THE IMPACT OF EMPLOYEES' BEHAVIOUR AND THE IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT ON SERVICE QUALITY: A CASE STUDY IN THE HOTEL INDUSTRY

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The Impact of Employees' Behaviour and the Implementation of TQM on Service Quality: A Case Study in the Hotel Industry

ABSTRACT

This study examines the impact of employees' in-role behaviours and organizational citizenship behaviours on service quality in a number of hotels, and of whom have a TQM programme. Are organizational citizenship behaviours, in-role behaviours and TQM programme likely to influence customers' perceived service quality? The hypothesized model was then developed based on three interlinked literature strands which consider human resources management, TQM, and tourism. A set of relationships between employees' in-role behaviours, organizational citizenship behaviours, total quality management, and service quality was examined by structural equation modeling. A measurement scale of employees' in-role behaviours was developed by employing exploratory factor analysis. Finally, three dimensions of in-role behaviours were developed, namely compliance with procedures, compliance with customer requests, and product knowledge. The results of the study suggested that employees' in-role behaviours and organizational citizenship behaviours have a substantial impact on customers' perception toward service quality

in the hotels. The results also showed that the implementation of total quality management in hotel has a moderate effect on employees' in-role behaviours and organizational citizenship behaviours. In order to improve the service quality in hotels, other than the development of clear operational procedures and providing extrinsic rewards, such as bonuses the most important aspect of all, is to enhance organizational citizenship behaviours. Management in implementing total quality management should set goals on employees' job satisfaction to enhance organizational citizenship behaviours.

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CHAPTER ONE - INTRODUCTION

1.1 BACKGROUND OF STUDY

1.1.1 Overview of the hospitality industry in Hong Kong

Doing business in today's environment is very different to doing business in the past. Over the last 20 years, enormous changes have taken place such as globalization, the need to reduce costs, and the pressure to be more competitive. Many companies have been forced to think of better ways of doing business (Carlos and Taborda, 2000).

The hotel industry is not exempted from these global pressures and faces growing threats from other lodging facilities. Hong Kong hotels now have to compete fiercely for a larger and more stable market share. According to the Hong Kong Tourism Board (HKTB, Feb 2004), the number of hotels in Hong Kong has grown by 9.2 percent over the past five years, from 87 in 1998 to 95 in June 2003. The number of hotels in Hong Kong is expected to increase to 119 in the next three years, (HKTB, Feb 2004) a growth rate of 25 percent. By the year 2007, the numbers of hotel rooms available in Hong Kong will have grown to 50,795 from 37,544 in 2003, an increase of 35.3 percent. Intense competition has forced traditional hotels to find ways to

retain their clients and attract guests from their competitors. In this study, Hong Kong is chosen for case study because there is keen competition in the Hong Kong hotel industry, also the researcher is based and worked in Hong Kong, the knowledge she has with Hong Kong hotel industry will benefit the study.

1.1.2 The importance of service quality and customer satisfaction

It is argued by a number of authors that increasing service quality by improving the performance of hotel staff is one viable way for hotels to remain competitive (Hartline and Jones, 1996). Heung, Mok and Kwan (1996) suggest that to survive in a competitive environment, the marketing focus for hoteliers should be on increasing the number of repeat customers and to prolonging their length of stay. They can do this by more effectively meeting their customer's needs.

Babich (1992) found that it is five times more costly to gain a new customer than to keep a current one. This shows that it is important for a company to retain existing customers by giving total customer satisfaction and therefore stay in business. Furthermore, Smith's (1995) study demonstrated that dissatisfied customers

generally tell three to five people about their unsatisfactory experiences. His study reinforced the perception that it is vital to continuously improving customer satisfaction so as to achieve business success. George and Bettenhausen (1990) and Grönroos (1985) also assert that ensuring customer service quality is critical for organizational success. Delivering high quality service becomes a crucial factor for success in the service industry (Parasuraman, Zeithaml and Berry, 1988), especially during times of intensive competition.

Some researchers suggest that to make a difference to business success; organizations need to be customer-focused in all their activities (Albrecht, 1992, 1994; Whitely, 1991). In particular, customer service is now recognized as the only area over which the hotel's product can be clearly differentiated from its major competitors' products (Haynes and Fryer, 2000).

A recent survey of North American, Western European, and Japanese managers showed that 78 per cent of the managers surveyed believe service improvements are the key to competitive success (Berry and Parasuraman, 1992). Hence, providing high quality service and enhancing customer satisfaction are widely recognized as

essential factors which lead to success in the hotel, catering and tourism industries (Legoherel, 1998; Stevens, Knutson and Patton 1995). Consequently, the delivery of high levels of service quality and the measurement of service quality becomes a key strategy in service providers' efforts to position themselves effectively in the marketplace (Cronin and Taylor, 1992).

1.1.3 The need to understand customers' requirements

As the link between service quality and business success has been established (Anderson, Fornell and Lehmann, 1994; Donaldson, 1995; Rust, Zathorik and Keiningham, 1995), being able to understand what customers perceive to be the ideal service, seeing service from the customers' perspective, and continually improving services are seen as the means of survival (Bennington and Cummane, 1998). Consequently, some researchers propose that constant attention to understand customers' needs as well as the total involvement of everyone in the company to meet the ultimate customers' requirements and to enhance their satisfaction is vital (Boulding, Katra, Staelin and Zeithaml 1993; Winsted, 2000). Bennington and Cummane (1998) suggest that knowing what constitutes service quality, in the eyes

of customers, is an essential element of business success because customers use specific attributes or cues to infer quality. It is important for managers to identify these attributes in order to optimize customers' overall perception of quality (Gould-Williams, 1999).

1.1.4 The importance of the service encounter on customers' evaluation of service quality

Two key elements of service quality are functional quality (attitudes, appearance of staff, smoothness of process) and technical quality (professional knowledge, standard of equipment, speed of service delivery) as outlined by Grönroos (1984) and Parasuraman et al. (1985). In people-based services, the technical and functional elements of service quality are closely linked due to the interactivity of such services (Broderick, 1999). Assessing these two elements of service quality can be difficult, because, in effect it requires assessing the personal interaction of the service encounter when a customer interacts with a front-line employee (Broderick, 1999).

Bitner, Booms, and Tetreault (1990) proposed that the service encounter should

positively impact on customers ratings of overall quality as customer responses to service quality were aggregated and matched with employees' responses before conducting an evaluation. Individual customers evaluated the employees they encountered based on the employees' service behaviours, and their responses were then aggregated to the encounter level of analysis (Yoon and Suh, 2003).

Furthermore, Brown and Swartz (1989) suggested that employees often compensate for quality gaps in other aspects of the service delivery process because experiences of customers in the service encounter are central to determining their levels of satisfaction and their judgments of service quality (e.g., Brown, Fisk and Bitner, 1994). In the hospitality industry the service offer is highly customized, and the degree of internal control exercised by the workforce is relatively high (Haynes and Fryer, 2000). Due to the nature of hospitality services, the evaluation of quality cannot solely rely on the end-result but also depends on the process (Hartline and Jones, 1996). This proposition was supported by other studies. The performance of front line staff can be a dominant quality cue (Bitner, 1990; Hartline and Jones, 1996; Parasuraman et al., 1985).

Furthermore, previous research suggests that customers' perceptions of service

quality are influenced more strongly by long than short service encounters (Price, Arnold and Tierney, 1995). Extended service encounters provide opportunities for customers and employees to develop relationships in which the employee can show a personal interest in the customer. Thus, an extended service encounter can result in relationship-building between the customers and employees, whereas a brief encounter is more likely to involve a simple transactional exchange based on a prescribed method of service-delivery (Mohr and Bitner, 1991; Price et al., 1995; Siehl, Bowen and Pearson, 1992). Hence, the most important factor in the service encounter is the performance of employees who have contact with customers.

Due to the complexity of service delivery processes in service based organizations, researchers are increasingly paying attention to the study of customer interaction with front-line staff (Chandon, Leo and Philippe, 1997; Dobni, Zerbe and Ritchie, 1997; Murray, Wilcock and Kobayashi, 1996; Price et al., 1995; Susskind, Kacmar and Borchgrevink, 2003). For instance, more attention is now given to organizational issues, such as employees' reactions to customer orientation (Brady and Cronin, 2001) and the organizational factors that influence service processes (Schneider, White and Paul, 1998).

1.1.5 The importance of employee performance to service quality in the hotel industry

In the past, researchers have highlighted the critical role of the performance of customer-contact staff has on customers' perception of service quality (Bitner, 1990; Grönroos, 1984; Parasuraman et al., 1985). Schneider et al. (1998) share a similar view and indicate that front-line employees have an influence on how customers' view their experience with those services. Grönroos (1983) claimed that employee performance constitutes the service, as far as most customers are concerned. Some studies found that almost 70 percent of customers who change suppliers do so not because of price, product quality or delivery, but because they perceive an attitude of indifference from one or more individuals in the supplier's organization (Howe, Gaeddert and Howe, 1993; Whitely, 1991). Studies from Chu and Choi (2000) also identified that the employee service delivery performance of employee was the most influential component in determining travelers' overall satisfaction levels and their likelihood of returning.

It is clear that hotel customers nowadays are not only looking for basic services and facilities provided by a hotel, but also are expecting a high standard of personal service. The findings from these studies clearly demonstrate that the service encounter or customer-employee interaction is a major determinant affecting travelers' perceptions in relation to service quality, resulting in their overall satisfaction/dissatisfaction with hotels in Hong Kong. Given the strategic importance of employee performance, hotels are now focusing their efforts on enhancing the intangible aspects of service delivery, such as the interaction between employees and guests (Hartline, Woolridge and Jones, 2003).

Empirical studies support the view that employee performance is an important cue used by guests to infer the overall quality of a hotel (Bitner, 1990; Bitner, Booms and Mohr, 1994; Hartline and Ferrell, 1996; Hartline et. al., 2003). Brady and Cronin (2001) reported that the extent of customer orientation by service employees' is directly related to customers' perceptions of overall service quality and the performance of service providers. Lau (2000) also found that the connections between workforce competence and customer service quality are conceptually strong since an organization's employees perform most service delivery. Moreover, the

findings from Choi and Chu's (2001) studies claimed that the aspects of customer-employee interaction include: 'efficiency of check-in/out', 'helpfulness of staff', 'politeness/friendliness of staff', 'efficiency of staff', 'multi-lingual skills of staff' and 'understandability of staff'. Employee performance carried the greatest weight in explaining travelers' overall satisfaction. It has been argued that in a service relationship, customers' evaluation of service is largely dependent on the specialized skills, techniques, and the experiences of interacting with the customer service staff (Paulin, Ferguson and Alvarez-Salazar, 1999; Paulin, Ferguson and Payaud, 2000). As such, it is anticipated that staff performance will play a more critical role in the hotel industry in gaining or maintaining competitive advantages (Hartline and Jones, 1996).

Furthermore, Bitner (1990) argued that quality perception is hypothesized as a dimension on which satisfaction is based. Teas (1993) also reported a strong relationship between perceived service quality and satisfaction. Clearly, then, the performance of customer service staff constitutes a major intrinsic cue signaling service quality and customer satisfaction (Hartline and Jones, 1996). Consequently, service providers need to have a better understanding of the attributes customers use

to judge their service encounter performance (Bowers, Swan and Koehler, 1994; Peyrot, Cooper and Schnapf, 1993; Winsted, 2000). Identifying the most important staff performance cues in these complex service encounters could enable the firm to save time and money by better focusing its resources on those aspects of staff performance that make a real difference in customer perceptions of service quality (Hartline and Jones, 1996).

1.1.6 Deficiencies of previous research of service quality

As a result of the link between good employee performance and increased consumer perception of service quality (Pfeiffer, 1994; Gould-Williams, 1999), many researchers have highlighted the importance of customer-contact employees in creating and providing good service quality (Hartline and Jones, 1996). As an element of functional quality (i.e. how the service is delivered), employee performance is important because it is a crucial determinant of customers' perceived service quality (Bitner, 1990; Bowen and Schneider, 1985; Grönroos 1983; Zeithaml, Parasuraman, and Berry, 1990). In fact, poor employee performance has been linked to increased customer complaints and the likelihood of customers switching to a

competing service (Keaveney, 1995). For these reasons, service marketing has focused on identifying the relationships between employee behaviours and the relevant organizational behaviour constructs, which in turn influence service quality.

Despite many calls for the development of behavioural measures to better define the meaning of good service (Bowers et al., 1994; Knutson, Steven, Wullaert, Patton and Yokoyama, 1990; Luthans and Davis, 1990), relatively little is known about how the customers evaluate service encounters (Winsted, 2000). There has been a lack of research that systematically explores what the actual behaviours of service delivery personnel really mean to customers' behaviours (Boulding et al., 1993).

Malhotra, Ugaldo, Agarwal and Baalbaki (1994) noted how there has been little effort to fully conceptualise and measure the behavioural components of encounters, although some studies made strides forward in service encounter analysis by using multiple behavioural measures (e.g., Boulding et al., 1993; Chandon et al., 1997; Dobni et al., 1997; Mittal and Baldasare, 1996). However, the measures are generally informally derived and are often forced to fit Parasuraman et al.'s (1988) SERVQUAL model or other preconceived dimensions (Winsted, 2000). SERVQUAL

assumes that a service provider should be reliable, courteous, empathetic, responsive and helpful (among other things). However, it does not offer any insight into what this means to customers, that is, what customers want waiters or other service providers to actually do (Winsted, 2000).

Moreover, the findings from Winsted's (2000) study suggested that customers do not think about service encounters as a general phenomenon, but instead think of encounters as industry-specific and evaluate encounters differently for different industries. Hence, the behavioural indicators of service encounter dimensions can be different to different people and for different industries. This research extends their work by examining behaviours of employees associated with everyday evaluation of service encounters by customers in the hotel industry and examining how these behaviours can be grouped together.

1.1.7 The importance of employees' extra-role behaviours on customers' perceived service quality

Yoon and Suh (2003) proposed that in addition to role-prescribed behaviours, extra-

role behaviours such as the discretionary behaviours of employees could be critical factors in determining the level of service quality perceived by customers. For example, various extra-role behaviours, such as informal mentoring of new or less skilled front-line staff, or assisting other service staff who are temporarily overburdened, may be more likely to contribute to better service. Furthermore, voluntary suggestions from service staff as boundary spanners might improve service quality. Thus, it is important for service companies to give more attention to discretionary and voluntary behaviours of front line staff, which should lead to more effective organizations and, in turn, service excellence (Yoon and Suh, 2003).

However, previous studies have largely neglected a particular set of customer service behaviours in service encounters that can also significantly influence customers' perceptions of service quality. These are the voluntary and/or discretionary behaviours that employees perform for both customers and organizations. These behaviours are individual contributions in the workplace that go beyond the specified role requirements and are not directly or explicitly recognized by the formal reward system (Organ, 1988; Organ and Ryan, 1995).

1.1.8 The concept of Organizational Citizenship Behaviour (OCB)

During the last decade, several researchers have attempted to call attention to the importance of the non-job components of performance (Austin and Villanova, 1992). For example, Bateman and Organ (1983) introduced the notion of Organizational Citizenship Behaviour (OCB), which consists of voluntary employee actions that benefit employers but are not required. These authors and other authors have suggested that work performance is two-dimensional, composed of both work required by an organization and discretionary employee work behaviours (Van Dyne and LePine, 1998). A number of studies have generally supported relationships between OCB and individual employee-level performance (MacKenzie, Podsakoff and Fetter, 1991, 1993; Werner, 1994) and organizational performance, including profitability, operating efficiency and customer satisfaction (Walz and Niehoff, 2000). These findings thus support Organ's assertion that OCB should be related to some general categories of organizational effectiveness.

Relatively little attention had been paid to other effects of OCB, especially the relationship between OCB and service quality. In particular, most marketing studies

limited the effect of OCB to managerial evaluation of subordinate performance and organizational effectiveness. Previous studies proposed that the OCB of salespeople in personal selling are useful predictors for managers' evaluation of salespeople's performance (Mackenzie et al., 1993, 1998; Netemeyer, Boles, McKee and McMurrian, 1997; Podsakoff and Mackenzie, 1994). A number of studies suggested that employees' OCB are positively related to indicators of organizational performance in terms of the number of units produced, the yield, financial performance, and profitability (George and Bettenhausen, 1990; Podsakoff, Ahearne, and MacKenzie, 1997; Walz and Niehoff, 2000). Those studies, however, have tended to ignore the relationship between OCB and critical organizational outcomes such as service quality (Yoon and Suh, 2003). Morrison (1994) suggests that research should continue to explore alternative behavioural elements of customer service staff roles as potential antecedents of service quality. In other words, investigating how service quality is delivered (i.e. the behaviours of front line staff which leads to superior service quality) should be a research priority for marketing academicians.

