the end of the questionnaire is a matter of choice of the researcher. Some people advocate asking personal data at the end rather than the beginning. Their reasoning may be that by the time the respondents reaches the end of the questionnaire the individual would have been convinced of the genuineness of the questions posed by the researcher"(Oppenheim, 2000: p.120)

Saudis are sensitive about personal information and so, in the Saudi context, questions regarding details of gender, age and marital status or other highly sensitive information are best left to the end of the questionnaire. In addition, a range of response options was provided rather than seeking actual numbers. The demographic information included the position of the respondents, gender, marital status, age, and nationality, the star rating of the hotel, the city where the hotel is located and the respondent's level of education. It should be noted that, although star rating data was collected, it is not reported in the thesis for two reasons. First, hotels had very similar ratings, either 3 or 4 star; second, no differences in response patterns appeared that could be attributed to star rating. Demographic information was collected because it was not known at this stage what factors might prove relevant. In the event, these factors proved unrelated to participants' view on the survey construct and are not reported in the analysis.

4.3.4 Layout

A number of authors (Sekaran, 2006; Saunders et al., 2011a; Babbie, 2012; Collis and Hussey, 2009; Creswell, 2008) have mentioned that it is important to consider how the questionnaire

looks. It should be attractive and neat with a very good introduction and instructions to make it easier for the respondent to answer, as this may assist in increasing the rate of response. A covering page is important because it might help to encourage a respondent to complete the questionnaire. The first page, therefore, received careful attention and included the following points, as suggested by previous authors: (1) the title of the study; (2) the purpose of the survey; (3) the variables in the study; (4) the importance of respondents' answers for the hotel industry; (5) an assurance of confidentiality; (6) an example of how to fill in the questionnaire; (7) a graphic illustration; (8) the name and contact number of the researcher; (9) signature; finally, a message of thanks (see Appendix).

Also the length of the questionnaire is very important, as it might affect the response rate. For managers and employees, it would be very difficult to answer a long questionnaire. Saunders et al. (2011) proposed that a length of four to eight A4 pages is acceptable for a within-organisation self-administered questionnaire. In this questionnaire, the number of pages was six for the English version and five for the Arabic version.

4.3.5 Instrument Reliability and Validity

"Precision and accuracy are obviously important qualities in research measurement, and they probably need no further explanation. When social scientists construct and evaluate measurement, however, they pay special attention to two technical consideration: reliability and validity" (Babbie, 1990: p.132).

To reduce possible errors, it was important to ensure that the survey correctly measured the exact variables. As announced by Sekaran, "The use of better instruments will ensure more accurate results, which in turn will enhance the scientific quality of the research" (Sekaran, 2006: p.204). Consequently, the following two sections will provide evidence of the instrument's reliability and validity.

4.3.5.1 Reliability of the instrument

"The reliability of a measure indicates the extent to which the measure is without bias (error free) and hence offers consistent measurement across time and across the various items in the instrument" (Sekaran, 2006: p.204).

Scholars have developed different techniques for cross-checking the reliability of the instrument. As indicated in the definition above, two notions are suggested to be examined for reliability: stability; and consistency of the measure. In this research, stability was based

on the use of an existing scale that has been widely used in several studies. As most of the variables used in this study were examined and confirmed in prior studies, except for the customer integration and customer co-production scale developed by the researcher, the instrument was expected to be reliable. This made internal consistency the more significant aspect to be examined in this study. As such, Cronbach's Alpha coefficient, the most widely applied approach in social science research (Peter, 1979), was applied as a measure of reliability, but factor analysis had to be tested first. In addition, regression findings would also provide evidence of reliability.

4.3.5.2 Validity of the instrument

"Validity refers to the issues of whether an indicator (or set of indicators) that is devised to gauge a concept really measures that concept" (Bryman and Bell, 2007: p.76). When we ask a set of questions (i.e., develop a measuring instrument) in hopes that we are tapping the concept, how can we set out to measure that and nothing else? (Sekaran, 2006: p.207). Careful attention was paid at an early stage to the validity of the research: literature review, research questions, hypothesis generation, developing and designing the questionnaire, sampling and use of suitable analysis techniques. Moreover, several techniques for checking validity were employed.

As with reliability, researchers have developed a number of different techniques to test the validity of instruments. Nevertheless, three types of validity (content or face validity, construct validity and criterion validity) can be applied as recommended by many authors (Babbie, 2012; Collis and Hussey, 2009; Sekaran, 2006). Bagozzi stated that "these types of validity are related to each other"(Bagozzi, 1995: p.19), through to determine the validity of a measure is nor fixed; the method selected depends on the situation. For this research, the relevant validity ideas are content, face and construct validity. Content and face validity were assured via the following procedures. First, definitions of what was measured were carefully chosen for this research, this was accomplished via a critical review of the literature, which led to clear definitions of the research problems and objectives of the research. Second, the well established SERVPERF measuring instrument was used, adjusted to fit the current research, the hotel industry. Third, the support of academic experts in the UK regarding the theoretical definitions, and the implication of the relevant items to be measured was valued. Fourth, the back translation technique was used to ensure that words would have the same meaning for all respondents. Fifth, the questionnaires were validated by ten colleagues of the same programme and the same school, as explained previously and their feedback, comments

and suggestions were taken into account. Sixth, the questionnaires were pre-tested and a pilot study conducted to refine the questionnaires. The validity of the constructs was examined using factor analysis; the outcome is reported in Chapter Five.

4.4 Data Collection Process

4.4.1 Pretesting and piloting

4.4.1.1 Pre-test

There is often misunderstanding regarding the ideas of pre-testing and pilot testing.

"Pre-test refers to initial testing of one or more aspects of the study design, such as the questionnaire, the sample design, computer program for analysis, and so forth. Pilot study refers to a miniaturised walk-through of the entire study design" (Babbie, 1990: p.220).

The argument for pre-testing is convincing as pointed out by Babbie (1990) who argued that no one wants to invest large sums of money, time and considerable effort in a huge research design that fails due to some unexpected problem. In fact, with pre-testing, decisions can be more carefully considered and the researcher can guarantee that they are acted upon consistently throughout the final study. Certainly, many scholars confirmed the requirement and importance of pre-testing (Hussey and Hussey, 1997; Babbie, 1990, 2012; Collis and Hussey, 2009; Sekaran, 2006) but Babbie (1990) provides a particularly good account of this process. Babbie categorizes pre-testing into four stages: pre-testing sample design, research instrument, data collection and finally analysis. In this study, several measures were applied to pre-test the questionnaire.

The questionnaire and research questions were discussed and negotiated with both the first and second supervisors, several times. Previous scholars pointed out that initially, the researcher should ask experts to give feedback and make comments on the repetition and appropriateness of questions and permit recommendations or suggestions to be made on the structure of the questionnaire. This action assists in finding content validity and facilitates necessary amendments to be taken prior to the pilot study. Since some of the targeted sample were Arabic speakers and others were English speakers, whereas the source language was English, back translation was used as recommended by (Bryman, 2004). The original (English) version was translated into Arabic. The Arabic was translated back into English, independent of the first English version. Any changes in meaning were corrected. Then, the second English version was translated into Arabic to make a second Arabic version. This

process was continued until any differences of meaning were corrected. The back translations were accomplished by a panel of experts in English and Arabic to validate the questionnaires. The Arabic questionnaire was intended for those managers and employee, who were Saudis. The English version was intended for those who were English speakers.

The second procedure was validation of the questionnaires by two Western-educated Saudi academics, who participated in validating both Arabic and English versions.

Thirdly, the questionnaire was distributed to some colleagues in the PhD programme in a Saudi college, to obtain their advice and suggestions. This was a very basic check for very obvious mistakes and oversights. This process gave the researcher an idea of the questionnaire's face validity (whether the questionnaire seems to make sense) as will be discussed later in this chapter. It also provided an indication of the understandability of the items for the target population. Participants raised no problems in this regard. Finally, both versions of the questionnaire were reviewed by the Ethics Committee in Hull University and approved (see Appendix D).

Small changes were made to both questionnaires, based on feedback made in the pre-test stage:

- The covering letter was designed (instructions and the example of how to complete the questionnaire and address on the same page).
- The boxes for ticking the appropriate answer were made larger to enable respondents to read and answer the questions without eye strain.
- The response scale was shown on every page to make it easier for respondents to see the scale rather than to go back to the previous page.
- Sensitive questions were re-located at the end of the questionnaire.

4.4.1.2 Pilot study

A pilot study followed the pre-testing process. According to Kalton and Moser:

"Pilot study is the dress preparation and like a theatrical dress rehearsal. Pilot study is standard practice with professional survey bodies. It is widely used in research survey" (Moser and Kalton, 1992: p.48).

According to Bryman and Bell (2007), a pilot study is carried out for the following reasons; first, piloting can raise the researcher's confidence and gained better experiences. Second, it

can be possible to spot questions that make respondents feel uncomfortable. Third, pilot study helps to identify questions that are not understandable. Finally, piloting allows the author to define the comprehensibility of instructions.

A pilot study should be directed towards a representative sample of the target population. Babbie (2012) recommended the number of people the researcher selects should be adequate to include any main difference in the population. Nevertheless, he suggested that the minimum number of the pilot study is ten. For this study the targeted sample for the employees and managers was quite large; at least 20 persons from both employees and managers to complete the questionnaires. Forty questionnaires were distributed and 20 completed questionnaires were collected.

The pilot study was conducted in hotels in the Saudi capital city Riyadh, for two reasons. First, the headquarters of the majority of hotels in Saudi Arabia are in Riyadh and have the same characteristics as all the hotels across the country. Second, it is better to avoid studying the same respondents in both the pilot study and the final questionnaire. Bryman and Bell (2004) and Babbie (1990) argued that, if possible, it is better to find a few respondents who are similar to members of the population from which the sample for the full study will be taken. The pilot study survey included all the proposed amendments in wording, format and sequence made based on pre-testing (Babbie, 1990). In addition, the questionnaire was self administered to both managers and employees as planned for the final questionnaire. All surveys were returned, but some of them were not usable. For the ones that were usable, data were coded, entered, cleaned and analysed as planned in the final questionnaire. Nothing strange was observed in the findings, and neither managers nor employees overall had any significant difficulties in completing the survey. Given the similarity of the pilot sample to the target population, this was taken as an indication that the questionnaire items would be understood by all the respondents in the main study. Hence, it was decided that the large-scale survey could proceed (see Appendix D).

4.4.2 Main survey

4.4.2.1 Survey administration

Data were collected in Saudi Arabia in different cities including Makkah, Madinah, Riyadh, Jeddah, Taif, and Albaha during the period from 22nd June until 22nd September 2013. The questionnaires were sent to the headquarter of each hotel chain, who forwarded them to their branches throughout Saudi Arabia (68 hotel in total). Each hotel undertook to distribute the

questionnaires to marketing department employees and managers who face customers. This was done on a non-probability (convenience) basis. The questionnaire was distributed to employees and middle managers of the hotels (Bryman and Bell, 2007). To increase validity, questionnaires were distributed to different languages, Arabic and English, according to participants' fluency in speaking and reading. In order to conduct factor analysis, the required number of questionnaires must be collected; 700 questionnaires were distributed. The number of responses received from each hotel ranged from 2-10.

4.4.2.2 Response analysis

The data was screened by applying descriptive analysis in SPPS 19 to test the means, standard deviations, missing data and range. The data should be screened according to Field, in order to spot values that are different from the coding range and detect any missing values (Field, 2009).

Although the data were collected from a non- probability sample, the missing data procedure was carried out for more statistically valid data, although the results are disregarded according to Hair. The rationales were, first, a non-probability sample paradigm is a likely cause of missing data (Hair et al., 1998). Second, with Likert scale rated items, it is more likely to have missing data problems. However, missing data are not a vital issue, if there are 10% or less of missing values (Cohen et al., 2013; Cohen and Manion, 1994).

The findings of missing data analysis in SPSS 19 revealed that there were no missing data in this research. This might be a reflection of the effort, time and careful hard work expended in collecting usable questionnaires. See Appendix A for an interpretive table of missing data analysis results by questionnaire items, which shows the complete table of data for the usable surveys. 412 questionnaires were collected. Of these, 398 were considered as usable and 14 unusable, due to the high large number of uncompleted questions, and similar answers to most or all questions, which led to strong discrepancy of respondents' opinions from one item to another.

4.5 Analytical Procedures

At the beginning of the data analysis with SPSS, the data was reviewed carefully via explanatory graphics (pie charts), which were developed from frequency and descriptive analysis. These analyses supplied the means, skew, variance, range and kurtosis, which allowed the author to have more confidence in the data and have an early warning of any problem related to the data. Given that the model to be tested represents relationships

between constructs, data analysis based upon some form of correlation is appropriate. The correlation family of statistics includes basic forms of correlation and moves through to more complicated techniques (e.g. regression, multiple regression) and into advanced multivariate techniques (e.g. structural equation modelling). The data was considered to be suitable for multivariate analysis (e.g. interval data, approximately normally distributed about the mean), and therefore structural equation modelling was chosen as the analytical technique employed.

4.5.1 Rationale for selecting Structural Equation Modelling

Structural equation modelling (SEM) has become increasingly widespread for data analysis in the social sciences in general (Kelloway, 1998; Chin, 1998), and in marketing in particular (Fornell and Larcker, 1981). The majority of published researches in leading marketing journals that use SEM have been carried out with cross-sectional data, as is the case of this study. The technique of structural equation modelling highlights the significance of theory as the basis for all study (Diamantopoulos and Siguaw, 2000). Structural equation modelling is more appropriate than the other statistical techniques, such as simple correlation or regression for testing complex relationships. This is because correlation and regression normally deal with one relationship at a time, while structural equation modelling incorporates a range of statistical models to concurrently assess a number of relationships within a conceptual model (Byrne, 1998; Chin, 1998; Hair et al., 2006b), and it is impossible to use the required kind of confirmatory factor analysis with regression. Since this study was intending to develop a comprehensive model that examined the relationships between procedural knowledge, performance documentation, formal and informal controls, customer co-production and finally as consequences service quality performance, structural equation modelling allowed accurate evaluation of the latent variable because of its inclusion of the errors of the developed measure (Jarvis et al., 2003).

4.5.2 Rationale for a variance based SEM Method

The selection of the SEM statistical technique, either covariance-based (CBSEM) such as AMOS, LISREL or invariance-based SEM such as PLS, or PLS Graph, should be made with respect to the target of the study.

In fact, with CBSEM, first, the data are presumed to be usually distributed as a main criterion to achieve the goodness-of-fit indices such as $\chi 2$ (chi square); technically a smaller $\chi 2$ value indicates a good model fit, whereas, statistically a higher $\chi 2$ value indicates non-significant fit. The goodness of fit index (GFI) and set goodness of fit index (AGFI) have been criticised by

scholars as unbalanced when the sample is large (Hair Jr et al., 2014). Hence, they advise against dependence on GFI and AGFI for the reason of evaluating a model or a measurement fit (Netemeyer et al., 2003). Secondly, as announced by Hair et al. (2006) the sample size should range from 150 or 200 and more in order to accomplish a good model fit, which is seen as a limitation of the CBSEM. Thirdly, CBSEM does not normally converge and yields un-interpretable results, which may result in model modification or a re-evaluation of hypothesised theory (Hair et al., 2012; Chin, 1998).

On the other hand, PLS-SEM uses ordinary least squares as an assessment technique to estimate the total variance (Gefen and Straub, 2005). The PLS creates ordinary least square frequently for every individual variable independently in order to minimize the remaining variance of the dependent variables and to yield a significant average R^2. Therefore, the PLS-SEM is less concerned with multivariate normally distributed data (Chin, 1998; Gefen and Straub, 2005; Hair et al., 2006). According to Hair, 204 previous studies came to the same conclusion about using the PLS-SEM (Hair Jr et al., 2014).

The PLS-SEM was applied for the evaluation of the full conceptual framework's SEM for a number of logical reasons as follows; firstly, since the current study's objective was to confirm previously forecast structural relationships, the PLS-SEM is a suitable statistical technique for analysis (Hair et al. 2014). Secondly, PLS-SEM breaks the barrier created through unacceptable solutions and factor indeterminacy by using the ordinary least square in series for each construct as explained previously (Fornell and Larcker, 1981a; Chin, 1998). Thirdly, PLS-SEM is widely used and has become popular in marketing research. Hair et al. (2012: p.15) say, "Our review substantiates that PLS-SEM has become a more widely used method in marketing research".

Fourthly, the framework which the current study was intended to look at empirically included six constructs, three of which are second-order. Two of these include two sub-constructs and the other one include two different dimensions. Hence, this conceptual model can be considered as a complicated framework, based on Hair et al. (2014). The PLS-SEM is regarded as the most suitable method for complex frameworks with a large number of constructs, variables and measuring items, because the PLS-SEM method has the ability to estimate a complex framework, avoiding difficult estimation problems (Wold, 1985) Fifth, Dijkstra announced that PLS is not dealing with a normal and distribution-free method that aims only at consistency, which is what was required for this study in order to test the hypothesised relationships (Dijkstra, 1983).

Lastly, usually the SEM domain tends to use a two step approach rather than a one step plan (Abbasi, 2011). The two-step approach depends on estimating undimensionality, reliability and convergent and discriminant validity in the beginning. The second step is to estimate the structural model through measuring hypothesised relationships between factors (Abbasi, 2011). Researchers have concluded that the two-step approach is desirable for research of a prediction and dimensionality developing nature (Hair et al. 2012; Gefen and Straub, 2005; Chin, 1998). Thus, based on all the discussion and reasons mentioned above for a study to use the PLS-SEM approach, it was thought that the most appropriate, useful and accurate results would be attained through the PLS-SEM approach.

4.6 Chapter Conclusion

This chapter has explained the procedures undertaken in order to answer the research questions and test the hypothses set out in earlier chapters. The research adopted a single method design, in which a survey of perceptions, measured on a 5 point Likert scale, was used to collect quantitative data. The survey was based on an established instrument, SERFPERF. Separate versions were developed for the hotel managers and employees, the former including measures of formal and informal controls and employees' stisfaction and customer co-production, as well as service quality performance (as dimensions and as an overall measure) which was common to both instruments. A number of measures were undertaken to ensure the validity and reliability of the survey.

Stratified random samples were drawn from the target population (n=398) staff of the hotels across different regiens and cities in Saudi Arabia. The results obtained from these procedures are presented in Chapters Six and Seven; Chapter Six addresses the testing of hypthreses, while Chapter Seven addresses the reserch questions and the interpretation of the findings.

5 Chapter Five: Findings

5.1 Introduction

The previous chapter explained the design of the questionnaire and the method and type of approach used in this research to collect data in order to test the hypotheses, examine for moderation and develop the conceptual framework. The current chapter describes the way data was cleaned, missing data checked, data prepared, normality tested, and multicollinearity and multivariate assumptions assessed. It then presents an analysis of the respondents' demographic profile. It is illustrated how the conceptual framework was developed based on the quality control initiatives literature (Jaworski, 1988), and scale reliability and validity are illustrated. Finally, the EFA results of the conceptual model's constructs, reliability and validity are shown.

Examination of the data began with data cleaning, as follows:

5.2 Testing the Assumptions of Multiple Regression Analysis

5.2.1 Multicollinearity

In simple terms multicollinearity refers to correlation among three or more independent variables (Field, 2013; Tabachnick and Fidell, 2001). A disadvantage of multicollinearity is that it reduces any single independent variable's predictive power by the extent to which it is associated with other independent variables. Multicollinearity is calculated using tolerance, which is the magnitude of variability of the chosen independent variable not illustrated by the other independent variables. A widespread method of measuring this tolerance is the Variance Inflation Factor (VIF) and the lower the VIF, the less the influence of multicollinearity. A VIF below 10 is considered as insignificant, and indicates that multicollinearity would not impact the outcomes of the regression. A multicollinearity test was conducted in this study and the levels of VIF indicating correlations between independent variables were below 2. Therefore the assumption of multicollinearity was satisfied.

5.2.2 Normality test

Normality can be tested by the values of Skewness and Kurtosis (Pallant, 2010). Statistics text books (Field, 2009; Pallant, 2010; Hair et al., 2006b) point out that normality is influenced by the sample size such that with acceptably large samples (more than 200) skewness will not make a substantive difference in the analysis. According to Hair et al.,

“Normality can have serious effects in small samples (less than 50 cases), but the influence effectively minimizes when sample size range 200 cases or more” (Hair et al., 2006 p.86). Nevertheless, Tabachnick and Fidell (2001) pointed out that the measures of skewness and kurtosis are too sensitive with large samples. The sample size of the current study (N=398) can be considered large, based on the opinion of Hair et al. (1998), who considered samples more than 200 as large. Churchill suggested that before exploratory factor analysis is carried out, data should be explored (Churchill Jr, 1979). Therefore, the assumption of normality for entering data on the basis of each single item of the questionnaire was observed via Kolmogorov-Smirnov (K-S) and Shapiro-Wilk (S-W) analysis and normality boxplot of the foundation conceptual framework’s variables through SPSS 19. It is advised by Field that the S-W examine gives more sensitive outcomes than K-S (Field, 2009). However, Barnes argued that the K-S test does not give the same reflection of normality as S-W (Barnes et al., 2001b). Both examinations, nevertheless, were carried out on all variables of the questionnaire and the outcome from both tests was insignificant. Therefore, it can be seen that the data was normally distributed.

After looking at the results of the S-W and K-S tests of normality, the researcher looked carefully at the differences among the histograms and the Q-Q plots of the variables, which revealed normal distribution of data and those values were on the same direct line. According to Hair et al. (1998) and Field (2009) likely outcomes are expected to be gained.

Field announced that “However, K-S and S-W have their limitations because with large sample size it is easy to get significant results from small deviations from normality and so a significant test does not necessarily tell us whether the deviation from normality is enough to bias any statistical procedures that we apply to the data” (Field, 2009 p.144). This implies that it is common to obtain non-normally distributed data with a large sample like the current sample (N=398). Moreover, according to a number of researchers, like Barnes, it is likely that normally distributed data outcomes will not be obtained when using Likert scales, which were employed in this study (Barnes et al., 2001a).

Furthermore, in terms of the infrequency with which insignificant normality outcomes are gained, (Barnes et al., 2001a: p.80) commented, “Virtually no variable follows a normal distribution”. Eventually, Coleman pointed out that “exploratory factor analysis and confirmatory factor analysis, in practice, are relatively robust against violations of normality” (Cohen et al., 2013: p.256).

To make sure of the accuracy of the normality test results, examinations of Skeweness and Kurtosis were carried out. These examinations were carried out in line with previous research (e.g. (Tay, 2006) to measure the normality of the raw data. Hair et al (1998) suggested that values of Skewness and Kurtosis should range between 2.00 and 7.00, and Kline suggested they should range from +/- 3.0 and +/- 10.0 (Kline, 2011).

Any case that where the value of standard errors more than the mean value of three Std of each test (Skewness and Kurtosis) is considered as a univariate outlier. These are examined next.

5.2.3 Testing the outliers

Outliers' outcomes are grouped into two patterns; first, cases with a strange mix of values for more than one variable, named *multivariate outliers;* second, cases with strange values for only one variable, named *univariate outliers* (Field, 2009; Pallant, 2010). First, the analysis has to discover the outliers. Following Field (2009), an exploratory analysis of the data was carried out through descriptive analysis in the SPSS 19. Next, the histogram of each item was tested to locate any extreme values. Values departing from the drawn line by more than 1.5 boxes were considered as outliers (Field, 2009; Pallant, 2010). Lastly, the boxplot of each single item was reviewed. The value of each item was satisfactory.

Multivariate outliers analysis was accomplished by applying the criterion that the D2 (Mahalanobis Distance) value should be $p<0.005$ as suggested by (Kline, 2011). All cases satisfied this criterion, confirming the previous assessment of normality and suitability of the data.

5.3 Descriptive Analysis of Respondents

Gender: Descriptive analysis of the respondents' answers showed that majority of respondents (349 or 87.7 % of the total sample) were male and 49 or 12.3% of the total sample were female.

Age: shows the frequency and percentage of the age groups in the sample, as follows: the first group of age was 18-25 with 65 respondents accounting for 16.3 % of the total sample. The second age group (26-35 years) was the largest, 185 or 46.5%. The third age group, 36-45 years, of age was the second highest with 107 respondents and percentage 26.9 % of the total sample. Fourth, the age group 46-55 years had 36 respondents, 9.0% of the sample. Finally, the smallest group of the total sample was age 55 and above, with 5 respondents 1.3%

from the total sample size. The frequency of the total variable of age group demonstrated a mean of 2.32 and standard deviation of .897.

Marital status: with regard to marital status, overall, 66.6 per cent (265) of the sample was married and 33.4 percent (133) was single.

Nationality: frequency and percentage of the nationality in the sample size demonstrated that the number of non-Saudi respondents was 230 (57.8%), while the number of Saudi respondents was 168 (42.2 %).

Position: the descriptive analysis showed managing directors were the smallest group with 28 respondents 7.0 % of the total sample. There were 86 managers, corresponding to 21.6% of the total sample. Heads of department were the third position and the third highest number of managerial level respondents, with 64 or 16.1% of the total sample. Supervisors were equal to the managers in frequency, 88 and 22.1% of the total sample. Finally, employees were the highest number of respondents, 132 corresponding to 33.2% of the total sample.

Educational level: respondents with Diploma education numbered 176, accounting for 44.2% of the total sample. Second, 180 respondents who had an Undergraduate degree were 45.2% of the total sample. Fewer respondents had a Postgraduate qualification, 37 or 9.3 % of the sample. Respondents with a PhD were the smallest category, numbering 5 or 1.3% of the total sample. Thus, the majority of the respondents held a Bachelor degree or equivalent.

5.4 Development of the Conceptual Framework

After the establishment of the data outliers, normality, cleaning, screening and missing data assumptions, the exploratory factor analysis and confirmatory factor analysis were carried out on the variables included in this research. The conceptual framework was developed on the foundation of Jaworski's work (1988), which shows the relationships between variables.

5.4.1 Exploratory Factor Analysis of the conceptual framework

The first stage of this step was to conduct an exploratory factor analysis in order to test variable dimensionality assumptions.

5.4.1.1 Suitability of the study's sample for factor analysis

It was recommended by Field (2009) and Pallant (2010) that before carrying out exploratory factor analysis, the factorability (appropriateness) of the tested sample size should be examined. Hence, the factorability of the tested sample was considered based on related

literature. The appropriate literature proposed the most suitable size of sample that would provide valuable results through exploratory factor analysis, as follows:

- The sample size should be about 300 as recommended by Field (2009).
- The sample size should be about 200 as recommended by (Ferguson and Cox, 1993).

Some statistics specialists have provided guidance on the sizes of tested samples based on the response ratio of the respondents. Among these researchers were Hair et al. (1998), who suggested that the suitable sample size for factor analysis is one that accomplishes a response ratio of 1:5.

Consequently, based on what has been discussed above, this study's sample size is appropriate for factor analysis. The sample size of the current research with regard to Hair et al.' (1998) response ratio 1:5 is appropriate because the tested sample had a response ratio of 9.9:9, which indicates that for each individual item of the conceptual framework, there were 9.9 respondents because the N=398. The sample size of 398 respondents is acceptable as it exceeds the size advised as suitable by Field (2009).

5.4.1.2 Factorability of the data

After the procedures of checking for normality, multicollinearity and outliers were completed, it was necessary to examine the factorability of the data next. This was checked through SPSS 19, which provides the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of Sphericity, which simply explore if the total set of data is an identify matrix or not.

After these tests were carried out on the total set of traits (67 traits), the results of each test as explained in Table 5.4 were as follows: first, the KMO for the whole 67 traits was .961 which is considered as good. Second, the results of Bartlett's test of Sphericity was *Chi-Square* = 12010.015 and *df* = 1378 ($p<0.000$), which is identified as a significant *Chi-Square*. In other words, the test data reflect a very high factorability. Hence, it was supposed that these data would result in unique factors with high reliability.

Next, the anti-image matrix was tested as recommended by Field (2009: 659): "It is important to examine the diagonal elements of the anti-image correlation matrix: the value should be above the bare minimum of 0.5 for all variables (and preferably higher)." The anti-image correlation matrix of the whole 67 traits was tested for each single trait. All tested variables achieved diagonals higher than 0.5 and for some of the traits they were higher than 0.7, which is advised by Field (2009). According to the results of KMO, Bartlett's test of Sphericity and

the anti-image correlations matrix, we should be satisfied that the dataset was suitable for factor analysis to be carried out.

5.4.1.3 Factor analysis for the conceptual framework and constructs

Following examination of the suitability of the data and its factorability, exploratory factor analysis was carried out. Based on the related literature, two types of factor analysis are widely conducted: Common Factor Analysis and Principal Components Analysis (PCA). PCA was carried out for this study for several reasons it is the most appropriate method for scientific research. However, the CFA type according to Field and Costello concentrates more on revealing constructs' dimensionality (Costello, 2009; Field, 2009). CFA could be carried out in various forms such as principal axis factor analysis, maximum likelihood analysis and un-weighted least squares.

The data from 398 employees and managers of hotels in different regions in Saudi Arabia, based on their ratings on a five-point Likert scale was subjected to PCA in order to create the most reliable and accurate factorial measure of the relationships between constructs in the conceptual framework. PCA was applied for several reasons: firstly, the CFA is basically recommended if the purpose is to form dimensions based on common variance instead of forming dimensions based on distinctive variance (Coakes and Steed, 2009; Hair et al., 1998). Secondly, from the assumptions of the EFA it was noticed that the EFA created some factors with small numbers of variables. Thirdly, a number of factors that are uninterpretable in theory resulted from the exploratory run of EFA. Therefore, PCA was carried out in this study.