Often, previous research measured the extra-role behaviours of white-collar workers (e.g. Mackenzie et al, 1991, 1993; Orr, Sackett, & Mercer, 1989). Researchers might

expect white-collar workers to be professional employees who are good organizational citizens, since these employees are normally highly paid and consider their work as a career rather than a job. Or employees might believe that these extra-role behaviours will facilitate promotion and salary increases. This study adds to prior findings by extending these findings to blue-collar workers in the hotel industry.

1.1.9 Previous studies of the components of Total Quality Management (TQM)

Many organizations with a shrinking workforce, and the need to sustain performance, are striving to implement TQM practices. A study of US Government Accounting Office Study (GAO) (1991) examined the impact of formal TQM practices on the performance of 20 US companies that had scored well on the 1988/1989 Malcolm Baldridge National Quality Award. The study found a strong relationship between the companies' use of TQM (such as strong customer focus, senior management leadership, a commitment to employee training, empowerment, and involvement) and organizational performance (measured by employee relations, quality, customer satisfaction, and profitability). Several studies also supported the notion that TQM does have a significantly positive effect on organizational performance (Podsakoff et

al., 1997; Walz and Niehoff, 2000). Despite a number of studies that have sought to test the link between TQM practice and organizational performance (Powell, 1995), results are not significant (e.g., Sluti, 1992). The real capability of TQM on influencing organization performance becomes a controversy (Lloréns Montes, Jover and Fernández, 2003).

TQM has been widely implemented in business and service organization and widely discussed in the past five to ten years (Zeitz, Mittal and McAuley, 1995). Until recently, most published reports on TQM were found to be practice-oriented management prescriptions or brief anecdotal case reports (Zeitz, Johannesson and Ritchie Jr., 1997). Such reports are good at documenting dates and locations of TQM programs, and the best of them may identify process dynamics and barriers to implementation. However, only a small number use a quantitative survey to benchmark the actual practices and organization performance (e.g. Zeitz et al., 1997).

Due to the importance of the material and human efforts in the implementation of TQM, researchers have been concerned by its relationship with the improvement of organizational performance. Schneider (1994) points out that the use of customer

evaluations as an index of organizational effectiveness is more appropriate in the service sector where organizational dynamics have a direct impact on the people the organization serves. Therefore, the present study sought to determine the degree of influence of the different quality principles and elements on organizational performance on customers' perceived service quality.

Academics and practitioners disagree as to which elements are actually implemented in the organization when a TQM system is established (Lloréns Montes et al., 2003). Differing lists of critical TQM success factors were produced by different authors according to the authors' background, experiences and research (e.g. Deming, 1986; Flynn, Schroeder and Sakakibara, 1995; Waldman, 1994). A full comparison of all the proposed by different authors would be impractical, but as far as possible, the most widely published and relevant lists of critical factors are raised by Ahire, Golhar and Waller (1996); Black and Porter (1996); Dale and Mcquator (1998); Flynn, Schroeder and Sakakibara (1994); Saraph, Benson and Schroeder (1989) and Tummala and Tang (1996).

The significant contributing elements promoted by quality experts are summarized

by Kanji and Asher (1993) and Krasachol and Tannock (1998). They identify five components of a TQM framework, which is consistent with and grounded within, a broad range of quantitative TQM studies in many different kinds of organizations. The five components of this framework can act as a useful vehicle for examining hotels implementing TQM. The five components are:

- TQM is strategically linked to the business goals.
- Customer understanding and satisfaction is vital.
- Employee participation and understanding at all levels is required.
- The need for management commitment and consistency of purpose.
- The organization is perceived as a series of processes which incorporate customer supplier relationships.

Benchmarking, statistical process control, employee training, and involvement programmes are among the most commonly implemented quality management strategies (Schroeder, Sakakibara, Flynn and Flynn, 1992). A recent literature review conducted by Sila and Ebrahimpour (2002) reported that customer focus and satisfaction, employee training, leadership and top management commitment,

teamwork, employee involvement, continuous improvement and innovation, and quality information and performance measurement are considered to be the major elements of TQM by most of the researchers between 1989 and 2000.

1.1.10 The need for participation in Total Quality Management (TQM)

Nearly all products or services and the characteristics of business are commodities as they can be duplicated by a competitor sooner or later (Rao and Melkar, 1997). Lee (1998) notes how the increasing global concern about total quality issues, ever changing customers' needs, fierce competition with other regional and local companies and sustainable competitive advantages for business survival, are pushing the hotel industry to consider the introduction of total quality management (TQM). TQM is a set of guiding principles and practices, as well as a philosophy that addresses not only the management of quality but also the quality of management (Pun, 2001). It is a relatively new management philosophy that integrates strategy, management practice and organizational outcomes to create a quality organization that continuously improves and sustains performance (Terziovski and Samson, 1999).

By implementing TQM, a company aims to build a unique and dynamic corporate personality and culture involving every employee on every level aiming to meet and even exceed customer requirements. This corporate personality will be virtually impossible for competitors to duplicate, and a competitive advantage will be achieved (Berry, 1990). Hence, TQM has been widely recognized as one of the competitive strategies for continuously improving the business performance in a highly competitive global market (Pun, 2001). TQM has also been described as an appropriate method to improve the competitiveness of organizations (Mersha and Merrick, 1997).

Despite a considerable amount of initial and ongoing costs such as investment in training, it is argued by proponents that TQM that will enhance organizational effectiveness and efficiency and potentially help firms to establish their competitive edge. It is believed that in the long run, TQM reduces the cost of producing high quality products/services because resources allocated to developing well-designed processes that create high-quality products/services are far less than the loss due to inferior quality (Hunt, 1993). Therefore, in recent years, TQM has been introduced in Hong Kong, as a strategy for better managing the quality-related activities and

practices and therefore maintaining and improving the effectiveness of organizations to satisfy and even exceed the customer needs (Chin, Yam and Pub, 1995; Pun, Chin and Lau, 1999). As TQM has gained wide acceptance as a means of gaining and sustaining a competitive edge in the global market, many hotels in Hong Kong have also participated in competitions to assess quality, such as the Malcolm Baldrige National Quality Award (MBNQA).

1.2 Problem Statement

As has already been noted employees' attitudes and behaviours toward customers during service encounters significantly influence employees' performance and customers' perceived service quality (Bowen and Schneider, 1985; Pfeiffer, 1994). For this reason, researchers should focus on identifying the relationships between employee behaviours and relevant organizational citizenship behaviour constructs, which in turn influence customers' perception of service quality. Previous research has identified the quality dimensions that are important to customers' perceived service quality. The most prominent work was developed by Zeithaml and Berry (1985) in which they identified five service quality dimensions: intangibility,

responsiveness, empathy, reliability, and assurance.

Winsted (2000) found that some employees' behaviours fall into more than one of the five dimensions. Clearly, the service quality dimensions which are frequently discussed as distinct dimensions in the service literature are not separate and distinct in the minds of customers when responding to the survey (Winsted, 2000). It appears that the service quality dimensions cannot clearly reflect the kind of service that the customers want from the customer service staff. This creates difficulties for human resource management in particular, when managing service encounters or when enforcing quality driven employee behaviours. Hence, developing operational definitions of constructs based on the behaviours of front-line staff, including the works and duties described in their roles and their discretionary behaviours that influence customers' perception of quality, are the primary focus of the present study.

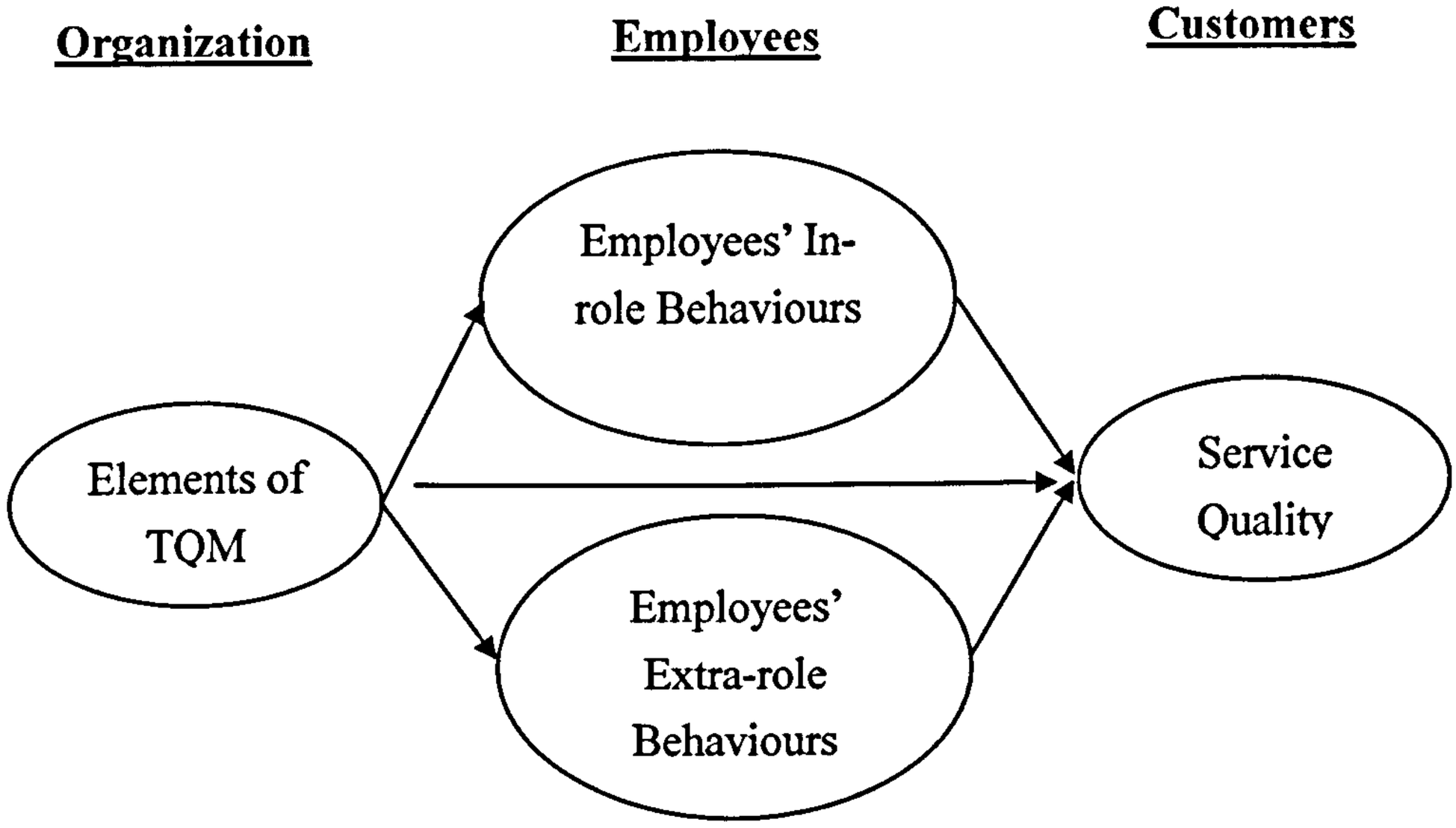
Many researchers agree that there is a strong association between TQM implementation and organizational effectiveness (Crosby, 1979; Juran, 1988; Ross, 1994). However, contradictory results were found. Many researchers attributed the failures to the inappropriate implementation (Becker, 1993; Eskildson, 1994; Shin,

Kalinowski and El-Enein, 1998). Ehigie and Akpan (2003) argued that the success of TQM depends on both the leaders and their subordinates. In other words, the way the leader relates to the subordinates, influences the willingness of subordinates to adapt to change. The present study supports this notion that the success of TQM largely depends on the employees' behaviour. That is, to achieve organizational effectiveness, it relies on the TQM elements and the principles to motivate employees' in-role behaviours, to stimulate employees' extra-role behaviours, and ultimately enhance customers' perception of quality.

Jawahar and Salegna (2003) proposed that TQM organizations should evaluate employees on the extent to which they focus on the customer and the extent to which they suggest and initiate actions to improve organizational systems and processes. This study draws attention to controllable elements at the point of interaction between customer service staff in a hotel and their customers that may influence customers' evaluations, and ultimately affect perceptions of service quality. The study aims to examine the degree of influence of the different TQM principles and elements on employee performance - both the in-role behaviours and extra-role behaviours - and ultimately on organizational performance in terms of customers'

perceived service quality. Hence, a mediation relationship of employee behaviours is proposed in the study between TQM implementation and customer perceived service quality. The hypothesized model is presented in Figure 1.1.

Figure 1.1 The Hypothesized Model of Total Quality Management (TQM)



1.3 RESEARCH QUESTIONS

The research questions are as follows:

1. What are the behaviours of employee prescribed by their jobs, the kind of in-role behaviours which can be described?

2. To what extent do employees' in-role behaviours influence customers' perceived service quality?

3. To what extent do employees' organizational citizenship behaviours influence customers' perceived service quality?

4. To what extent does each element of total quality management affect customers' perceived service quality?

5. To what extent does total quality management has on employees' organizational citizenship behaviour?

6. To what extent does total quality management has on employees' in-role behaviour?

1.4 OBJECTIVES

To address the above-mentioned research questions, the specific objectives are formulated as follows:

1. To identify the behaviours of employee prescribed by their jobs, the kind of in-role behaviours which can be described.

2. To critically evaluate the influence of employees' in-role behaviours on customers' perceived service quality.

3. To critically evaluate the influence of employees' organizational citizenship behaviours on customers' perceived service quality.

4. To critically evaluate the influence of each element of total quality management on customers' perceived service quality.

5. To critically evaluate the influence of employees' organizational citizenship behaviours on customers' perceived service quality.

6. To critically evaluate the influence of employees' in-role behaviours on customers' perceived service quality.

1.5 SCOPE OF THE STUDY

The meta analysis from Sila and Ebrahimpour (2002) indicated that there was a lack of TQM studies in the hospitality and tourism sector. Most of the studies, especially those on hotels (e.g. Breiter and Bloomquist, 1998), involved the use of case studies. This study then aims to address this gap by examining the TQM practices in the Hong Kong hotel industry.

In this study, it is intended to measure the perception of service quality from the actual experiences of hotel guests, in relation to the behaviours performed by front line staff. The hospitality industry is said to be a "personal industry" (Normann, 1984), in that the service offer is highly customized, and the extent of service encounters and interaction between customers and employees is relatively high (Haynes and Fryer, 2000). Due to the multidimensional nature of service in the hotel industry, it is anticipated that the behaviours of customer service staff are of critical importance to the performance of the organization and the customers' perception of service quality.

The present study focuses on the behaviours and performance of the front desk employees. Hartline et al. (2003) found that only front desk and housekeeping performance have a positive and significant effect on guests' perceived service quality. Similar findings were reported by Gundersen, Heide and Olsson (1996). They found that front desk employees contribute significantly to customer satisfaction. Significantly, customers normally experience many interactions with the front desk staff during their stay. Therefore, front desk employees were selected as the focus of this study.

Employees' behaviours can be classified into two types – in-role behaviours and extra-role behaviours (Katz and Kahn, 1978). Those behaviours that are job related or are required as part of performing the duties and responsibilities of assigned work are regarded as in-role behaviours (Barksdale and Werner, 2001). These behaviours contribute to the technical core of the organization (Rotundo and Sackett, 2002). They are also recognized by the organization's formal reward system. In this study, in-role behaviours represent those behaviours that are prescribed in job descriptions and related to standards of performance specified in the individual's job description. These in-role behaviours were used for grouping employees' behaviour into different

service quality dimensions.

Extra-role behaviours are regarded as discretionary behaviours that are not organizationally required and go beyond existing role expectations (Van Dyne, Cummings and Parks, 1995). Such behaviours are outside the prescribed tasks and are completed without the expectation of reward (Krilowicz and Lowery, 1996). Some researchers have classified this type of employee behaviours as organizational citizenship behaviours (Organ, 1988, 1990) or contextual performance (Borman and Motowidlo, 1993). This study employs the terminology of organizational citizenship behaviours (OCB). The working definition of OCB for this study is behaviour that contributes to the goals of the organization by contributing to its social and psychological environment (Rotundo and Sackett, 2002).