The data were rotated through the PROMAX method instead of VARIMAX for several reasons: firstly, PROMAX rotation allows factors to correlate, which is what the current study is about (Floyd and Widaman, 1995). This was supported by Anderson and Gerbing, who argued that the PROMAX method points towards the important structure of the data more accurately than orthogonal methods (e.g. VARIMAX) (Anderson and Gerbing, 1988). Secondly, VARIMAX rotation might create a model with extremely low correlation (e.g. zero), which would not be valuable if CFA is going to be conducted on the same framework (Thompson, 2004; Brown, 2012). Thirdly, as a result of the second reason, it is argued that models developed through the VARIMAX method are expected to lack practically due to weak correlation among factors (Costello and Osborne, 2011; Gorsuch, 1990). Finally, for

development of a logical and understandable framework/model, PROMAX should be carried out (Conway and Huffcutt, 2003).

Following the above discussion, the rotation of factors was carried out (Churchill Jr, 1979). The EFA through PROMAX method was carried out on all the 38traits that were adopted from the previous studies and used to develop the conceptual framework to reach the target and purpose of this study. First, the EFA was carried out with item loadings set to be 0.5 as suggested by Hair et al. (1998) and for the size of dataset of the current study.
Then, items with same loadings of 0.50 were rotated based on the suggestion of (Herche, 1992). This was done for several reasons: firstly, to allow SPSS to reduce the original set of 38 traits to a more controllable set. Secondly, with SPSS carried out on loadings from 0.5 and higher, it was found from the assessment of the component correlation matrix that some factors correlated very highly, which implies that those factors were loading on each other strongly (Field, 2009). Lastly, items with loadings of 0.4 and lower are unlikely to contribute significantly to any factor (Churchill, 1979). As a result of the PROMAX rotation, a conceptual framework of nine logically interpretable factors was found. The steps of this model development were as follows:

Initial Rotations

Factor rotation was carried out with items loading >0.50 as mentioned earlier (Hair et al., 2006), extraction with Eigenvalue >1 and an unlimited number of factors on the 38 traits. This rotation set of multiple choices resulted in a framework of eleven factors; some of the factor included only two items. EFA yielded nine factors, which explained about 77% of the total variance. At this phase, the dimensionality of some of the main constructs appeared different from theory. For example, formal control and informal control, each of which in theory has three dimensions, after the EFA became two dimensions, which means two dimensions were combined together. Specifically, among the formal controls, process and output controls (originally 4 and 5 items respectively) merged into a single construct comprising of 6 items (comprising of four items from process control and two items from output control). With respect to informal controls, the original professional and culture control constructs, consisting of 5 and 2 items respectively merged to form a new construct composed of the professional control items, plus one of the culture control items. Also, one construct, “organisational commitment” was removed because the items correlated with other factors.

Service quality performance originally based on theory had 22 items five dimensions, which after EFA became two dimensions, with 14 items. Hence, further rotation was needed based on the Scree plot solution and the total variance explained.

Next, the filtered dataset was frequently rotated with the same multiple choices, i.e. loading >0.50 but the Eigenvalue option was set to be off and thirteen factors extracted from the dataset based on the previous findings of the Scree plot. Twenty-nine items/traits were removed based on the result obtained during these rotations.

Final Rotation

The EFA was repeated with a different set of choices, decided based on the first rotation round. The trait loading was set to be greater than 0.5, with each factor to be extracted, instead of those with Eigenvalue greater than 1, because of the number of factors that were interpreted in the previous stage of rotation. From the beginning of the rotation till this step resulted in a conceptual framework with nine factors, which were interpreted to be kept and confirmed by the Scree Plot. The final conceptual framework contained 38 items, which was considered to be a comprehensive model compared with previous studies.

The thirty eight items retained because they resulted in high loadings on nine factors were as follows: ***Procedural Knowledge, Performance Documentation, Formal control (Employee Customer Oriented training and combined process control and output control), Informal control (self control and combined professional and culture control), customer coproduction, customer integration and finally, Service Quality Performance.*** The KMO test of this model was .962 the Bartlett's test was Chi-Square > 19443.075, degree of freedom was 2850 and significant at .000. These results are satisfactorily over the suggested thresholds.

This framework's items communalities, which are the percentage of variance that each individual trait can explain after conducting rotation, are all more than 0.4 or slightly lower. This means the internal reliability of this model is high.

It is necessary to indicate that all items of factors were accepted, because it was believed that they reflected the sample's view of how certain items were related. Service quality performance based on literature has five dimensions but after the EFA it became one

dimension with a mix of items from other dimensions. Formal and informal controls, which each had three dimensions based on literature, after the EFA became two dimensions. Some of the items were related and others appeared unrelated to each other. This unexpected mixture of items may be related to the uniqueness of the Saudi Arabian context. Therefore, this unique grouping of items under nine factors will be discussed in more detail in the discussion chapter.

In the final stage, the final model rotation was additionally supported by the findings of the Component Correlation Matrix which points out the relationships between factors. Thus, the final comprehensive conceptual framework explained above yielded very significant correlations between the nine factors.

5.4.2 Exploratory factor analysis for the Environment Controls

Exploratory factor analysis for theory of controls (QCIs) and service quality performance was carried out by the same procedure described above for the EFA of the model. This part of the analysis was carried out to explore in which order the variables of the adopted theoretical factors would be sorted, and whether the items of these constructs' factors loaded similarly to the theory or differently. Hence, the EFA was carried out on each construct of the model separately.

5.4.2.1 Exploratory factor analysis for Procedural Knowledge

This EFA was carried out on two items that measure procedural knowledge (PK). The KMO measure of sampling adequacy was 0.500, which is satisfactory. Moreover, the Bartlett's test and Chi-Square test findings were 84.332 with DF 1 at a significance level of $p<0.000$.

Figure 5-1 Scree Plot of EFA of the PK with Eigenvalue >1.

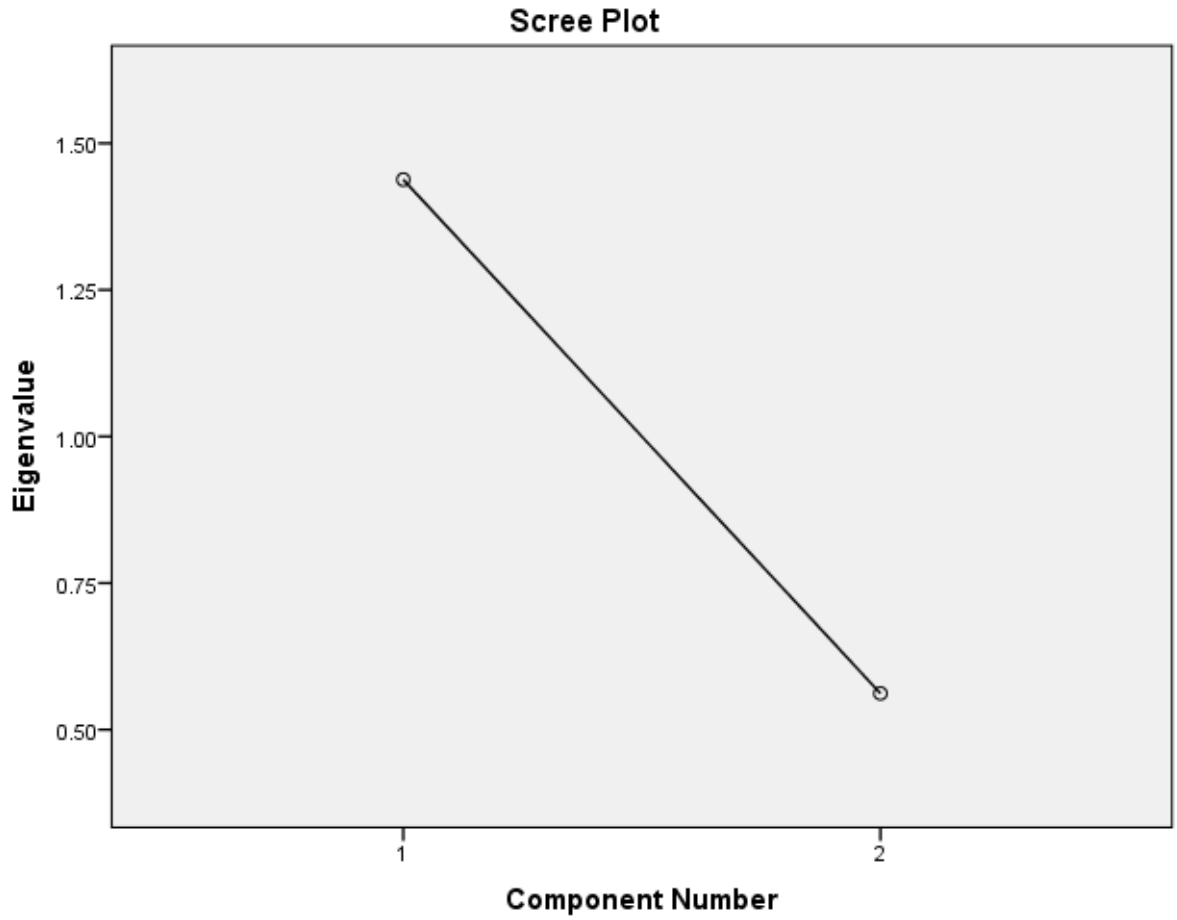


Table 5-1 Component Matrixa of PK

	Component
	1
PD_2	.862
PD_1	.862

5.4.2.2 Exploratory factor analysis for Performance Documentation

This EFA was conducted on two items that measure performance documentation (PD). The KMO measure of sampling adequacy was 0.500, which is satisfactory. Moreover, the Bartlett's test and Chi-Square test findings were 107.327 with DF 1 at a significance level of $p<0.000$.

Figure 5-2 Scree Plot of EFA of the PD with Eigenvalue >1.

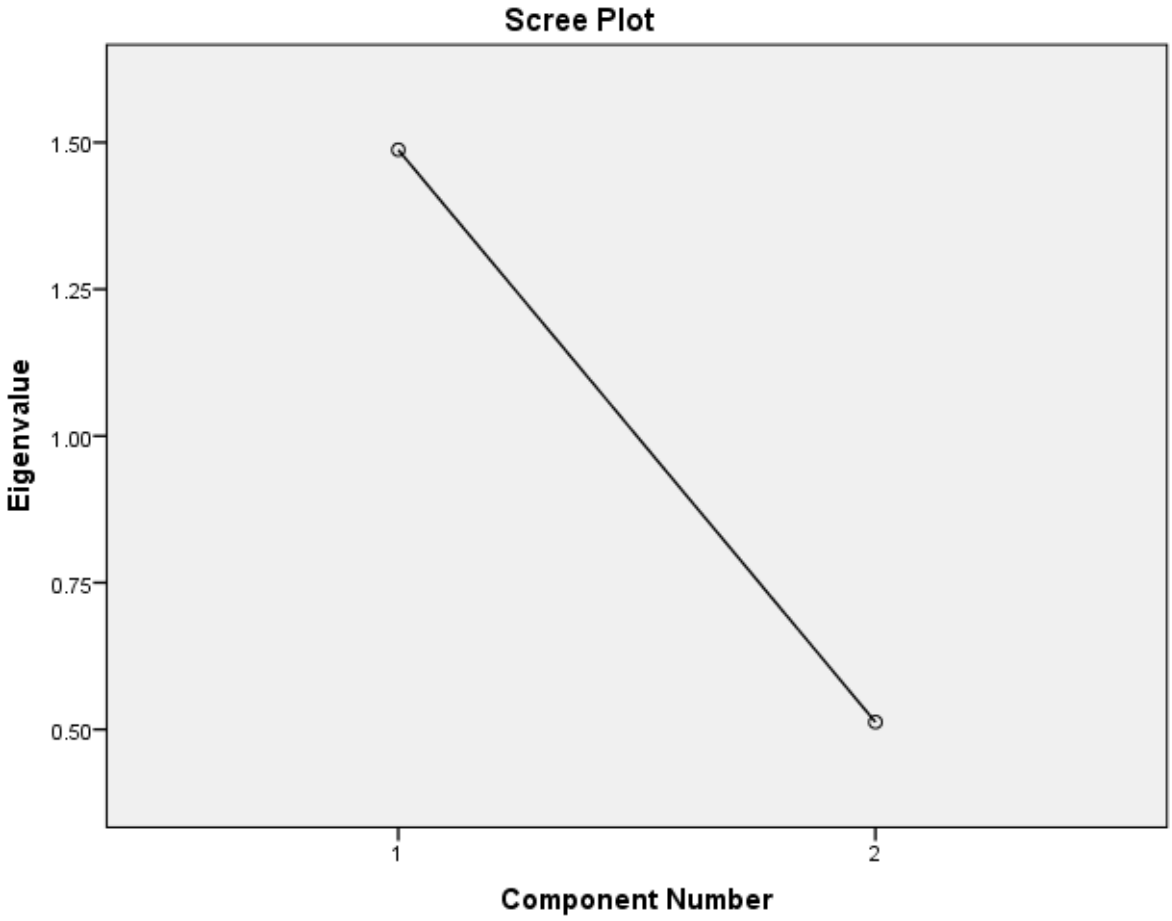


Table 5-2 Component Matrixa of PD.

	Component
	1
PD_2	.862
PD_1	.862

5.4.2.3 Exploratory factor analysis for Formal Control

This EFA was conducted on thirteen items representing three constructs: employee customer oriented training (ECOT) with four items, output control (OPC) with four items and process control (PSC) with five items. The findings of the EFA differed from the theory by combining process control and output control. The KMO measure of sampling adequacy was 0.923, which is satisfactory. Moreover, the Bartlett's test and Chi-Square test findings were 2408.406 with DF 78 at a significance level of $p<0.000$.

Figure 5-3 Scree Plot of EFA of the Formal Control with Eigenvalue >1.

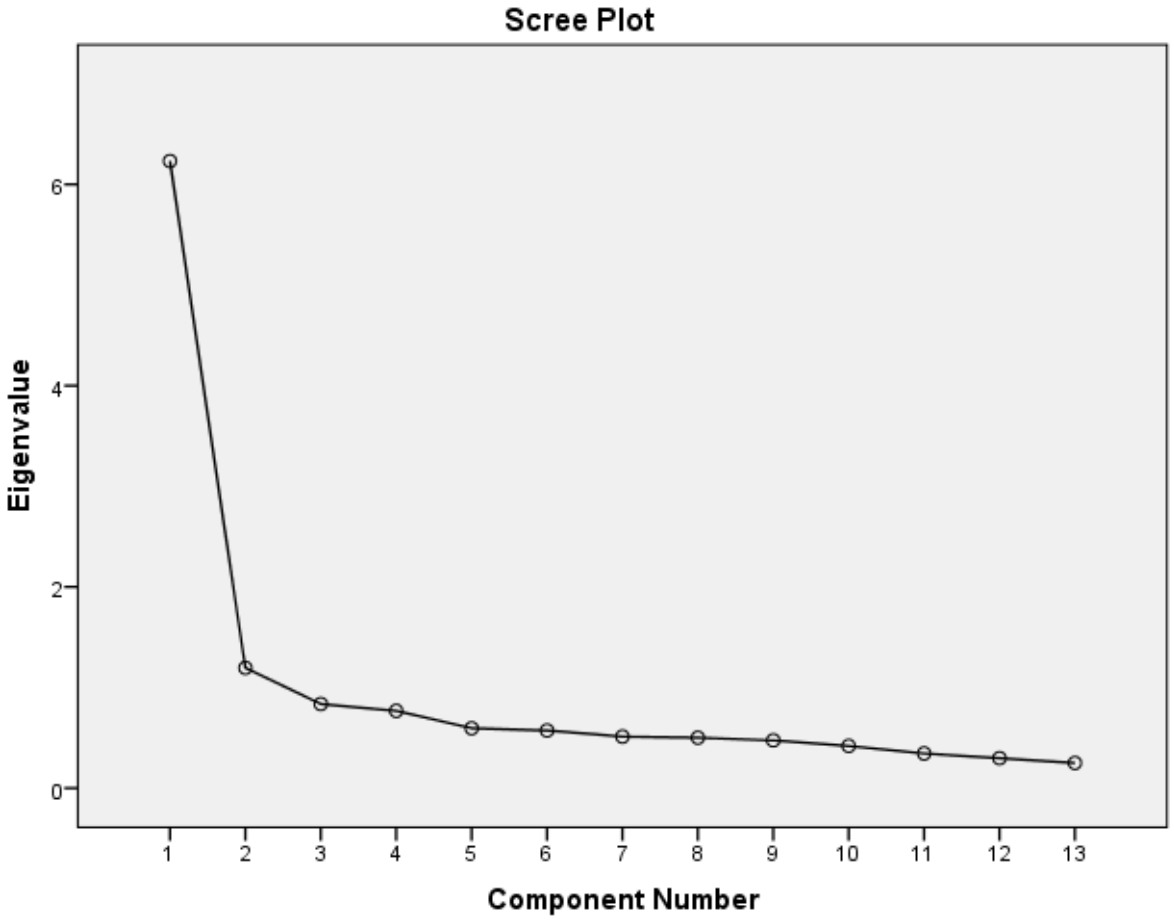


Table 5-3 Pattern Matrixa of Formal Controls.

	Component	
	1	2
PSC_1	.800	
OPC_2	.793	
PSC_3	.781	
PSC_4	.775	
OPC_4	.746	
PSC_2	.730	
OPC_5	.698	
OPC_1	.641	
OPC_3	.623	
ECOT_3		.833
ECOT_2		.811
ECOT_1		.798
ECOT_4		.633

5.4.2.4 Exploratory Factor analysis for Informal Control

This EFA was conducted on ten items for the three constructs, self control (SC) with three items, professional control (PC) with five items and culture control (CC) with two items. The findings of the EFA differed from the theory by combining professional control and culture control. The KMO measure of sampling adequacy was 0.894, which is satisfactory. Moreover, the Bartlett's test and Chi-Square test findings were 1163.294 with DF 28 at a significance level of $p<0.000$.

Figure 5-4 Scree Plot of EFA of the Informal Control with Eigenvalue >1.

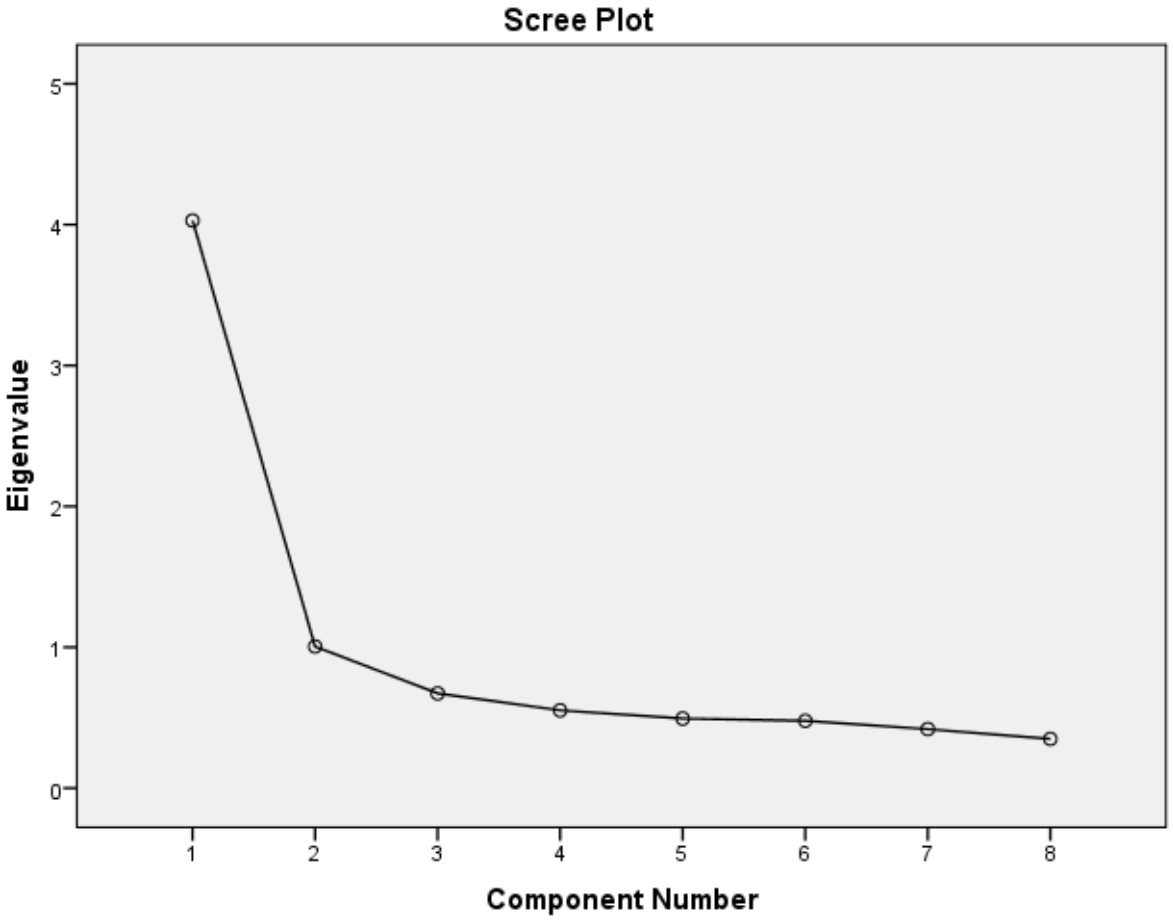


Table 5-4 Pattern Matrixa of Informal Control.

	Component	
	1	2
PC_5	.932	
PC_1	.807	
PC_4	.762	
CC_2	.698	
PC_2	.633	
SC_3		.826
SC_2		.786
SC_1		.732

5.4.3 Exploratory factor analysis for Customer Co-production and Customer Integration

5.4.3.1 Customer Co-production

This EFA was conducted on three items that measure customer co-production. The KMO measure of sampling adequacy was 0.630, which is a good score. Moreover, the Bartlett's test and Chi-Square test findings were 136.895 with DF 3 at a significance level of p<0.000.

Figure 5-5 Scree Plot of EFA of the Customer Co-production with Eigenvalue >1.

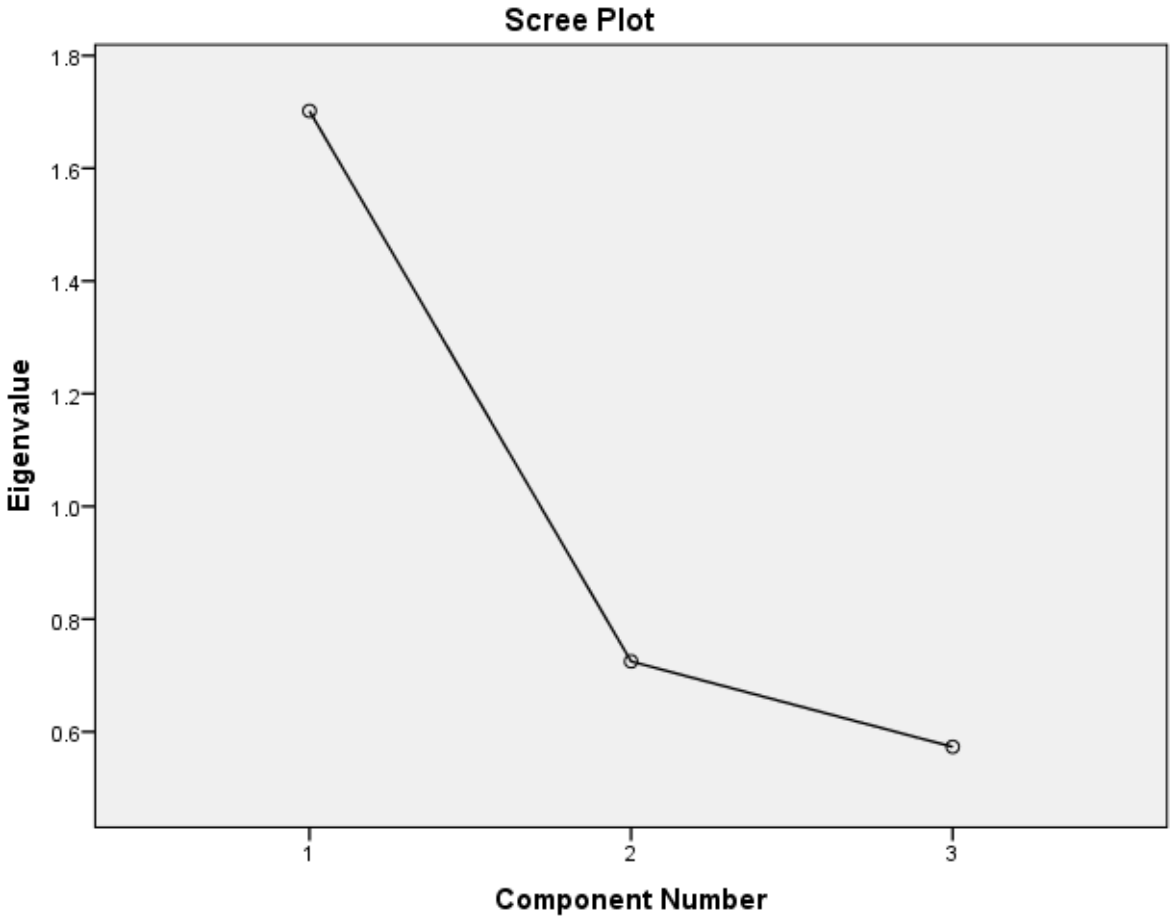


Table 5-5 Component Matrixa of Customer Co-production.

	Component
	1
CCP_1	.793
CCP_2	.767
CCP_3	.697

5.4.3.2 Customer Integration

This EFA was conducted on four items that measure customer integration. The KMO measure of sampling adequacy test findings was 0.696, which is a good score. Moreover, the Bartlett's test and Chi-Square test findings were 195.532 with DF 6 at a significance level of p<0.000.

Figure 5-6 Scree Plot of EFA of the Customer Integration with Eigenvalue >1.

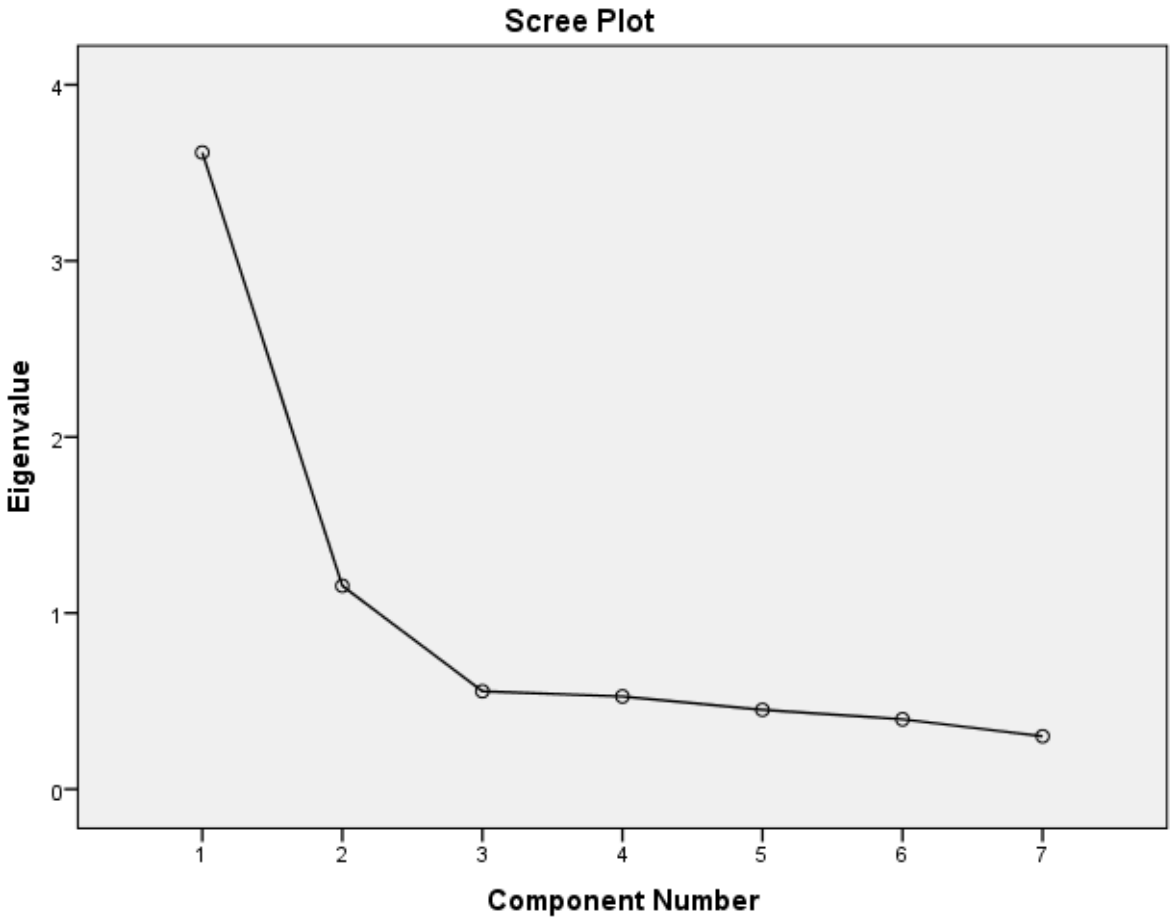


Table 5-6 Component Matrixa of Customer Integration.