According to Organ (1988), OCB have a variety of forms, including altruism, courtesy, sportsmanship, civic virtue, and conscientiousness. These five dimensions of OCB were found by Krilowicz and Lowery (1996) to be significantly related to organizational effectiveness. However, there is a lack of agreement on the dimensions of OCB. Some researchers are against viewing conscientiousness as a

citizenship dimension because the indicators of this dimension are among the in-role required of most jobs (Barsdale and Werner, 2001). As a consequence, this study measures the OCB dimensions of altruism, courtesy, sportsmanship, and civic virtue and conscientious is excluded.

The most widely used and tested service quality survey instrument is SERVQUAL (Hemmasi, Strong and Taylor, 1994) based on the service quality "gap model" developed by Parasurman, Zeithaml and Berry (1988). These authors conceptualized service quality as a function of the gap between customers' expectations of a service and their perceptions of actual service delivery by an organization. They agreed a 22 item scale measuring five dimensions entitled SERVQUAL, which claimed to be generally applicable across service industries (Rao and Melkar, 1997). It is also identified as a popular measure of service quality within the hospitality industry (Johns and Tyas, 1997).

Though the identification of service gaps that potentially affect customers' perceptions of service quality represents a significant contribution, the validity of the perception-expectation service quality gap concept and corresponding measurement

framework was questioned (Teas, 1993). It was criticized as having uncovered conceptual and operational problems (Rao and Melkar, 1997). Cronin and Taylor (1994) found evidence that perceptions need only be measured in determining service quality. It was found that measurement of service perceptions alone explained the most variance in the measurement of overall service quality (Cronin and Taylor, 1992). Consequently, this study employs this method to measure service quality and resultantly only service perception were measured.

Total Quality Management (TQM) was first developed in the 1970s by Japanese engineers (Ishikawa, 1985). Quality systems have been evolving rapidly since then to ensure quality and service. There is an abundance of literature on quality concepts and quality management. Different elements or lists of critical TQM success factors have been raised by different authors according to the authors' background, experiences, and research (e.g. Crosby, 1979; Deming, 1986; Flynn et al., 1994; Juran, 1989; Sila and Ebrahimpour, 2002). At present, there are still no widely accepted elements of TQM in the TQM literature. Consequently, this study is based on the research objective and the nature of research setting. Four major elements were chosen, namely top management commitment and leadership, customer focus,

employee involvement and continuous improvement. Details of the constructs are further discussed in Chapter 2.

Most of the studies measure the implementation of TQM from the management perspective. Many instruments are designed to be administrated by managers – the general manager, quality manager, and the division manager - so as to measure their perceptions of the extent or degree of implementation (e.g. Ahire et al., 1996; Black and Porter, 1996; Flynn et al., 1994). However, it was found that quality management is not always implemented at the bottom line level (Flynn et al., 1994). A number of critics point out that TQM policies are formally instituted at the top management level but do not affect actual behaviour of the work group at the bottom line or front line (Zeitz et al., 1997). Measures which rely solely on the perceptions of the general manager and quality manager have the potential for bias (Flynn et al., 1994). As such, this study measures the point of view of the front-line employees.

Although many authors have tried to set out a clear definition of performance, debate continues in the literature, especially regarding some aspects of terminology (Ford and Schellenberg, 1982). Venkatraman and Ramanujan (1986) considered three

different levels of performance within organizations. They distinguished among financial performance, business performance and organization effectiveness, although the latter has been subsequently known as organizational performance (Chu-Hua, Madu and Lin, 2001; Terziovski and Samson, 1999). The present study investigates the relationship between TQM implementation, employees' in-role and extra-role behaviours, and organizational performance. Bitner (1990) claimed that quality perception is hypothesized as a dimension on which satisfaction is based. Teas (1993) also reported that there is a strong relationship between perceived service quality and satisfaction (Choi and Chu, 2001). As such, this thesis measures organizational performance based on customers' perception of service quality.

1.6 SIGNIFICANCE OF THE STUDY

This study aims to offer insights on the development of a comprehensive TQM model for the hotel industry by taking into account the three major components – company strategies, employee performance, and customers' experience and integrating them into one model. The hypothesized model integrates TQM critical strategies or factors, elements of employee performance, and customers' perceived

service quality as a whole. It aims to assess whether the success of implementing TQM strategies (i.e. reflected by customers' perceived service quality) is reliant on employee performance.

1.7 CONTRIBUTION TO THE ACADEMIC FIELD

The study attempts to empirically test an integrated TQM model in the Hong Kong hotel industry by taking into consideration three major components of success - company strategies, employees, and customers.

1. The study takes into account the employees' behaviours, both the in-role behaviours and organizational citizenship behaviours on customers' perceived service quality. A number of studies have argued that employees' behaviours directly affect customers' perception of service quality. A limited number take into account the discretionary behaviours of employees. The effect of organizational citizenship behaviours on service quality is not fully investigated. The results of the present study will contribute to the advancement of knowledge of organizational citizenship behaviours and service quality.

2. The study examines the degree of influence of each critical element of TQM on employees' behaviours, both in-role behaviours and organizational citizenship behaviours. Most TQM studies focus on measuring the effect of TQM on organizational performance. Its impact on employees' performance is rarely proposed. Consequently the results of the present study provide additional insight into TQM.

3. The study investigates the degree of influence of each critical elements of TQM on organizational effectiveness. Terziovski and Samson (1999) note how there is a lack of rigorous research to establish the link between TQM practice and organization performance. The degree of influence of each elements of TQM on organization performance is seldom investigated.

1.8 CONTRIBUTION TO THE HOSPITALITY INDUSTRY

This study focuses on the hotel industry in Hong Kong. The behaviours of employees and customers' experiences from service encounter were derived from the hotel industry. The critical elements of TQM selected for study were also centered on the

hotel industry.

1. The present study examines employees' behaviour, both in-role behaviours and extra-role behaviours on customers' perception of service quality. In-role behaviours studied are derived from employees' job descriptions. The results provide insight into which employee behaviours may directly enhance or cause customers to perceive service quality. The results could potentially help human resource managers to enhance service quality in their organizations.

2. An examination of the impact of employees' organizational citizenship behaviours on the organization's service quality presents the importance of OCB on organizational performance in the hotel industry and customers' perception of service quality. This may help hotel managers to improve service quality by stimulating organizational citizenship behaviours in their organizations.

3. An investigation of the degree of influence of each critical elements of TQM on customers' perception of service quality provides valuable information on the

relative importance of TQM elements that enhance customers' perceived service quality and satisfaction. This could help hotel management to focus on those TQM practices that are important to service quality in the hotel industry and prioritize their TQM activities accordingly. Furthermore, it would encourage hotels to allocate their company's resources to improve those critical elements in order to achieve the best results.

1.9 DEFINITION OF TERMS USED IN THIS STUDY

Total Quality Management

According to Cohen and Brand (1993), total implies applying the search for quality to every aspect of work from identifying customer needs to aggressively evaluating whether the customer is satisfied. Quality means meeting and exceeding customer expectations. Management means developing and maintaining the organizational capacity to constantly improve quality. Total Quality Management is a management approach of an organization, centered on quality, based on the participation of all its members and aiming at the long-term success through customer satisfaction.

Service encounter

Service encounter is a period of time during which a consumer directly interacts with a service (Shostack, 1985).

Service quality

Service quality is the consumers' judgment about an entity's overall excellence or superiority (Zeithaml, 1987). Parasuraman et al. (1988) define service quality as the degree and direction of discrepancy between customers' perceptions and expectations.

Employees' in-role behaviours

In-role behaviours are defined as behaviours that are required or expected as part of performing the duties and responsibilities of an assigned work role and are recognized by the organization's formal reward systems (Barksdale and Werner, 2001).

Employees' extra-role behaviours / Organizational citizenship behaviours

Organizational citizenship behaviours are discretionary behaviours that are not directly or explicitly recognized by the formal reward system and that, in the

aggregate, promote the effective functioning of the organization (Organ, 1988).

Altruism

Altruism is described as the discretionary behaviour that has the effect of helping a specific other person with an organizationally relevant task (Organ, 1988).

Civic virtue

Civic virtue is behaviour indicating that the employees' responsibly participates in, and is concerned about the life of the company (Organ, 1988).

Sportsmanship

Sportsmanship is a willingness on the part of an employee to tolerate less than ideal circumstances without complaining, and making federal cases out of small potatoes (Organ, 1988).

Conscientiousness

Conscientiousness refers to behaviour that goes beyond minimum role requirements of the organization or standards (Organ, 1988). Conscientiousness consists of

behaviours that go well beyond the minimum requirement in the areas of attendance, obeying rules, taking breaks, and so forth (Podsakoff et al., 1990).

Courtesy

Courtesy refers the discretionary behaviour aimed at preventing work-related problems with others or help to lessen the severity of a foreseen problem (Organ, 1988).

Customer service staff/ Front-line staff

Customer service staff or front-line staff are customer contact employees or those who have any direct contact with customers in their regular duties.

CHAPTER TWO - LITERATURE REVIEW

This literature review is divided into four sections. The first section describes the characteristics of service, the concept of the service encounter and its importance. This section also explains service quality, the historical development of the concept and measurement, the SERVQUAL model and the issues over service quality. The second section considers the relevant literature of Total Quality Management (TQM), including the principles and critical elements of TQM, its evolution and benefits; and the criticism of TQM. The third section gives an overview of employee behaviours, including the types of employee behaviours and their differences. In addition, a detail review of the concept of organizational citizenship behaviours, its dimensions and benefit, the previous studies of OCB and the criticism are given. After reviewing the relevant literature, the last section introduces the conceptual framework and describes the constructs used in this study.

2.1 CONCEPTS OF SERVICE

2.1.1 Characteristics of service

Many writers have distinguished the service sector from manufacturing and product-based organizations on the basis that the services provided are intangible, perishable and inseparable from the service producer, non-standardized and consumed in a single episode or in a series of closely related episodes (Susskind et al., 2003). Service is about performance in its nature and thus, in contrast to tangible goods, service quality depends heavily on how contact employees work with customers, co-workers, and their organization (Yoon and Suh, 2003). A service can be regarded as consisting of attributes which are evaluated by customers during and after experiencing the service (Lemmink and Mattsson, 2002). Within each service episode the customers and service providers create and interpret expectations for the service episode and its outcomes (Ford, 2001) and determine whether expectations for service delivery have been met. This view implies a critical importance for the producer-consumer interaction within the service offer in determining the customer's perceptions of service quality, which is most frequently defined as exceeding the customer's expectations (Haynes and Fryer, 2000).

Three characteristics of services were well documented in the literature (Grönroos,

1998; Parasuraman et al., 1985). The multi-dimensional nature of the service encounter creates an environment where failure can hardly be prevented (Parasuraman et al., 1991; Stevens, Knutson and Patton, 1995). Palmer, McMahon-Beattie and Beggs (2000) also claimed that the inseparable and intangible nature of services gives rise to the inevitable occurrence of failures.

Services are intangible with low objective measurability (Parasuraman et al., 1985). Unlike products that are physical objects, the performance of services can hardly be verified or assessed with concrete and precise standards. Zeithaml and Bitner (1996) posit that goods bring with them more search-quality attributes while services hold more experience-quality attributes, which can only be recognized during or after the phase of consumption. Such intangible service properties have led to many difficulties in service performance measures and evaluation (Zeithaml, 1981). Another consideration is that the intangible nature of services makes it more difficult for a customer to specify what he or she wants. Services are more difficult to standardize, and thus more negative deviations may occur from what is expected (Gronhaug and Gilly, 1991).

The other characteristic of service is heterogeneity. The performance of a service often varies from producer to producer, from customer to customer, and from day to day (Zeithaml et. al., 1990), especially for services with a high labor content, such as those provided by the hospitality industry (Lockwood, 1994). Since no two customers are identical, service providers have to evaluate the needs of each customer individually; yet misunderstandings and mistakes often occur when providing the desired service to customers (Zeithaml et al., 1990). Therefore, the heterogeneous characteristic of services may often lead to discrepancies between expectations of the customer and the perceived level of service. Ultimately, disagreement, dissatisfaction and even conflict may occur between the customer and the service provider (Babin and Boles, 1996).

Another characteristic of services is inseparability - that is the inherent amalgamation of the production and consumption process of services (Parasuraman et al., 1985). The production and consumption of a service are said to occur simultaneously (Murrmann and Suttle, 1993). Grönroos (1998) suggests that a service is produced in a process in which customers interact with the production resources of a service organization. That is, the use of a service is a consumption of process rather than a

consumption of outcome, where the customer perceives the production process to be part of the consumption, and does not perceive service as simply being the outcome of the production process as in the production of physical goods (Grönroos, 1998). In other words, when consuming services, customers are taking part in the process of production to some extent. One consequence of the inseparability between service production and consumption is that service failures usually cannot be disguised from the customers (Boshoff, 1997).

2.1.2 The service encounter

Shostack (1985: 243) suggests that the "Service encounter is a period of time during which a consumer directly interacts with a service". Shostack's definition encompasses all aspects of the service firm with which the consumer may interact including its personnel, its physical facilities, and other tangible elements – during a given period of time. Surprenant and Solomon (1987) defined the service encounter as the dyadic interaction between a customer and a service provider. Woodside, Frey and Daly (1989) operationalized service encounters as consisting of specific events, while Liljander and Strandvik (1995) conceptualized them as service episodes.

Danaker and Mattsson (1994) defined stages in the service process as a way to structure the experience of the customer. All of these approaches make use of a time frame to sequence the events during the service encounter (Lemmink and Mattsson, 2002). However, Lemmink and Mattsson (2002) refer to service encounters as procedures, environmental settings, and employee scripts.

2.1.3 Importance of the service encounter

Many researchers proposed that all consumers' perceived quality attributes related to the dress, the performance and the behaviours of service employees (Bitner, Booms, and Tetreault, 1990; Bowen and Schneider, 1985; Hartline and Ferrell, 1993; Hartline and Jones, 1996; Rafaeli, 1993). Atkinson (1988) recognizes that, in order of importance, cleanliness, security, value for money, courtesy and helpfulness of staff are found to be key attributes for travelers in hotel choice selection. Cadotte and Turgeon (1988) survey on 26 categories of compliments, found that the attitudes of employees, cleanliness and neatness, quality of service and employee knowledge are the most frequent factors mentioned by travelers. Knutson's study (1988) also found that cleanliness and comfort, convenience of location, promptness and courtesy of

service, safety and security, and friendliness of employees are considered important by business and leisure travelers when selecting a hotel for the first time or for repeat patronage. All these findings demonstrated that the service encounter and employee performance is a key determinant to the positive customer evaluation and the choice of a hotel (Hartline et al., 2003).

In the hospitality industry, the success and failure in providing service quality often determines the success and failures of the hotel. In particular, the Front Office the nerve center of the hotel is vital to provide service quality to hotel guests during the service encounter. They are very often represents the only direct contact the hotel guest has with the hotel. Capitalizing on opportunities to provide service quality is essential. John Norlander of the Radisson Hotel Corporation estimated 12 million guests pass through Radisson doors each year with an average of 12 contacts with bellmen, front desk clerks and other hotel staff which create 144 million chances for the hotel chain to give a good or bad impression (Bardi, 1996). Hence, hotel management should focus on managing quality service at the Front Office.

2.14 Definition of Service Quality

The Dictionary of Psychology (Chaplin, 1981) defined quality as the relative level of goodness or excellence of anything. The most popular definition of quality relates to meeting/exceeding expectations (Reeves and Bednar, 1994). Many researchers viewed service quality as a measure of how well the service delivery level matched with customer expectations, i.e. comparison of what they want or expected from the firms with what they actually received (Grönroos, 1982; Lewis and Booms, 1983; Zeithaml and Berry, 1985). Service quality is the consumer's judgment about an entity's overall excellence or superiority (Zeithaml, 1987). By proposing the SERVQUAL model, Parasuraman *et al.* (1988: 17) define service quality as "the degree and direction of discrepancy between customers' perceptions and expectations." Therefore, it is clear that there is a linkage between service expectations and perceptions of service quality. Extensive exploratory research conducted by Parasuraman et al. (1985) supports the notion that service quality is an overall evaluation similar to, but not the same as an attitude. Some researchers proposed that service quality should include the manner in which the service is delivered (Grönroos, 1982), as well as the company's image or profile, and the

interaction between the salesperson and the customer (Lehtinen and Lehtinen, 1982).

According to Robinson (1999), it is generally agreed that service quality is an attitude or global judgment about the superiority of service. However, some authors suggested that is stems from a comparison of performance ideal standards (Teas, 1993) or from perceptions of performance alone (Cronin and Taylor, 1992).

Quality has become the single most important force leading to organizational success, company growth, and maintaining a competitive advantage in national and international markets. There are a wide variety of approaches to defining quality. Quality has been defined as being about value (Feigenbaum, 1983); conformance to standards, specifications or requirements (Crosby, 1979); fitness for use (Juran, 1989); quality as excellence (Peters and Waterman, 1982); and delighting the customer (Peters, 1989).

2.1.5 Definition of perceived Service Quality

In the marketing literature, perceptions of service are defined as consumers' beliefs

concerning the service received (Parasuraman et al., 1985) or experienced service (Brown and Swartz, 1989). Parasuraman et al. (1988: 16) define perceived service quality as a "global judgment, or attitude, relating to the superiority of the service." In other words, perceived service quality is the consumer's judgment about a firm's overall excellence or superiority. This definition suggests that perceived quality is similar to an individual's general attitude toward the firm. Some researchers propose that the overall measures of quality and value are attitudinal and develop over time, whereas specific performance ratings are linked with the immediate service encounter (Hartline and Jones, 1996). This proposition concurs with Parasuraman et al.'s (1988) earlier definition of perceived service quality which according to Bitner (1990) is similar to all individual's general attitude toward the organization (Gould-Williams, 1999). However, Caruana (2002) argued that perceived quality is the result of the evaluation they make of what was expected and what was experienced, taking into account the influence of the organization's image.

2.1.6 Measurement of Service Quality

Delivering high quality service is a crucial factor for success in the service industry

(Parasuraman et al., 1988), especially during times of intensive competition. A recent survey of North American, Western European, and Japanese managers showed that 78 percent of the surveyed managers believe service improvements are the key to competitive success (Berry and Parasuraman, 1992). Min and Min (1997) further suggested that service improvements usually prescribe the establishment of service standards and the measurement of service quality. The measurement of service quality, however, is not an easy task due to the intangible and elusive nature of service quality (Min and Min, 1997). As services are largely intangible, the quality of services is assessed subjectively by consumers (Rao and Melkar, 1997). Considering the importance of delivering high quality service, measurement of service quality is of paramount importance to the service providers (Rudie and Wansley, 1985; Thompson, DeSousa and Gale, 1985).

2.1.7 The SERVQUAL Model

Parasuraman et al. (1988) offered what could be considered as the first generally accepted instrument to measure service quality. These authors conceptualized service quality as the difference between perceived performance and the expected

performance of the service. They came up with a 22 item scale entitled SERVQUAL, which they claimed was generally applicable across service industries. SERVQUAL measures service quality, breaking it up into five dimensions; tangibles, reliability, responsiveness, assurance, and empathy. According to Parasuraman et al. (1988), tangibles refer to the appearance of physical facilities, equipment, personnel and communication material. Reliability is considered as the ability to perform the promised service dependably and accurately. Responsiveness is regarded as the willingness to help customers and provide prompt service. Assurance refers to the knowledge and courtesy of employees and their ability to convey trust and confidence. Empathy is the caring, individualized attention that the firm provides to its customers. Several researchers have recently applied the conceptual and measurement approach used to develop SERVQUAL in different service industries (e.g., Hedvall and Paltschick, 1989; Vogels, Lemmink and Kasper, 1989).

2.1.8 Problems of measuring Service Quality

Though the identification of service gaps that potentially affect customers' perceptions of service quality represents a significant contribution, empirical

research has identified important problems concerning the operationization of the service expectation concept (Teas, 1993). The validity of the perception-expectation service quality gap concept and corresponding measurement framework is questionable. This is due to a number of problems involving conceptual and operational definitions of the concept of expectations, and the resulting ambiguity of the theoretical justification and interpretation of the perception-expectation perceived quality framework (Teas, 1993). Carman (1990) also questioned the validity of the expectations measure when consumers do not have "well formed expectations". Another problem with the use of expectations is that they are not necessarily consistent or predictable (Blanchard and Galloway, 1994), and they are subject to management communication or advertising. This led to some debate about the empirical versus diagnostic value of incorporating expectations in any measurement of quality (Bennington and Cummane, 1998). Teas (1993) argued that there is a lack of congruence between the conceptual and operational definitions of the original SERVQUAL expectation measure. The findings from his study indicated that a considerable portion of the variance in responses to the SERVQUAL expectation scale is due to the variance in respondents' interpretations of the question being asked rather than to variance in respondents' attitudes (Teas 1993).

The five dimensions identified by Parasuraman et al. (1985, 1990) suffer from at least two major shortcomings. First, they are very broad and lack specificity in serving as cues that consumer can use to infer service quality (Oliver, 1993). For example, a problem with a service's "reliability" does not indicate the particular attribute or cue that was unreliable. The second shortcoming is that the particular attributes or cues that comprise each dimension vary across service contexts (Babakus and Boller, 1992; Carman, 1990; Oliver, 1993). For example, the cues that comprise "responsiveness" in health care are not necessarily the same as the cues that create responsiveness in a restaurant (Hartline and Jones, 1996). Bennington and Cummane (1998) argue that service quality means different things to different people. Nayyar (1995) found that between 24 and 99 activities constitute customer service activities, however, a review by Donaldson (1995) investigating the key dimensions of customer service revealed seventeen dimensions, instead of five. Specifically, different industries comprise different numbers of dimensions and each industry may comprise different dimensions of service quality.

The results afford a less than satisfactory support for the generalizing of the

dimensions of SERVQUAL across different service industries. As a consequence, at least three alternative formulations of the service quality model have been suggested (Babakus and Inhofe 1991, Carman 1990). The first approach operationalizes service quality as a multiplicative linear compensatory function of performance and importance ratings. Babakus and Inhofe (1991) tested this approach with negative results. In a survey conducted in the public utility sector they found that including the importance ratings of service attributes does not improve the explanatory power of the 't' model. The second approach suggested by Cronin and Taylor (1992) has shown that performance on the 22 service attributes suggested in SERVQUAL, is an important antecedent affecting overall service quality, consumer satisfaction and purchase intentions. They found that their performance-based measure of service quality (SERVPERF) outperformed the traditional SERVQUAL. The third approach, suggested by Carman (1990), has not yet been empirically tested (Rao and Melkar, 1997).

The issue of service quality has received considerable attention in the marketing literature (Bolton and Drew, 1991; Cronin and Taylor, 1992; Parasuraman et al., 1985, 1988). In today's competitive environment the pursuit of service quality is

considered as an essential strategy. During the last decade researchers have focused on the issues surrounding the conceptualization and measurement of service quality (Grönroos, 1984: Lehtinen and Lehtinen, 1991; Parasuraman et al., 1985, 1988). As much progress has been made in this area researchers are now endeavoring to gain a better understanding of the relationship between service quality and a range of consumer behavioural intentions (Zeithaml et al., 1996).

2.2 TOTAL QUALITY MANAGEMENT (TQM)

2.2.1 Definition of Total Quality Management

Total quality management, similar to the concept of quality, does not possess a universal definition (Gehani, 1993). However, most definitions accept the notion that customers define quality. The term Total Quality Management (TQM) is a body of practice defined by both quality theorists and practitioners. Oakland (1993) defined TQM as an approach to improve the effectiveness and flexibility of business as a whole. According to him, TQM is essentially a way of organizing and improving the whole organization, every department, activity, and every single person at every level.

The aim is to continuously improve process performance by placing the customers at the focal point of operations in order to satisfy their requirements. TQM is a continuous quest for excellence that has to reach every individual within an organization to make prevention of defects possible and to totally satisfy customers at all times.

According to Pfau (1989) TQM is an approach for continuously improving the quality of goods and service delivered through the participation at all levels and functions of the organization. Tobin (1990) viewed TQM as a totally integrated effort for gaining competitive advantage by continuously improving every facet of organizational culture. Similarly, Lakhe and Mohanty (1994) claimed that TQM helps an organization clearly focus on the needs of the target markets by channeling the efforts, of all human and procedural functions to achieve quality performance. It develops good procedures of never-ending improvement and enables firms to fully understand the competitive potentials and to contribute to their competitive strategy development.

According to a study group of the 1992 Total Quality Forum, TQM is defined as:

> "A people focused management system that aims at continual increase in customer satisfaction at continually lower real cost. TQM is a total system approach, and an integral part of high level strategy. It works horizontally across functions and departments, involving all employees, top to bottom, and extend backwards and forwards to include the supply chain and the customer chain" (cited in Bounds, Yorks, Adams, and Ranny, 1994: 4).

The gurus created the overall philosophical content of the subject and practitioners are completing the "how-to" details (Cortada, 1995; Kolarik, 1999). Cohen and Brand (1993: 11) argue:

> "Total implies applying the search for quality to every aspect of work from identifying customer needs to aggressively evaluating whether the customer is satisfied. Quality means meeting and exceeding customer expectations. Management means developing and maintaining the organizational capacity to constantly improve quality."

Overall, TQM is the way of an organization committed to customer satisfaction by continuous improving the quality of service. It is a management approach of an organization, centered on quality, based on the participation of all its members and aiming at long-term success through customer satisfaction, and benefits to all members of the organization and to society (Cohen and Brand, 1990).

Mohr-Jackson (1993) believes TQM is reliant on a distinct organizational culture, a fundamental shared set of beliefs and values that put the customers at the center of the firms' activities and operations. TQM has been described as a new model of thinking in business management (Chorn, 1991), a comprehensive style to improve organizational performance and quality (Hunt, 1993). Ross (1995) regards TQM as an integrated management philosophy and a set of practices that emphasizes, among other things, continuous improvement, meeting customer requirements, reducing rework, long-range thinking, increased employee involvement and teamwork, process redesign, competitive benchmarking, team-based problem-solving, constant measurement of results, and closer relationships with suppliers. TQM has evolved as an approach to quality that is now characterized by an integrated, systematic, organization-wide strategy for improving product and service quality (Saylor, 1996).

Its adherents claim that TQM is equally applicable to different types of organizations, for example, manufacturing organizations, service providers, non-profit and government organizations (Huq and Stolen, 1998). TQM also generates improved products and services, reduces costs, produces more satisfied customers and employees, and improves bottom-line financial performance (Walton, 1989).

Williams (1994) defines TQM as a process of creating an environment in which management and workers strive to create an organizational culture, which helps to achieve the goal of creating the highest possible quality in products and services for the purpose of customers' satisfaction. Ho (1995) sees TQM as a totally integrated effort for gaining competitive advantage by continuously improving every facet of an organization's activity for the purpose of customers' satisfaction. Okolie (1996) defines TQM as a management philosophy, which seeks continuous improvement in the quality of performance of all processes, products and service of an organization, with the primary objective of achieving customers' satisfaction and loyalty. Terziovski and Samson (1999) define TQM as a philosophy that embraces concepts, methods, tools and techniques to form a language which is understood and applied as a business strategy at the "top-floor" and as a functional strategy at the "shop-floor".

This approach assists organizations to integrate business activities through leadership, people, customer focus, planning, quality assurance of processes and information and analysis. These activities when effectively linked together would lead to sustainable world-class performance in customer satisfaction, employee relations, operating performance and business performance.

Although an abundance of research has emerged on TQM in the past two decades, there is an absence of a universally accepted definition for TQM, and much controversy exists on finding a TQM definition that includes the efforts made by the different researchers (Gehani, 1993). Based on the literature, the core concepts of TQM are to delight the customer, management by fact; people based management and continuous improvement. Total quality necessitates organizational support and continuing management interest. Management must create a new atmosphere in the organization and reach for defined, attainable quality goals (Buckland et al., 1991). Quality management is often regarded as a systematic way of guaranteeing the organized activities happen in the way they are planned. It is a management discipline concerned with preventing problems from occurring by creating the attitudes, behaviour, and controls that prevent defects from happening in the

company's performance cycle.

2.2.2 Principles of Total Quality Management

TQM has been employed and perfected by the Japanese over the last thirty years. The great commercial success of Japanese companies in the last two decades and the extensive Japanese penetration of global markets is the result of managing quality – by fully adopting total quality control (TQC). This is undoubtedly the integrative strategic framework of the Japanese company (Dale and Cooper, 1992; Ishikawa, 1985). There are a number of important facts that can be learnt from their good practice that can afford considerable benefit in the pursuit of TQM.

The concept of TQC was originated by Feigenbaum (1991), who defined it as, "an effective system for integrating the quality development, quality maintenance, and quality improvement efforts of the various groups in an organization so as enable production and service at the most economical levels which allow for customer satisfaction."

Ishikawa (1985) classified into six categories the manner in which the Japanese companies were transformed:

- Quality first, rather than short-term profit first.
- Consumer orientation, rather than producer orientation.
- The next process is your customer, for breaking down the barrier of sectionalism.
- Using facts and data to make presentations by utilizing statistical methods.
- Respect for humanity as a management philosophy by full participatory management.
- Cross-functional management.

There are a number of important practices and strategies which many agree can be learnt from the Japanese experience (Dale and Cooper, 1992). They are as follows:

Total (T): Company-wide, "total" view of quality includes all activities at all levels in all areas and total participation, total commitment, and total responsibility of everyone in an organization (top management, employees, suppliers and customers),

integrating them into a comprehensive approach to continuous improvement.

Quality (Q): Quality that fulfills the customers' ultimate requirements.

Management (M): Management of all activities including available resources at all levels in all areas in an organization under a TQM-oriented environment in a most efficient and cost-effective way for continuous improvement.

TQM strives to create an organizational culture that fosters continuous improvements in everything by everyone all the time, and requires changes in organizational processes, strategic priorities, individual belief, attitudes and behaviors (Dale et al., 1998; Pun, 2001). Therefore, TQM is the management of all activities and available resources at all levels in all areas through the total participation, total commitment, and total responsibility of everyone in an organization. This means the needs and expectations of the customer and the objectives of the organization are satisfied under a TQM-oriented environment in the most efficient and cost effective way in a continuing and company-wide drive for improvement. Continuous improvement requires patience, tenacity, understanding, skills and considerable commitment from

people at every level in the organization, in particular the senior management team. The guiding principles express an organization's overriding values and beliefs, whereas the TQM strategy is an integrated sequential milestone that can help track the progress toward improving a quality-driven business process (McDermott, Mikulak and Beauregard, 1993; Pun, 2001). TQM is a comprehensive and integrated way of managing any organization in order to meet the needs of the customer consistently, maintaining process to satisfying external and internal customer and achieving continuous improvement in every aspect of the organization's activities (Voss, 1992; Wilkinson, Redman and Snape, 1998).

2.2.3 Benefits and costs of TQM implementation

TQM is an integrated management philosophy and set of practices that emphasizes continuous improvement, meeting customers' requirements, reducing rework, long-range thinking, increasing employee involvement and teamwork, process redesign, competitive benchmarking, team-based problem-solving, constant measurement of results, and closer relationships with suppliers (Powell, 1995; Pun, 2001; Ross, 1994). The greatest benefit of TQM should be promoting continuous company-wide

improvement so as to understand and meet the requirements of customers in the most cost-effective way (Dale and McQuator, 1998). When implemented well, TQM can help an organization excel, by improving relations with customers, suppliers and employees and, in the process to improve the quality of the products by improved organizational performance capability, so as to enhance organizational effectiveness (Dale et al., 1997).

Furthermore, TQM organizations involve everyone in decision-making because doing so offers a number of benefits (e.g. Dale et al., 1997; Robbins, 1993). For example, it is suggested that people will accept a decision more readily when they have been involved in making the decision. Also, diverse input often leads to a high quality decision and helps develop an environment of trust among employees (Rodriguez, 1994). Powell (1995) also argues that managers can implement TQM in any organization (including manufacturing, service, nonprofit or government), and the implementation can generate improved serves, reduced operating costs, more satisfied customers and employees and improved bottom-line financial performance. TQM also acts as a powerful tool against competitors. Implementing TQM can help organizations produce a better, more reliable product that better meets customer

requirements and reduces manufacturing costs by minimizing variation in the manufacturing costs and the manufacturing process (Menon, 1992).

Although many adherents openly praise TQM (Crosby, 1979; Juran, 1988; Ross, 1994), others have identified significant costs and implementation obstacles. Critics have suggested, for instance, that TQM entails excessive retraining costs, consumes inordinate amounts of management time, increases paperwork and formality, demands unrealistic employee commitment levels, emphasizes process over results, and fails to address the needs of small firms, service firms or non-profits (Powell, 1995). The failures of TQM have been attributed to the pre-existence of factors that conflict with TQM philosophy and practice. These included lack of co-operation (Larson and Sinha, 1995) and excessive time and financial commitments (Merron, 1994). Shortcomings of TQM or the reasons for its failure can be attributed to implementation problems (Reger, Gustafson, Demarie and Mullace, 1994) or a disregard for contextual factors (Lozada and Contreras, 1999). Reasons for friction or failure to implement a quality program may include a mismatch of organizational culture (Kekale and Kekale, 1995), a lack of management leadership and inadequate training (Doyle, 1992).