	Component
	1
CI_1	.744
CI_4	.712
CI_2	.705
CI_3	.617

5.4.4 Exploratory factor analysis for Service Quality Performance

The EFA was carried out on the twenty two items that included five different dimensions as follows: Tangibles, Assurance, Responsiveness, Reliability and Empathy. The findings of the

EFA differed from the theory by mixing all the items together and grouping them as two separate components. The KMO measure of sampling adequacy was 0.937, which is a good score. Moreover, the Bartlett's test and Chi-Square test findings were 2427.501 with DF 91 at a significance level of p<0.000.

Figure 5-7 Scree Plot of EFA of the Service Quality Performance with Eigenvalue >1.

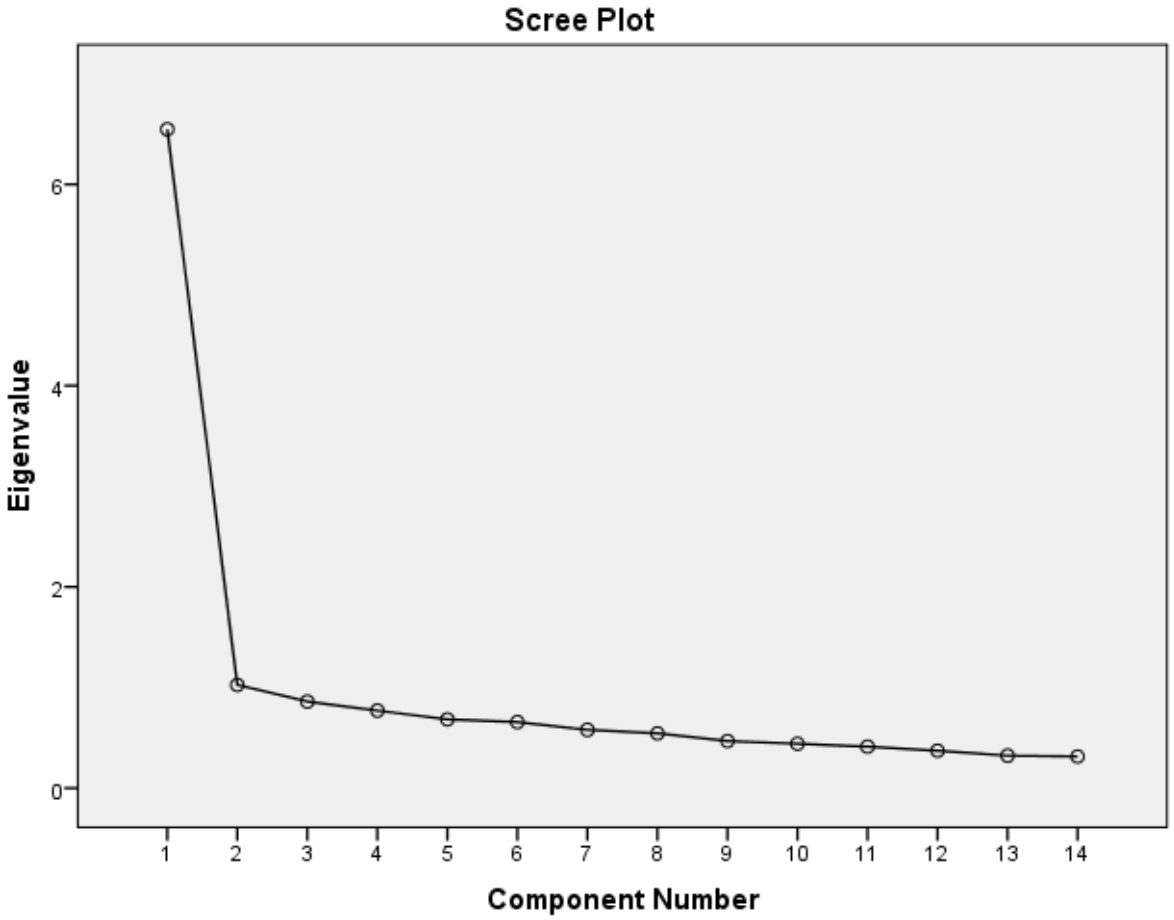


Table 5-7 Pattern Matrixa of Service Quality Performance.

	Component	
	1	2
SQP_EM3	.858	
SQP_AS4	.786	
SQP_RE2	.758	
SQP_EM1	.716	
SQP_EM2	.651	
SQP_AS3	.621	
SQP_TA1	.543	
SQP_AS1	.530	

SQP_TA5		.847
SQP_TA6		.827
SQP_EM6		.768
SQP_TA4		.715
SQP_RE3		.585
SQP_RS2		.530

5.5 Reliability Analysis of the Conceptual Framework

It is necessary to emphasize that the conceptual framework was built, developed and designed to be measured correctly. Hence, the techniques of measuring reliability are always regarded as critical. Reliability was identified by Saunders as the extent to which a measurement model may provide consistent and stable findings (Saunders et al., 2011b). In general, the validity of a measure involves the assessment that the scale measures what it is supposed to measure-the extent to which the scale is a reflection of the underlying variable it is attempting to measure. Reliability is concerned with how stable the measure is. That is, if the measure is used repeatedly, it will provide identical or near-identical outcomes. Reliability indicates the extent to which the scale is free of measurement error, whereas in validity, the scale must be free from both systematic and random error (Bagozzi, 1992). In other words, while reliability is a necessary condition, it is not a sufficient condition for validity.

According to Pallant (2010, p: 97) "One of the most commonly used indicators of internal consistency is Cronbach's alpha coefficient". Other researchers agreed with Pallant such as Field (2009) and Hair et al. (1998). According to Churchill's (1979) paradigm, which this research used, the quantitative data analysis step should begin from testing the reliability of the conceptual framework. According to Sekaran, a measurement scale is considered as reliable if it yields high internal Cronbach's alpha results (Sekaran, 2006). Cronbach's alpha reflects the possible split-half reliabilities for the sample (Sekaran, 2006). Cronbach's alpha coefficient indicator determines the degree to which a scale's items belong to each other, and strongly correlated items indicate their ability to measure the same latent variable (Pallant, 2010). The Cronbach's alpha coefficients varied from 0.59 to 0.83. Cronbach's alpha values of 0.7 and above are generally seen as acceptable (Pallant, 2010). However, the value of Cronbach's alpha is affected by the number of items and the nature of the study (Cortina, 1993). Cortina showed that as the number of items increases, alpha also increases so it is possible to have a high value of alpha just because the number of items is high conversely, scales with very low items are expected to have lower Cronbach's alpha. Churchill (1984) argued that items with high scores of consistency reliability would negatively influence a

model's construct validity. That is to say, items with high reliability scores should be excluded because there would not be new findings to consider (Churchill Jr and Peter, 1984). This research has followed the view of Pallant (2005) in terms of addressing the scale reliability. Appendix C shows scale alpha, alpha if items deleted and item-total correlations for each construct.

Content validity is most easily assured through employment of a well-defined research plan and adoption of necessary procedures for test construction e.g. (Churchill, 1999b; Spector, 1992). It is best determined prior to the administration of a test, rather than afterwards (Nunnally and Bernstein, 1994). Bagozzi (1992, p: 331) defines content validity (also often referred to as face validity) as, "the degree to which the domain of properties or characteristics of a concept one desires to measure are in fact captured by the measure". For the purpose of this research, content validity or 'face validity' was taken into account, to determine to what degree the item represent the domain to be measured. This validation procedure can be achieved by determining the correspondence between the items and the domain through specialists' evaluation or a pre-test (Hair et al., 1998). For this research, the author addressed content validity through conducting a pilot study, care in sampling techniques and considering the average variance extracted (AVE) validity as well.

Table 5-8 AVEs, AVEs' Roots, Inter correlation between constructs.

Constructs	AVE	√AVE	CCP	Formal	Informal	PD	PK	SQP
CCP	0.5728	0.75	1					
Formal	0.6576	0.81	0.4753	1				
Informal	0.6275	0.79	0.4862	0.7684	1			
PD	0.7488	0.87	0.366	0.6032	0.5416	1		
PK	0.7265	0.85	0.3266	0.5519	0.5523	0.5518	1	
SQP	0.5483	0.74	0.4221	0.7091	0.7279	0.5455	0.5824	1

Note: CCP =, customer co-production, Formal =, formal control, Informal =, informal control, PD =, performance documentation, PK =, procedural knowledge, SQP =, service quality performance.

5.5.1 Reliability analysis for Procedural Knowledge

After the results of the EFA for the constructs were developed, it was necessary to examine each factor's reliability. The reliability of the procedural knowledge dimension as a construct of the QCIs theory was .573.

5.5.2 Reliability analysis for Performance Documentation

The reliability of the performance documentation dimension as a construct of the QCIs theory factor showed a low Cronbach's Alpha, .623.

5.5.3 Reliability analysis for Informal Control

The EFA of informal control produced two factors. The first factor included five items, one item from culture control and four items from the professional control and self control constructs. These factors demonstrate a high reliability of .781.

5.5.4 Reliability analysis for Formal Control

The EFA of formal control produced two factors. The first factor included nine items, four items from process control and five items from output control. These factors demonstrate a high reliability with .0.832, which is a high score according to guidance on Cronbach's Alpha.

5.5.5 Reliability analysis for Customer Integration

In Appendix C the reliability of the customer integration construct is depicted. This factor showed a low Cronbach's Alpha with a score of .644.

5.5.6 Reliability analysis for Customer Co-production

In Appendix C the reliability of the customer co-production construct is depicted. This factor showed a low Cronbach's Alpha with a score of .589.

5.5.7 Reliability analysis for Service Quality Performance

The EFA of service quality performance produced two factors. The first factor included eight items, four items from Tangibles, two items from Responsiveness, one item from Reliability, three items from Assurance and four items from Empathy. These factors demonstrate a high reliability with .0.764, which is a high score according to the guidance on Cronbach's Alpha.

The tables in Appendix C demonstrate strong and acceptable reliability. Some of the constructs have only two items and the Cronbach's alpha is expected to be less than 0.70. As mentioned above, Cronbach's alpha scores in this study ranged from 0.59 to 0.83 (Cortina, 1993). All these constructs were supported by the EFA final rotations. The reliability of the factors with two items (performance documentation, procedural knowledge) if items were deleted was 3.76 and 3.79, which is acceptable reliability with a benchmark of 0.70 (Hair et al., 1998, 2006). Further investigation was done in order to make sure of the reliability of the filtered model. Inter-item and item-to-total correlations were obtained through SPSS 19 as

suggested by (Diamantopoulos and Souchon, 1999). Based on these statistics, any traits that have negative or near to zero values are assumed to be excluded. The inter-item correlations ranged from .338 and .76 and the item-to-total correlations ranged from .438 and .488 as demonstrated and these results are acceptable (Hair et al., 2006a).

5.6 Reliability and Validity of the Measures

Data is checked for reliability and validity because some degree of error is involved in any measurement (Bagozzi et al., 1991; Carmines and Zeller, 1979; Hunter and Gerbing, 1982; MacCallum et al., 1992; Nunnally et al., 1967). Measurement error comprises inaccuracies in measuring subjects' true scores on latent constructs, because of shortcomings in the measuring instrument (Lee and Hooley, 2005). Measurement error normally takes two forms: systematic or random processes (Churchill and Iacobucci, 2009; Bagozzi et al., 1991). Systematic error is also known as constant error, since it affects the measurement process in a constant way (Churchill and Iacobucci, 2009). This relates mostly to the concept of measure reliability. Reliability concerns the extent to which an experiment, test, or any measuring procedure generates the same results on repeated applications (Churchill, 1976; Carmines and Zeller, 1979). It is comparable to the stability of a measurement method (Churchill, 1999). Therefore, the more reliable a measure, the less systematic error it will contain. Random error is not a constant, but is instead related to transient aspects of the respondent or the measuring situation (Churchill, 1999). This relates more to the validity of a measure. A measure is said to be valid if it represents the intended, and only the intended, concept (Bagozzi and Phillips, 1982; Bagozzi et al., 1991; Churchill, 1976; Cohen et al., 2013). Ideally, measures should be both reliable and valid, and reliability is a necessary, but not sufficient, condition for validity (Carmines and Zeller, 1979; Nunnally, 1994). Hence, a measure may be reliable without being valid. Furthermore, reliability and validity assessments should never be based solely upon empirical analysis of data, but should also be interpreted in light of a priori theoretical assumptions (Peter, 1981b).

5.6.1 Reliability

Reliability can be thought of as the correlation between one measure of a variable, and another, equivalent measure of the same variable (Cohen et al, 2013; Peter, 1981). A number of different ways exist for assessing reliability: test-retest reliability, the alternative-form method and internal consistency (Carmines and Zeller, 1979). Test-retest reliability involves administering a test at two different points in time and comparing responses (Carmines and

Zeller, 1979). Using alternative-forms tests, two different tests are administered and their results are compared for consistency (Nunnally and Bernstein, 1994). However, because these methods require longitudinal work, or increased questionnaire length, and are generally more cost-intensive, they were ruled out for this study. In the case of internal consistency, items measuring a construct are correlated with one another to calculate an index of reliability (Carmines and Zeller, 1979). As such, internal consistency investigates the degree of inter-relatedness among the items in a scale (Cortina, 1993). The calculation of the coefficient alpha (Cronbach‘s alpha) of a scale has been suggested as a way to assess its internal consistency. Nunnaly (1978) recommends a value of 0.70 as the threshold for the lowest acceptable level for alpha, while DeVellis suggests that, where possible, scales be shortened if alpha values exceed 0.90 (DeVellis, 2011; Nunnally, 1978). Another way in which the reliability of a scale can be examined is through composite reliability (CR). A calculation of composite reliability is possible if scales are assessed through confirmatory factor analysis (CFA). Some disadvantages of coefficient alpha are that it underestimates reliability for congeneric measures (Jöreskog and Sörbom, 1996), and the more items a scale has the larger the coefficient alpha, all other things being equal (Bollen, 1998; Hair et al., 2006b). Some researchers suggest that a high Cronbach‘s alpha for a construct is one of two rules for determining if a construct is unidimensional (Hunter and Gerbing, 1982; Peter, 1981). The second rule is the criterion of external consistency, whereby items related to a construct should also correlate with a related construct, though to a lesser degree than that to which they correlate with their hypothesised construct (Bollen and Lennox, 1991; Hunter and Gerbing, 1982). However, others (e.g., Bollen and Lennox, 1991; Gerbing and Anderson, 1988) argue that reliability does not imply unidimensionality.

There are some limitations of traditional methods of assessing reliability. Firstly, these methods are based on correlations between observed variables and do not account for the possible effects of the latent constructs, and for measurement error (Bollen, 1998). As such, estimates of, for example, internal consistency reliability should not be solely relied upon as a form of measure assessment, especially unidimensionality. However, structural equation modelling overcomes many of the limitations of these traditional methods (Baumgartner and Homburg, 1996). In addition to assessing item reliability, methods exist for assessing scale reliability in SEM. These methods for establishing scale reliability are based on parameter estimates. Construct reliability (also referred to as composite reliability) captures the size of the relationship between a latent construct and the indicators that relate to the construct (Steenkamp and Van Trijp, 1991). The advantage of this method is that a structural equations

framework corrects for random error (Bagozzi, 1994). Construct reliability measures the internal consistency of a set of indicators rather than the reliability of a single indicator. Construct reliability estimates of 0.7 or greater are desirable (Hair et al., 2006). Scale reliability in SEM can also be assessed via analysis of the average variance extracted (AVE) for each construct, where an AVE greater than 0.5 supports the reliability of the measure (Fornell and Larcker, 1981b). The AVE demonstrates the amount of variance in indicators that is accounted for by its associated construct, as opposed to the amount of variance accounted for by measurement error (Fornell and Larcker, 1981). An AVE of 0.5 or greater indicates that more than 50% of the variance in each individual item is explained by its associated construct, indicating good reliability (Fornell and Larcker, 1981). In this study, internal consistency reliability (i.e., Cronbach's alpha), construct (composite) reliability and AVE estimates for each construct are reported.

5.6.2 Validity

Validity of measurement scales is concerned with whether or not scales meet the following criteria: content validity, criterion-related validity, construct validity, convergent validity, and discriminant validity (Churchill, 1999; Hair et al., 2006b). There have been calls in the literature for more attention to be paid to validity in organisational research (Scandura and Williams, 2000). Content validity relates to whether a specified domain of content has been sampled sufficiently (Nunnally and Bernstein, 1994). The use of previously constructed scales in this research should go some way towards ensuring the content validity of the scales employed, as they (should) have been subjected to rigorous scale development procedures over time.

Criterion-related validity is concerned with the correlation between a measure and some criterion variable of interest (Hair et al., 2006b). Criterion-validity is most easily assessed by examining the correlation matrix between constructs after they have been purified, where constructs that are expected to correlate should do so. In this regard, criterion-related validity is similar to the notion of nomological validity (Peter, 1981) and predictive validity (Nunnally and Bernstein, 1994). Nomological validity is defined as assessment of how well one construct theoretically fits within a network of other established constructs that are related yet different (Hair et al, 2006a: 356) and predictive validity refers to a construct's ability to forecast a subsequent criterion (Malhotra and Birks, 2007).

Construct validity is concerned with the degree of relationship between a measure and other constructs (Ping Jr, 2004). Construct validity can be assumed when all measures of interests

(the tested and target measures) show plausible correlations (i.e., their significance, direction, and magnitude). Assessment of construct validity is performed as a three stage process (Carmines and Zeller, 1979). Firstly, theoretical relationships between the concepts themselves are specified (as they were in Chapter 3). Second, the empirical relationships between the constructs must be examined and, finally, the empirical evidence must be interpreted as it relates to confirming the validity of the particular construct (Carmines and Zeller, 1979). In other words, a social scientist can assess the construct validity of an empirical measurement if the measure can be placed in a theoretical context (Carmines and Zeller, 1979: 27). However, the correlation among the observed variables may not be a good indicator of whether the observed variable measures the latent construct. The observed variable correlation can also be influenced by the correlation of the latent constructs, the reliability of the measures for the other constructs, measurement error for each variable, and the effect of other latent constructs (Bollen, 1998). Construct validation is generally seen as an ongoing process, with no single study able to validate a construct (Peter, 1981a). If measures display convergent validity, then different measures of the same construct should be highly correlated (Bagozzi, 1981; Bagozzi and Phillips, 1982). In order to fully examine convergent validity, a researcher must use different measurement approaches to evaluate the same construct (Hair et al, 2006).

Discriminant validity is the degree to which measures of distinct constructs differ from each other (Bagozzi and Phillips, 1982; Churchill, 1999; Fornell and Larcker, 1981). Discriminant validity is present when a measure has low correlation with other measures that are supposedly not measuring the same variable or concept (Heeler and Ray, 1972: p.362). Generally, intercorrelations between items forming one construct should exceed intercorrelations between items that measure different constructs (Bollen and Lennox, 1991). Assessing discriminant validity is especially important where the constructs are interrelated. One of the most widely-known methods for assessing discriminant validity is the multitrait-multimethod matrix (Carmines and Zeller, 1979). This method entails measuring each construct with multiple methods and comparing correlations between methods in order to determine convergent and discriminant validity. One of the criticisms of using a single method to represent a construct is that it does not take into account measurement error (Bagozzi, et al., 1991). However, structural equation modelling allows measurement error to be taken into account (Bollen, 1998), so the limitation of single measures of constructs is lessened in this study. Furthermore, the multitrait-multimethod technique is resource intensive and essentially requires the lengthening of the questionnaire instrument, so its use is

sporadic in the literature (Bagozzi and Phillips, 1982). Discriminant validity was measured, since it was regarded as a critical method to develop a conceptual framework based on previous studies (Bagozzi and Foxall, 1996; Byrne, 2001; Sheeran and Orbell, 1999). This validity was examined through the dimensions' internal correlation and the root square of their correlations as well. Churchill (1979) stated that the factors of the suggested model should be filtered by removing 'garbage' traits, which implies removing items with a total corrected correlation lower than 0.3.

Confirmatory factor analysis is useful for assessing convergent and discriminant validity (Bagozzi and Phillips, 1982; Fornell and Larcker, 1981). Convergent validity is inferred if item loadings on factors are statistically significant (Hair et al., 2006b). Discriminant validity can be assessed statistically in two ways: by comparing pairs of constructs in a CFA or by comparing the AVE values of constructs to squared correlations between constructs (Hair et al., 2006b). In the first method, items for two constructs can be entered into a CFA and forced to load on a single factor (Bagozzi and Phillips, 1982). Then they can be free to load on their hypothesised factors (Hair et al., 2006b). If the two-factor free model demonstrates a significantly better fit to the data (i.e., a reduction in the chi-square statistic > 3.84 with a change of one degree of freedom), then the constructs can be said to demonstrate discriminant validity.

5.6.2.1 Composite Reliability of Study Constructs

According to Bagozzi and Foxall (1996), it is strongly advised that the reliability of the entire constructs based on the complete set of indicators under each construct and the conceptual framework is examined. The next step is the development of the outer-model. Therefore, CFA was used to investigate the adopted framework' reliability. This stage was accomplished through two approaches: firstly, Composite Reliability (CR) analysis, which is widely accepted and utilised, secondly, Cronbach's Alpha (α), which is also widely used to indicate a scale's reliability. The Cronbach's Alpha (α) values in regard to the constructs have already been reported in the CFA, section 5.5.1.

Composite Reliability (CR) was determined in order to evaluate the internal consistency of the scale with 42 traits and the conceptual framework model's constructs procedural knowledge, performance documentation, formal control (ECOT, process control and output control), Informal control (Self control, professional control and culture control) and customer co-production and service quality performance. According to Nunnally and Bernstein (1978) the CR value of the constructs should be equal to or greater than 0.60. The

CR was attained via Smart PLS 2.0 M3 since it is automatically calculated which was measured through the following equation:

$$\mathbf{CR} = \frac{\textbf{Squared} \sum \textbf{ factor loadings for construct items}}{(\textbf{Squared} \sum \textbf{ factor loadings for construct items}) + (\sum \textbf{the estimation error variance})}$$

(Hair et al, 1988)

Table 5-9 Reliability Analysis of Constructs

Constructs	Composite Reliability	Cronbachs Alpha
CCP	0.8282	0.5891
Formal	0.8731	0.8329
Informal	0.8474	0.7815
PD	0.8415	0.6236
PK	0.8224	0.5733
SQP	0.8366	0.764

All the attained CR values of the outer-model's constructs exceeded 0.60, the benchmark suggested in order to move on to the next phase, which concerns the Average Variance Extracted (AVE) (DeVellis, 2011; Hair et al., 1998). Therefore, it can be said that the conceptual framework and construct measures of procedural knowledge, performance documentation, formal control (ECOT, process control and output control), informal control (self control, professional control and culture control), and customer co-production and service quality performance in the Saudi context are reliable. However, it was still necessary to investigate their validities as well.

5.7 Confirmatory Factor Analysis (CFA)

Factor analysis is a statistical method conducted for data reduction and generally involves the study of relationships amongst items to attempt to determine a new smaller set of variables than those in the original set (Hair et al., 2006b). Exploratory factor analysis (EFA) is usually employed in cases where the underlying factor structure of a set of data is unknown. In cases where relationships between observed variables and latent variables are hypothesised a priori,

confirmatory factor analysis (CFA) is employed to ascertain if the factor structure present in the data matches the hypothesised one (Sharma et al., 2009b).

Since EFA is not theory-driven, it does not rely upon a priori assumptions regarding data structure. Thus, making sense of an EFA model can be problematic due to factor rotation and interpretation issues (Sharma et al., 2009b). Overall, it is argued that CFA overcomes many of the limitations associated with the EFA technique. Moreover, CFA can be applied in a more exploratory fashion (Fox, 1983). CFA is useful in determining construct validity, since it enables the calculation of reliability coefficients, factor loadings, and variance extracted estimates (Hair et al., 2006b). The CFA procedures provide "a stricter analysis and interpretation of unidimensinality than can be provided by more traditional methods such as coefficient alpha, item-total correlations, and exploratory factor analysis and thus generally will provide different conclusions about the acceptability of the scale" (Anderson and Gerbing, 1988: p.186). Gerbing and Hamilton asserted, "It is always preferable to begin an analysis as far along the confirmatory end of the continuum as possible" (Gerbing and Hamilton, 1996: p.63). Likewise, Gerbing argues that "data driven methods such as exploratory data analysis lack the rigor of the specification of a priori models required by the "confirmatory" (Gerbing et al., 1994). Both EFA and CFA were used in this study.

CFA enables researchers to measure constructs' unidimensionality and validity and provides better readings of the suitability of constructs' sub variables as a preparation for structural equation modelling. As explained by Hair et al. (1998), CFA provides a researcher with total control in determining which variables to use to illustrate a construct and the constructs are clearly able to correlate with each other. Moreover, the CFA provides a comparison between the original constructs and the constructs of the theoretical framework (Leong, 2009).

5.7.1.1 Conceptual model assessment through PLS-SEM

In order to confirm the determined relationships of the suggested model, a two step method via PLS-SEM was conducted. This includes an Inner-model, the 'assessment model', which relates observed variables to their constructs and an Outer-model, the 'structural model', which links the dependent and independent factors to each other based on the hypothesised direction of relationship. These steps were applied sequentially (Chin, 1998; Gefen and Straub, 2005; Hair et al., 2006). This analysis method starts with the Inner-model phase via determining the reliability and validity of the measurement model's sub items. This 'assessment model' is regarded as the CFA phase within the PLS-SEM approach (Henseler et

al., 2009). From the CFA phase or 'Inner model' phase, vital indicators are attainable such as Composite reliability (CR), Cronbach's alpha reliability (α) and validities (e.g. convergent validity and disciminant validity). These indicators were applied in this current study.

The second phase 'structural model' or Outer-model provides very significant indices by which the hypothesised relationships between endogenous and exogenous latent variables might be tested (Götz et al., 2010; Hair Jr et al., 2014; Henseler et al., 2009). These indices, provided by bootstrapping techniques, include path coefficients, importance of path coefficients and R^2.

By applying the analysis approach described above, a reliable, valid, generaliseable critical understanding of the relationships among procedural knowledge, performance documentation, formal and informal controls, customer co-production and service quality performance based on Jaworski's work was determined. During the development of the conceptual framework and the SEM, the fit of the Outer-model and the suggested relationships between factors/constructs were evaluated and measured. The fit of the attained assessment and the model was tested by utilising the approach most broadly employed with PLS-SEM, which is non-parametric statistical tests (Abbasi, 2011). Hence, the model fit was ascertained based on the values of evaluation of path coefficient (β), effect size (f^2), coefficient of determination (R^2) and prediction relevance (q^2) (Sarstedt et al., 2011; Hair et al., 2012; Chin, 2010).

From the above discussion, CFA through PLS-SEM was used in this research, in order to attain a well illustrated fit of the assessment and the model, and to confirm the kind of relationships that exist among procedural knowledge and performance documentation, formal and informal controls, customer co-production and service quality performance.

5.7.2 Conceptual Model Estimation through SEM Method

It was essential to pay attention to selecting a method of model estimation, due to the effects model estimation has on the model fit (Kenny and McCoach, 2003; Marsh et al., 2004). The employed model estimation method was PLS-SEM. Several reasons for the researcher choosing the PLS-SEM are explained below. PLS-SEM estimation was said by Chin to yield an accurate estimated parameter value compared to MLE. Therefore, the PLS-SEM estimation method was considered appropriate for this study (Chin, 2010). The R^2 is noted to be comparatively satisfactory for the tested data (Hair et al., 2012).

5.7.2.1 Content validity of the study constructs

Content validity is defined as "face validity and the representativeness or sampling adequacy of the content of a measuring instrument" (Byrne, 2001: p.82). With regard to the face validity of the conceptual framework developed, it was addressed by examining the relevance of the model's items to each construct. Therefore, two phases were performed, as follows: the first phase was a pilot study and collecting feedback and comments from academics (PhD researchers in marketing). The second phase was attaining feedback and comments from marketing academics and experts regarding the degree to which each of the generated variables was significantly related to the conceptual framework, as discussed in Chapter Four of this research. Based on these phases it was concluded that the conceptual framework has face validity.

Likewise, the face validity of the full hypothesised model was attained by testing the relevance of model items to each construct adopted from QCIs. This was again achieved in two phases, first, piloting the adopted measuring items and collecting feedback from academics, PhD researchers in marketing, and second, obtaining feedback and comments from marketing academics and experts regarding the degree to which each of the adopted measuring items was related to the hypothesised model. Furthermore, these items were assumed to be valid since they all were adopted from well established and recognised theories, QCIs. Hence, it was concluded that the hypothesised full model has face validity.

5.7.2.2 Convergent validity of the study constructs

As the CR of the conceptual model's constructs was verified, the convergent validity was evaluated by two unique methods for the conceptual framework's constructs. First, based on Steenkamp and Van Trijp (1991) an instrument with item loadings $\geqslant 0.50$ is assumed to be valid. Therefore, since the FL cut-off point adopted by this study was greater than or equal to 0.50, the outer-model produced can be assumed as valid.