2.2.4 The evolution of Total Quality Management

The origins of TQM can be traced to 1949, when the Union of Japanese Scientists and Engineers (JUSE) formed a committee of scholars, engineers and government officials devoted to improving Japanese productivity, and enhancing their post-war quality of life. Influenced by Deming (1986) and Juran (1986), the committee developed a course on statistical quality control for Japanese engineers, followed by extensive statistical training and the widespread dissemination of the Deming philosophy among Japanese manufacturers (Power, 1995). TQM has produced managerial innovation such as quality circles, equity circles, supplier partnerships, and hoshin planning that have proved very effective in Japan (Akao, 1991).

Since then quality control programmes became more widely implemented and sophisticated. Quality systems have been evolving rapidly for ensuring product and service quality. Since the 1970s simple inspection activities have been replaced or supplemented by quality control, quality assurance has been developed and refined, and more companies are working towards which was developed from the work of

Dale and Plunket (1990).

Several of the leading gurus have produced broad frameworks for implementing and sustaining competitive advantage through quality management (NIST, 1995). These include Crosby's "14 steps" (Crobsy, 1979), Deming's "14 points" (Deming, 1982), and Juran's "10 steps" (Juran, 1986). Literature studies have often identified key differences between these prescriptions (Oakland, 1993; Saraph et al., 1989). Deming (1982) summarized his management philosophy around fourteen principles he offered as requirements to remain competitive in providing products and services. These include management commitment and leadership, statistical process control, removal of barriers to employee participation and control of their own quality, and continuous improvement of processes. Crosby (1979) focused on organizational factors such as cultural change, training leadership, and the ongoing calculation of quality cost. Juran (1986) emphasized quality planning, quality control, quality improvement and training as three basic elements of quality management.

Feigenbaum (1991) developed the concept of the "cost of quality" as a means of quantifying the benefits of adopting a total quality management approach and he

introduced "total quality control" (TQC) for the first time in the 1950s. Ishikawa (1985) advocated company-wide quality control (CWQC) and the use of seven tools of quality for solving problems and removing barriers to improvement, co-operation, training and education. Garvin (1983) recognized the eight dimensions of quality as the basis for developing strategic options and he emphasized that quality should be linked with the strategic planning process requiring organization-wide commitment.

Although there is an abundance of literature on quality concepts and quality management, no single model has yet established itself as a basis for theory (Saraph et al., 1989). This has meant not only an absence of a practical model that could be used by organizations in developing their TQM systems, but also a lack of easily applied methods for identifying areas for improvement in current TQM programmes. As a result, there has been a trend in organizations to use TQM frameworks based upon the assessment criteria from key quality awards such as the Deming Prize in Japan, the Malcolm Baldridge National Quality Award in the USA and the European Quality Award. These awards had originally been developed to identify which organizations utilized the best quality management practices.

In Hong Kong, the Hong Kong Management Association introduced the annual Quality Award in 1991 to give recognition to those companies in Hong Kong which have made a lasting commitment to quality and also to provide an opportunity for companies to share with one another their experience in Total Quality Management. The Award is based on the American Malcolm Baldridge National Quality Award judging criteria, and is equivalent to the Japanese Deming Prize and the European Quality Award. Past hotel winners include Mandarin Oriental Hotel Group (1992), Island Shangri-la, Hong Kong (1997), the Marco Polo Hong Kong hotel, the Marco Polo Gateway and the Marco Polo Prince hotel (2003) (HKMA, 2005).

2.2.5 Models of Total Quality Management

There have been many recent developments of national and international quality system standards and quality awards to promote quality and TQM by offering a continually changing blueprint for organizational self-assessment and focus attention on the strategic implications of continuous quality improvement. The two most popular quality award frameworks, are the Malcolm Baldridge National Quality Award (MBNQA) (NIST, 2000) and the European Quality Award (EFQM, 1991).

The awards are considered a popular means to assess the progress of an organization's quality management (McDonald, Zairi and Idris, 2002).

The key elements of these quality award frameworks can serve as guiding principles for companies that are implementing or planning for TQM to develop and apply quality improvement strategies. These awards include a series of standards to help implement quality management systems, which define and set out a list of features and practices and provide an effective managerial framework on which to assist TQM development to focus on the process of continuous improvement (Terziovski and Samson, 1999). Therefore, both the quality assurance system and awards can provide a list of essential quality management practices which can be grouped together to complement each other to capture a set of TQM key elements, from which organizations can acquire more understanding of TQM practice for better TQM planning. A brief introduction on MBNQA and EQA is presented in the following section.

I. The Malcolm Baldridge National Quality Award (MBNQA)

The Malcolm Baldridge National Quality Award (MBNQA) was firstly introduced in the USA during 1987 and is becoming highly valued in the United States (Garvin, 1991; Terziovski and Samson, 1999). The MBNQA aims to drive US companies to pursue involvement in quality activities to improve their products and services to higher levels of quality in order to get the highest level of national recognition for quality performance and practices to meet the challenges of global competition.

The MBNQA helps organizations focus on the delivery of ever-improving value to customers, resulting in marketing success and improvements in overall organizational effectiveness and capabilities. The MBNQA adopts the Performance Excellence Framework, which consists of seven categories that can allow organizations to identity strengths and to target opportunities for improving processes and results affecting all key stakeholders. The major focus of each of the seven categories is:

- Leadership – the senior executives' success in creating and sustaining a quality culture and customer focus.

- Information and Analysis – the effectiveness of data collection, analysis, and

benchmarking for quality planning and improvement.

- Strategic Planning – the integration of performance requirements into the business plan and the establishment of strategies to assure the quality of products and service.

- Human Resource Development and Management – the success of efforts to develop the full potential of the workforce to meet the company's quality and performance objectives.

- Process Management – the effectiveness of systems and practices to assure the quality of all operations including suppliers.

- Business Results – the measures of progress demonstrating quality achievement and quality improvement through internal quantitative measures.

- Customer Focus and Satisfaction – the effectiveness of systems to focus on the customer, define their requirements and successfully meet them, and to provide external results.

II. The European Quality Award (EQA)

More recently, the European Quality Award (EQA) adopted the European Foundation

for Quality Management (EFQM) Excellence Model as a strategic tool for the overall company management. The EFQM Excellence Model was launched in 1991 and is now firmly established as Europe's most successful quality-in-business model. The EFQM Excellence Model is a non-prescriptive framework, and it consists of nine criteria and 32 sub-criteria, including top management commitment and leadership strategic quality planning, human resource planning, external partnership and participation, people participation and motivation, organizational learning, process management, resource management, external performance. Five of the criteria are "Enablers" which are concerned with the results the organization is achieving with respect to different stakeholders.

Both the EQA and MBNQA are almost similar in the sense that both of them give maximum weight to the results criteria. The EQA is gives greater emphasis to increased visibility of the value chain, including the increasingly important role of external partnerships to that chain; the emerging importance of the management of knowledge within organizations, the learning organization culture and innovation, as providing a key competitive advantage; and the alignment of all corporate activity to the results being sought and consequently to the organization's policy and strategy.

The MBNQA addresses the customer and market focus separately as a main criterion whereas the EQA mentions the customer focus under process criterion. Both the MBNQA and EQA focus on supplier relationship, leadership, planning, and managing information.

2.2.6 Critical elements of TQM identified by previous researchers

There is no agreement between academics and practitioners as to which elements are actually implemented in an organization when a TQM system is set up. Thus, from Saraph et al.'s (1989) work up to the present, many studies have tried to establish the degree of real implementation of a quality system in a company (e.g. Ahire et al., 1996; Anderson et al., 1995; Flynn et al., 1995; Grandzol and Gershon, 1998; Rao, Solis and Raghunathan, 1999). These elements tend to provide the guidelines to appraise the effectiveness of a TQM program following implementation. The elements considered in these works can be classified into five large blocks:

- Managerial leadership and commitment.
- Human resources management.

- The relationship between customers and suppliers.
- The internal culture of the organization.
- The process management.

Recently, Krasachol and Tannock (1998) identified five components of a TQM framework, which is consistent with and grounded within, a broad range of qualitative and quantitative TQM studies in many different kinds of organizations. The five components of this framework can act as a useful vehicle for examining the relationship between TQM and organizational performance. The five components are:

1. TQM is strategically linked to the business goals.
2. Customer understanding and satisfaction is vital.
3. Employee participation and understanding at all levels is required.
4. The need for management commitment and consistency of purpose.
5. The organization is perceived as a series of processes, which incorporate customer supplier relationships.

The recent study by Sila and Ebrahimpour (2002) summarized the 25 most

commonly suggested critical factors of success from 76 empirical studies of TQM.

The factors are shown in the following table 2.1:

Table 2.1 The Summary of the Total Quality Management critical success factors.

1. Top management commitment.
2. Social responsibility (including environmental control, security and safety of employees, customers and communities and other related issues).
3. Strategic planning.
4. Customer focus and satisfaction.
5. Quality information and performance measurement.
6. Benchmarking.
7. Human resource management [human resource management issues other than those listed below (8-13)].
8. Training.
9. Employee involvement.
10. Employee empowerment.
11. Employee satisfaction.
12. Teamwork.
13. Employee appraisal, rewards, and recognition.
14. Process management.
15. Process control.
16. Product and service design.
17. Supplier management.
18. Continuous improvement and innovation.
19. Quality assurance.
20. Zero defects.
21. Quality culture.
22. Communication.
23. Quality system.

24. Just in time.
25. Flexibility.

2.2.7 Criticism of Total Quality Management

Although many adherents openly praise TQM (Crosby, 1979; Juran, 1988; Ross, 1995), a large number of failures have been reported (e.g. Eskildson, 1995; Przasnyski and Tai, 1999) and the contribution of TQM to organizational competitiveness has been questioned (Harari, 1993; Powell, 1995). Many of the studies that measured direct relationships between TQM practices and business financial performance found results which were not significant (Terziovski and Samson, 1999). Some researchers posited that the failure is not caused by the concept of TQM, but due to the problems in the implementation process (Eskildson, 1994; Reger et al., 1994; Shin, Kalinowski and El-Enein, 1998). Other reasons for friction or failure to implement a quality program may include a mismatch of organizational culture (Kekale and Kekale, 1995), a lack of management leadership and inadequate training (Doyle, 1992).

Some of the other criticisms concern the significant cost incurred in time, human,

and financial resources, a long period for pay back, and suitability for service organizations (Harari, 1993; Nai, 1993). Critics have suggested, for instance, that TQM entails excessive retraining costs, consumes inordinate amounts of management time, increases paperwork and formality, demands unrealistic employee commitment levels, emphasizes process over results, and fails to address the needs of small firms, service firms or non-profit organizations (Powell, 1995).

Furthermore, although many studies deal with the implementation of TQM and the effect of TQM, a large number of studies are specifically within the context of manufacturing companies (Sila and Ebrahimpour, 2002), with a limited number of studies within the context of services. Most of the TQM studies reported tend to use survey measures which are manufacturing and industrial specific (e.g., Ahire et al., 1996; Black and Porter, 1996; Flynn et al., 1994; Saraph et al., 1989). The applicability of various TQM implementation models to service organizations is questionable (Sila and Ebrahimpour, 2002). There are also few reliable and valid instruments measuring the effectiveness of TQM implementation for the service industry, and specifically for the hotel industry.

2.2.8 Total Quality Management in the tourism and hospitality industry

The research of TQM in the tourism and hospitality industry is insufficient. There are only 10 published articles between 1989 and 2002 (Sila & Ebrahimpour, 2002). A major criticism of the TQM studies on the hospitality industry, and especially those on hotels are that they mostly involved the use of case studies and the personal perceptions of researchers (Breiter and Bloomquist, 1998). Quality management research in the hospitality industry in particular has taken a less holistic approach to TQM, most focusing on the human resource management aspect of TQM (Hoque, 1999; Partlow, 1996). Clearly, there seems a need for further studies of TQM in the hospitality industry (Sila and Ebrahimpour, 2002).

Table 2.1 is a summary of the previous studies on total quality management in the hotel industry between 1989 and 2002. It was found that only a few articles on total quality management were focused on the hotel industry. Thus the importance of total quality management in the hotel industry is under-examined. Most of these studies involved the use of case studies and the measures of either EFQM model or the Malcolm Baldridge model. Besides, TQM studies were focused in America or

Europe. None of them was conducted in an Asian country. Table 2.2 outlines the TQM components which were primarily examined focused on process management, culture of quality, and personnel management. Other TQM components, such as continuous improvement and customer focus were not examined in the previous studies.

Table 2.2 Summary of the literatures on Total Quality Management in the hotel industry

Authors	Summary	TQM Components	Countries
Breiter, D., & Bloomquist, P. (1998)	Measures the implementation of TQM in the hotel industry in the United States	Process orientation, human element, and culture of quality	America
Camišon, C. (1996)	Measures the gap on perception of quality between customers and hotel management based on EFQM model .	Leadership, policy and strategy, personnel management, resource management, process management	Spain
Dube, L., & Renaghan, L. M. (1999)	Measures customers' view on the benefits delivered by the brand of hotel.		America

Luchars, J. Y., & Hinken, T. R. (1996)	Proposes a service quality audit that quantifies the cost of everyday errors.	Service quality audit	America
Meyer, A., Chase, R., Roth, A., Voss, C. (1999)	A cross-country examination of TQM practice and organization performance for four different industries.	Leadership, employee empower, culture of quality, process management	UK, US, Germany
Orley, C. (1988)	A case study of implementing participative management in selected hotels.	Participative management	France
Partlow, C. G. (1996)	Discusses how human resources practice affect the success of TQM programme in hotels.	Employee involvement, job design, culture of quality	America
Soriano, D. R. (1999)	Identifies the most important factors of a hotel's TQM programme and comparison with European quality management standard	Leadership, policy & strategy, personnel management	Spain
Walker, J. R., & Salameh, T .T. (1990)	Investigates the return on implementation of TQM		Not specify
Watkins, E. (1992)	Describes how Ritz-Cartlon Hotel won the Malcolm		America

	Baldrige award		

Remark: This summary only includes articles published between 1989 and 2002

The TQM literature is based largely upon case studies, anecdotal evidence and the personal perceptions of the recognized gurus of the discipline, including Deming, Juran, Crosby, and Ishikawa (Black and Porter, 1996). Conceptual papers and case studies only provide insights into key elements of quality management strategies, however, they cannot generalize the perceptions. These works suffer from a lack of systematic scale development, content validity, and empirical validation and fall short on overall generalizability of results (Ahire et al., 1996).

Saraph et al. (1989) first identified quality management constructs and development of related scales. Although, several researchers also conducted empirical validation of the constructs (e.g., Anderson et al., 1995; Black and Porter, 1996; Flynn et al., 1994), the critical elements or factors that constitute TQM are not completely agreed (Sila and Ebrahimpour, 2002). Although there are similarities between the factors found in different studies, the list of the critical factors of TQM varies from study to study. Different elements or list of critical TQM success factors were raised by different authors according to the authors' background, experiences, and research

(e.g., Anderson et al., 1995; Flynn et al., 1994; Saraph et al., 1989; Shire et al., 1996; Sila and Ebrahimpour, 2002). However, the critical elements should be specific to the industry. It is argued that a set of criteria based upon the perceptions of actual industrial practitioners might be more valid (Black and Porter, 1996).

2.3 ORGANIZATIONAL CITIZENSHIP BEHAVIOUR (OCB)

The behaviour of customer contact employees and the management of customer contact employees have been extensively discussed both in the human resources literature and the services marketing literature. The following presents the importance of employees' behaviour to organizational performance, and then explain the relationship between employees' behaviour and empowerment and the classification of employee's behaviours. The definition and dimensions of Organizational Citizenship Behaviour are explained. An overview of the previous studies of OCB and the criticism of OCB are also presented.