The second method involved evaluating the Average Variance Extracted (AVE) validity individually for each of the outer-model's constructs. The most widely recognised equation for AVE calculation purposes is Fornell and Larcker's (1981) which is applied by Smart PLS 2.0 M3 and is as follows:

$$\sqrt{\mathbf{AVE}} = \frac{\textbf{Sum factor loadings for construct items}}{\textbf{Number of construct items}}$$

(Fornell and Larcker, 1981)

As discussed above in more details, the AVE for each of six constructs of the outer-model was > 0.50. These findings indicated that the conceptual model's constructs/factors yielded an acceptable convergent validity for six constructs: customer co-production (CCP) => 0.75, Formal Control => 0.81, Informal Control => 0.79, Performance Documentation (PD) => 0.87, Procedural Knowledge (PK) => 0.85, Service Quality Performance (SQP) => 0.74. This indicated that the conceptual framework's AVE's values were satisfied based on the results of the PLS. See the table for more details.

5.7.3 Discriminant validity

There are different methods and approaches in order to validate the development measure. This research has applied two different methods to approve the validity of the model. The first method was the diagonal elements and off-diagonal elements approach of Fornell and Larcker (1981). The second approach was the comparison model of Bagoozi and Philips (1982):

First approach according to Mackenzie et al (2011) "Assess the validity of the set of sub-dimensions using Edwards' (2001) multivariate coefficient of determination (R^2). Alternatively, the average variance extracted (AVE) could be calculated for the second order construct by averaging the squared multiple correlations for the first-order indicators. In either case, values greater than .50 would mean that, on average, a majority of the variance in the first-order sub-dimensions is shared with the second-order latent construct" (MacKenzie et al., 2011: p.A1).

Based on the above discussion, this research has calculated the average AVE for constructs with second order such as formal and informal control and service quality performance. Then these were compared with the Diagonal Elements (DE), which are correlations between constructs as suggested by Fornell and Larcker (1981). Based on the AVEs attained from the Smart PLS 2.0 M3 previously, the DE values for the outer-model were as follows: customer co-production √0.57= (0.75), formal control √0.66= (0.81), informal control √0.63= (0.79), performance documentation √0.75= (0.87), procedural knowledge √0.73= (0.85) and service quality performance √0.55= (0.74). By looking at inter correlation between outer-model constructs' findings, the highest correlation between two constructs was 0.76. Consequently, the ODE values between the outer-model constructs were below the AVE and AVEs roots. Hence, it can be said that the validity of this study model is proven.

Second approach: a common approach to measure discriminant validity is Baggozi and Philips (1982) which has been extensively used in previous studies, such as (Lin and Hsieh, 2011; Bagozzi and Dholakia, 2006). Bagozzi and Phillips argued that "This test involves comparing the model to a similar model in which the D correlations among A1-A4 are constrained to equal 1.0. A significantly lower X2 value for the model in which the trait correlations are constrained to unity would indicate that the traits are not perfectly correlated and that discriminant validity is achieved. A X2 difference (X3) value with an associated P value less than .05 supports the discriminant validity hypothesis" (1982: P.476). This implies implementing the CFA on the conceptual framework and constraining two constructs together to be equal 0 and then running the CFA, and then the constrained should be equal to 1 and run the CFA again and compare the differences. The discriminant validity is accomplished if the two-factor free model demonstrates a significantly better fit to the data (i.e., a reduction in the chi-square statistic > 3.84 with a change of one degree of freedom). Based on this approach the discriminant validity is additionally supported as shown in the tables below. Please refer to Appendix B.

5.7.3.1 Nomological validity

Nomological validity was defined by previous researches as the degree to which a measure/scale behaves according to the related theoretical prediction (e.g. Bagozzi et al., 1991; Hair et al., 2006). Nomological validity represents the ability of a tool to behave as theoretically expected in terms of other theoretically related factors (Churchill, 1979). Assumptions based on theory in terms of proposed positive relationship between controls, customer co-production and service quality performance were previously discussed in Chapter Three. Therefore, it was expected in this study that nomological validity would be attained if customer co-production was positively related to service quality performance.

5.7.3.2 Criterion validity

The criterion validity of the conceptual framework based on correlation with a similar existing conceptual framework of the same variables/constructs, as explained by some previous studies, was not evaluated by the current research. The reason for not evaluating the criterion validity of the current conceptual framework is that the model of this study was based on Jaworskis' work which was previously validated and there are valid measures for the other constructs of the entire model, such as controls and customer co-production and

service quality performance. However, they were not previously validated in the same constructs and number of sub-items.

5.8 Method Bias

Bias may occur due to causes such as social desirability, ambiguous wording, negative affectivity and scale length (Podsakoff et al., 2003). Social desirability and negative affectivity are assumed to be personality variables in their own right and these are likely to bias evaluation of self-reports (Spector, 2006). After the CFA step was accomplished, therefore it was important to evaluate the Common Method Variance (CMV) of the full hypothesised model, the Inner-model, to test the level of the CMV influence on the produced measures. CMV refers to the extent of covariance shared between constructs/dimensions due to the common method practised in data collection and external factors to the measurement (Bagozzi and Yi, 1990; Malhotra et al., 2006). According to Malhotra et al. (2006: p.1874) "Although researchers generally agree that CMV has the potential to affect the results of a single-method study, no consensus exists about the seriousness of such biases". Questionnaires are typically rated at the same point in time, which means that they are more likely to be affected by CMV (Sharma et al., 2009b). Malhotra et al. (2006) explained only four methods to capture sources of CMV and recommended they be followed by an empirical comparison. These four methods are as follows; firstly, the traditional multitrait-multimethod (MTMM) approach. Secondly, the new MTMM method by confirmatory factor analysis (CFA). Thirdly, Haman's single construct test. Lastly, the marker-variable approach.

Podsakoff et al. (2003) favoured the marker variable technique to avoid some powerful causes of method biases such as the bias caused by implicit theories. Sharma et al. (2009b) argued, however, that sources of CMV are not pointed out by a marker such as age and gender of respondents, because these markers are essentially the same instrument format.

This research has assumed the CMV as a vital theoretical problem that required to be evaluated for further confirmation of the reliability and validity of this study's results. The CMV was evaluated through two different methods. The first one was the common latent factor method. The second method was the marker variable method (Podsakoff et al., 2003).

5.8.1 Common Latent Factor Method of CMV

The findings that were attained from conducting CFA on the hypothesised model were almost the same. By looking at the R^2 it can be seen that it slightly increased after including CMV,

as shown in Table 5.11. These findings demonstrated a very good fit of the hypothesised model. In order to find out whether the model was influenced by CMV, the original results were compared to the result after conducting the common method factor (CMF) or the common latent factor (CLF) as a few researchers refer to it, in the model. It can be said that if the CMV influenced the model the results of both models will be the same, but if the results of the model with CMF or CLF are not the same as the original model's fit findings, then it can be said there is no significant effect of CMV on the hypothesised model.

Table 5-10 Comparison between the original Outer-model and CMF/CLF Outer-model results.

Marker Outer Model	AVE	Composite Reliability	R Square	Cronbachs Alpha
CCP	0.522	0.766	0.1855	0.5497
Formal	0.4569	0.8821	0.4008	0.8482
Informal	0.4462	0.8641	0.4317	0.819
PD	0.5322	0.7652	0.2202	0.5539
PK	0.7273	0.8421	N/A	0.6258
SQP	0.6895	0.8159	N/A	0.5535
Original Outer Model	**AVE**	**Composite Reliability**	**R Square**	**Cronbachs Alpha**
CCP	0.7071	0.8282	0.2617	0.5891
Formal	0.4643	0.8731	0.4329	0.8329
Informal	0.4855	0.8474	0.3856	0.7815
PD	0.7264	0.8415	0	0.6236
PK	0.6988	0.8224	0	0.5733
SQP	0.4634	0.8366	0.5859	0.764

Note: CCP, customer co-production, Formal, formal control, Informal, informal control, PD, performance documentation, PK, procedural knowledge, SQP, service quality performance.

5.8.2 Marker-variable Method (MVM) of CMV

The CMV was lastly evaluated through the MVM evaluation. This kind of test is strongly recommended to assess the CMV bias of a suggested model (Lindell and Whitney, 2001; Pavlou et al., 2007; Sharma et al., 2009b). It can be noticed that the MVM test is widely used. This type of test was suggested to be conducted on an additional construct that is theoretically entirely unrelated to the constructs of study. As Sharma et al (2009: p.A1) explained, "Application of the marker variable technique requires the inclusion in the study of a variable that is theoretically unrelated to at least one of the focal variables". The correlations or path coefficients attained in this study by applying Smart 2.0 M3 PLS-SEM between the marker variable (MV) and model constructs that are unrelated theoretically are illustrated as an estimate of the CMV bias (Richardson et al., 2009).

In this research it was decided to add an additional construct that is theoretically unrelated to the hypothesised model's constructs. The MV adopted in this study was the construct fantasising. The path coefficients that were attained for the MV when included into the outer-model are presented in Figure. The x^2 value of this correlations was 0.4, which implies that the CMV based on the MVM test is =4%, which is considered as low and not significant (Lindell and Whitney, 2001; Pavlou et al., 2007; Sharma et al., 2009). Moreover, by looking at the results of original model, CMF/CLF and MV model shown in Table 5.11, it could be seen that the fit was decreased and not satisfactory. Hence, CMV bias was demonstrated through the MVM to be not significantly affecting this study's results.

5.8.3 Bagozzi's CMV Bias test Method

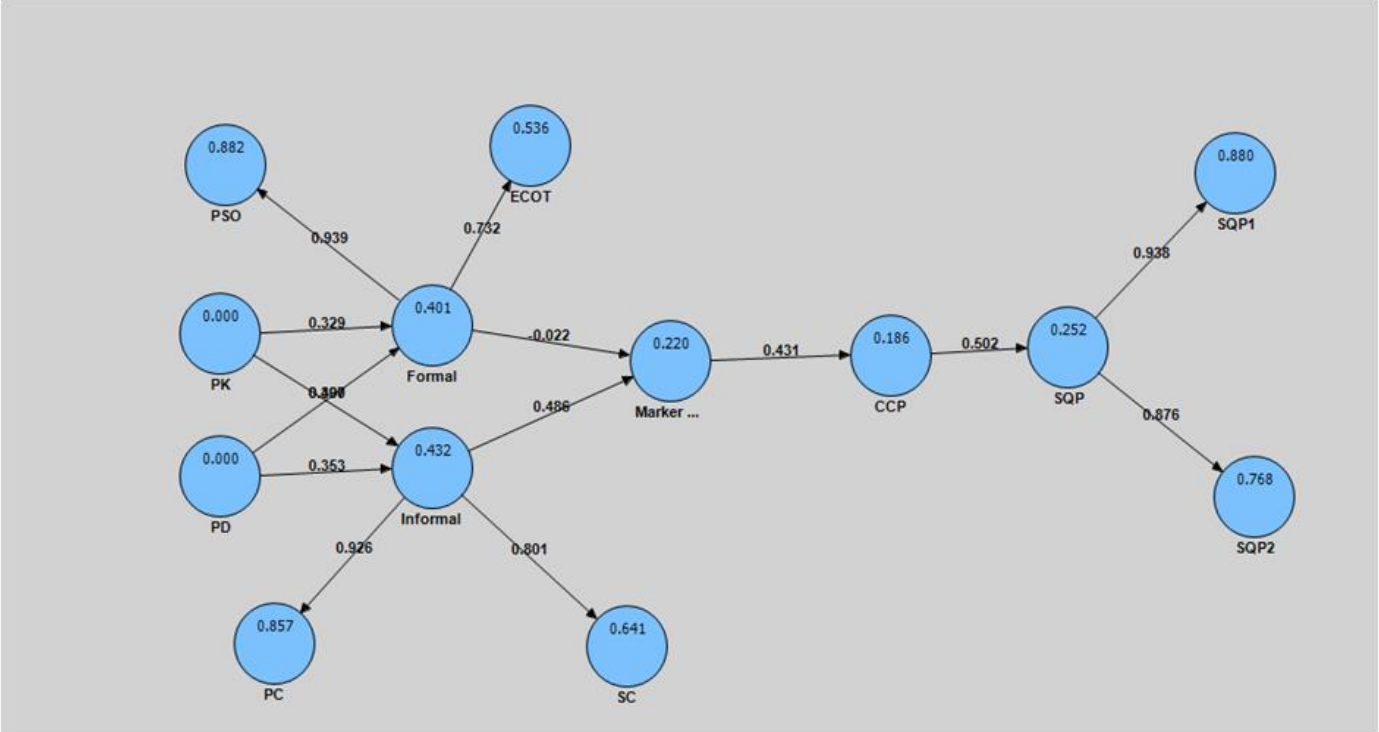
Finally, the CMV bias test method of Bagozzi et al. (1991), which is based on the correlation level between construct of a model, is reported. According to Bagozzi et al. (1991) if any high correlation is gained between constructs (r>.90), then it can be said that the CMV bias is obviously impacting the constructs' results. Based on Bagozzi et al.'s (1991) CMV method, there was no construct highly (r>0.90) correlated to any other construct. The highest correlation attained only from the outer-model's constructs was 0.46, which is the correlation between informal control and customer co-production. The conclusion can be drawn that there is no evidence of CMV bias in this study's data, based on the finding of Bagozzi et al.'s (1991) CMV method.

Table 5-11 Correlation between the original model's constructs with marker variable included.

Constructs	CCP	Formal	Informal	JS	Marker Variable	PD	PK
CCP	1						
Formal	0.5327	1					
Informal	0.5508	0.7713	1				
Marker Variable	**0.4307**	**0.3529**	**0.469**	1			
PD	0.4302	0.5673	0.5609	0.1898	1		
PK	0.3717	0.5345	0.5835	0.2775	**0.5186**	1	
SQP	0.5021	0.7074	0.7805	0.5059	**0.5199**	0.5787	1

Note: CCP, customer co-production, Formal, formal control, Informal, informal control, PD, performance documentation, PK, procedural knowledge, SQP, service quality performance.

Figure 5-8 Model of the Marker Variable Method of CMV Bias Analysis via Smart 2.0.



5.9 Structural Equation Model and fit of the Hypothesised Model 'Inner-Model'

Following the first stage of the PLS-SEM process testing the 'Outer-model', the structural relational model/ Inner-model was evaluated by assessing the hypothetical direction of relationships among the dependent and the independent latent variables (Chin, 1998; Gotz et al., 2010). As argued by Abbasi (2011: p.232), "unlike covariance-based approaches PLS does not purport to statistically evaluate the overall goodness of fit of the model that is based on assumptions of distribution-free variance (e.eg. GFI, AGFI, CFI, REMSI); therefore, non-parametric statistical tests were applied to evaluate the overall model fitting." The steps suggested to be applied in examining the inner-model by a different number of researchers such as Anderson and Gerbing (1988a), Chin (2010), Gefen and Straub (2005), Gotz et al. (2010) and Hair et al. (2012) are as follows:

- Path coefficient estimate 'β'. This criterion is relied on correlation coefficients between all kinds of latent variables of the conceptual framework and the value of β is evaluated according to importance level through t-test values (Tabachnick and Fidell, 2007). The significance of the t-test values is assessed in accordance with suggested values of t=2.326 at ***p<0.01, t=1.96 at **p<0.05 and t= 1.64 at *p<0.10 (Hair et al., 2006b; Kline, 2011).

- Effect size ‘f²’. As illustrated by Tabachnick and Fidell (2007) this criterion calculate the ratio of the fitted conceptual framework’s improvement in forecasting based on the inner-model findings. In evaluating the values of f², 0.02 is assumed as weak, 0.15 is assumed as medium and 0.35 is assumed as a strong effect, as suggested by Chin (1998).
- Prediction relevance ‘Q²’. According to Henseler et al. (2009) Q² is applied to assess the ability of a conceptual framework to point out R² through cross-validation, and their benchmarks are 0.02 weak, 0.15 medium and 0.35 strong (Chin, 1998).
- Goodness of fit ‘GOF’. According to Abbasi (2011: p.232), this is a criterion of global goodness of fit, which is worked out via the geometric mean of the average communality and average R2. The closed the GOF value to 1, the better (Gerbing and Anderson, 1993).

Nevertheless, it is important to indicate that in the current research only four model fit criteria were applied as these were the main and most widely applied and accepted ones, as follows; the Goodness of fit ‘GOF’, path coefficient estimates ‘β’, effect size ‘f²’ and coefficient of determination ‘R²’ (Wetzels et al., 2009; Chin, 1998; Hair Jr et al., 2014).

5.9.1 Coefficient of Determination (R^2) for original dataset

This study refers to the original dataset with 398 respondents, which is the final prepared and cleaned dataset. In the process of conducting EFA an indicator named the percentage of explained variance is output in the ‘Inner-model’ The R^2 likewise reflects the variance explained by endogenous latent variables. The R^2 is assumed as the key criterion for evaluating the inner-model. R² value of 0.20 is assumed as high in some academia fields (Hair et al. 2011). Nevertheless, it is agreed that R² alone is not enough to evaluate a model’s fit; therefore, further criteria should be used as illustrated above (Vinzi et al., 2010). In this research, R² values of the endogenous latent variables that exceeded or equalled 0.20 were considered to be high and lower values to be moderate or weak. As shown in Table 5.13, R² values ranged between 0.261 and 0.585. The highest attained shared variance ‘R²’ is for the factor of customer co-production with a value of 0.261 → 26%. Second was formal control with a value of 0.432 → 43%, regarded as high. Third, was informal control with a value of 0.385 → 34%, regarded as high. Fourth, was customer co-production with value of 0.261 → 26%. Last, was service quality performance with a value of 0.585 → 59%. It can be said that there is no benchmark for an acceptable value of R² that is widely accepted (Hair et al., 2011).

The structural model based on the R^2 values accomplished provided an acceptable range of variance explained through the endogenous latent variables customer co-production, formal control, informal control, and service quality performance, that is, four of six. Therefore, the structural model of the current study was assumed to have a high level of fit based on Chin (1998).

5.9.2 Path Estimation (β) evaluation of original dataset

The path estimation is also indicated by other expressions such as hypothetical paths/relationships and nomological validity of the inner-model (Keil et al., 2000). The measured path coefficients calculated through PLS-SEM show the type and strength of the relationships between dependent and independent latent variables. The path coefficients' values reflect the degree to which the dependent and independent latent variables are related, and the sign of the path determines if the relationship among the two variables is positive or negative.

Nevertheless, the t-test value for individual coefficients is a vital criterion to assess the hypothesised relationship between latent variables in the structural model (Gotz et al., 2010; Hair et al., 2012). Those path coefficients were assessed through utilizing the PLS Bootstrap approach in Smart PLS 2.0 M3 since it was considered to be the most accurate and efficient approach in PLS (Chin, 1998). In the current research the PLS bootstrap was used with 5000 samples, which is more satisfactory than the number of valid observations of this study as suggested by Hair et al. (2012). Based on the attained bootstrap assessment, the highest significant relationship was between informal control and service quality performance with β = 0.6523= 66% and t value = 5.6030, and the lowest significant relationship was between customer co-production and service quality performance with β = 0.1060= 10% and t-value 1.3399. See the table 6.2 below. The criteria evaluation of the path coefficients' significance of the model are as follows: t = 2.326 at ***p<0.01, t = 1.96 at ** p<0.05 and t = 1.64 at *p<0.10 (Hair et al., 2006:p.390; Keil et al., 2000: p.312).

5.9.3 Effect Size 'f' for original dataset

The "f" effect size criterion was applied in this research as a further evaluation of the validity of factors and model fit. The total effect 'f' allows the hypothesised relationships among constructs to be better interpreted (Henseler et al., 2009). It is worthwhile to indicate that the 'f' is only output based on the population of the evaluated data and not the sample size of the study; hence no DF is needed to measure the values of 'f'. This research measured the values

of ‘f’ according to the criteria suggested by Cohen (1998), which are as follows: 0.02 weak, 0.15 moderate and 0.35 large. Measurement of the total effect of all paths beginning from independent latent variable formal control, informal control, customer co-production and ending at the service quality performance was suggested by Bollen (1989) and it was performed based on multiplying the effect of each direct path from formal control to service quality performance.

The results were as follows: the total effect of the relationship path from formal control towards customer co-production was 0.327 (large). The total effect of the relationship path from informal control towards customer co-production was 0.330 (large). The total effect of the relationship path from customer co-production towards service quality performance was 0.106 (weak). All paths were found to be significant at $p<0.0001$.

5.9.4 Global fit Measure (Goodness of fit ‘GOF’) for original dataset

The global fit calculation is explained by Tenenhaus et al. (2005) to be the geometric application of the average communality of outer-model measurement model and average R square, which is the illustrated variance based on the dependent variable for dependent latent variables of a conceptual framework. This is in contrast to the variance based on structural equation model, where there is no goodness of fit for the entire model, such as X^2. Consequently, PLS does not produce an indicator that measures the overall fit of the hypothesised model (Hulland, 1999). The PLS-SEM essentially decreases the standard error or increases R square values of the dependent latent variables (Hair et al., 2011). Therefore, following Wetzels et al. (2009). Therefore goodness of fit criterion was used in this research to provide further indication of the validity of the model produced through PLS-SEM and the benchmarks.Goodness of fit findings in the current study were measured according to the following criteria: GoF ≥ 0.36 assumed as high, GoF ≥ 0.25 assumed as moderate and GoF ≥ 0.1 assumed as low. The result revealed that the goodness of fit of the current study’s model was within the moderate level within a value of 0.34→34% as shown in the table below; consequently, the model of this study was satisfactory (Wetzels et al., 2009; Chin, 1998; Gotz et al., 2010).

Table 5-12 Communalities, GOF and R^2

Dependent& Independent latent variables	R Square	Communality
CCP	0.2617	0.7071
Formal	0.4329	0.4643
Informal	0.3856	0.4855
PD	0	0.7264
PK	0	0.6988
SQP	0.5859	0.4634
Average	0.2776	0.5909
GoF	0.40 (40%)	

Note: CCP, customer co-production, Formal, formal control, Informal, informal control, PD, performance documentation, PK, procedural knowledge, SQP, service quality performance.

5.10 Conclusion

This chapter described the analysis of the data, beginning with respondents' demographic profile. The data was checked and cleaned for any missing values and normality tests carried out, Multicollinearity and Multivariate assumptions were tested. Then the exploratory factor analysis findings were provided for each construct in the model, followed by the reliability and validity of each construct. Then confirmatory factor analysis was reported, followed by the discriminant validity of the conceptual framework. Finally, the goodness of fit of the model was tested. In the following chapter, the findings of hypothesis testing will be reported.

6 Chapter Six: Hypothesis Testing

6.1 Introduction

The objective of this chapter is to test the research hypotheses, regarding possible relationships between variables and the roles of moderators. First the hypotheses were tested based on the original dataset collected by this study. Second, the moderators that are theoretically justified were tested by residual centring. Third, the moderator effect of customer integration and procedural knowledge was assessed.

6.2 Hypothesised Relationships Testing Based on the Original Dataset

In this part of the data analysis, the hypothesised relationships between independent and dependent latent variables are tested based on the results gained from the original data set through PLS-SEM. Therefore, the results from the structural equation model/inner-model based on Smart PLS 2.0 M3 are shown in Table 6.1 in order to outline the hypothesised relationships between the model's constructs, suggested in Chapter Three on hypothesis development. Please refer to Figure 6.1 for more details of the paths and T values. It is commonly known that the path coefficients between the independent and dependent latent variables are assumed as significant or valid if the T-values of these indicators are more than t=2.326 with ***p<0.0001, t=1.96 with **p<0.05 and 1.64 with *p<0.10.

As shown in Table 6.1, the hypothesised positive relationship between Customer co-production and Service Quality Performance, indicated as customer co-production towards service quality performance (H1), was found to be statistically insignificant at *p<0.10; hence H1 was insignificant. Therefore, the positive influence of the customer co-production on service quality performance was not evident in this study's original dataset. In terms of the QCIs environment, positive influential relationships between procedural knowledge and performance documentation towards formal and informal control were suggested (H3, H4), which were statistically significant at ***p<0.001. Therefore, the positive influence of procedural knowledge on both formal and informal control was accepted based on the original dataset. With regard to the hypothesised influence of performance documentation on both formal and informal control this was proved to be supported and thus these hypotheses were accepted. The following hypotheses were based on a positive impact of formal and informal control on customer co-production (H6a_b); these were satisfied due to the observed significant t-test at ***p<0.001. Next the hypothesised positive impacting link directly from controls to customer co-production (H6) was observed to be significant at p<0.001, so this

hypothesis was supported. Other relationships originally proposed in the conceptual model in Chapter Three were not tested, as the factor analysis reported in Chapter Five did not support Output control, Culture Control and Organisational Commitment as separate constructs; they were merged with Process Control, Professional Control and Service Quality Performance, respectively.

Table 6-1 Path Coefficients and the Hypothesised Relationships Testing of Conceptual Model.

Hypotheses	Relationship/Direction	Path Coefficient/Sign	t-tests	Decision
H1	Customer Co-production and Service Quality Performance	0.1060	1.3399	Not-Supported
H2	Customer Integration moderate b/w Customer co-production and Service Quality Performance	-0.092	0.555	Not-Supported
H3a	Procedural Knowledge and Formal Control (Process)	(+)0.3697***	3.4633	Supported
H3b	Procedural Knowledge and Informal Control (Self)	(+)0.3505***	3.7506	Supported
H3c	Procedural Knowledge and informal Control (Professional)	(+)0.3997***	3.8920	Supported
H3d	Procedural Knowledge and informal Control (Culture Control)	Not tested	Not tested	Not tested
H3e	Procedural Knowledge moderate b/w customer coproduction and service quality performance e	-0.119	1.184	Not supported
H4a	Performance Documentation and Formal Control (Output)	Not tested	Not tested	Not tested
H4b	Performance Documentation and Informal Control (Self)	(+)0.3310***	3.7232	Supported
H4c	Performance Documentation and Informal Control (Professional)	(+)0.3774 ***	3.7920	Supported
H4d	Performance Documentation and Informal Control (Culture Control)	Not tested	Not tested	Not tested
H4e	Performance Documentation moderate b/w customer coproduction and service quality performance	-0.115	1.022	Not supported
H5a_f	Organisational Commitment and other variables	Not tested	Not tested	Not tested
H5g	Organisational Commitment moderate b/w Customer Co-production and Service Quality Performance	-0.111	1.973	Not supported
H6a_b	Formal Control input (Customer Oriented of service employee), (Process) and Customer co-production	(+)0.3270***	1.9305	Supported
H6c	Formal Control (Output) and Customer co-production	Not tested	Not tested	Not tested

H6d_e	Informal Control (Self), (Professional) and Customer co-production	(+)0.3297***	2.1314	Supported
H6f	Informal Control (Culture) and Customer co-production	Not tested	Not tested	Not tested
H7a	Formal control positively related to service quality performance	0.2291**	1.8380	Supported
H7b	Informal control positively related to service quality performance	0.6523***	5.6030	Supported

Notes:

H3d: The relationship between Procedural Knowledge and informal Control (Culture Control) is not tested because culture control merged with professional control.

H4a: The relationship between perfromance Documentation and formal control (output) is not tested because output control merged with process control.

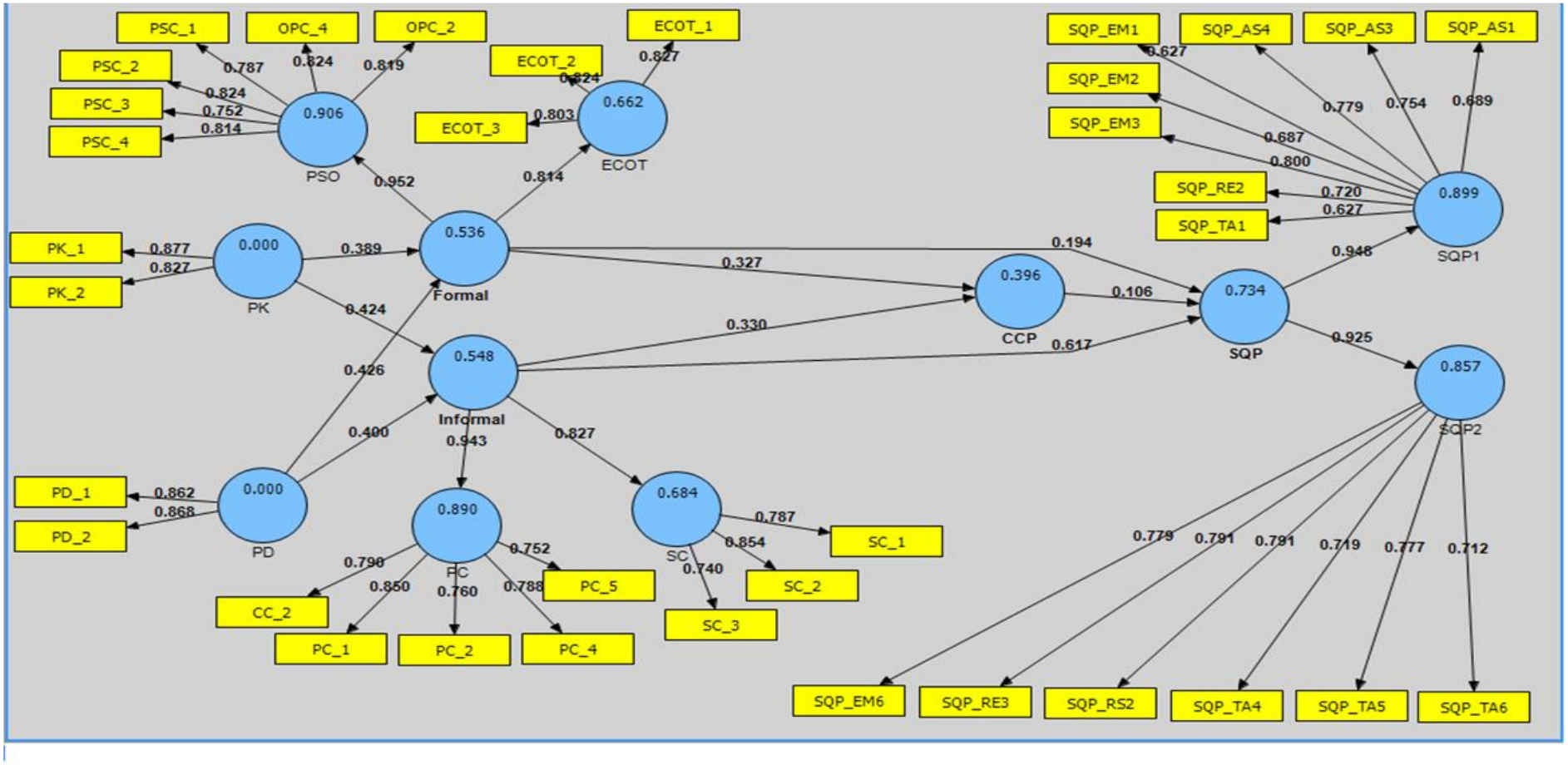
H4d: The relationship between perfromance Documentation and Informal control (culture control) is not tested because culture control merged with professional control.

H5a_f: The relationship between Organisational Commitment and other variables is not tested because OC merged with service quality perfromance.

H6c: The relationship between formal control (output) and customer co-production is not tested because output control merged with process control.

H6f: The relationship between Informl control (culture control) and customer co-production is not tested because culture control merged with professional control.

Figure 6-1 Illustration of the Paths Coefficients from PLS-SEM based on Original Dataset.



Note: CCP, customer co-production, Formal, formal control, Informal, informal control, PD, performance documentation, PK, procedural knowledge, SQP, service quality performance.

6.3 Testing Moderator Hypotheses

Applied researchers often estimate interaction terms to infer how the effect of one independent variable on the dependent variable depends on the magnitude of another independent variable. There are various methods of deriving interaction terms and testing their effects. In this study, residual centering (Lance, 1988) was chosen as the preferred method for deriving the interaction term for testing the moderating effects of procedural knowledge, performance documentation, organisational commitment and customer integration between customer co-production and service quality performance. The following section discusses the technique of residual centering to represent interaction effects in latent variable models.

6.3.1 Residual Centering

A major issue for researchers, when testing interaction effects, is the fundamental problem that the product term may be highly correlated with the predictor variables from which it is derived (Little et al, 2006). When predictor variables are correlated, problems may arise when estimating regression coefficients in that it can create instability in the values for the estimated regression weights (Little et al, 2006). Under most circumstances, mean centering is an adequate solution to the collinearity problem. Mean centering involves the subtraction of the mean value of a descriptor from all values of that descriptor so that the mean for each variable is 0. At times, however, the mean-centred product may still be correlated with its first-order variables, which can influence the partial regression coefficients. Due to this lack of complete orthogonality with the mean-centering approach, a simple two-step regression technique called residual centering has been proposed as an alternative (Lance, 1988). Residual centering is essentially a two-stage OLS procedure in which a product term (i.e., the product of the predictor variables) is regressed onto its respective first-order effect(s) (Lance, 1988). The residuals of this regression are then used to represent the interaction effect.

Residual centering has a number of key advantages. First, the coefficients for orthogonalised product or powered terms are stable. Second, the significance of the product or powered term is unaffected by the orthogonalising process. Third, unlike mean centering, residual centering ensures full independence between the product term and the main effects from which it is derived (Little et al, 2006). Under orthogonal conditions, when the interaction term is entered into a model, the partial regression coefficients representing the magnitudes, directions, and

significances of the main effect variables remain precisely the same as they were before the interaction was included.

Furthermore, residual centering yields a coefficient for the orthogonalised cross product term that can directly be interpreted as the effect of the interaction on the dependent variable (Lance, 1988:164). This replaces the assessment of the increase in the R2 due to the inclusion of the interaction term.

6.3.2 Moderation finding for each moderator

According to the approach explained previously, the Smart PLS 2.0 M3 was run for the full hypothesised model using the original dataset. The βs, standard errors (SE) and the t-test values were gained for each individual path coefficient 'relationship' to be able to indicate the type of moderation and differences between the direct and indirect paths' effects. The process was undertaken to test for a moderator effect through two steps: First, the PLS algorithm was run on the model. This step allowed the researcher to attain the path coefficients for the direct and indirect links. Second, the PLS bootstrapping method was carried out in order to attain the β and the SE for the paths of the direct and indirect relationships. See the table below for more information about the effect of the proposed moderators.

Table 6-2 Result of hypothesis testing for moderating effects.

Hypotheses	Antecedent	Outcome	Coefficient	T-values	Sig	Decision
H3_e	CCP*PK	SQP	-0.119	1.184	NS	Not Supported
H4_e	CCP*PD	SQP	-0.115	1.022	NS	Not Supported
H5_g	CCP*OC	SQP	-0.111	1.973	NS	Not Supported
H2	CCP*CI	SQP	-0.092	0.555	NS	Not Supported

Procedural knowledge (PK) moderator: the hypothesis suggested that Procedural Knowledge moderates the relationship between Customer Co-production and Service Quality Performance: specifically, when Procedural Knowledge is high, the relationship between Customer Co-production and Service Quality Performance will be stronger. After conducting the test of the suggested hypothesis through smart PLS, the coefficient path was -0.119 and

the t-test from PLS bootstrapping was 1.184 which means that the relationship is not significant and the hypothesis is not supported in this study. Please refer to the figures below.

Figure 6-2 An Illustration of PLS Bootstrapping of PK moderator Model.

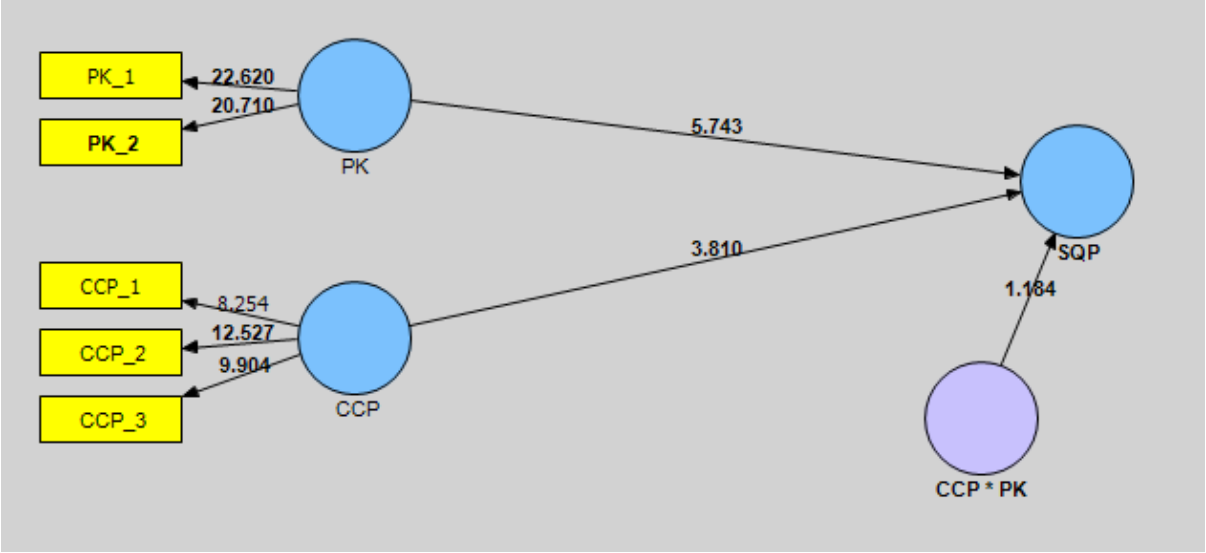
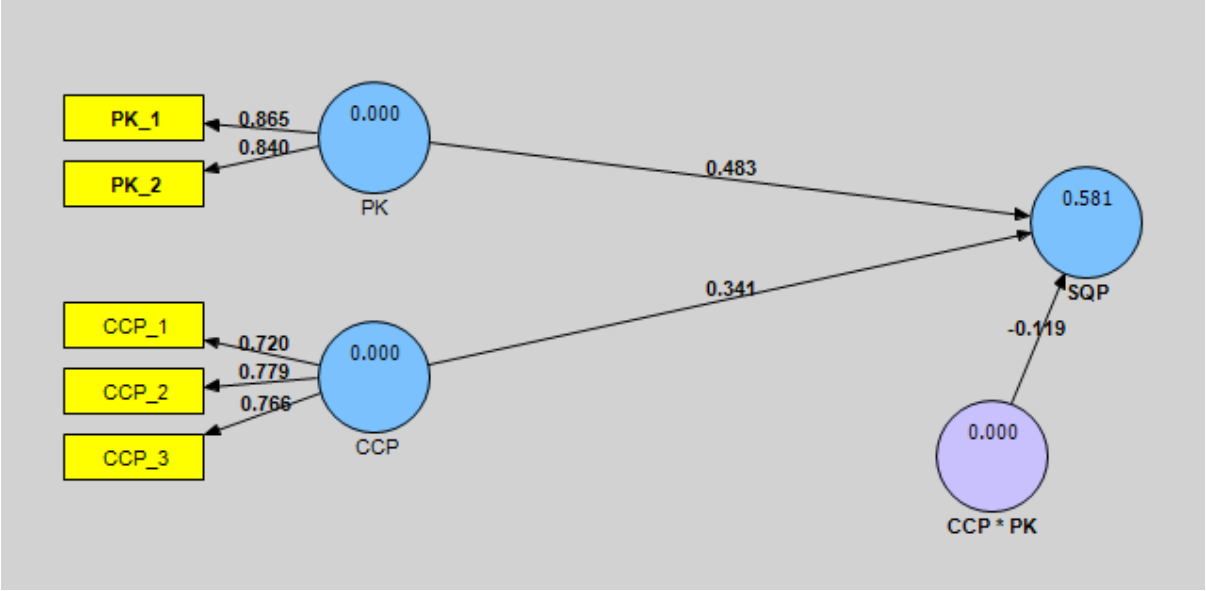


Figure 6-3 An Illustration of PLS Algorithm of PK moderator Model.



Performance Documentation (PD) moderator: the hypothesis suggested that performance documentation moderates the relationship between Customer Co-production and Service Quality Performance: specifically, when performance documentation is high, the relationship between Customer Co-production and Service Quality Performance will be stronger. After conducting the test of the suggested hypothesis through smart PLS, the coefficient path was -

0.115 and the t-test from PLS bootstrapping was 1.022 which means that the relationship is not significant and the hypothesis is not supported in this study. Please refer to the figures below.

Figure 6-4 An Illustration of PLS Algorithm of PD moderator Model.

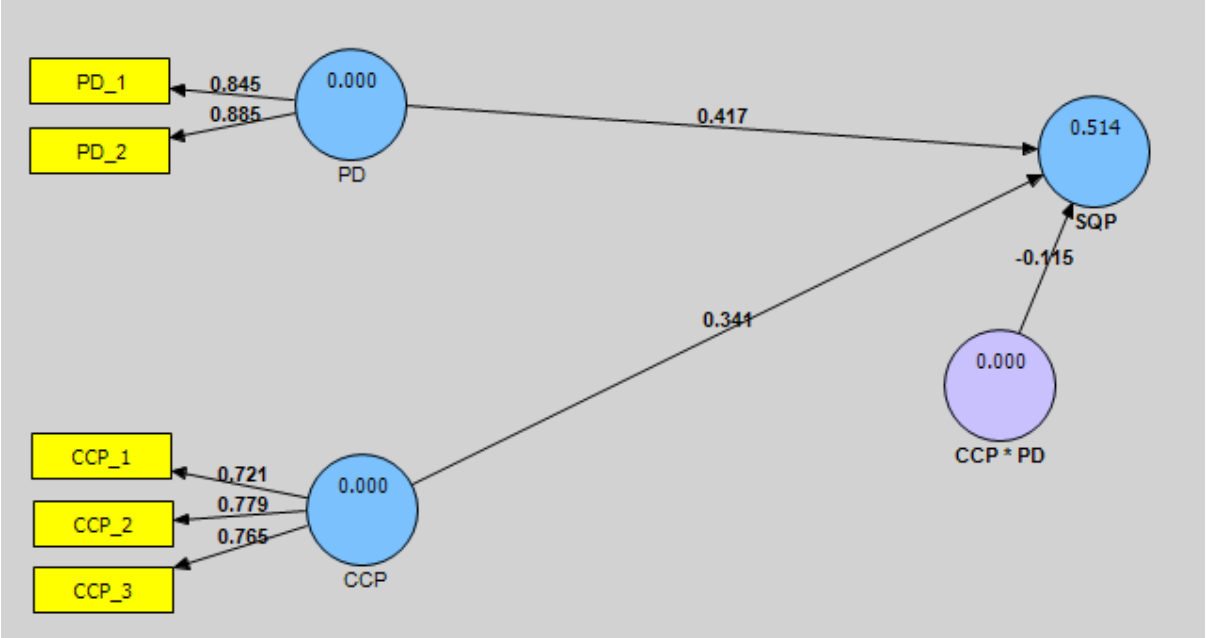
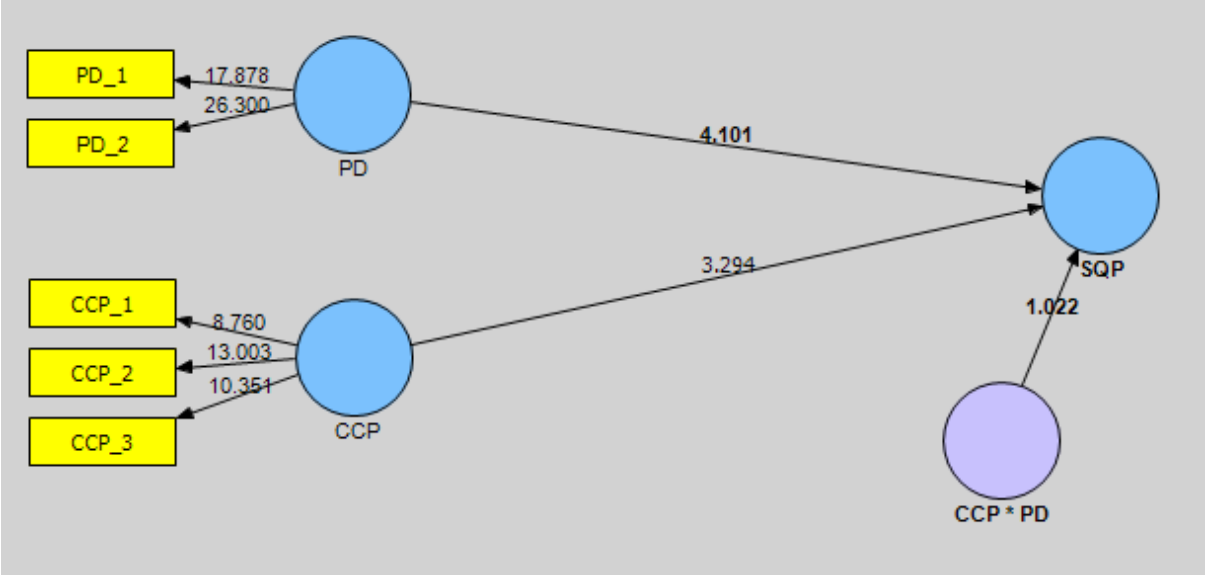


Figure 6-5An Illustration of PLS Bootstrapping of PD moderator Model.



Organisational Commitment (OC) moderator: the hypothesis suggested that organisational commitment moderates the relationship between Customer Co-production and Service Quality Performance: specifically, when organisational commitment is high, the relationship between Customer Co-production and Service Quality Performance will be stronger. After

conducting the test of the suggested hypothesis through smart PLS, the coefficient path was -0.111 and the t-test from PLS bootstrapping was 1.973 which means that the relationship is not significant and the hypothesis is not supported in this study. Please refer to the figures below.

Figure 6-6 An Illustration of PLS Algorithm of OC moderator Model.

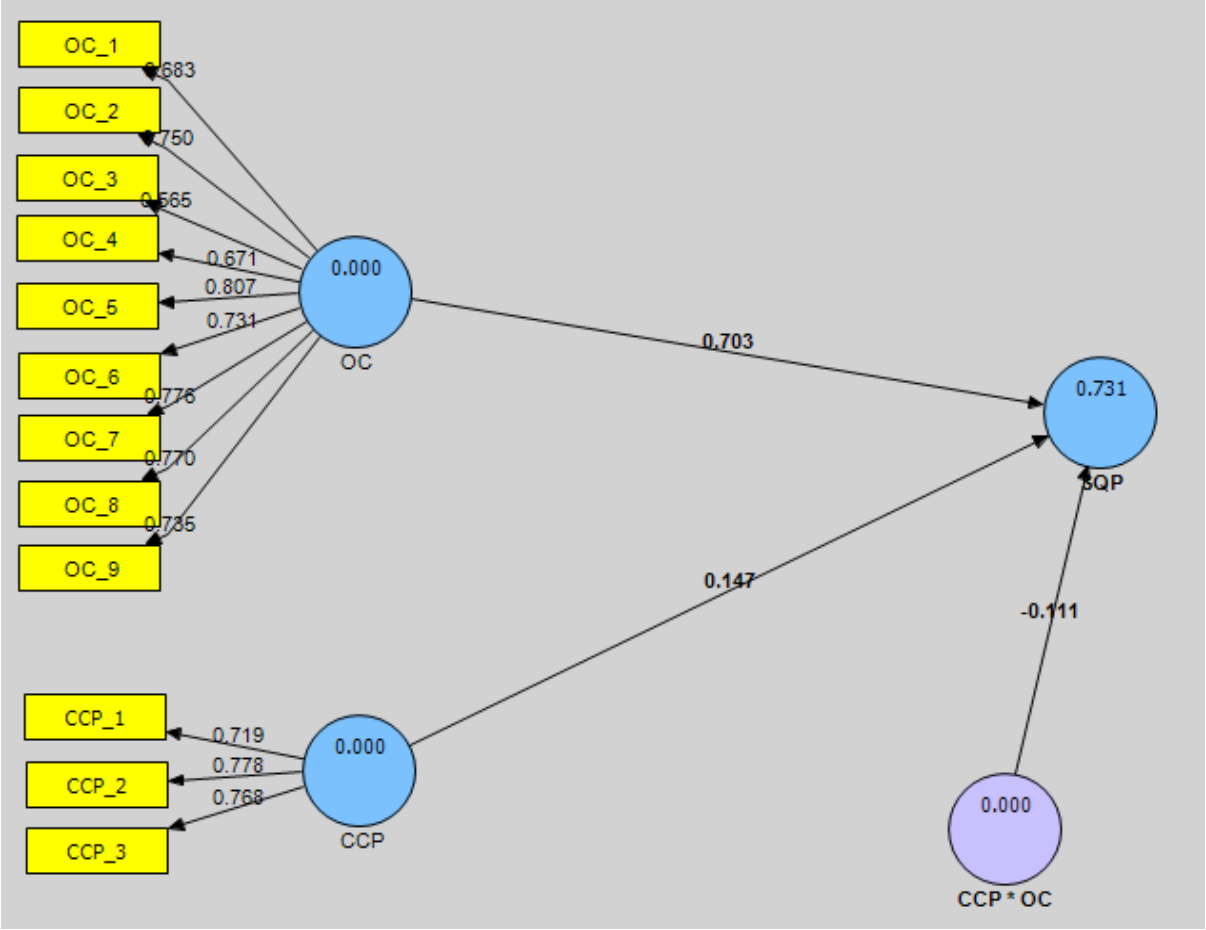
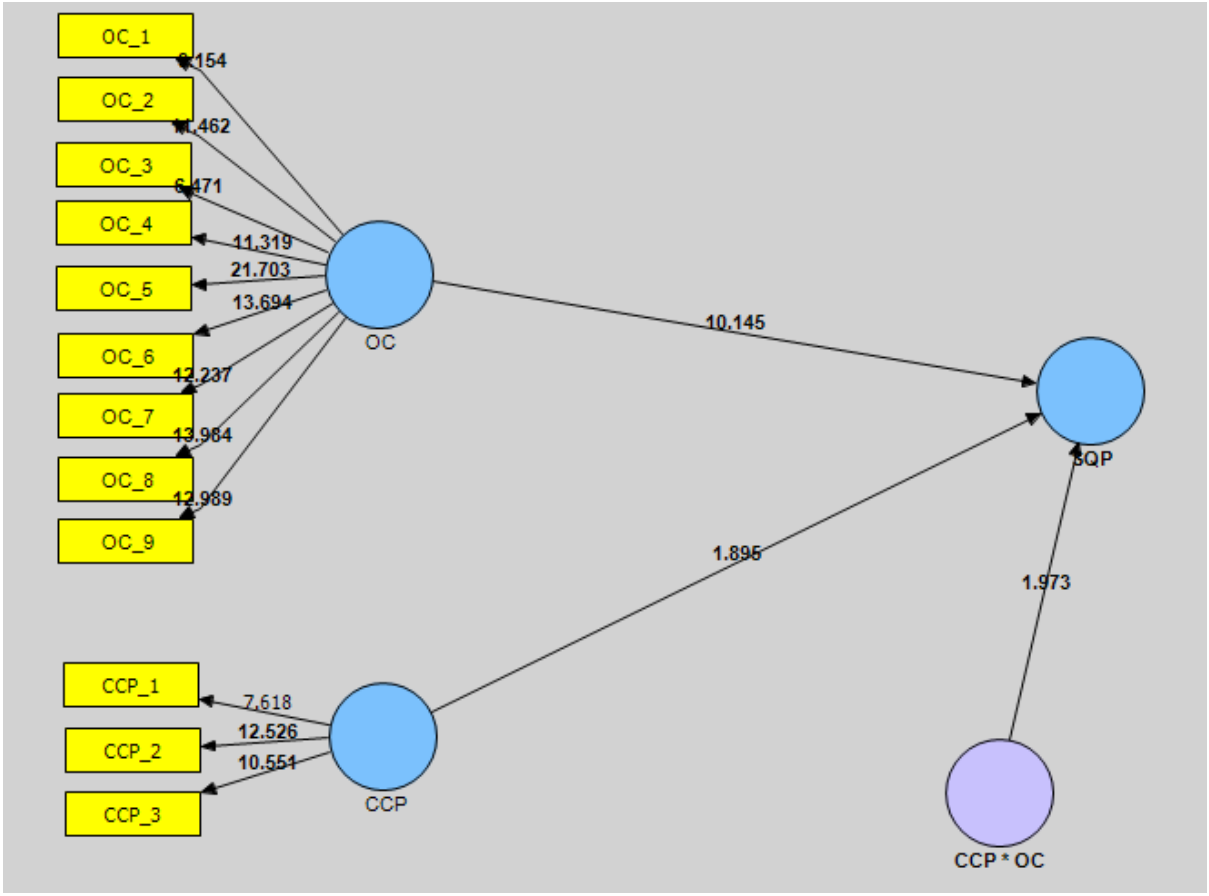


Figure 6-7 An Illustration of PLS Bootstrapping of OC moderator Model.



Customer Integration (CI) moderator: the hypothesis suggested that Customer integration will moderate the relationship between customer co-production and service quality performance. Specifically, if customer integration is high, the relationship between customer co-production and service quality performance will be stronger. After conducting the test of the suggested hypothesis through smart PLS, coefficient path was -0.092 and the t-test from PLS bootstrapping was 0.555 which means that the relationship is not significant and the hypothesis is not supported in this study. Please refer to the figures below.

Figure 6-8 An Illustration of PLS Bootstrapping of CI moderator Model.

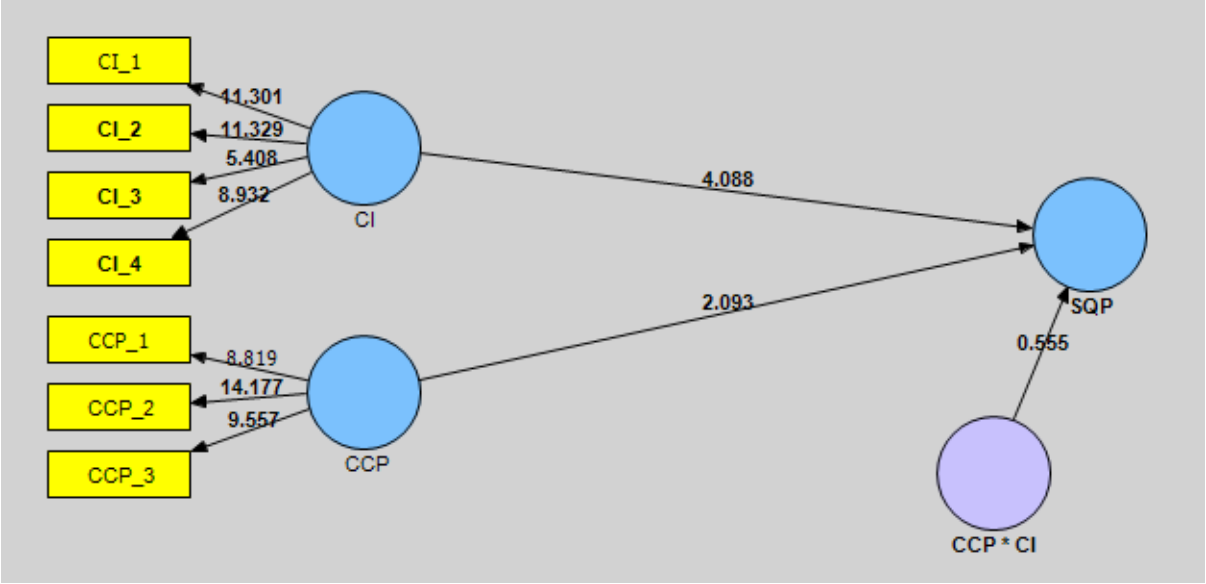
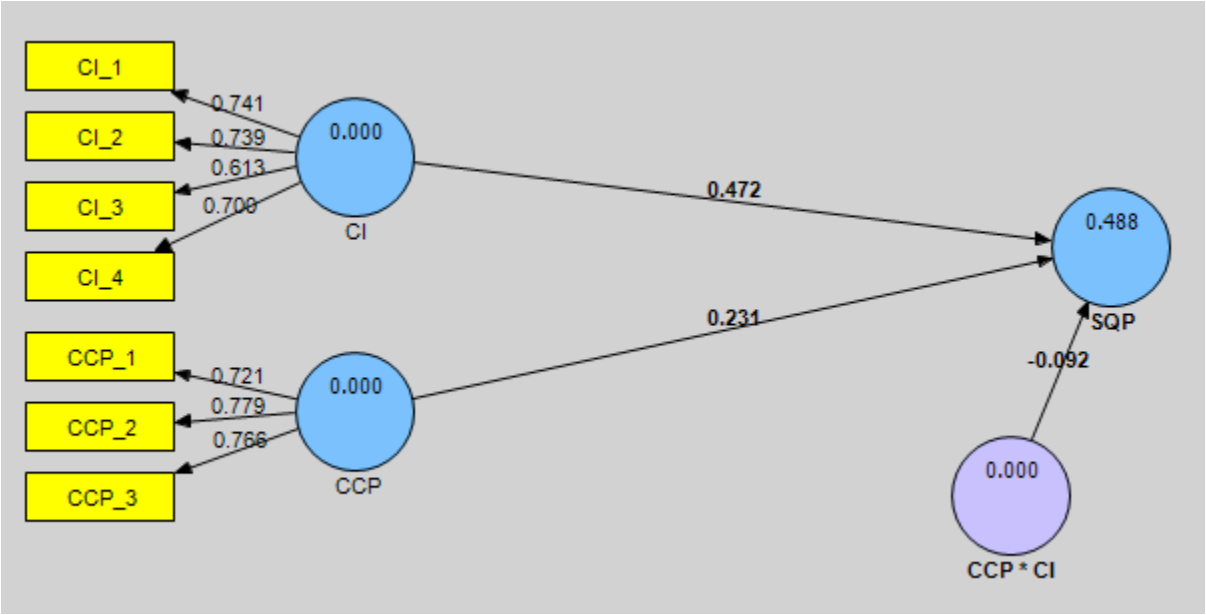


Figure 6-9 An Illustration of PLS Algorithm of CI moderator Model.



It can be seen from the results reported in this section that none of the moderating effects hypothesized based on theory proved significant. Possible reasons for those findings are discussed in Chapter 7, section 7.2.5.

6.4 Conclusion

This chapter reported the testing of the hypotheses proposed for this study, including the assessment of possible moderating roles. It should be noted, however, their because of the different dimensionality of some constructs from those orgniality proposed (i.e. the merging

of informal culture and professional controls, of formal process and output controls, and organisation commitment with service quality perfromance), some of the hypotheses orignally proposed in Ch 3 could not be tested. The hypotheses were indicated to be mostly supported. The proposed moderator variables were found to be mostly not moderating the underpinning paths of the conceptual model based on the obtained findings. The findings reported in this chapter were summarized in Table 6.1. Next, Chapter Seven will present a discussion of the obtained results and the degree to which these findings are or are not consistent with the related literature.