2.3.1 EMPLOYEE BEHAVIOUR

A number of empirical studies mentioned in the above section reflected that

employee performance is an important cue used by guests to infer the overall quality of a hotel (Hartline et al., 2003). Seminal papers dating back to the 1970s defined job performance in terms of actions and behaviours rather than the results of these actions (Campbell, 1990; Murphy, 1989). Definitions also focused on behaviours that affect the goals of the organization and are under the control of the individual. According to one of the most widely held definitions, employee performance refers to the behaviour evaluated in terms of its contribution to the goals of the organization. Performance, in other words, has a normative element reflecting whether an employee's behaviour is good or bad in light of the organization's goals and objectives (Churchill, Ford and Walker, 1990). Based on the above-mentioned definition of employee performance, employee behaviours always contribute to employees' performance, and ultimately contribute to the success of an organization. Holistic evaluations of employee behaviours continue to play an important role in organizational evaluations of employees (Barksdale and Werner, 2001).

2.3.2 EMPLOYEE BEHAVIOUR AND EMPOWERMENT

Empowerment refers to a situation in which the manager gives employees the decision to make day-to-day decisions about job related activities (Bowen and

Lawler 1992; Conger and Kanungo, 1988). Empowerment is thought to be necessary to hotel customer service job as employees need the flexibility to completely satisfy the hotel guests. Bowler and Lawler (1992) suggest that empowered employees feel better about their jobs and more enthusiastic about serving customers which resulted in quicker response to customer needs and increased customer satisfaction. Hartline and Ferell (1996) tested the influence of empowerment on the attitudinal and behavioural responses of contact employees. They also found that empowered employees are more confident in their job skills. In studying customers' evaluation on empowered staff, Sparks, Bardley and Callan (1997) examine the impact of staff empowerment and communication style on customers' evaluations. According to their results, a fully empowered employee produced more customer satisfaction than limited or non-empowered employees, but only when the service employees use an accommodating style of communication. Previous studies (Brown, Steven and Peterson 1993; Conger and Kanungo 1988; Niehoff, Enz and Grover 1990; Scott and Bruce 1994; Westman 1992) provide some evidence of the positive influence of empowerment on employees' behaviours. In the present study, though empowerment is not directly examined, it appears that there are some indirect relationship between the employees' behaviours and empowerment.

2.3.3 Classification of employee behaviour

Katz and Kahn (1978) classified job related behaviours into two types. They are labeled as in-role and extra-role behaviours. In-role behaviour has been defined as behaviour that is required or expected as part of performing the duties and responsibilities of an assigned work role, whereas extra-role behaviour is discretionary behaviour that benefits the organization and that goes beyond existing role expectations (Van Dyne et al., 1995). Van Dyne and Lepine (1998) share the same view and suggested that work performance is two dimensional, composed of both work required by an organization and discretionary employee work behaviours. These two categories of behaviour have been labeled as "core" and "discretionary" behaviours by Thompson and Werner (1997), and a similar but not identical distinction has also been made between task and contextual performance by Borman and Motowidlo (1993).

Barksdale and Werner (2001) defined in-role behaviour as being part of one's job, and recognized by the organization's formal reward systems. The extra-role

behaviours were conceptualized as organizational citizenship behaviours (OCB) (Organ, 1988). Rotundo and Sackett (2002) conceptualized task performance with two central features. Firstly, task performance requires activities that contribute to the technical core and are formally recognized as part of the job. Secondly, task performance included behaviours that contribute to the production of goods or the provision of a service. Contextual performance is described as a "set of interpersonal and volitional behaviours that support the social and motivational context in which organizational work is accomplished" (Van Scotter and Motowidlo, 1996: 525). Organ (1997) proposed that organizational citizenship behaviours be equated with Borman and Motowidlo's (1993) conceptual performance (Barksdale and Werner, 2001).

A critical difference between in-role and extra-role behaviour is the extent to which others reward the behaviour and impose sanctions if it is absent (Organ, 1988, 1990). Both in-role and extra role behaviours may be intrinsically rewarding. However, in-role behaviour is more likely to be linked to extrinsic rewards and sanctions, both formal and informal (Katz, 1964; Organ, 1988; Puffer, 1987). Another difference is that the incentives for extra-role activities are weaker than the incentives for in-role

activities (Morrison, 1994). However, Morrison (1994) argued that a given behaviour may be classified as in-role by an employee and extra-role by that employee's supervisor, or vice versa. Organ (1997) also claimed that in-role performance directly supports the technical core (i.e., transformation of raw materials into products), while OCB influence the social and psychological environment of organizations, which in turn influences the technical core. That is, in-role behaviours involve producing goods and service (e.g. selling goods, delivering service) and maintaining this production over time, whereas OCB enhance the psychological environment in which the technical core operates (Motowidlo, Borman and Schmit, 1997). Thus, both types of behaviour contribute to organizational effectiveness, OCB operates indirectly and task performance operates directly.

The concept of in-role behaviours (Katz and Kahn, 1978) is similar to the notion of core behaviours (Thompson and Werner, 1997) and task performance (Borman and Motowidlo, 1993). This study employs the terminology of in-role behaviours to conceptualize the behaviour that is required or expected as part of performing the duties and responsibilities of an assigned work role. The volitional behaviours performed by employees, which had been conceptualized as extra-role behaviours

(Katz and Kahn, 1978), discretionary behaviours (Thompson and Werner, 1997), contextual performance (Borman and Motowidlo, 1993), and organizational citizenship behaviours (Organ, 1988) are represented by the terminology of organizational citizenship behaviours in this study.

2.3.4 Definition of Organizational Citizenship Behaviour

Recent research has focused on a class of employee behaviour that, in the aggregate, should benefit the organization, but may in fact not be prescribed as part of any specific employee's formal job role. This class of behavior encompass or refer to a variety of theoretical constructs, including "organizational citizenship behaviours" (Organ, 1977, 1988), "prosocial organizational behaviours" (Brief and Motowidlo, 1986), "extra-role behaviours" (Graham, 1991; Van Dyne et al., 1995) or most recently "contextual performance" (Borman and Motowidlo, 1993; Motowidlo and Van Scotter, 1994; Organ, 1997).

Organizational citizenship behaviour (OCB) is an important concept in that it is thought to enhance organizational effectiveness. Research has indicated that

organizational citizenship behaviour may benefit the organization in general or may be done for the benefit of a particular individual within the organization (Williams and Anderson, 1991). Hence, extensive research on organizational citizenship behaviour has been conducted in recent years (Krilowicz and Lowery, 1996).

The most prominent working definition of organizational citizenship behaviours has been:

> "the discretionary behaviours that are not directly or explicitly recognized by the formal reward system and that, in the aggregate, promote the effective functioning of the organization. By discretionary, we mean that the behaviour is not an enforceable requirement of the role or the job description, that is, the clearly specifiable terms of the person's employee contract with the organization; the behaviour is rather a matter of personal choice, such that its omission is not generally understood as punishable" (Organ, 1988: 4).

According to Organ (1988), OCB are discretionary behaviours on the part of an employee that directly promote the effective functioning of an organization, without necessarily influencing an employee's job duties. OCB are more discretionary and

less constrained by work process technology and other task features (Diefendorff, Brown, Kamin and Lord, 2002). Organ (1990) defined OCB as those organizationally beneficial behaviours and gestures that can neither be enforced on the basis of formal role obligations nor elicited by contractual guarantee of recompense. (Barksdale and Werner, 2001). It has also been formally defined as "an individual behaviour that is discretionary, not directly or explicitly recognized by the formal reward system, and in the aggregate promotes the efficient and effective functioning of the organization" (Williams and Anderson, 1991: 601). The behaviour may be directed toward an individual, a group or the organization as a whole (Kuehn and Al-Busaidi, 2002). Krilowicz and Lowery (1996) concluded that OCB are acts on the part of employees which are outside of or in addition to their prescribed tasks or reasonably expected duties, and done without the expectation of reward.

A secondary definition of OCB proposed the broader construct of "extra-role behaviour", defining OCB as "behaviour which benefits the organization and/or is intended to benefit the organization, which is discretionary and which goes beyond existing role expectations" (Van Dynes et al., 1995: 218). Organ (1997) suggested that Borman and Motowidlo's (1993) construct of "contextual behaviours" provided

a more tenable definition of OCB. Contextual behaviours "do not support the technical core itself so much as they support the broader organizational, social, and psychological environment in which the technical core must function" (Borman and Motowidlo, 1993: 73). This definition is not clouded by any notions of discretion, rewards, or intent by the actor. This definition only assumes that the behaviours should support "the organizational, social, and psychological environment" rather than the "technical core". There is no specific motive presumed of the actor, nor are any other antecedents inferred. What subjectivity that exists is that surrounding the fuzzy line between what is and is not in the technical core (Niehoff and Moorman, 1993).

Schnake (1991) gives three reasons why OCB are not affected by organizational influences: OCB are subtle and therefore hard to rate objectively, which makes it difficult to be included in appraisals; some forms of OCB may pull people away from their own work to assist another; and because OCB cannot be contractually required (if they were required behaviours, they would be contractual behaviours, not OCB), the organization cannot punish employee for not performing them. For this reason, OCB is commonly defined in terms of social exchange (Moorman, 1991).

Moorman describes the difference between economical and social exchange in the following terms: "Because social exchange exists outside of strict contracts, the exchange tends toward ambiguity, allowing for discretionary, prosocial acts by the employee" (Moorman, 1991: 846).

Discretionary organizational citizenship behaviours includes behaviours such as constructive or co-operative gestures that are neither mandatory in role behaviour nor directly or contractually compensated for by formal organizational reward systems (Organ and Konovsky, 1989). However, the incentives for extra-role activities are weaker than the incentives for in-role activities (Morrison, 1994). Aggregated over time and persons, organizational citizenship behaviours become important because they facilitate the accomplishment of organizational goals and enhance organizational performance (Organ, 1990; Podsakoff and Mackenzie, 1997). Besides, OCB are actions that are clearly observable by fellow employees, supervisors, or researchers.

Ineson and Bayliss (2003) further studied employees' behaviours by examining the relationship between the personality profiles and job performance of food and service

providers. A sample of 192 student trainees was surveyed using the Customer Contact Styles Questionnaire and a specially designed instrument for assessing service performance. Results indicated that personality appear to relate to performance. Nevertheless, it is insufficient for a customer service employee to have pleasant manners, the focus on producing results, continuously improving oneself and the service is more important. The present study attempted to gain more employees' behaviour by studying the relationship between TQM and service quality, OCB and service quality which focus on continuous improvement and service.

2.3.5 Dimensions of Organizational Citizenship Behaviour

According to Organ (1988a), OCB have a variety of forms, including altruism, courtesy, sportsmanship, civic virtue, and conscientiousness. The following presents the discussion on each form:

Altruism is described as those discretionary behaviours that have the effect of helping a specific other person with an organizationally relevant task (Organ, 1988). This dimension had been identified as an important form of citizenship behaviour by

virtually everyone who has worked in this area (Borman and Motowidlo, 1997; George and Jones, 1997). It is associated with behaviours that either directly or indirectly help another worker with a present work-related problem. Altruism includes those behaviours that have to do with helping a specific person (supervisor, co-worker, or client) (Organ, 1988). For example, helping colleagues during the busy periods, or voluntarily helping with orientation for new employees.

Courtesy is closely related to altruism, but distinctly different. It refers to the discretionary behaviour aimed at preventing work-related problems with others or helping to lessen the severity of a foreseen problem. Behaviours such as advance notice, reminders, and consultation fall under this dimension. Podsakoff, MacKenzie, Pain and Bachrach (2000) regarded this dimension as part of altruism because it involves helping others by taking steps to prevent the creation of problems for co-workers. Empirical research (MacKenzie et al., 1993; MacKenzie, Podsakoff and Rich, 1999; Podsakoff et al., 1997) has generally confirmed the fact that all of these various forms of 'helping behaviour' load on a single factor.

Civic virtue is "behaviour indicating that the employees responsibly participates in,

and is concerned about, the life of the company" (Organ, 1988a: 11). Graham (1986) defined civic virtue as responsible participation in the political life of the organization. These definitions relate to employees' initiative to participate in meetings and functions for the good of their organization. Finally, Hogan and Hogan (1989) and others refer civic virtue to an employees' reliability criterion concept including such behaviours as defying rules, ignoring social expectations, avoiding commitments, and being insubordinate to bosses (Borman and Motowidlo, 1997). This is shown by a willingness to participate actively in organizational governance (e.g. employees attend any meetings or functions that are not required by their role but that help the company, engage in policy debates, express one's opinion about what strategy the organization ought to follow, etc); to monitor its environment for threats and opportunities (e.g. employees keeping up with changes in the organization and taking the initiative to recommend how company operations or procedures can be improved). These behaviours reflect peoples' recognition of being part of a larger whole in the same way that citizens are members of a country and accept the responsibilities which that entails.

Sportsmanship is a form of organizational citizenship behaviour that has received

much less attention in the literature (Podsakoff et al., 2000). Sportsmanship is a willingness on the part of an employee to tolerate less than ideal circumstances or the inevitable inconveniences without complaining. That is, people who not only do not complain when they are inconvenienced by others, but also maintain a positive attitude even when things do not go their way, are not offended when others do not follow their suggestions, are willing to sacrifice their personal interest for the good of the work group, and do not take the rejection of their ideas personally. These employees have high levels of sportsmanship, positive attitudes and avoid unnecessary complaining.

Conscientiousness consists of behaviours that go "well beyond the minimum requirement" in the areas of attendance, obeying rules, taking breaks, and so forth (Podsakoff et al., 1990: 115). This includes such behaviours as being punctual; maintaining a better-than-average attendance record; following an organization's rules, regulations, and procedures. Conscientiousness is reflected in the provision of prompt or immediate service; flexibility and responsiveness to the special needs of the internal customer (Paraskevas, 2001). For example, employees working extra-long days, returning phone calls from the home office promptly, and never bending

the rules. As a personality construct, conscientiousness refers to characteristics such as being organized, dependable, willing to achieve, and persevering (Costa and McCrae, 1985). Although some empirical research demonstrated that conscientiousness belongs to one of the OCB dimension (Organ and Ryan, 1995), George and Brief (1992) argued against viewing conscientiousness as a citizenship dimension, since indicators of this dimension (e.g. regular attendance, following rules) are among the in-role requirement of most jobs. (Barksdale and Werner, 2001).

2.3.6 Other dimensions of Organizational Citizenship Behaviour

The concept of OCB is considered multi-dimensional. According to Organ (1988), there are five OCB dimensions: Altruism, Conscientiousness, Sportsmanship, Courtesy and Civic Virtue. Because there is overlap across these dimensions, recent research indicates that they should be combined into subgroups. Williams and Anderson (1991) formulated two subgroups: OCBI are organizational citizenship behaviours directed toward individuals, and OCBO are organizational citizenship behaviours directed toward organization. OCBI consist of altruism and courtesy, and OCBO consist of conscientiousness, sportsmanship, and civic virtue (Coleman and

Borman, 2000; Williams and Anderson, 1991).

Some other researchers proposed other dimensions of organizational citizenship behaviours. Graham (1989; 1991) proposed the behaviour of organizational loyalty which consists of behaviours spreading goodwill and protecting the organization (George and Jones, 1997); and the endorsing, supporting, and defending of organizational objectives construct (Borman and Motowidlo, 1997). Essentially, organizational loyalty entails promoting the organization to outsiders, protecting and defending it against external threats, and remaining committed to it even under adverse conditions. Preliminary research by Moorman and Blakely (1995) has indicated that this dimension is distinct from several other forms of citizenship behaviour, although a confirmatory factor analysis in a follow-up study conducted by Moorman, Blakely, and Niehoff (1998) failed to confirm this.

Another dimension that several researchers have identified as a form of citizenship behaviour is called individual initiative (Podsakoff et al., 2000). This form of OCB is extra-role only in the sense that it involves engaging in task-related behaviours at a level that is so far beyond minimally required or generally expected levels that it

takes on a voluntary flavor. Such behaviours include voluntary acts of creativity and innovation designed to improve one's task or the organization's performance, persisting with extra enthusiasm and effort to accomplish one's job, volunteering to take on extra responsibilities, and encouraging others in the organization to do the same. All these behaviours share the idea that the employee is going "above and beyond" the call of duty. This dimension is similar to Organ's conscientiousness construct (Organ, 1988), Graham's and, Moorman and Blakely's personal industry and individual initiative constructs (Graham, 1989; Moorman and Blakely, 1995). Many researchers indicated that this form of behaviour is difficult to distinguish empirically from in-role or task performance (Motowidlo et al., 1997; Van Scotter and Motowidlo, 1996).