7 Chapter Seven: Discussion

7.1 Introduction

This research set out to evaluate customer co-production antecedent of service quality performance. In Chapter Three, hypotheses were developed and a conceptualisation of relationships presented. The methodology and measure development findings were discussed in Chapters Four and Five and in Chapter Six, the hypotheses were formally tested, and the outcomes of this testing were reported. It should be noted that a number of hypotheses could not be tested, as factor analysis resulted in some of the original variables being conflated to form new constructs. For convenience of testing are summarized again in Table 7.1. The current chapter seeks to interpret these findings and explain the results in a non-technical manner. Firstly, all the significant hypotheses will be presented and discussed. Next, the moderating relationships will be highlighted and discussed. The chapter will then conclude by introducing the final chapter of this thesis, which focuses upon the academic and practical implications of this work, its limitations, and future directions that subsequent researchers may choose to follow.

Table 7-1 Path Coefficients and the Hypothesised Relationships Testing of Conceptual Model.

Hypotheses	Relationship/Direction	Path Coefficient/Sign	t-tests
H1	Customer Co-production and Service Quality Performance	0.1060	1.3399
H2	Customer Integration moderate b/w Customer co-production and Service Quality Performance	-0.092	0.555
H3a	Procedural Knowledge and Formal Control (Process)	(+)0.3697***	3.4633
H3b	Procedural Knowledge and Informal Control (Self)	(+)0.3505***	3.7506
H3c	Procedural Knowledge and informal Control (Professional)	(+)0.3997***	3.8920
H3d	Procedural Knowledge and informal Control (Culture Control)	Not tested	Not tested
H3e	Procedural Knowledge moderate b/w customer coproduction and service quality performance e	-0.119	1.184
H4a	Performance Documentation and Formal Control (Output)	Not tested	Not tested
H4b	Performance Documentation and Informal Control (Self)	(+)0.3310***	3.7232
H4c	Performance Documentation and Informal Control (Professional)	(+)0.3774 ***	3.7920
H4d	Performance Documentation and Informal Control (Culture Control)	Not tested	Not tested
H4e	Performance Documentation moderate b/w customer coproduction and service quality performance	-0.115	1.022
H5a_f	Organisational Commitment and other	Not tested	Not tested

	variables		
H5g	Organisational Commitment moderate b/w Customer Co-production and Service Quality Performance	-0.111	1.973
H6a_b	Formal Control input (Customer Oriented of service employee), (Process) and Customer co-production	(+)0.3270***	1.9305
H6c	Formal Control (Output) and Customer co-production	Not tested	Not tested
H6d_e	Informal Control (Self), (Professional) and Customer co-production	(+)0.3297***	2.1314
H6f	Informal Control (Culture) and Customer co-production	Not tested	Not tested
H7a	Formal control positively related to service quality performance	0.2291**	1.8380
H7b	Informal control positively related to service quality performance	0.6523***	5.6030

Note: CCP, customer co-production, Formal, formal control, Informal, informal control, PD, performance documentation, PK, procedural knowledge, SQP, service quality performance. *** Significant at the 0.001 level. The reasons why these relationships were not tested were explained in Chapter 6, section 6.4 in notes to Table 6.2.

7.2 Overview of the Aim, Objectives, Questions and Related Hypotheses

As discussed in Chapter One, the aim of the this research was investigate the relationship between quality control initiatives (QCIs) customer co-production (CCP) and service quality performance in order to develop tools that might help to improve service quality performance. Also, it aimed to investigate customer integration as a potential moderator between customer co-production and service quality performance.

This aim was translated into two research questions, as follows:

Q1: How do customer integration and customer co-production affect service quality performance?

Q2: How do different formal and informal QCIs mechanisms improve service quality performance?

The outcomes of hypothesis testing in relation to those quaestions are discussed in the follwing subsections.

The discussion that follows will take the research questions in turn and examine how service quality is influenced.

7.2.1 The impact of customer co-production on service quality perfromance

Customer co-production was found insignificantly related to service quality performance. The result is as expected and further supports the several studies which have shown that

customer participation should ultimately have a positive impact on financial performance. The result is similar to the previous studies that suggest the provision of high-quality service to customers is a key determinant of superior service performance (Cândido and Morris, 2001; Van Looy et al., 2003). Service quality performance is likely to be improved if the customer takes part in the core service offering. Also, customers should be told when, where and how they can participate in order to control the resources exchange between the hotels and customers, which would lead to better service quality performance. In an Islamic context, such a relationship is supported by Islam's tradition of participation and consultation (Abbas, 2005), which would encourage accessibility of service providers to customers and the provision of information to customers about how they can participate. As customers' participation in intangible services increases, researchers are responding by developing research that seeks to understand and predict phenomena of interest within the domain. Customer co-production, such as using a service to participate, means that the end service is a blend of the customer's effort and the input service. Consequently, the outcome is not entirely due to either service performance or the customer's own accomplishment. We believe that outcome dependency happening at the intersection of service and customer participation has important managerial and theoretical implications.

Those findings provide new insight into two important aspects of the general understanding of consumer behaviour in hotels. Firstly, the antecedents of quality of service in different types of hotels in Saudi Arabia have been investigated. Secondly, the structure of service quality has been measured. This last aspect is specifically relevant, as it has been confirmed that service quality is a higher order dimension (Wilkins et al., 2007). Wilkins suggested a new structure to service quality and service quality can be measured through three different groups: physical product, services experience and quality food and beverage. According to the findings of this research, interaction and co-production can be added to the service experience. Hotel managers would find this useful compared to the widely-different sets of criteria suggested by previous studies. In contrast to the original SERVPERF this study found service quality performance to consist of only two dimensions, which can be named as physical product and service experience. This confirms the theory that service quality is likely to be reducible to a small number of dimensions (Durvasula et al., 1999; Jayawardhena, 2004). The second dimension, service performance, found in this study, takes in elements of what Parasuraman et al. (1988) in SERVQUAL divided into four dimensions: Assurance, Empathy, Reliability and Responsiveness. The perception of all these elements as

constituting an indivisible whole in the conceptualization of service quality is consistent with the Islamic perspective outlined in Chapter One. It has been noted that in contexts underpinned by Islamic values, relationships should be based on mercy, kindness and justice (Armstrong, 1992), which can be interpreted as having parallels to the notions of Empathy, Responsiveness and Reliability. Moreover, the Prophet emphasized the value of the competent worker and portrayed working with integrity and commitment, to the best of one's ability, concepts parallel to Assurance, as an act of worship (Abbas, 2005). In such a context, it seems that Saudi managers' view of service quality reflects a distinctive service ethic underpinned by their Islamic values, so that they could not envisage any element of the service relationship in isolation from the others. Another interpretation of the smaller number of dimension is industry-specific; hotel decision makers do not see quality of service as a number of slices of pizza; they look at the service quality as one piece. They see the pizza as whole. This is what second order factors reveal. This emphasis on the customer co-production antecedents of hotel service quality performance is important because service quality components are the performance drivers of a hotel.

7.2.2 Environment and QCIs

As expected, procedural knowledge (PK) was found to be positively related to the use of processes of formal control. In terms of informal control, the hypothesis represented it as self control and professional control. Literature has suggested and supported with emprical evidence that procedural knowledge negatively influences the use of self and professional control. This study has found a different result for self and professional control, in that procedural knowledge influenced them positviely. As for performance documentation, the literature suggested that the availability of performance documentation would be positiviely related to self and professional control. The result supported the hypothesis; as expected, performance documentation (PD) was found to be positively related to self and professional control. The purpose of investigating these relationships was to consider the role of task characteristics in shaping both the development of control systems and their effects on marketing managers. Overall, the task characteristics-control findings suggest that the characteristics of service contexts have a role in shaping the types of control in use. These findings are both consistent with and extend those of prior research. The findings of strong, positive relationships between procedural knowledge and process controls and between performance documentation and formal controls closely parallel the findings of Ouchi and Maguire (1975), Eisenhardt (1985), and Anderson (1985). Hypotheses about the effects of

task characteristics on informal controls represent an extension of previous research. The findings suggest that it is possible to obtain a richer understanding of the formal and informal controls in use by examining characteristics of the service context.

Drawing from the FTU framework and control theory, this study has provided empirical evidence that QCIs should be understood to relate to the service employee's performance and the customer's coproduction. Furthermore, it has been shown that hotel characteristics such as procedural knowledge and performance documentation are important drivers of QCIs in the service sector context. The findings suggested that regardless of the degree of customer integration in service provision, both employee customer oriented training and customer co-production emerge as significant mechanisms of superior service quality. The result of this study suggests that service providers should implement both QCIs when delivering their services.

7.2.3 The relationship between QCIs and Customer Co-production

Formal: As expected, Input control was found to be positively related to customer co-production; service dominant logic recommends that service employees be helped by training and educational programmes to improve and expand new competencies (Lusch et al., 2007). Previous study (Sichtman et al. 2011) has demonstrated that training employees, particularly with a customer focus, increases a firm's inter-functional interdependence and reduces inter-functional conflict, thus impacting organisation performance positively. It increases employees' sensitivity to customer needs and their ability to adopt to the needs of customer integration (Sichtmann et al. 2011). Drawing from the FTU framework and control theory, this study has provided empirical evidence that QCIs should be understood to relate to the service employee's performance and the customer's coproduction. The findings suggested that regardless of the degree of customer integration in service provision, both employee customer oriented training and customer co-production emerge as significant mechanisms of superior service quality. The result of this study suggests that service providers should implement both QCIs when delivering their services.

As suggested in hypothesis H4b, use of process control is positively related to customer co-production. Previous studies (Jaworski and MacInnis, 1989) have demonstrated through empirical evidence that reliance on process control produces less job tension. This may facilitate effective integration with customers and participation in the process of delivering services. Moreover, through process controls such as work standardization, a service firm

may be better able to identify when, how and where it is most beneficial to involve customers' (Sichtmann et al., 2011). To the best of the author's knowledge, in previous studies on controls, no studies have shown the effect of formal or informal controls on customer co-production through social exchange theory, as this study does.

Informal: as expected, hypotheses H6a and H6b were supported, meaning self and professional controls were positively related to customer co-production. However, the path coefficient t- test shows that informal control is more positively related than formal control with values of 2.007 and 1.96 respectively. This is not to say that informal controls always produce behaviours and responses in the best interest of the organisation. Indeed, informal controls may lead workers to create slack, slow production, and feed invalid data into the control system. However, the type of informal controls conceived by Ouchi (1979) and Thompson (1967) and investigated in this study was more consistent with a system that assumes goal congruity between the individual and the organisation. In such circumstances employees may be more committed to customer-oriented values and willing to engage with customer to produce the desired service outcomes.

7.2.4 Moderator Variables

7.2.4.1 The Moderating Effect of Customer Integration

Hypothesis H2 suggested that customer integration will moderate the relationship between customer co-production and service quality performance. Specifically, if customer integration is high, the relationship between customer co-production and service quality performance will be stronger. The finding was not supported, which means customer integration does not positively moderate the relationship between customer co-production and service quality performance; contrary to expectations, customer co-production is less effective for the Saudi hotel industry a service requiring a high degree of customer integration. A possible explanation for this result is that clarity as to requirements for customer co-coproduction in terms of communicating what, where and when the customer should contribute is not sufficient in this industry. Because a high degree of customer integration implies a more complex service delivery (Bowen and Ford, 2002), the customer might need a greater depth of understanding and learning. Therefore, QCIs such as customer training may be more appropriate for such services.

7.2.4.2 The Moderating Effect of Procedural Knowledge

H3e suggested that Procedural (transformation process) Knowledge moderates the relationship between customer co-production and service quality performance: specifically, when procedural knowledge is high, the relationship between customer co-production and service quality performance will be stronger. The finding was not supported, which means that procedural knowledge does not moderate the relationship between customer co-production and service quality performance. This may be because the level of process control is high and managers specify the task and the work for the employees to follow; extra information is not needed to perform the job, because managers follow up their employees and provide them with feedback in terms of outputs and achieving targets (Jaworski, 1988). It may also be that despite availability of PK, employees do not sufficiently understand the customer's role (i.e. PK focuses on employees' tasks and does not sufficiently consider customers' role).

7.2.4.3 The Moderating Effect of Performance Documentation

H4e suggested that Performance Documentation moderates the relationship between customer co-production and service quality performance: specifically, when performance documentation is high, the relationship between customer co-production and service quality performance will be stronger. The hypothesis was not supported, which means that performance documentation does not moderate the relationship between customer co-production and service quality performance. This may be because the PD focuses on assessing marketing employees' performance (Jaworski, 1988). It may also be that despite availability of PD, employees do not sufficiently understand the customer's role (i.e. PD focuses on availability of documentation to employees and does not sufficiently consider customers' role).

7.2.4.4 The Moderating Effect of Organisational Commitment

H5f suggested that Organisational Commitement moderates the relationship between customer co-production and service quality perfromance: specifically, when organisational commitment is high, the relationship between customer co-production and service quality performance will be stronger. The hypothesis was not supported, which means that organisational commiment does not moderate the relationship between customer co-prodcution and service quality performance. This may be because OC focuses on promises

and indidivual identification rather than the role of customer co-prodcution, or the information that might be needed in order to interact with customers.

Another possible reason why none of the proposed moderator relationships was supported may be related to the cultural context of this study. It may be that the relationship between customer co-production and service quality is strong in any case, underpinned by a strong service ethic influenced by Islam. In other words, it is possible that the relationship between customer co-production and service quality performance in the Saudi context is influenced predominantly by this service ethic, outweighing the impact of other factors.

7.3 Conclusion

The current chapter discussion the outcomes of testing proposed relationships between QCIs customer co-production and SQP reported in chapter six. The impact of customer co-prduction on service quality performance was explained by outlining the customer co-production items the proposed conceptual framework contained by employing PLS-SEM. Next, the types of relationships between environment aspects such as procedural knowledge and performance documentation and formal and informal controls were indicated and further understood based on the PLS-SEM results of the hypothesised paths. It was indicated that customer co-production positively influenced service quality performance. The non-significant effects of customer integration and procedural knowldege as moderators between customer co-production and service quality performance were also explained. Hence, this chapter answered the research questions set for this study.

8 Chapter Eight: Conclusion

8.1 Introduction

The importance of service quality and its measurement is widely recognized within the service marketing field as an essential element on its own and a critical component of service delivery (Wilkins et al., 2007; Jayawardhena, 2004), the environment and mechanisms of control (Jaworski, 1988; Jaworski et al., 1993; Jaworski and MacInnis, 1989), customer co-production (Jiménez et al., 2013; Troye and Supphellen, 2012), and customer integration (Moeller, 2008; Flynn et al., 2010). However, there is a lack of knowledge in relation to customer co-production and customer integration on service quality performance literature, particularly for the Middle Eastern region.

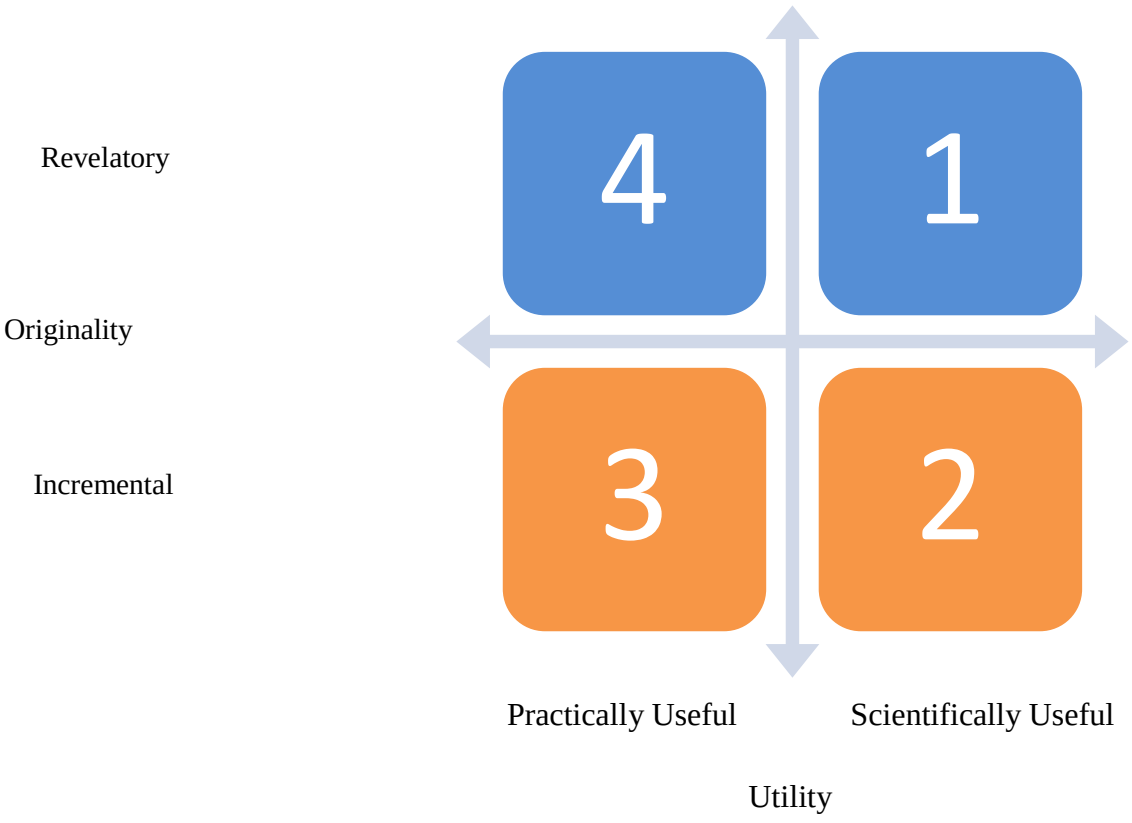
Thus, the purpose of the current research was to test and develop the theory of the influence of customer co-production and customer integration on service quality performance based on Jaworski conceptual framework (Sichtmann et al., 2011). In doing so, this study provided a reliable and validated customer co-production measure for the Arab context. Moreover, this study demonstrated empirical findings that provide further understanding of the relationships between the service environment and formal and informal control, customer co-production, and service quality performance, and tested the hypothesised moderating effect of customer integration, procedural knowledge, performance documentation and organisational commitment. This chapter explains the theoretical, methodological and managerial contributions of the study. Its limitations are discussed, future research directions, and recommendations are suggested, and brief concluding remarks offered.

8.2 Theoretical Contribution

In terms of theoretical contributions, this research advances knowledge in regard to customer co-production, the impact of customer co-production on service quality performance, antecedents in the organisation environment, and the impact of formal and informal controls, theory adding to control, theory social exchange and customer co-production and service quality literatures. This study provides a contribution to theoretical knowledge in terms of both originality (revelatory insight) and scientific and practical utility. Also, this study contributes from a managerial (practical utility) perspective. The research makes an incremental contribution to theory based on a gap spotting approach. The strategy of gap spotting is divided into three different sub-strategies: confusion, neglect and new context

spotting. Confusion exists in the literature in terms of the customer participation or co-production, where scholars have failed to arrive at a specific definition, as discussed in Chapter Two. Neglect refers to a gap or under-researched field. This applies to the use of quality control initiatives (QCIs) which has been neglected in the literature and no studies have used the same framework as used in this study. Finally, the research was conducted in a new context; to the best of the authors' knowledge, no such study has previously been done in Saudi Arabia.

Figure 8-1Conceptual model: Dimensions of contribution



8.2.1 Theoretical contribution related to QCIs

This study has developed a framework that explains the role of QCIs in customer co-production and the performance of service quality in the Saudi hotel industry such a conceptual framework has been neglected in service marketing literature. Thus, this research's exploration of phenomena in relation to the Middle Eastern context provides a further stage in the understanding of formal and informal controls across different managerial perspectives and demonstrates conceptual framework with unique traits that differs from previous studies. For example, service quality dimensions were reduced to a smaller number than the original typology, while both formal and informal controls also had fewer

dimensions than the original. Therefore, the result of this study provides incremental contributions to knowledge. Refer to figure 8.1.

8.2.2 Theoretical Contribution: the Development of the Conceptual Framework based on Jaworski's Work

One of the objectives of the current research was to develop a conceptual framework that can examine the relationship between customer co-production and QCIs in the hotel industries in the Saudi Arabia context, and explore how quality control initiatives can control or manage the interactions between employees and customers in participating in the core service by addressing potential causes of failure in the service facilitation, transformation and usage stages. Thus, the current research addressed the questions: To what extent do customer integration and customer co-production affect service quality performance? How do different QCIs formal and informal mechanisms improve service quality performance?

As mentioned and explained in Chapter One, to the best of the researcher's knowledge, these problems in service quality performance and the examination of a quality control initiatives framework in relation to the Saudi hotel industries context, have not been previously investigated. All the previous studies were designed and carried out in non-Arab contexts. The most recent study investigated different types of control to the ones used in the current study; customer co-production and organisation performance (Sichtmann et al., 2011). It showed that co-production positively influenced the performance of the organisation. The original study from which the idea of quality control initiatives came, investigated the impact of different mechanisms of control on job tension and dysfunctional behaviour. It arrived at the conclusion that formal control increases the possibility of creating job tension, whereas the informal control decreases its chances (Jaworski and MacInnis, 1989). Therefore, the QCIs conceptual framework developed in this research offers both revelatory and incremental contributions, and adds to understanding of phenomena and behaviours.

This study integrated different theories into one conceptual framework and reconfirmed the validity and reliability of control measures with four constructs consisting of 29 items, as explained in the previous chapter. Moreover, procedural knowledge was found to influence process control positively, whereas it was not found to influence self or professional control positively in previous research (Jaworski and MacInnis, 1989), although performance documentation was found positively related to use of professional control and self control in the previous study (Jaworski and MacInnis, 1989). These environmental factors were

assumed to be key determinant of the use of different control mechanisms. Thus, this study has further contributed to the literature regarding the controls framework by refocusing again on the environment of control and its impact on different types of control. This study found that procedural knowledge is positively related to self and professional controls. Also, this research proposed 17 items that can measure formal and informal controls. In all these ways, the research differs from the original theory. It is important to mention that the new sub-constructs of formal and informal control can be used or replicated in different contexts. Formal controls were statistically grouped as two dimensions, "process control" and "(Input control) organisation customer–oriented training of service employees". Informal control can be measured by two sub-constructs, "professional control" and "self control", the former being expanded by the addition of one item previously assumed to reflect culture control.

Finally, the current research will enable interested researchers to examine the QCIs framework particularly in the Gulf region context. Moreover, it provides a step towards better understanding of behaviours in the Saudi hotel industry. This will increase the possibility for forthcoming researchers to replicate the proposed QCIs measurement in other Arab contexts which may have different managerial perspectives from those reflected in this thesis. The study's results in relation to the environment and formal and informal controls are a first step towards theoretically and practically understanding such influential behaviour of employees on the job and setting directions for further research on Arab and Middle East marketing and examining exactly how different cultures influence the QCIs.

8.2.3 Understanding the relationship between Environment and Controls

Another original (revelatory) contribution in relation to environment control was achieved based on the literature related to the impact of environment at factors on formal and informal controls; such a relationship was found different from previous studies (Jaworski and MacInnis, 1989; Jaworski et al., 1993). This relationship was based on the fact that the environment was regarded as one of the antecedents of formal and informal controls (Jaworski, 1988). Consequently, procedural knowledge was found to have strong positive influence on informal control and a less positive impact on formal control in the context concerned, and performance documentation was found to have strong positive influence on both formal and informal controls. This conclusion is a new direction in considering the environmental drivers of controls as an element to influence employees' behaviour by controlling the QCIs.

The finding that procedural knowledge is not significant for formal control may be because employees already know what they have to do, but it is still positive. Procedural knowledge was found to have more positive influence on informal control perhaps, because employees have less information regarding the performance of the job and any information that might help them to behave towards the task is needed, or maybe it is because, when they have good PK, they are able to cooperate to maintain consistent standards. Performance documentation was found to have a strong positive influence on both formal and informal control. This might because employees like to have evidence of their achievements. Also, their performance can be adequately measured or assessed by the existing documents.

Subsequently, this study further contributes to the literature regarding a new understanding of management by setting the ground for future research to investigate empirically the impact of organisational culture on QCIs and different characteristics, environments or antecedents. Such an exploration is recommended by this thesis and previous studies (Sichtmann et al., 2011) in order to improve the understanding of the management perspective.

8.2.4 Theoretical Contribution Related to Customer Co-production and Service Quality Literature

One of the key elements of this thesis is the concern to find a better practice or tools in order to improve service quality performance. Therefore, it is very important to provide a better understanding of the influential role that customer co-production may play in relation to service quality performance, as can be seen from the aim of this study and the related objectives and questions (Refer to Chapter One). Some previous studies have investigated the influential role of customer co-production on financial performance/organisation performance (Sichtmann et al., 2011; Moeller, 2008; Flynn et al., 2010). Also, some support the idea that the customer as a part of the core service could improve the service, which would lead to customer satisfaction (Jiménez et al., 2013; Troye and Supphellen, 2012). However, there has been a lack of empirical study of the influence of customer co-production on service quality performance. No other studies have investigated the impact of customer co-production on service quality performance, empirically within a marketing context such as the QCIs conceptual framework. Thus, this thesis is the first to investigate the impact of customer co-production on service quality performance. Furthermore, this thesis has contributed by

cultivating the literature customer co-production and service quality, as one of the very rarely studies that have done so.

With regard to the above claimed contribution, it was observed that customer co-production has a statistically positive and significant influence on service quality performance. This finding was expected according to the previous studies of the impact of customer co-production. However, an unexpected finding was observed regarding the dimensions of the service quality construct; according to SERVPERF there are five dimensions Tangibles, Responsiveness, Assurance, Reliability and Empathy, each measured with its own items. In the findings of this study, the dimensions of service quality were reduced to two dimensions; thus, this study indicates that service quality performance can be measured in the Saudi hotels by two different dimensions which can be named physical products and service experience; all the items load on one or other service of these dimensions. This may be because of the nature of the Saudi hotel context or the nature of the original background of the conceptual framework used in this study. Consequently, the research makes an original contribution related to the dimensionality of service quality performance and provides a base for future research towards understanding the behaviour and the nature of services and interactions between employees and customers in the hotels industry.

8.3 Managerial and Practical Implications

This thesis has drawn the attention of practitioners and managers to the importance of the QCIs as drivers in an organisational context with their ability to impact employees' environment, work states and their ultimate behaviours. In particular, quality control initiatives seem to have a key role in minimizing the failure that might occur in performing the job or task. These controls, whether formal or informal mechanisms, are shaped by task characteristics. The findings on the drivers of environment control can be a source of reference for employees. The findings suggested that both types of control are positively influenced by the task characteristics, but it depends on the level of affectivity. It can be understood that task characteristics can shape the employees' behaviours in performing the job or achieving goals (internal influence and service delivery). Therefore, these findings are not only important to service managers; but also relevant to their employers and trainers.

A service manager who intends to try to reduce the reliance on informal control should apply formal control, but should also be wary that formal control could in fact reduce employees'

performance. Thus, while service managers can demand to clarify their strategy of expectation of what is expected of the output of employees in order to reduce employees' pressure, they should monitor with an attitude of helping, not in the sense of watching for mistakes, and they should also provide feedback to employees on what they have achieved and what they have not, paying attention to encouraging them. Relying on formal control does not mean that managers can not apply informal control; they actually could if the criteria of formal control are not available e.g. training programme, feedback, information on performing the job and intervention of the managers or supervisors.

This study also demonstrates a more comprehensive model of the process by which employee behaviours are driven, which might fundamentally give managers a clue as to how their own behaviour may impact various aspects of employee performance and satisfaction. For example, a service manager always aspires to produce better outcomes which can be achieved by setting clear goals and creating a support network for the employees. This will lead to the target to which most service managers aspire, effective interaction between employees and customers. In an Islamic context, the behaviours identified in this study as linked to enhanced service quality performance can be encouraged and embedded by invoking the Islamic values described in Chapter One. Manager behaviour conducive can be encouraged by invoking the model of the Prophet's leadership style, whereby direction and guidance on behaviour were balanced with openness and encouragement of participation (Abbas, 2005). Moreover, employees can be trained and encouraged to adopt a service ethic underpinned by traditional Islamic values of discipline. commitment to work, and co-operation and consultation, in a spirit of kindness and justice, in relationship with customers.

The findings found that customer co-production has a positive influence on service quality performance. Hence, service managers should inform customers where, when and how they should contribute to the service process. The current study confirms suggestions in the service marketing literature that the participation or co-production of customers in the particular and provision of services should be associated with behaviours. It is clear that co-production has benefits for managers from a process perspective, as seen in the following example. Consider managers are interested in offering customers the opportunity to co-produce a service delivery through tactile input. Managers should by now realise that one of the drivers that improve service quality performance is co-production. This is in line with theory that co-production improves the performance the service and would lead to the

satisfaction of the customers at the end. This research indicates the importance of behaviour and how it can shape the process and improve the outcomes of the service. Managers should pay attention to their employees in terms of communication, emotion and encouragement in the same job. This study confirms that neglect of these things can make a big difference in the consequences of delivering the services. All those managerial skills are reflected in the way employees treat their own customers; hence the customer co-production would be higher, and the service performance would be high.

8.4 Study Summary

This research has revealed unique findings related to QCIs, customer co-production and service quality performance. Furthermore, this study has highlighted the complex nature of drivers of service employees' behaviours. Many different constructs have been involved in this comprehensive conceptual framework to influence this complicated process. Variables that seem to have a positive influence are formal and informal controls and customer co-production. Moderating effects can be considered as a negative influence, and they are customer integration and procedural knowledge.

8.5 Study Limitations

As limitations are in the nature of any research, it is wise to consider the limitations of the work. There are two fields in which limitations can be identified: conceptual and methodological. Each of these will now be discussed in turn.

8.5.1 Conceptual Limitations

The logic of social science studies always draws attention to the issue of what variables should or could have been involved in the study. This research is no exception, and the number of possible variables is endless, given the deep history of research into organisational psychology and employee behaviours.

From the first thought after looking at this study, many of the hypotheses linking constructs together in this study are significant. Nevertheless, this is not overly surprising, given that there are plenty of constructs (in addition to attitudes) that can forecast behaviour. For instance, social norms, habits and personality characteristics might also influence behaviour as well as time, skills and cooperation of others (Hartnell et al., 2011).

Many other variables could also have been included in the conceptual framework as consequences of individual effects such as role perceptions, behavioural, performance and psychological. Furthermore, finance has arisen in the literature as a variable that might need more work for its influence to be better understood (Jaworski, 1988). Self reported measures might be supplemented with objective measures; for instance, actual hotel sales could be included as a variable in order to measure the hotel performance, if the data is available (Bolton, 2004).

In the present study, moderating variables were included for more information and guidance on the role of interactions between employees and customers, and integrating resources and plans in the process of delivering services. For instance, procedural knowledge represents the body of knowledge that employees need in performing the job, while customer integration concerns integrating the resources and sharing plans with customers. As often occurs in research, however, there is a difference between model comprehensiveness and parsimony, which allows for highlighting of future variables for consideration.

Regarding the variables that could have been investigated in the study, environment controls could have been expanded to include other variables such as the macro environment; uncertainty and dynamism, operating environment and competitive intensity, and in the internal environment, market dominance, size of marketing unit and nature of marketing position, in order to test the antecedents of the controls. On the other hand, organisation commitment could have been investigated in relation to the three dimensions affective, normative and continue commitment. Job satisfaction either as a single construct or in terms of possible dimensions, such as satisfaction with supervision, co-workers, work, pay and opportunity could be investigated to see how they might be impacted by controls, or influence employee behaviours. Regarding the effect of managers' and employees' behaviour, this study only considered service quality performance. There could be possibilities to investigate the quality of the individual performance.

The logical response to the missing constructs is that it is very difficult to try to include every possible variable in a given conceptual framework, due to the imposed time, funding and other resources restrictions. A researcher has to balance collecting data with the costs and time of gathering the information. Also, the length of the questionnaire might affect the rate of responses. Nevertheless, regardless of the response rate, the length of a questionnaire has

an adverse impact on overall research costs and efforts and also can impact the time needed to collect the data. Hence, although the number of possible constructs that could have been included in the model is essentially endless, at some point a decision must be made in terms of which variables are most potentially useful to include, and which constructs should be directed to future research.

8.5.2 Methodological Limitations

In addition to the above-mentioned conceptual limitations, number of methodological limitations apply in this study. Some are cultural concerns such as the small number of female respondents due to the small number of female employees in traditionally male fields in Saudi Arabia, while others are only now starting to increase prominence in the literature. Hence, it is appropriate to acknowledge the limitations in this research for other researchers' awareness.

- First, as all the measures used in this study had been developed and validated elsewhere in the literature, a quantitative approach was appropriate and justified. Nevertheless, Bryman (2004) and Conger (1998) have said that in order to fully understand the complexities involved in studying behaviours, a qualitative focus is equally appropriate.
- Second, there were limitations regarding the sample of this study. Ideally, the sample used in this research would have been larger, so any of the findings shown here, and indeed the recommendations based upon those findings, should be interpreted or viewed with full attention and caution. It is important to note as part of this discussion that some of the findings attained in this thesis were counter-intuitive, whereby suggested relationships were found to be inversely related, although they were still significant. These findings may be because of a lack of statistical power due to a smaller sample size.
- The sample was limited to one industry. A large number of respondents could also have been gained from outside of the Kingdom of Saudi Arabia's hotel industry. Although applying research in one particular industry can help to minimize the potential extraneous and confusing effects (Bell and Menguc, 2002), it is obviously, a limiting factor with regards to the generalisability of the findings.
- Furthermore, the manager sample was of Saudi Arabia hotel middle managerial staff, who may be not be required to perform the full range of hotel activities investigated,

which could distort the findings. In other words the people who responded to the questionnaire may bias the findings in that they may be people who are more likely to perform the investigated employee behaviours in their jobs, or they may have more inclination towards participating in surveys. Regarding sample bias in relation to the gender of respondents, the majority of research conducted in Saudi Arabia whether in the hospitality industry or elsewhere, reports that more than 50 per cent of their respondents are male, so the present sample is in line with previous studies.

- The logic of the inter-relationships between variables should also be highlighted. A cross-sectional design was applied in this thesis, effectively measuring all constructs at a single point in time. As such it is not easy to investigate which constructs make changes in other variables, since constructs should be measured at a minimum of two different periods of time for that. Consequently, any causal ordering between constructs is based on the conceptual framework and theoretical background from the literature.
- Moreover, there might be some potential issues of measurement alignment given that all data was collected from a single category of respondents (i.e. only employees were asked to fill out the questionnaire). There is a possibility of common method bias occurring (Podsakoff et al., 2003). Although measures were taken to reduce the possible effect of bias in the research (e.g. the order of items was mixed up in the questionnaire) it is difficult to eliminate the potential of bias altogether. Another technique that can be used in trying to reduce or manage bias is the inclusion of scales to measure bias (e.g. social desirability bias, positive or negative affectivity). Nevertheless, the technique of including such scales would have made the questionnaire longer, which would certainly have reduced the overall response rate.
- Another way to further reduce bias is to collect data from more than one type of respondent (Luo et al., 2007). For instance, senior managers and supervisors could provide their perceptions of co-production and employee behaviours. As a further reliability check, some of the participants could have been given another chance to fill out the questionnaires after returning the first ones (test-retest). Nevertheless, anonymity of participants, limited time and resources made this difficult. In addition, it is possible to reduce bias by involving multiple measures for every single variable; afterwards they can be compared to evaluate the validity of the measure. However,

doing so in the present research would put the response rate at risk, as it would considerably lengthen the questionnaires.

8.6 Future Research Directions

By looking at the limitations of this thesis, a number of areas can be identified to be considered in further studies related to marketing, management or consumer behaviour. Certainly, reviewing the conceptual limitations section above, it is possible immediately to spot a number of notions. First, there is an opportunity to investigate many other potential antecedent constructs in the conceptual framework (e.g. organisational commitment, operating environment and internal environment). Second, organisation commitment can be investigated in more details by examining the three components; affective, normative and continue commitment. The directionality of the relationship between organisation commitment and controls would also be worthy of investigation given the contrasting theories proposed by previous researchers. Thirdly, the size of organisation may influence control, so it would be interesting to compare small and large size organisations (Sichtmann et al., 2011).

A potentially interesting topic outside the scope of the current study is the possible relationship between use of QCIs, employees' job satisfaction and service quality performance, specifically the possibility that job satisfaction (shown by Jaworski and MacInnis, 1989, to be linked to control) may be a moderator between QCIs and SQP. The present study measured service quality performance purely from a provider-side perspective while, as noted in Chapter Two, previous research focused on quality as perceived by customers. Although managerial perceptions of quality of service are most likely influenced by customer feedback, researchers should attempt to clearly consider both provider and customer's side by adopting a dyadic research design. This is especially important given the evidence that service quality results from the interaction between providers and customers, and the integration of customer resource. Furthermore, although there is an emerging stream of literature on customer co-production and customer integration (Moeller, 2008; Jiménez et al., 2013), there is no established scale to measure these constructs in empirical works. Hence, future research should develop multi-item scales for these significant variables. Another issue to be addressed is that the effectiveness of QCIs may vary across cultures. Hence, a future investigation could use culture as a moderating variable between customer co-production and service quality performance.

The model of this thesis used only internal control constructs. Future research should also take into account external control constructs, such as psychic distance between service provider and hotel customers, and the intercultural capability of both service provider and customers (Sharma et al., 2009a). It would also be invaluable to attempt to replicate the present research in different industries and different contexts to find out whether the relationships and the findings are similar to or different from those of the current study. Medical care services, estate agents, personal bank services or insurance companies could be potential contexts.

8.7 Concluding Remarks

This research is the first to investigate the impact of customer integration and customer co-production on service quality performance by using a QCIs framework. A key outcome is that QCIs improve the service quality performance as well as the behaviours of employees. Furthermore, this study has highlighted the importance of the participation of customers in the core services. Also, it has drawn attention to social exchange theory and how it can affect the behaviours of employees towards the interactions between the providers and customers. This research has discovered new items for measuring the actual service quality in the hospitality industry and particularly in the Middle East context (Saudi Arabia), and it produced a unique finding regarding the dimensionality of SERVPERF by highlighting the importance of the physical products and service experience in shaping perceptions of quality of service. Implications have been discussed which, it is hoped, will contribute to the improvement and development of the hospitality sectors in Saudi Arabia in a time of change and challenge, and this work will provide a springboard for further research efforts in the areas of service marketing and organisational behaviour.

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Appendix A

Table of Missing Data Procedure Findings Based on Frequency Distribution

Items	N	Missing	
		Count	Percent
PK_1	398	0	.0
PK_2	398	0	.0
PD_1	398	0	.0
PD_2	398	0	.0
OC_1	398	0	.0
OC_2	398	0	.0
OC_3	398	0	.0
OC_4	398	0	.0
OC_5	398	0	.0
OC_6	398	0	.0
OC_7	398	0	.0
OC_8	398	0	.0
OC_9	398	0	.0
ECOT_1	398	0	.0
ECOT_2	398	0	.0
ECOT_3	398	0	.0
ECOT_4	398	0	.0
PSC_1	398	0	.0
PSC_2	398	0	.0
PSC_3	398	0	.0
PSC_4	398	0	.0
OPC_1	398	0	.0
OPC_2	398	0	.0
OPC_3	398	0	.0
OPC_4	398	0	.0
OPC_5	398	0	.0
SC_1	398	0	.0
SC_2	398	0	.0
SC_3	398	0	.0
PC_1	398	0	.0
PC_2	398	0	.0
PC_3	398	0	.0
PC_4	398	0	.0
PC_5	398	0	.0
CC_1	398	0	.0
CC_2	398	0	.0
JS_P1	398	0	.0
JS_P2	398	0	.0
JS_P3	398	0	.0

JS_O1	398	0	.0
JS_O2	398	0	.0
JS_O3	398	0	.0
JS_W1	398	0	.0
JS_W2	398	0	.0
JS_W3	398	0	.0
JS_R1	398	0	.0
JS_R2	398	0	.0
JS_R3	398	0	.0
JS_R4	398	0	.0
JS_S1	398	0	.0
JS_S2	398	0	.0
JS_S3	398	0	.0
JS_S4	398	0	.0
JS_C1	398	0	.0
JS_C2	398	0	.0
JS_C3	398	0	.0
CCP_1	398	0	.0
CCP_2	398	0	.0
CCP_3	398	0	.0
CI_1	398	0	.0
CI_2	398	0	.0
CI_3	398	0	.0
CI_4	398	0	.0
SQP_TA1	398	0	.0
SQP_TA2	398	0	.0
SQP_TA3	398	0	.0
SQP_TA4	398	0	.0
SQP_TA5	398	0	.0
SQP_TA6	398	0	.0
SQP_RE1	398	0	.0
SQP_RE2	398	0	.0
SQP_RE3	398	0	.0
SQP_RS1	398	0	.0
SQP_RS2	398	0	.0
SQP_AS1	398	0	.0
SQP_AS2	398	0	.0
SQP_AS3	398	0	.0
SQP_AS4	398	0	.0
SQP_AS5	398	0	.0
SQP_EM1	398	0	.0
SQP_EM2	398	0	.0
SQP_EM3	398	0	.0

SQP_EM4	398	0	.0
SQP_EM5	398	0	.0
SQP_EM6	398	0	.0

Appendix B

Tables of Discriminant Validity between Variables

Constructs SQP&PK	Unconstrained Model	Constrained Model	Differences
Chi-square	252.661	331.765	79.104
DF	101	102	1

Constructs SQP&PD	Unconstrained Model	Constrained Model	Differences
Chi-square	270.843	318.801	47.958
DF	101	102	1

Constructs SQP&JS	Unconstrained Model	Constrained Model	Differences
Chi-square	757.535	804.418	46.883
DF	318	319	1

Constructs SQP&Informal	Unconstrained Model	Constrained Model	Differences
Chi-square	692.772	748.3	55.578
DF	319	320	1

Constructs SQP&Formal	Unconstrained Model	Constrained Model	Differences
Chi-square	455.6	508.8	53.2
DF	204	205	1

Constructs SQP&CCP	Unconstrained Model	Constrained Model	Differences
Chi-square	297.860	369.461	71.601
DF	204	205	1

Constructs PK&PD	Unconstrained Model	Constrained Model	Differences
Chi-square	8.534	40.321	31.787
DF	1	2	1

Constructs PK&JS	Unconstrained Model	Constrained Model	Differences
Chi-square	284.845	327.475	42.63
DF	86	87	1

Constructs PK&Informal	Unconstrained Model	Constrained Model	Differences
Chi-square	61.784	110.382	48.598
DF	32	33	1

Constructs PK&Formal	Unconstrained Model	Constrained Model	Differences
Chi-square	262.478	330.462	67.984
DF	87	88	1

Constructs PK&CCP	Unconstrained Model	Constrained Model	Differences
Chi-square	14.861	95.239	80.378
DF	4	5	1

Constructs PD&JS	Unconstrained Model	Constrained Model	Differences
Chi-square	270.254	312.373	42.119
DF	86	87	1

Constructs PD&Informal	Unconstrained Model	Constrained Model	Differences
Chi-square	90.008	134.064	44.056
DF	32	33	1

Constructs PD&Formal	Unconstrained Model	Constrained Model	Differences
Chi-square	262.800	317.559	54.759
DF	87	88	1

Constructs PD&CCP	Unconstrained Model	Constrained Model	Differences
Chi-square	26.537	88.059	53.522
DF	4	5	1

Constructs JS&Informal	Unconstrained Model	Constrained Model	Differences
Chi-square	470.921	505.327	34.406
DF	183	184	1

Constructs JS&Formal	Unconstrained Model	Constrained Model	Differences
Chi-square	792.038	826.5	34.462
DF	293	294	1

Constructs JS&CCP	Unconstrained Model	Constrained Model	Differences
Chi-square	307.707	376.187	68.48
DF	100	101	1

Constructs Informal&Formal	Unconstrained Model	Constrained Model	Differences
Chi-square	556.8	601.3	44.5
DF	184	185	1

Constructs Informal&CCP	Unconstrained Model	Constrained Model	Differences
Chi-square	97.180	173.230	76.05
DF	41	42	1

Constructs Formal&CCP	Unconstrained Model	Constrained Model	Differences
Chi-square	275.706	364.569	88.863
DF	101	102	1

Appendix C

Tables of Frequencies of the Data and EFA& CFA of the Variables

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	349	87.7	87.7	87.7
	female	49	12.3	12.3	100.0
	Total	398	100.0	100.0	

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	65	16.3	16.3	16.3
	26-35	185	46.5	46.5	62.8
	36-45	107	26.9	26.9	89.7
	46-55	36	9.0	9.0	98.7
	55 and above	5	1.3	1.3	100.0
	Total	398	100.0	100.0	

KMO and Bartlett's Test[a]

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.961
Bartlett's Test of Sphericity	Approx. Chi-Square	12010.015
	df	1378
	Sig.	.000

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.500
Bartlett's Test of Sphericity	Approx. Chi-Square	84.332
	df	1
	Sig.	.000

Communalities

	Initial	Extraction
PK_1	1.000	.719
PK_2	1.000	.719

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.438	71.911	71.911	1.438	71.911	71.911
2	.562	28.089	100.000			

Extraction Method: Principal Component Analysis.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.500
Bartlett's Test of Sphericity	Approx. Chi-Square	107.327
	df	1
	Sig.	.000

Communalities

	Initial	Extraction
PD_1	1.000	.744
PD_2	1.000	.744

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.488	74.376	74.376	1.488	74.376	74.376
2	.512	25.624	100.000			

Extraction Method: Principal Component Analysis.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.923
Bartlett's Test of Sphericity	Approx. Chi-Square	2408.406
	df	78
	Sig.	.000

Communalities

	Initial	Extraction
ECOT_1	1.000	.635
ECOT_2	1.000	.631
ECOT_3	1.000	.669
ECOT_4	1.000	.542
PSC_1	1.000	.596
PSC_2	1.000	.630
PSC_3	1.000	.592
PSC_4	1.000	.652
OPC_1	1.000	.342
OPC_2	1.000	.638
OPC_3	1.000	.468
OPC_4	1.000	.615
OPC_5	1.000	.487

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total

1	6.233	47.944	47.944	6.233	47.944	47.944	5.902
2	1.195	9.190	57.134	1.195	9.190	57.134	4.348
3	.837	6.435	63.569				
4	.768	5.908	69.477				
5	.595	4.578	74.055				
6	.573	4.408	78.463				
7	.512	3.939	82.402				
8	.501	3.856	86.258				
9	.474	3.648	89.906				
10	.419	3.225	93.131				
11	.345	2.652	95.783				
12	.298	2.290	98.073				
13	.250	1.927	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Component Correlation Matrix

Component	1	2
1	1.000	.608
2	.608	1.000

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.894
Bartlett's Test of Sphericity	Approx. Chi-Square	1163.294
	df	28
	Sig.	.000

Communalities

	Initial	Extraction
SC_1	1.000	.580
SC_2	1.000	.685
SC_3	1.000	.585
PC_1	1.000	.712
PC_2	1.000	.558

PC_4	1.000	.624
CC_2	1.000	.622
PC_5	1.000	.668

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4.029	50.366	50.366	4.029	50.366	50.366	3.687
2	1.005	12.568	62.934	1.005	12.568	62.934	2.965
3	.673	8.412	71.346				
4	.552	6.903	78.249				
5	.494	6.174	84.424				
6	.478	5.970	90.394				
7	.419	5.238	95.632				
8	.349	4.368	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Component Correlation Matrix

Component	1	2
1	1.000	.559
2	.559	1.000

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.845
Bartlett's Test of Sphericity	Approx. Chi-Square	1006.711
	df	21
	Sig.	.000

Communalities

	Initial	Extraction
JS_O2	1.000	.650
JS_W1	1.000	.681
JS_R1	1.000	.737
JS_R2	1.000	.779
JS_S1	1.000	.709
JS_S2	1.000	.639
JS_C2	1.000	.661

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3.682	52.598	52.598	3.682	52.598	52.598	3.274
2	1.174	16.776	69.374	1.174	16.776	69.374	2.783
3	.521	7.441	76.815				
4	.491	7.009	83.824				
5	.436	6.225	90.049				
6	.398	5.692	95.741				
7	.298	4.259	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Component Correlation Matrix

Component	1	2
1	1.000	.491
2	.491	1.000

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.630
Bartlett's Test of Sphericity	Approx. Chi-Square	136.895
	df	3
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.702	56.728	56.728	1.702	56.728	56.728
2	.725	24.162	80.890			
3	.573	19.110	100.000			

Extraction Method: Principal Component Analysis.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.696
Bartlett's Test of Sphericity	Approx. Chi-Square	195.532
	df	6
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.938	48.451	48.451	1.938	48.451	48.451
2	.813	20.319	68.770			
3	.681	17.033	85.803			
4	.568	14.197	100.000			

Extraction Method: Principal Component Analysis.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.937
Bartlett's Test of Sphericity	Approx. Chi-Square	2427.501
	df	91
	Sig.	.000

Communalities

	Initial	Extraction
SQP_TA1	1.000	.357
SQP_TA4	1.000	.518
SQP_TA5	1.000	.643
SQP_TA6	1.000	.552
SQP_RE2	1.000	.535
SQP_RE3	1.000	.607
SQP_RS2	1.000	.576
SQP_AS1	1.000	.473
SQP_AS3	1.000	.551
SQP_AS4	1.000	.624
SQP_EM1	1.000	.429
SQP_EM2	1.000	.441
SQP_EM3	1.000	.651
SQP_EM6	1.000	.617

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	6.548	46.775	46.775	6.548	46.775	46.775	5.883
2	1.026	7.328	54.103	1.026	7.328	54.103	5.475
3	.861	6.149	60.252				
4	.770	5.500	65.752				
5	.683	4.882	70.634				
6	.656	4.689	75.323				
7	.579	4.137	79.459				
8	.544	3.888	83.347				
9	.468	3.346	86.693				
10	.441	3.151	89.844				
11	.412	2.945	92.788				
12	.372	2.655	95.443				
13	.323	2.310	97.753				
14	.315	2.247	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Component Correlation Matrix

Component	1	2
1	1.000	.689
2	.689	1.000

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

Reliability Statistics

Cronbach's Alpha	N of Items
.604	2

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PK_1	3.79	.818	.438	.
PK_2	3.78	1.118	.438	.

Reliability Statistics

Cronbach's Alpha	N of Items
.653	2

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
PD_1	3.77	1.100	.488	.
PD_2	3.76	1.372	.488	.

Reliability Statistics

Cronbach's Alpha	N of Items
.856	8

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SC_1	26.60	27.454	.529	.847
SC_2	26.50	27.334	.600	.838
SC_3	26.49	28.422	.446	.856
PC_1	26.74	25.935	.713	.825
PC_2	26.77	26.993	.632	.834
PC_4	26.83	26.260	.650	.832
CC_2	26.69	26.361	.673	.829
PC_5	26.82	27.118	.553	.844

Reliability Statistics

Cronbach's Alpha	N of Items
.907	13

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
ECOT_1	45.02	84.516	.562	.902
ECOT_2	45.07	84.310	.543	.903
ECOT_3	45.12	85.243	.530	.904
ECOT_4	45.27	83.130	.589	.901
PSC_1	45.30	81.421	.694	.897
PSC_2	45.19	81.398	.716	.896
PSC_3	45.39	81.574	.657	.898
PSC_4	45.43	79.369	.730	.895
OPC_1	45.46	84.194	.476	.907
OPC_2	45.33	79.743	.719	.896
OPC_3	45.17	83.086	.603	.901
OPC_4	45.24	81.983	.676	.898
OPC_5	45.58	80.088	.608	.901

Reliability Statistics

Cronbach's Alpha	N of Items
.843	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
JS_R2	22.44	21.109	.629	.817
JS_W1	22.38	21.178	.635	.816
JS_C2	22.07	21.619	.653	.813
JS_S2	22.17	21.826	.631	.816
JS_R1	21.91	22.881	.509	.834
JS_S1	21.97	22.437	.572	.825
JS_O2	22.00	22.350	.556	.828

Reliability Statistics

Cronbach's Alpha	N of Items
.644	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CI_1	10.97	4.929	.469	.543
CI_2	10.77	5.177	.429	.572
CI_3	11.01	5.509	.356	.621
CI_4	10.88	5.019	.442	.563

Reliability Statistics

Cronbach's Alpha	N of Items
.618	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
CCP_1	7.33	2.681	.472	.451
CCP_2	7.42	2.863	.440	.500
CCP_3	7.16	3.203	.372	.593

Reliability Statistics

Cronbach's Alpha	N of Items
.910	14

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SQP_EM3	49.75	84.066	.675	.902
SQP_AS4	49.57	84.069	.677	.902
SQP_RE2	49.82	86.498	.611	.904
SQP_EM1	49.79	88.164	.522	.907
SQP_EM2	49.86	85.997	.565	.906
SQP_AS3	49.83	83.952	.667	.902
SQP_TA1	49.87	84.967	.515	.909
SQP_AS1	49.49	85.842	.615	.904
SQP_TA5	49.97	84.027	.639	.903
SQP_TA6	49.78	85.345	.558	.906
SQP_EM6	50.04	83.941	.653	.903
SQP_TA4	49.92	84.991	.582	.905
SQP_RE3	49.65	83.408	.702	.901
SQP_RS2	49.66	84.744	.687	.902

Appendix D

Questionnaires (Arabic Version)

" تأثير تكامل ومشاركة العميل على أداء خدمة الجودة"

عزيزي المجيب

هذا الاستبيان خاص بدراسة أكاديمية تهدف لقياس جودة أداء الخدمة في قطاع الفنادق في المملكة العربية السعودية ومدى مساهمة العميل في الخدمة المقدمة من الفنادق عن طريق تكامل العميل. هذه الدراسة هي الجزء الأخير من رسالة الدكتوراة في مجال دراسة الأعمال من جامعة هال في المملكة المتحدة ,سوف أكون سعيدا إذا قمت بتعبئة هذا البحث الذي لن يستغرق أكثر من بضع دقائق وفقا لرأيك بصراحة جميع المعلومات سوف تعامل بسرية تمامة.

في حالة وجود أي استفسار أرجو الإتصال ب:

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أرجو الإشارة لمدى توافقك من العبارات التالية وذلك بإختيار الرقم المناسب **1= أرفض بشدة, 2 = أرفض, 3 = محايد, 4 = أوفق , 5 = أوافق بشدة**					
يقوم الفندق بتقييم أدائي بعد الانتهاء من أداء مهامي.	①	②	③	④	⑤
أنا على استعداد لمضاعفة جهدي بشكل أكثر من المتوقع للمساهمة في نجاح الفندق.	①	②	③	④	⑤
يوجد لدينا قاعدة معلومات تهدف لمساعدتي أو توجيهي لأداء عملي.	①	②	③	④	⑤
لا أمانع لقبول أي عمل إضافي للحفاظ على وظيفتي في هذا الفندق.	①	②	③	④	⑤
من الممكن الاعتماد على الإجراءات الموجودة في الفندق لتحقيق مخرجات العمل.	①	②	③	④	⑤
يعتبر الفندق مصدر إلهامي لأظهار أفضل ما لدي في طريقة أدائي للوظيفة.	①	②	③	④	⑤
أشعر بأني استحق الافتخار أو الملامة بالنتائج التي حققتها من خلال أدائي لعملي.	①	②	③	④	⑤
الفندق يدمج المصادر أو الموارد مع مصادر موارد العملاء.	①	②	③	④	⑤

بيئة العمل تشجع المتخصصين في مجال التسويق على شعورهم بأنهم جزء من القسم.	①	②	③	④	⑤
نحن نخبر العميل عن أي إضافة أو مصادر يجب عليه تزويدها في عملية تبادل الخدمة.	①	②	③	④	⑤
يتم تقيم أدائي بصورة كافية باستخدام نماذج التقييم الوظيفي الموجودة.	①	②	③	④	⑤
الموظفين في هذا الفندق هم دائم على استعداد تام لمساعدة العملاء.	①	②	③	④	⑤
أرجو الإشارة لمدى توافقك من العبارات التالية وذلك بإختيار الرقم المناسب **1= أرفض بشدة, 2 = أرفض, 3 = محايد, 4 = أوفق , 5 = أوافق بشدة**					
أجد بأن مبادئي ومبادئ هذا الفندق متشابهه.	①	②	③	④	⑤
نحن نشجع تدريب الموظفين لتقديم الخدمة في هذا الفندق.	①	②	③	④	⑤
جزء كبير من سعادتي في حياتي تأتي من عملي.	①	②	③	④	⑤
يشارك الفندق المعلومات والبيانات مع العملاء في عملية تقديم الخدمة.	①	②	③	④	⑤
موظفين تقديم الخدمة يحصلون على دعم كافي لتأدية عملهم في هذا الفندق.	①	②	③	④	⑤
عند مشاهدتي لفيلم بسهولة أندمج مع الفيلم.	①	②	③	④	⑤
هذا الفندق يعطي انتباه فردياً أو شخصياً للعملاء.	①	②	③	④	⑤
الفندق يشارك خطط الخدمة مع العملاء.	①	②	③	④	⑤
نحن نخبر عملائنا للمشاركة في عملية تقديم الخدمة.	①	②	③	④	⑤
العمل الذي أقوم به في هذه الوظيفة يعني لي الكثير.	①	②	③	④	⑤
موظفين تقديم الخدمة هم على دراية مسبقآ بأن خدمة العملاء تحضى بدرجة كبيرة من الأهمية والأولوية.	①	②	③	④	⑤
أنا مسرور إلى حد كبير لاختياري هذا الفندق للعمل فيه من بين الفنادق الأخرى.	①	②	③	④	⑤
نحن نخبر عملاء الفندق متى وأين يجب عليهم المشاركة في عملية تبادل الخدمة.	①	②	③	④	⑤
جودة خدماتنا تعتمد بشكل كبير على المشاركة المقدمة من العملاء.	①	②	③	④	⑤
نحن نخبر موظفي تقديم الخدمة بالتصرف وفقآ لاحتياجات عملاء الفندق.	①	②	③	④	⑤
أنا أتحدث عن هذا الفندق لأصدقائي كفندق رفيع المستوى للعمل فيه.	①	②	③	④	⑤