The other form of dimension is organizational compliance. This dimension has a long tradition of research in the citizenship behaviour area. This dimension has been called generalized compliance by Smith et al. (1983); organizational obedience by Graham (1991); and following organizational rules and procedures by Borman and Motowidlo (1993). This dimension appear to capture a person's internalization and acceptance of the organization's rules, regulations, and procedures, which results in a

scrupulous adherence to them, even when no one observes or monitors compliance. The reason that this behaviour is regarded as a form of citizenship behaviour is that even though everyone is expected to obey company regulations, rules, and procedures at all times, many employee simply do not. An employee who religiously obeys all rules and regulations, even when no one is watching, is regarded as an especially "good citizen" (Podsakoff et al., 2000)

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2.3.7 Benefits of Organizational Citizenship Behaviour

Mackenzie et al. (1991) suggest that organizational citizenship behaviour may be a potentially important class of behaviour because citizenship behaviours can influence supervisory ratings of performance. Mackenzie et al. (1993) found sales managers take OCB into account when evaluating a salesperson's overall performance. Supervisors, either consciously or subconsciously, appear to consider organizational citizenship behaviours as an important facet of overall performance. Employees may believe, rightly or wrongly, that their work performance is indirectly improved due to these extra behaviours, thereby increasing their rewards (Puffer, 1987). They may even engage in these behaviours in anticipation of direct rewards, or individual

characteristics, such as need for achievement, may lead them to perform citizenship behaviours (Puffer, 1987). Regardless of whether employees engage in OCB for personal reward or not, it appears that they are in fact rewarded for that behaviour when they are evaluated by their supervisors, since performance evaluations are usually the vehicle by which reward decision s are made.

Many researchers have suggested that OCB facilitate organizational effectiveness, efficiency, and success, because OCB make for more efficient use of resources, allow managers to devote more time to productive activities, and improve the ability of co-workers to perform their jobs (Organ, 1988; Podsakoff and Mackenzie, 1994; Yoon and Suh, 2003). The relative importance of task and citizenship performance depends on the job or the organization's culture or strategic goals for job performance. Some will argue that organizations have their own culture or goals and the importance placed on task, citizenship, and counterproductive performance (Morrison, 1994).

According to Chen, Hui and Sego (1998), the mere presence of OCB (specifically altruism, conscientiousness, and sportsmanship) indicated a lower turnover rate.

These dedicated workers will stay with the company longer, produce more products of high quality, and help the company succeed in many other ways. Logically it seems reasonable to assume that prevalent OCB will foster a better work environment within the organization. This environment, in turn, should elicit greater employee dedication, which yields greater productivity, and lowers turnover (Chen et al., 1998). Furthermore, OCB can benefit an employee by producing "an affective response and hence enhance a managers' liking for a subordinate" (Allen and Rush, 1997: 248). However, it is not known whether an employee's persistent performance of OCB causes a greater affective response by management or whether an employee who is already liked by management is noticed engaging in OCB more often than other employees.

2.3.8 Previous studies on Organizational Citizenship Behaviour

For the last two decades, OCB has received much attention in the literature (Bateman and Organ, 1983; Organ and Ryan, 1995). The construct of OCB has been expanded in recent years (e.g. Van Dyne and LePine, 1998) and examined in different contexts.

A number of studies examining a variety of predictors of OCB or contextual

performance, including job satisfaction, organizational commitment, and perceptions of justice (e.g., Bateman and Organ, 1983; Moorman, 1991; Moorman, Niehoff and Organ, 1993; Robinson and Morrison, 1995; Van Dyne, Graham and Diensch, 1994; Williams and Anderson, 1991), personality behaviours (Niehoff and Moorman, 1993; Podsakoff, MacKenzie, Moorman and Fetter, 1990). Researchers have examined OCB and social exchange (e.g., Konovsky and Pugh, 1994), ingratiation (Eastman, 1994), leader-member exchange (Deluga, 1994), job satisfaction (Bateman and Organ, 1983), organizational support (Moorman, Blakely and Niehoff, 1998), performance judgment (Podsakoff et al., 1997), compensation (Deckop, Mangel and Cirka, 1999), and cross-cultural issues (Farh, Earley and Lin, 1997; Van Dyne and Ang, 1998).

2.3.9 Criticism of Organizational Citizenship Behaviour

Despite the fact that a number of studies have been conducted on organizational citizenship behaviours, a review of the literature in this area reveals a lack of consensus about the dimensions of this construct (Podsakoff et al., 2000). Indeed, the examination of the literature indicated that almost 30 potentially different forms of

citizenship behaviour have been identified. Some of them are conceptually overlapped. Podsakoff et al. (2000) summarized them into seven common themes or dimension: 1) helping behaviour, 2) sportsmanship, 3) organizational loyalty, 4) organizational compliance, 5) individual initiative, 6) civic virtue, and 7) self development.

2.4 Conceptual Framework of The Proposed Model

Based on Figure 1.1 and after reviewing the above literature on Service Quality, Total Quality Management and Organizational Citizenship Behaviour, the hypothesized model is developed. The proposed model of TQM in this study is shown in Figure 2.1. The model is developed from the initial model Figure 1.1, the components of Service Quality, Total Quality Management, Organizational Citizenship Behaviour are included. The components of In-role Behaviour are identified from the factor analysis results and are included into the model.

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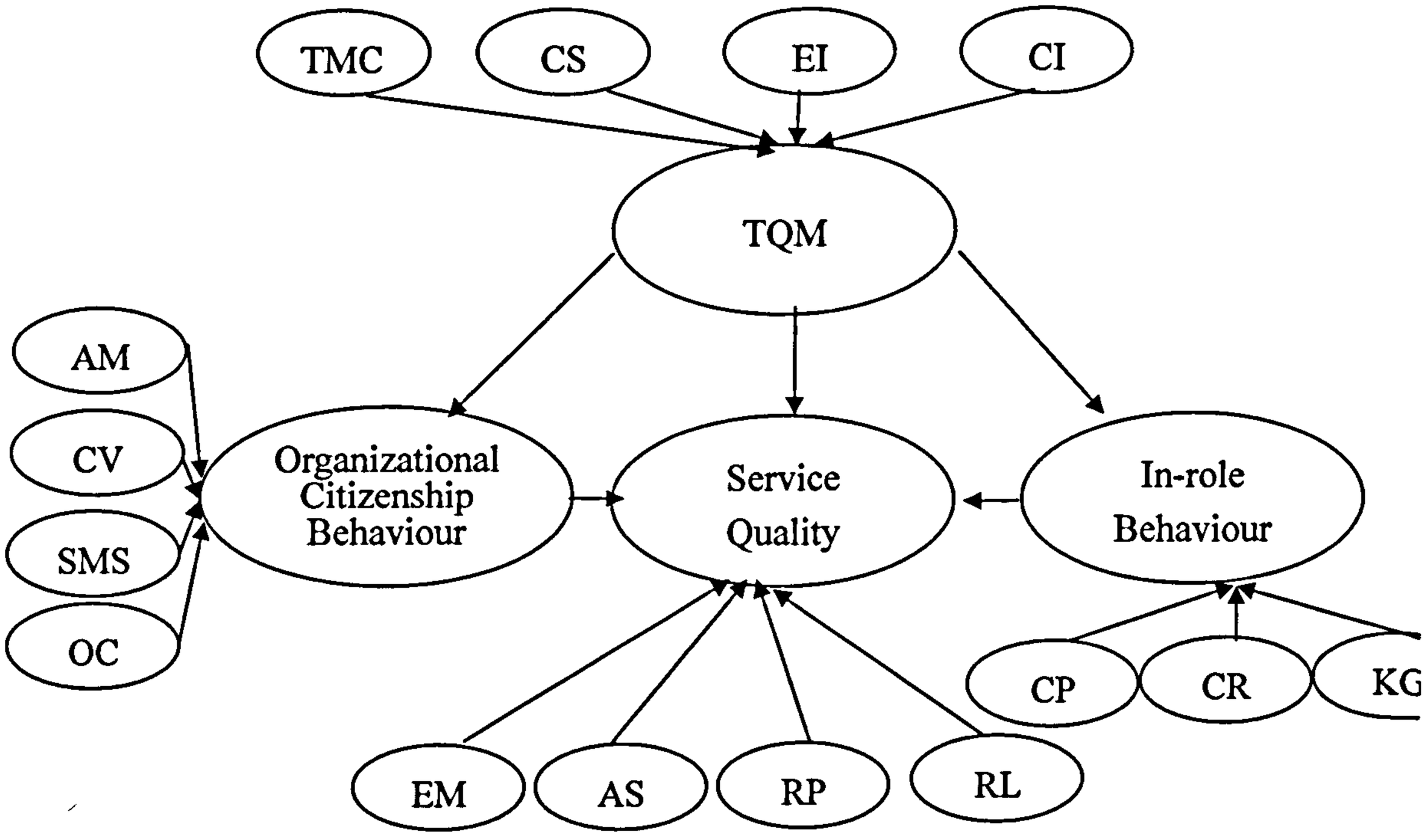
Figure 2.1 The Proposed Model of TQM



TMC=Top Management Commitment and leadership

CS=Customer Focus

EI=Employee Involvement

CI=Continuous Improvement

AM=Altruism

TQM= Total Quality Management

CV=Civic Virtue

SMS=Sportsmanship

OC=Organization Compliance

EM=Empathy

AS=Assurance

RP=Responsiveness

RL=Reliability

CP=Compliance with procedures

CR=Compliance with customers' requests

KG=Knowledge

The following gives the description of each component included in the hypothesized model.

2.4.1 Critical elements of TQM examined in this study

The major common factors of TQM suggested by researchers are top management leadership, quality improvement, supplier partnership and supplier quality management (Black and Porter, 1994). According to the literature review conducted by Sila and Ebrahimpour (2002), issues related to customer focus and satisfaction

had the highest coverage. Other than this, leadership, top management commitment, employee involvement, and continuous improvement are also considered to be the major elements of TQM by many authors (Sila and Ebrahimpour, 2002).

A comprehensive set of critical factors of quality management is proposed. The factors were derived through a process that involved identification and synthesis of those critical requirements for quality management that have been prescribed by quality practitioners and academics. The process included an exhaustive literature review. In addition, based upon a panel review with a group of Hong Kong hotel managers formed by convenience sampling, the following five elements are selected for the study. These elements are top management commitment and leadership, customer focus, employee involvement and continuous improvement. One element, process management is identified as according to the literature, focus on continuous improvement in routines and variation reductions (Anderson, Rungtusanatham & Schroeder, 1994; Hackman & Wagemen, 1995; Harry and Schroeder, 2000). The panel of managers believed that the techniques used for continuous improvement processes in hotels are the same as process management techniques, hence this element is removed.

Many researchers suggested quality management by supplier should be included in the study (Ahire et al., 1996; Stamm and Golhar, 1993). For example, Newmann (1988) provided guidelines to ensure suppliers' quality and developed a framework for single-source qualification. Since the hotel setting is used as the background for this study, it is expected that suppliers' quality management is not a critical elements of TQM in the hospitality industry. Some other critical elements identified by other researchers such as product design (Flynn et al., 1994), is considered as more important or relevant for manufacturing industries only, therefore, they are not included in this study.

I. Top Management Commitment and leadership

Top management commitment and leadership has been identified as one of the major determinants of successful quality management implementation (Dale and Duncalf, 1984). Top management act as a driver of quality management implementation, creating values, goals, and systems to satisfy customer expectations and to improve an organization's performance (Ahire et al., 1996). The clarity of quality goals for an

organization determines the effectiveness of the quality efforts (Senge, 1990; Stalk, Evans and Schulman, 1992). Furthermore, Flynn et al. (1994) indicated that employees behave as they perceived they are expected to, based on the expectations of higher levels of management. Hence, top management commitment can play a critical role in leading quality performance.

Examples of top management commitment and leadership are top management allocating time to develop their own personal and group understanding of TQM, and visibly demonstrating its commitment by participating in quality-related activities, such as meeting with employees and customers, giving formal and informal recognition, organizing and chairing the TQM steering committee and reviewing the program (Dale, 1999). Top management commitment to quality must convey the philosophy that quality will receive a higher priority over cost or schedule, and that in the long-run, superior and consistent quality will lead to improvements in cost and delivery performance (Lrajewski and Ritzman, 1993). Top management should not only give high priority to quality, but should also demonstrate its quality commitment by providing adequate resources to the implementation of quality management efforts, particularly, considerable investment in human and financial resources (Ham

and William, 1986).

II. Customer Focus

The principle of customer focus is concerned with how to satisfy customers and understand their needs. Customer expectations are dynamic in nature (Shepetuk, 1991), an organization needs to assess them regularly and adjust its operations accordingly (Walker, 1992). Organizations may only outperform their competition if they are able to respond quickly to customers' demands with new ideas and technologies, producing products and services that satisfy or exceed customers' expectations, and anticipating and responding to customers' evolving needs and wants (Stalk et al., 1992). Voss (1992) further suggested that an organization's long-term success is tied to customer retention efforts through understanding the needs of their customer.

Studies from Narver and Slater (1990) reported that customer focus is positively related to business profitability. The importance of customer focus is also evident from the fact that it is assigned the highest weighting among the Malcolm Baldridge

Award criteria (NIST, 1993). Therefore, customer focus should be reflected in the overall planning and execution of quality efforts (Ahire et al., 1996). Kordupleski, Rust, and Zahorik (1993) argue that even organizations that employ the latest process improvement techniques and have capable management, if they neglect their customers it may lead to a disaster.

The customer focus of an organization is usually assessed by the frequency and rigor of customer satisfaction surveys. However, mere execution of such surveys is not useful unless the results are available to functional areas and are used in improving the service quality (Kamp, 1989).

III. Employee Involvement

Employee involvement is often regarded as being fundamental to TQM (Oakland, 1989). Cotton (1993) defined employee involvement as a participative process to use the entire capacity of workers, designed to encourage employee commitment to organizational success. Employee involvement is the sharing of information about business performance, plans, goals, and strategies (Lawler et al., 1998). Chung (1999)

suggested that involving employees in enhancing the operation process may allow them to identify the organization's goals as their own. If organizations do not share the business information, employees find it difficult to understand how the business is doing and to make meaningful contributions to organizational success. Without information sharing, employees cannot change their behaviour or receive feedback about the effectiveness of their performance when the organization's condition is changed (Gatchalian, 1997).

Employee involvement also requires employees to take responsibility for the quality of their own work, and demands their active participation in the search for continuous improvement. Employers introducing TQM need to gain employee commitment and co-operation rather than just compliance, and this requires greater involvement of employees in the decision-making process (Wilkinson et al., 1997). Therefore, organizations should allow employees to participate in advisory groups to voice concerns and exchange views on quality issues, and to discuss problems and concerns on any topic.

Lawler, Mohrman and Ledford (1995) stated that the involvement approach is based

on the idea that organizations should be designed from top to bottom so that employees are in control of their destiny and able to participate in the business. Formal communication from the top keeps employees abreast of their company's quality initiatives. However, top-down communication represents only one direction of information flow (Partlow, 1996). Organizations encouraging bottom-up communication ensure that employees' voices are heard by management. Consequently, organizations should facilitate upward communication through focus groups, employee committees, open-door policies and suggestion systems.

When employees have a problem or complaint that cannot be resolved by their immediate supervisor, an open door policy can give direct access to all levels of management (Partlow, 1996). According to Oliver (1988), employee involvement has a positive impact on employees' commitment to quality. However, organizations must develop formal systems to encourage, track, and reward employee involvement. Employee involvement is more than simply taking part in decision-making; it can include incentives and training. Otherwise, the extent and quality of participation declines, leading to a dissatisfied workforce (Griffin, 1988). The use of cross-functional quality improvement teams (Port, 1989) and quality circles (Schroeder,

Sakakibara, Flynn and Flynn, 1992), along with a framework of appropriate evaluation and reward systems for quality improvement projects, have been shown to improve quality significantly (Krantz, 1989). Hence, employee involvement is deemed to be a critical factor of TQM.

IV. Continuous Improvement

Continuous improvement means a commitment to constantly examine technical and administrative processes in search of better methods (Dean and Bowen, 1994; Kolarik, 1999). Underlying this principle is the concept of the organization as a system of interlinked processes and the belief that by improving these processes, organizations can continue to meet the increasingly stringent expectations of their customers (Grandzol, 1996). Relevant practices include process analysis and reengineering. Continuous improvement is considered the most effective means to achieve customer satisfaction, when driven by customer needs. The long term health of an enterprise depends on treating quality improvement as a never-ending quest (Hackman and Wageman, 1995). Opportunities to develop better methods for carrying out work always exist, and a commitment to continuous improvement

ensures that people will never stop learning about the work they do (Deming, 1986). A number of studies advocate that continuous improvement is significantly associated with organizational performance and customer satisfaction (Dean and Bowen, 1994; Hunt, 1992). As such, continuous improvement is a factor that needs to be included in this study.