هذا الفندق يقدم عروض ترويجية خاصة.	①	②	③	④	⑤
موظفين هذا الفندق هم على علم باحتياجات العملاء.	①	②	③	④	⑤
هذا الفندق يقدم قيمة جيدة تتناسب مع مستوى الأسعار.	①	②	③	④	⑤
هذا الفندق يقدم مميزات إضافية وأنشطة على سبيل المثال نادي رياضي.	①	②	③	④	⑤
نحن ندعم موظفي تقديم الخدمة بأجهزة اتصالات وتقنية معلومات متطورة.	①	②	③	④	⑤
أنا فخور بكوني جزء من هذا الفندق.	①	②	③	④	⑤
هذا الفندق موقعه مناسب.	①	②	③	④	⑤
أرجو الإشارة لمدى توافقك من العبارات التالية وذلك بإختيار الرقم المناسب **1= أرفض بشدة, 2 = أرفض, 3 = محايد, 4 = أوفق , 5 = أوافق بشدة**					
هذا الفندق يفي بوعوده في الوقت المحدد عندما يعد بفعل شيء ما.	①	②	③	④	⑤
هذا الفندق ليس لديه اهتمام أفضل من اهتمامه بالعملاء.	①	②	③	④	⑤
انا فعلاً مهتم بمصير هذا الفندق.	①	②	③	④	⑤
موظفي الخدمة يتمتعون بمهارات خاصة.	①	②	③	④	⑤
هذا الفندق يحرص على سرية خصوصية العملاء.	①	②	③	④	⑤
هذا الفندق لدية ساعات عمل مناسبة.	①	②	③	④	⑤
موظفين هذا الفندق قادرون على حل مشكلات العملاء في اسرع وقت ممكن.	①	②	③	④	⑤
دائماً افكر في ماذا يجب عليه فعله.	①	②	③	④	⑤
هذا الفندق لديه إجراءات حجز مناسبة.	①	②	③	④	⑤
الطعام والمرطبات المقدمة في هذا الفندق على مستوى عالي.	①	②	③	④	⑤
بالنسبة لي هذا الفندق أفضل مكان للعمل فيه من كل الاحتمالات الممكنة.	①	②	③	④	⑤
أحلامي كبيرة جداً.	①	②	③	④	⑤
موضة الديكورات الداخلية في هذا الفندق جذابة.	①	②	③	④	⑤
يقدم هذا الفندق معلومات سياحية للنزلاء.	①	②	③	④	⑤
شخصية مقدم الخدمة في الفندق مهذبة.	①	②	③	④	⑤

يتميز هذا الفندق بأجهزة حديثة.	①	②	③	④	⑤
يقدم هذا الفندق مواقف سيارات مناسبة.	①	②	③	④	⑤
يقدم هذا الفندق حماية لخصوصية العميل.	①	②	③	④	⑤
بيئة العمل تشجع المتخصصين في مجال التسويق على الشعور بالفخر في عملهم.	①	②	③	④	⑤

أرجو الإشارة لمدى توافقك من العبارات التالية وذلك بإختيار الرقم المناسب **1= أبدآ, 2 = نادرآ, 3 = أحياناً, 4 = أغلب الأوقات, 5 = دائماً**					
القسم يعزز بيئة عمل حيث المتخصصين في مجال التسويق يحترمون عمل بعضهم البعض.	①	②	③	④	⑤
مديري المباشر يقوم بتعديل الإجراءات الخاصه بي عندما لا يتم الحصول على النتائج المرجوة.	①	②	③	④	⑤
إذا لم أحقق النتائج المرجوه يجب علي شرح المسببات لذلك.	①	②	③	④	⑤
أغلب المتخصصين في مجال التسويق على دراية بدرجة إنتاجية بعضهم البعض.	①	②	③	④	⑤
أتلقى ملاحظات من مديري المباشر عن مدى إنجازي للأهداف المرجوة.	①	②	③	④	⑤
مديري المباشر يقيم الإجراءات التي استخدمها في إنجاز المهام المكلفة.	①	②	③	④	⑤
القسم يشجع المناقشة المتعلقة بالوظيفة بين المتخصصين في مجال التسويق.	①	②	③	④	⑤
أهداف أدائي لوظيفتي محددة.	①	②	③	④	⑤
القسم يشجع التعاون بين المتخصصين في مجال التسويق.	①	②	③	④	⑤
مديري المباشر يراقب إلى أي مدى أنا متوافق مع الإجراءات المنصوص عليها.	①	②	③	④	⑤
زيادة راتبي تعتمد على كيفية أدائي مقارنةً مع أهدافي.	①	②	③	④	⑤
أتلقى ملاحظات عن كيفية أداء أهدافي.	①	②	③	④	⑤
مديري المباشر يراقب إلى أي مدى تم تحقيق أداء أهدافي.	①	②	③	④	⑤
معظم المتخصصين في مجال التسويق قادرون على تقديم تقييم دقيق لعمل كل منهم.	①	②	③	④	⑤

أرجو الإشارة لمدى توافقك من العبارات التالية وذلك بإختيار الرقم المناسب 1= لست راضي بشدة, 2 = لست راضي, 3 = محايد, 4 = راضي, 5 = راضي بشدة					
مدى ما يدفع لي مقابل مشاركتي.	①	②	③	④	⑤
الفرصة في وظيفتي لتحقيق التميز في عملي.	①	②	③	④	⑤
سلوك زملاء العمل تجاهي.	①	②	③	④	⑤
طبيعة مشرفي المباشر من حيث التعاطف.	①	②	③	④	⑤
فرصتي للعمل مع أناس أفضل العمل معهم في وظيفتي.	①	②	③	④	⑤
مدى دعم زملائي لي.	①	②	③	④	⑤
أرجو الإشارة لمدى توافقك من العبارات التالية وذلك بإختيار الرقم المناسب 1= لست راضي بشدة, 2 = لست راضي, 3 = محايد, 4 = راضي, 5 = راضي بشدة					
طريقة مساعدة مشرفي للتحقيق الأهداف.	①	②	③	④	⑤
فرص الترقيات المستقبلية في عملي.	①	②	③	④	⑤
مبلغ التعويض الذي أتلقاه.	①	②	③	④	⑤
الكفاءة التقنية لمشرفي المباشر.	①	②	③	④	⑤
نوع خطط المنافع الذي يتناسب في خططي الوظيفية.	①	②	③	④	⑤
فرص إكتساب مهارات عالية.	①	②	③	④	⑤
سياسات (أنظمة) العمل في وظيفتي.	①	②	③	④	⑤
قدرة المشرف على إرشادي وزملائي.	①	②	③	④	⑤
طبيعة العمل الذي أقوم به في وظيفتي.	①	②	③	④	⑤
نوع سياسات/الممارسات التي تحكم عملي.	①	②	③	④	⑤
مقدار التقدير/الإحترام الذي أحصل عليه مقابل عملي.	①	②	③	④	⑤
الإحترام الذي أحصل عليه لعملي.	①	②	③	④	⑤
المدى الذي يتم فيه تقديري والاعتراف بعملي.	①	②	③	④	⑤
الدرجة التي يعتبر عملي مهم للشركة.	①	②	③	④	⑤

لوجود اي ملاحظة او تعليق يرجى تعبئتة في الفراغ الادنى:

- **الجنس:**

□ **ذكر** □ **أنثى**

- **العمر:**

□ **18-25 سنة** □ **26 إلى 35** □**36 إلى 45** □**46 إلى 55** □**49 الى 50** □ **55 او اكثر**

- **الحالة الإجتماعية:**

□ **أعزب** □ **متزوج**

- **الجنسية:**

□ **سعودي** □ **غير سعودي** □ **أخرى** □ **حدد.....**

- **المنصب:**

□مدير إدارة □مدير □ رئيس قسم □مشرف □موظف

- **تصنيف الفندق الذي تعمل فيه:**

□5 □4 □3 □2 □ 1

- **المدينه:**

□ **الرياض** □**مكه** □**جده** □ **الدمام** □**الخبر** □ **اخرئ** □ **حدد .....**

- **التحصيل العملي:**

□ **دبلوم عالي** □**بكالوريوس** □**ماجستير** □ **دكتوراه**

شكرا لوقتك الثمين

Questionnaires (English Version)

"The impact of customer integration and customer co-production on service quality performance"

Dear Respondents

This questionnaire is for academic study. The intention of this survey is to measure quality of service performance in the Saudi hotel s industry and how customers contribute to the service that provide by the hotel through customer integration. The survey is the final part of my dissertation for the award of a PhD degree in Business Management from the University of Hull. United Kingdom.

I would be pleased if you would take a few minutes to complete this survey. According to your honest opinion, this information will be kept confidential, and you will not be identified.

FOR ANY ENQUIRES PLEASE CONTACT ONE OF THE FOLLOWING:

Mr. Zyad Mishaal Alzaydi
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University of Hull
Tel: + 44 (0)7794444101
K.S.A Tel:+ 966 (0)551184422
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Marketing Chair
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Please indicate to the extent to which you agree with following statement by ticking the most appropriate number: 1= Strongly disagree, 2= Disagree, 3=Neutral, 4= Agree, 5= Strongly agree					
Documents exist to measure my performance after activities are complete.	①	②	③	④	⑤
I am willing to put in a great deal of effort beyond that normally expected in order to help this hotel be successful.	①	②	③	④	⑤
There exists a clearly defined body of knowledge or subject matter that can guide me in doing my work.	①	②	③	④	⑤
I would accept almost any type of job assignment in order to keep working for this hotel.	①	②	③	④	⑤

It is possible to rely upon existing procedures.	①	②	③	④	⑤
This hotel really inspires the very best in me in the way of job performance.	①	②	③	④	⑤
I feel that I should take credit or blame for the results of my work.	①	②	③	④	⑤
Please indicate to the extent to which you agree with following statement by ticking the most appropriate number: 1= Strongly disagree, 2= Disagree, 3=Neutral, 4= Agree, 5= Strongly agree					
The hotel integrates resources with customers' resources.	①	②	③	④	⑤
The work environment encourages marketing professionals to feel a part of the department.	①	②	③	④	⑤
We tell our hotel customers which inputs and resources they have to provide in the service transformation process.	①	②	③	④	⑤
My performance can be adequately assessed using existing documents.	①	②	③	④	⑤
Employees of this hotel are always willing to help customers.	①	②	③	④	⑤
I find that my values and the hotel's values are very similar.	①	②	③	④	⑤
We encourage training for the employees delivering the service in the hotel.	①	②	③	④	⑤
The major satisfactions in my life come from my job.	①	②	③	④	⑤
The hotel shares information and data with customers in service process delivery.	①	②	③	④	⑤
The service employee personal get adequate support from this hotel to the job.	①	②	③	④	⑤
When I go to the movies I find it easy to lose myself in the film.	①	②	③	④	⑤
This hotel gives individual attention to its customers.	①	②	③	④	⑤
The hotel share the service plans with our customers.	①	②	③	④	⑤

We tell our hotel customers to participate in the service delivery process.	①	②	③	④	⑤
The work I do on this job is very meaningful to me.	①	②	③	④	⑤
Our employees delivering the service are told that serving hotel customers is an extremely important priority.	①	②	③	④	⑤
I am extremely glad that I chose this hotel to work for over others I was considering at the time I joined.	①	②	③	④	⑤
Please indicate to the extent to which you agree with following statement by ticking the most appropriate number: 1= Strongly disagree, 2= Disagree, 3=Neutral, 4= Agree, 5= Strongly agree					
We tell our hotel customers where and when they have to participate in the service transformation process.	①	②	③	④	⑤
The quality of our service is highly dependent on contributions provided by the customers.	①	②	③	④	⑤
We tell our employees delivering the service to act according to the hotel customers' needs.	①	②	③	④	⑤
I talk up this hotel to my friends as a great hotel to work for.	①	②	③	④	⑤
This hotel offers special promotions.	①	②	③	④	⑤
The employees of this hotel know what customer needs.	①	②	③	④	⑤
This hotel offers good value for its price level.	①	②	③	④	⑤
This hotel offers additional facilities and activities, e.g. gym.	①	②	③	④	⑤
We support our employees delivering the service with innovative communication and information technology.	①	②	③	④	⑤
I am proud to tell others that I am part of this hotel.	①	②	③	④	⑤
This hotel is conveniently located.	①	②	③	④	⑤
This hotel promises to do something by a cretin time, it does so.	①	②	③	④	⑤

This hotel does not have the best interests of its customers at heart.	①	②	③	④	⑤
I really care about the fate of this hotel.	①	②	③	④	⑤
Services personal in this hotel have specialized skills.	①	②	③	④	⑤
The privacy of transaction in this hotel is safe.	①	②	③	④	⑤
This hotel has convenient opening hours.	①	②	③	④	⑤
Please indicate to the extent to which you agree with following statement by ticking the most appropriate number: 1= Strongly disagree, 2= Disagree, 3=Neutral, 4= Agree, 5= Strongly agree					
The employees of this hotel are able to solve customer problems quickly.	①	②	③	④	⑤
I often think of what might have been.	①	②	③	④	⑤
This hotel has a convenient reservation procedure.	①	②	③	④	⑤
The food and beverages service provided in this hotel are of a high standard.	①	②	③	④	⑤
For me this is the best of all possible hotels for which to work.	①	②	③	④	⑤
I daydream a lot.	①	②	③	④	⑤
The style of the interior decorations in this hotel is attractive.	①	②	③	④	⑤
This hotel offers customer' tourism information.	①	②	③	④	⑤
The service personal in this hotel are courteous.	①	②	③	④	⑤
This hotel has up to date equipment.	①	②	③	④	⑤
This hotel offers convenient parking.	①	②	③	④	⑤

This hotel safeguards customers' privacy.	①	②	③	④	⑤
The work environment encourages marketing professionals to feel a sense of pride in their work.	①	②	③	④	⑤

Please indicate to the extent to which you agree with following statement by ticking the most appropriate number: 1= Never, 2= Rarely, 3=Sometimes, 4= Most of the time, 5= Always					
The department fosters an environment where marketing professionals respect each other's work.	①	②	③	④	⑤
My immediate boss modifies my procedures when desired results are not obtained.	①	②	③	④	⑤
If my performance goals were not met, I would be required to explain why.	①	②	③	④	⑤
Please indicate to the extent to which you agree with following statement by ticking the most appropriate number: 1= Never, 2= Rarely, 3=Sometimes, 4= Most of the time, 5= Always					
Most of the marketing professionals in my department are familiar with each other's productivity.	①	②	③	④	⑤
I receive feedback from my immediate superior concerning the extent to which I achieve my goals.	①	②	③	④	⑤
My immediate boss evaluates the procedures I use to accomplish a given task.	①	②	③	④	⑤
The department encourages job-related discussions between marketing professionals	①	②	③	④	⑤
Specific performance goals are established for my job.	①	②	③	④	⑤
The department encourages cooperation between marketing professionals.	①	②	③	④	⑤
My immediate boss monitors the extent to which I follow established procedures.	①	②	③	④	⑤
My pay increases are based upon how my performance compares with my goals.	①	②	③	④	⑤
I receive feedback on how I accomplish my performance goals.	①	②	③	④	⑤

My immediate boss monitors the extent to which I attain my performance goals.	①	②	③	④	⑤
Most marketing professionals in my department are able to provide accurate appraisals of each other's work.	①	②	③	④	⑤

Please indicate to the extent to which you agree with following statement by ticking the most appropriate number: 1= Very Dissatisfied, 2= Dissatisfied, 3=Neutral, 4= Satisfied, 5= Very satisfied.					
The extent to which I am fairly paid for what I contribute.	①	②	③	④	⑤
The opportunity in my job to achieve excellence in my work.	①	②	③	④	⑤
The extent to which I am recognized for my work.	①	②	③	④	⑤
The considerate/sympathetic nature of my immediate supervisor.	①	②	③	④	⑤
Please indicate to the extent to which you agree with following statement by ticking the most appropriate number: 1= Very Dissatisfied, 2= Dissatisfied, 3=Neutral, 4= Satisfied, 5= Very satisfied.					
The supportive attitude of my colleagues at work.	①	②	③	④	⑤
The chance of future promotion I have in my job.	①	②	③	④	⑤
The kind of benefit plans that go with my job.	①	②	③	④	⑤
The kind of company policies/practices that govern my job.	①	②	③	④	⑤
The degree to which my work is perceived to be important to the company.	①	②	③	④	⑤
The opportunity I have in my job to work with people I like.	①	②	③	④	⑤
My supervisor's ability to lead me and my colleagues.	①	②	③	④	⑤
The amount of recognition/respect that I receive for my job.	①	②	③	④	⑤

The amount of compensation I receive.	①	②	③	④	⑤
The working conditions of my job.	①	②	③	④	⑤
The technical competence of my immediate supervisor.	①	②	③	④	⑤
The opportunity for acquiring higher skills.	①	②	③	④	⑤
The respect I receive for my work.	①	②	③	④	⑤
The way my supervisor helps me achieve my goals.	①	②	③	④	⑤
The attitude of my fellow workers toward me.	①	②	③	④	⑤
The nature of the work I do in my job.	①	②	③	④	⑤

If you have any comments please add:

Gender:

□ Male □ Female

Age:

□18- 25 □ 26- 35 □ 36-45 □ 46-55 □55 or above

Marital status:

☐ Single □ Married

Nationality:

□ Saudi □Non-Saudi □Other Specify……

Position:

□ Director Manager □ Manager □ Head of Department □ Supervisor □ Employee

What is star rating of your hotel?

□ 1 □2 □3 □4 □5

City:

☐ Makkah □ Madinah □ Jeddah □ Riyadh □ Khobar □ Dammam □Other Specify…

Education:

□ Diploma □ Undergraduate □ Postgraduate □ PhD

Thank you for your valuable time.

Appendix E

Items and Definitions of each Construct

Author/Journal	Construct	Definition	Items (Original)	adaptation	Items (Original)	adaptation
Jaworski and MacInnis (1989) Journal of Marketing Research	Procedural Knowledge	the degree to which managers can specify clearly the activities an individual must perform to achieve a desired outcome	1. There exists a clearly defined body of knowledge or subject matter that can guide me in doing my work. 2. It is possible to rely upon existing proceduresa nd practices to do my work			
Jaworski and MacInnis (1989) Journal of Marketing Research	Performance Documentation	the extent to which marketing superiors have available forms of documentation to assess a marketing employee's performance (similar in spirit to Ouchi's "measurability" variable)	1. Documents exist to measure my performance after activities are complete. 2. My performance can be adequately assessed using existing documents.			
Agarwal and Ramaswami (1993) Journal of Personal Selling & Sales Management	Organisational Commitment	as an individual's identification with and involvement in an organization	1- I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful. 2- I talk up this organization to my friends as a great organization to work for. 3- I would accept almost any type of job assignment in order to keep working for this organization. 4- I find that my values and the organization's values are very similar. 5- I am proud to tell others that I am part of this organization. 6- This organization really inspires the very best in me in	1- feel strongly about improving the quality of this organisation's services 2- I often discuss quality-related issues with people outside of this organisation 3- The way I feel about quality is very similar to the way this organisation feels about quality 4- I talk about this organisation to my friends as a great place to work 5- I would accept almost any type of job assignment in order to keep working for this organisation 6- I find that my values and this organisation's values		

			the way of job performance. 7- I am extremely glad that I chose this organization to work for over others I was considering at the time I joined. 8- I really care about the fate of this organization. 9- For me this is the best of all possible organizations for which to work.	are similar 7- I am proud to tell others that I am part of this organisation 8- This organisation really inspires the very best in me in the way of job performance 9- I am extremely glad that I chose this organisation to work for over others I was considering at the time I joined 10- I really care about the fate of this organisation 11- For me, this is the best of all possible organisations for which to work		
Sichtmann et al. (2011) Journal of International Marketing	(Input Control)Organisation customer–oriented training of service employees	Input controls are assessable actions taken by the organisation before implementing an action	1- Our employees delivering the service are told that serving organisation customers is an extremely important priority2- We encourage training for the employees delivering the service in the organisation 3- We tell our employees delivering the service to act according to the organisation customers' needs4- We support our employees delivering the service with innovative communication and information technology.			

Jaworski and MacInnis (1989) Journal of Marketing Research	process control	Exercised when the organisation tries to impact the means to achieve desired ends.	1. My immediate boss monitors the extent to which I follow established procedures. 2. My immediate boss evaluates the procedures I use to accomplish a given task. 3. My immediate boss modifies my procedures when desired results are not obtained. 4. I receive feedback on how I accomplish my performance goals.			
Jaworski and MacInnis (1989) Journal of Marketing Research	Output Control	Outcome control means that behaviours are influenced by defined targets and rewards	1. Specific performance goals are established for my job. 2. My immediate boss monitors the extent to which I attain my performance goals. 3. If my performance goals were not met, I would be required to explain why. 4. I receive feedback from my immediate superior concerning the extent to which I achieve my goals. 5. My pay increases are based upon how my performance compares with my goals.			
Jaworski and MacInnis (1989) Journal of Marketing Research	Self Control	is operative when the individual demonstrates obligation and willingness to take responsibility for his or her job	1. The major satisfactions in my life come from my job. 2. The work I do on this job is very meaningful to me. 3. I feel that I should take credit or blame for the results ofmy work			

Jaworski and MacInnis (1989) Journal of Marketing Research	Professional Control	is operative when peers in one's work unit are involved in teamwork interaction, discussion and informal assessments of an employee's work	1. The division encourages cooperation between marketing professionals. 2. Most of the marketing professionals in my division are familiar with each other's productivity. 3. The division fosters an environment where marketing professionals respect each other's work. 4. The division encourages job-related discussions between marketing professionals. 5. Most marketing professionals in my division are able to provide accurate appraisals of each other's work.			
Jaworski et al. (1993) Journal of Marketing	Culture Control	control is a form of normative pressure derived through socialization into the values of the organisation	1. The work environment encourages marketing professionals to feel a part of the division 2. The work environment encourages marketing professionals to feel a sense of pride in their work			

Yoon and Suh (2003)Journal of Business Research	Job satisfaction	a pleasurable time or positive emotional state resulting from the appraisal of one's job or job experiences, a personal evaluation of conditions present in the job, or outcomes that arise as a result of having a job	<u>Pay:</u> 1- The extent to which I am fairly paid for what I contribute 2- The amount of compensation I receive 3- The kind of benefit plans that go with my job Opportunities 4- The opportunity for acquiring higher skills 5- The opportunity in my job to achieve excellence in my work 6- The chance of future of promotion I have in my job <u>Work</u>: 1- The working conditions at my job 2- The nature of work I do in my job 3- The kind of company policies/practices that govern my job <u>Recognition</u> 1- The amount of recognition/respect that I receive for my job 2- The respect I receive for my work 3- The extent, which I am recognized for my work 4- The degree to which my work is perceived to be important to the company <u>Supervisor</u> : 1- The technical			

			competence of my immediate supervisor 2- The considerate/sympathetic nature of immediate supervisor 3- My supervisor's ability to lead me and my colleagues the way my supervisor helps me achieve my goals <u>Co-workers</u>: 1- The attitude of my fellow workers toward me 2- The supportive attitude of my colleagues at work 3- The opportunity I have in my job to work with people I like			

Sichtmann et al. (2011) Journal of International Marketing	Customer Co-production	involves the participation [and integrationof customer resources] in the core offering itself	1- We tell our organisation customers to participate in the service delivery process 2- We tell our organisation customers where and when they have to participate in the service transformation process3- 3- We tell our organisation customers which inputs and resources they have to provide in the service transformation process.			
Lau et al. (2010) Journal of Product Innovation Management,	Customer integration	combining customer resources (persons, possessions, nominal goods, and/or personal data) with the company resources in order to transform customer resources.	1- Share production plans. 2- Share inventory mix/level information. 3- Share technological information. 4- Share marketing information	1- The organisation share the service plans with our customers 2- The organisation shares information and data with customers in service process delivery 3- The organisation integrates resources with customers' resources 4- The quality of our service is highly dependent on contributions provided by the customers.		

Corin and Taylor (1992) Journal of Marketing	Service Quality Perfromasnce		P1. XYZ has up-to-date equipment. P2. XYZ 's physical facilities are visually ap-pealing. P3. XYZ 's employees are well dressed and appear neat. P4. The appearance of the physical facilities of XYZ is in keeping with the type of ser-vice provided. P5. When XYZ promises to do something by a certain time, it does so. P6. When you have problems, XYZ is sym-pathetic and reassuring. P7. XYZ is dependable. P8. XYZ provides its services at the time it promises to do so. P9. XYZ keeps its records accurately. P10. XYZ does not tell its customers exactly when services will be performed. P11. You do not receive prompt service from XYZ employees. P12. Employees of XYZ are not always willing to help customers. P13. Employees of XYZ are too busy to respond to customer requests promptly. P14. You can trust employees of XYZ P15. You can feel safe in your transactions with XYZ 's employees. P16. Employees of XYZ are polite. P17. Employees get adequate support from XYZ to do their jobs well. P18. XYZ does not give you individual attention.	P1. This hotel has up-to-date equipment. P2. This hotel's physical facilities are visually appealing.P3. This hotel's employees are well dressed and appear neat. P4. The appearance of the physical facilities of this hotel is in keeping with the type of service provided. P5. When this hotel promises to do something by a certain time, it does so. P6. When you have problems, the hotel is sym-pathetic and reassuring. P7. The hotel is dependable. P8. The hotel provides its services at the time it promises to do so.P9. This hotel keeps its records accurately. P10. This hotel does not tell its customers exactly when services will be performed. P11. I do not receive prompt service from employees of this hotel P12. Employees of this hotel are not always willing to help customers. P13. Employees of this hotel are too busy to respond to customer requests promptly. P14. I can trust employees of this hotel P15. I can feel safe in my transactions with employees of this hotel. P16. Employees of this hotel are polite. P17. Employees get adequate support from this hotel to do their jobs well.P18. This hotel does not give me	1- Hardware facilities 2- The convenience of parking 3- The style of the interior decorations4- 4- The location of the Hotel 5- The lot sizes in which the hotel occupies 6- Food and beverages service6- 7- Additional facilities and activities provide by the hotel, including exercise, gym, sports, etc. 8- Sanitary hot spring environment 9- The characteristics oh water quality 10- The safety and privacy of hot spring facilities 11- The specialized skill of services personal 12- Instant service 13- The image of the hot spring hotel 14- The quick problem solving abilities by the service personal	1- This hotel has up to date equipment. 2- This hotel offers convenient parking. 3- The style of the interior decorations in this hotel is attractive. 4- This hotel is conveniently located 5- . The food and beverages service provided in this hotel is of a high standard. 6- This hotel offers additional facilities and activities, e.g. gym 7- . This hotel safeguards customers' privacy. 8- Services personal in this hotel have specialized skills. 9- This hotel promises to do something by a cretin time, it does so. 10- The quick problem solving abilities by the service personal. 11- The courteous attitude by the service personal. 12- 12- Employees of this hotel always willing to help customers. 13- This hotel offers good value for its price level. 14- This hotel has a convenient reservation procedure. 15- The privacy of transaction in this hotel is safe. 16- The service employee personal get adequate support from this hotel to the job. 17- This hotel offers special promotions. 18- This hotel offers customer' tourism information. 19- This hotel gives an individual attention. 20- The employees of this hotel know what customer needs. 21- This hotel does not have best interests at heart. 22- This hotel has convenient opening hours

			P19. Employees of XYZ do not give you personal attention. P20. Employees of XYZ do not know what your needs are. P21. XYZ does not have your best interests at heart. P22. XYZ does not have operating hours convenient to all their customers.	individual attention. P19. Employees of this hotel do not give me personal attention. P20. Employees of this hotel do not know what my needs are. P21. This hotel does not have my best interests at heart. P22. This hotel does not have operating hours convenient to all their customers	15- The courteous attitude by the service personal 16- Price level 17- Satisfy the demands of the customers. 18- Convenience of reservation procedure 19- Special promotions Opening hours 20- Parenting bath pool 21- Convenience traffic route/shuttle bus 22- Tourism route suggestion	

Appendix F

Copy of the Paper Presented at AMA

Death Matters: A Meta-Analysis of Fear Appeal Persuasion from a Terror Management Theory Perspective
David M. Hunt, University of Wyoming
Scott K. Radford, University of Calgary
Nancy Rhodes, Ohio State University

Pride Regulation during Social Coupon Redemption
Chinintorn Nakhata, University of South Florida
Hsiao-Ching Kuo, University of South Florida

Effects of Guilt and Sadness on Carbohydrate Consumption
Sarah Lefebvre, University of Central Florida
Ze Wang, University of Central Florida

EXHIBIT HALL: Sunday, February 23 10:00 AM

Palazzo E **10:00 AM-10:30 AM**

Coffee break available. Enjoy a coffee while meeting with exhibitors and sponsors.

ACADEMIC SESSIONS: Sunday, February 23 10:30 AM-12:00 PM

Segura 5 **10:30 AM-12:00 PM**

U21 Customer Participation Customer Participation in Service Encounters

The Effects of Consumer Participation on Service Evaluation: A Self-Expression Perspective
Xia Wang, Peking University
Hean Tat Keh, Monash University
Siqing Peng, Monash University

Service Conversations: Dynamics of Service Context and Customer Participation
Helen Wang, University of Hong Kong
Mary Jo Bitner, Arizona State University
Amy Ostrom, Arizona State University
Douglas Olsen, Arizona State University

A Dynamic Model of Customer Participation & Perceived Service Quality During Extended Consumption Experiences
Shruti Saxena, Arizona State University
Ruth Bolton, Arizona State University

Impact of Customer Integration & Customer Co-production on Service Quality
Zyad M. Alzaydi, University of Hull
Chanaka Jayawardhena, University of Hull

Segura 6 **10:30 AM-12:00 PM**

U22 From Pricing to Sales Controls: Using CRM to Better Understand Customer and Salesperson Motivations

Performance Effects of Sales Controls: A Comparison of Alternative Conceptualizations
Nikolaos Panagopoulos, The University of Alabama
Catherine Johnson, The University of Alabama
David Mothersbaugh, The University of Alabama