2.4.2 Dimensions of OCB examined in this study

I. Altruism

Altruism is described as a discretionary behaviour that has the effect of helping a specific other person with an organizationally relevant task (Organ, 1988). It is associated with behaviors that either directly or indirectly help another worker with the present work-related problem. Altruism includes those behaviors that have to do with helping a specific person such as supervisor, co-worker, or client (Organ, 1988). For example, helping others during the rush hours, or voluntarily helping to orient new employees.

II. Civic virtue

Civic virtue refers to behaviours employees exhibit where they demonstrate a responsible participation in the firm and a sincere concern about the life of the company (Mackenzie et al., 1998), and responsible participation in the political life of the organization (Graham, 1986). These definitions relate to employees' initiatives to participate in meetings and functions for the good of an organization. Such behaviours include defying rules, ignoring social expectations, avoiding commitments, and being insubordinate to bosses (Borman and Motowidlo, 1997). This is shown by a willingness to participate actively in organizational governance, for example, employees attending any meetings or functions that are not required by their role but that help the company, engaging in policy debates, expressing one's opinion about what strategy the organization ought to follow; to monitor its environment for threats and opportunities (e.g. employees keeping up with changes in the organization and taking the initiative to recommend how company operations or procedures can be improved).

III. Sportsmanship

Sportsmanship is a willingness on the part of an employee to tolerate less than ideal circumstances or the inevitable inconveniences without complaining (Podsakoff et al., 2000). That is, people who not only do not complain when they are inconvenienced by others, but also maintain a positive attitude even when things do not go their way. They are not offended when others do not follow their suggestions, are willing to sacrifice their personal interest for the good of the work group, and do not take the rejection of their ideas personally. An employee with a high level of sportsmanship has a positive attitude and avoids unnecessary complaining.

IV. Organization Compliance

Organization Compliance has been called generalized compliance by Smith et al. (1983); organizational obedience by Graham (1991); and following organizational rules and procedures by Borman and Motowidlo (1993). This dimension appears to capture a person's internalization and acceptance of the organization's rules, regulations, and procedures, which results in a scrupulous adherence to them, even when no one observes or monitors compliance. The reason that this behaviour is seen

as a form of organizational citizenship behavior is that even though everyone is expected to obey company regulations, rules, and procedures at all times, many employees simply do not. An employee who religiously obeys all rules and regulations, even when no one is watching, is regarded as an especially "good citizen" (Podsakoff et al., 2000).

V. Other Constructs

Some empirical research demonstrated that conscientiousness belongs to one of the OCB dimension (Organ and Ryan, 1995). However, George and Brief (1992) argued against viewing conscientiousness as a citizenship dimension, since indicators of this dimension (e.g. regular attendance, following rules) are among the in-role requirement of most jobs (Barksdale and Werner, 2001). This dimension was dropped from this study.

Although Organ (1988) regarded courtesy as one of the dimensions of OCB, some researchers regarded this as part of altruism because it involves helping others or taking steps to prevent the creation of problems for co-workers (MacKenzie et al.,

1999; Podsakoff et al., 2000). To avoid duplication, this dimension was excluded in this study.

Some other researchers (e.g. Moorman and Blakely, 1995) proposed the behaviour of organizational loyalty, which consists of behaviours spreading goodwill and protecting the organization (George and Jones, 1997); and the endorsing, supporting, and defending organizational objectives (Borman and Motowidlo, 1997). Essentially, organizational loyalty entails promoting the organization to outsiders, protecting and defending it against external threats, and remaining committed to it even under adverse conditions. However, this construct was not well supported by empirical studies (e.g., Moorman et al., 1998), therefore, this construct was not selected in this study.

Another dimension that has been identified by some researchers as a form of citizenship behavior is individual initiative (Podsakoff et al., 2000). This form of OCB includes voluntary acts of creativity and innovation designed to improve one's task or the organization's performance, persisting with extra enthusiasm and effort to accomplish one's job, volunteering to take on extra responsibilities, and encouraging

others in the organization to do the same. All these behaviors share the idea that the employee is going "above and beyond" the call of duty. As many researchers indicated that this form of behaviour is difficult to distinguish empirically from in-role or task performance like the dimension of conscientiousness (Motowidlo et al., 1997; Van Scotter and Motowidlo, 1996), this dimension was also dropped from this study.

CHAPTER THREE – METHODOLOGY

Based on concepts and model presented in Chapter 2, this chapter states and describes the hypotheses tested, explains the methodology and the process of data collection in the study. This chapter also explains the rationale for the research design, the chosen sampling technique, the selected method of data collection and data analysis. The first section of the chapter introduces the hypotheses tested. The second section discusses the research design. The development of the survey instruments, the content of the questionnaire, the measurement scale and the pilot study were described in sections three and four. The fifth section describes the method and procedures of data collection. The characteristics of the sample selected and the selection of the using Structural Equation Modeling are described in sections six and seven. Finally, this chapter ends with a brief conclusion.

3.1 HYPOTHESES

3.1.1 Effect of Organizational Citizenship Behaviours on customers' perceived Service Quality

There are several reasons why employees' organizational citizenship behaviours could be expected to be related to the customers' perceptions of service. The primary reason is that each of the discretionary behaviours in the service encounter can be a meaningful relationship with service excellence, especially for the customer-employee interaction dimension of service quality (Yoon and Suh, 2003). This point is likely to be true because only after effective internal exchanges have occurred, can successful external exchanges between employees and customers take place (George, 1991; Kelley and Hoffinan, 1997). Walz and Niehoff (2000) found that OCB is significantly associated with operating efficiency, customer assessments of service quality, and customer satisfaction.

The second reason is based on the fact that service quality, especially the external customers' evaluation of service quality, is a major element of organization effective-ness. Much previous research on OCB has been based on the assumption that OCB lead to greater overall organizational effectiveness (Mackenzie et al., 1991, 1993; Organ, 1988; Podsakoff et al., 1997; Waltz and Niehoff, 1996). Recent studies also suggest that service quality in service organization is a major indicator of a firm's

external effectiveness (Paulin et al., 1997, 2000) and external efficiency (Grönroos, 1992). This point is especially true in customer-oriented management, where service quality is a key determinant for successful firm-customer relationships and comprises a major part of external effectiveness (Paulin et al., 1999). In addition to making a direct contribution to customers' perceptions of service quality, OCB indirectly improves the customer-orientation of customer contact personnel through the provision of assistance and support. For instance, the helping behavior will mean that new employees will obtain required product knowledge faster and customer may not be required to wait longer for information. This may enhance co-worker productivity and the efficient operation of groups. Hence, OCB makes both direct and indirect contributions to the quality of service provided (Morrison, 1996).

Third, employees' OCB on the service quality is expected to take place through the socialization process (Yoon and Suh, 2003). Socialization research suggests that one type of helping behavior is more likely to facilitate other types of helping behaviours due to the personal value acquired through the socialization process (Grusec, 1991; Kelley and Hoffman, 1997). Employees who exhibit higher OCB for co-workers of their organization will be more active in the fulfillment of customer needs in the

customers' best interest, which will be reflected in the customers' evaluation of service quality (Yoon and Suh, 2003).

Hypothesis 1: Employees' Organizational Citizenship Behaviours is positively related to customer perception of service quality.

3.1.2 Effect of Altruism on perceived Service Quality

If employees are willing to help each other, external customers may be better served; ultimately, the service quality may be enhanced (Albrecht and Zemke, 1985). Altruism encourages teamwork and co-operation, allowing employees to increase the pool of available knowledge. Such teamwork should facilitate the more complex customer service tasks to accomplish more quickly (Yen and Niehoff, 2003). Fast service is a valued component in the minds of customers (Sturt, 1994). For example, if an employee helps another customer service employee who is temporarily overburdened or absent, customers will receive quality service without waiting a long-time or concerns about poor service. Podsakoff et al. (1997) explained that when an experienced guest contact employee helps less skilled or new employees

solve service-related problems and finds more efficient ways of performing their service, it is likely to improve customers' perceived service quality. Furthermore, many previous studies have demonstrated that customer satisfaction is directly affected by employee co-operation behaviours (Davis, 1994; Ferrero, 1994). For instance, if an experienced employee of a hotel helps a new employee with a complex transaction, the new employee can better serve his or her own customers. When a skilled employee provides information and teaches various "tricks of the trade" to new or unskilled employees, their service performance for customers will be greatly enhanced (Yoon & Suh, 2003). Ultimately, altruism helps create a positive, group-cohesive climate among employees, which, in turn, spills over into their interactions with external customers (Schneider & Bowen, 1992).

3.1.3 Effect of Civic Virtue on perceived Service Quality

Hogan and Hogan et al. (1989) refer to civic virtue as an employees' reliability criterion concept including such behaviours as defying rules, ignoring social expectations, avoiding commitments, and being insubordinate to bosses (Borman and Motowidlo, 1997). In particular, it can affect service quality in several indirect ways.

First, civic virtue involves making constructive suggestions about service improvement and organizational effectiveness. Customer service staff is boundary spanners who interact with external customers on an ongoing basis. Thus, the suggestions they make can be the basis for developing new services, controlling services, and improving service quality. Second, with regard to employees' suggestions, they can identify earlier the potential problems in relation to service delivery processes. Management can be notified quickly before any crises emerge. This may reduce the chance of service failures and enhance the service quality of the organization. Finally, voluntary participation in meetings may help co-ordinate activities among employees in creating a "team" spirit. In other words, civic virtue, in the form of attending and actively participating in meetings, may provide opportunities for employees to share various experiences of other employees during their service encounters, to identify their own problems in providing service, to learn how to improve customer service, and to share fellowship (Yoon and Suh, 2003).

3.1.4 Effect of Sportsmanship on perceived Service Quality

The behaviour of sportsmanship may ensure service quality (Yoon and Suh, 2003).

An employee with a high level of sportsmanship has a positive attitude and avoids unnecessary complaints. In fact, research suggests that customers tend to experience greater service quality when this behaviour is exhibited (Morrison, 1996). Sportsmanship behaviour creates a positive climate among employees that is likely to be transferred to their interactions with customers (Schneider and Bowen, 1992). If employees are "good sportsman" or co-operate with each other, they will exhibit co-operative behaviour in the service delivery process. On the contrary, when employees are low in sportsmanship, they are less customer-oriented and lack of the capability to deliver quality services because they spend their time and energy on complaining trivial issues (Yoon and Suh, 2003). In general, a positive work climate among employees may have an indirect effect on service quality by creating an overall environment that customers find more pleasant (Yoon and Suh, 2003). In contrast, a lack of sportsmanship is likely to have harmful effects on group cohesiveness and leave the organizational atmosphere less attractive to co-workers (Podsakoff et al., 1997).

3.1.5 Effect of Organizational Compliance on perceived Service Quality

Organizational compliance behaviours refers to accepting and adhering to the organization's rules, regulations, and procedures, even when no one observes or monitors compliance (Smith, 1983). For example, employees report to work on time, adhere to the rules of the organization, will not take undeserved breaks, or will not do private business in work time. When employees adhere to the rules and regulations of an organization, they are able to maintain predictable work schedules, which increase the reliability of service. Parasuraman et al. (1988) claimed that reliability enhances customers' perception of service quality. For instance, employees can make use of the time that may be given over to private business or engaging in idle conversation, to fulfill customers' need or to pay more attention to or spend more time on customers. Moreover, customers may not have to wait for a long time if employees report for duty on time and do not take a longer break. Specifically, organizational compliance behaviours facilitate organizational effectiveness, efficiency, and success, because this behaviour make more efficient use of employees' work time (Organ, 1988; Podsakoff and Mackenzie, 1994). That is, when employees adhere to the organization's rule, it can enhance organizational performance, and ultimately increase service quality.

3.1.6 Effect of employees' In-role Behaviours on perceived Service Quality

Front line employees are considered the most important players for the service quality of an organization (Luchars and Hinkin, 1996). Their behaviours toward customers have been argued to significantly influence customers' perceived service quality (Pfeffer, 1994). Service is performance in its nature and thus, in contrast to tangible goods, service quality depends heavily on how customer service staff work with customers, co-workers, and their organization (Yoon and Suh, 2003). Paulin et al. (1999, 2000) argue that customer evaluation of service largely depends on the skills, techniques, and experience of customer service staff when interacting with customers. It is also reported that customers' perception of service quality can be attributed to the behaviours of service employees (Bitner et al., 1990; Chu and Choi, 2001). For instance, Bolton and Drew (1991) found that employee courtesy and billing errors had a significant impact on customer perceptions of quality in the residential telephone services sector. Crane and Lynch (1988) also reported similar findings that customers relied on employees' courtesy, competence, and responsiveness when assessing the quality of service provision (Gould-Williams, 1999). As employees' in-role behaviour has been defined as behaviour that is

required or expected as part of the duties and responsibilities of an assigned work role, in-role behaviour is, implicitly, reflected by employees' skill level, competence and the number of errors occurred. In this study, the focus is on front desk duties and responsibilities, the dimensions of the front desk employees' in-role behaviours are later identified by exploratory factor analysis. Each dimension of the resulted in-role bahaviours is positively related to customers' perception of service quality. Hence, the following main hypothesis for in-role behaviours was developed:

Hypothesis 2: Employees' in-role behaviour is positively related to customers' perception of service quality.

3.1.7 Effect of the implementation of TQM on perceived Service Quality

Several researchers emphasized that the successful use of TQM is closely related to economic and performance success (e.g., Easton and Jarrell, 1998; Hendricks and Singhal, 1997; Lemak and Reed, 1997; Wrolsted and Krueger, 2001). A large number of studies have demonstrated that a better quality of products and services is highly associated with better organizational performance (Forker et al., 1996; Golhar

and Deshpande, 1999; Kroll et al., 1999). A number of recent studies have argued that service quality in service organization is a critical indicator reflecting an organization's external effectiveness (Paulin et al., 2000). Measuring customer perceptions of service quality, therefore, should be an appropriate means to reflect the performance of an organization. The study conducted by the United States Government Accounting Office (GAO, 1991), which examined the performance of twenty American companies, reported a strong relationship between the implementation of TQM and organizational performance which is measured by employee relations, quality, customer satisfaction and profitability (Terziovski and Samson, 1999). Therefore, the following hypothesis was developed:

Hypothesis 3: The implementation of TQM is positively related to customers' perception of service quality.

3.1.8 Effect of Top Management Commitment in quality on perceived Service Quality

Top management commitment has been identified as one of the essential elements

for quality management implementation (Dale and Duncalf, 1985). Top management refers to those people at the senior managerial level, such as the senior managers (Whalen and Rahim, 1994). TQM advocates personal involvement and leadership of senior executives in setting strategic directions, building and maintaining a leadership system in order to facilitate high organizational performance, individual development, and organizational learning (Brah, Tee and Rao, 2002). Top management also acts as a driver of quality management implementation, creating values, goals and systems to satisfy customer expectations and to improve an organization's performance (Ahire et al., 1996). The top management has the responsibility to create organizational environment, values, and behaviour in which TQM can achieve its potential. Without strong top management commitment and involvement, high levels of quality performance cannot be easily achieved (Garvin, 1986). Sohal et al. (1998) found that top management commitment has a positive influence on the successful implementation of TQM. Parzinger and Nath (2000) and Powell (1995) also reported that top management commitment was positively correlated with many organization performance measures such as financial and operational results and customer satisfaction.

3.1.9 Effect of Customer Focus on perceived Service Quality

Most researchers agree that customer focus is one of TQM's core principles (Dean and Bowen, 1994; Hackman and Wageman, 1995; Wilson et al., 1998). Customer care is also one of the generally accepted precepts of quality management (Soltani, Van Der Meer, Gennard and Williams, 2003). Bowen and Waldman (1999) review of the quality management texts confirms that the basic rationale of TQM is the belief that customer satisfaction is the most important requirement for long-term organizational success. Therefore, the key to quality management is maintaining a close relationship with the customers to fully determine the customer's needs, as well as to receive feedback on the extent to which their needs are being met (Flynn et al., 1994). The feedback from customers permits adjustments to the service delivery process to be made immediately, and ultimately, improve the quality of service and enhance customer satisfaction (Flynn et al., 1994). Bowen and Waldman (1999) suggested that the management practices that support the principle of customer focus include collecting information about customers' expectations, sharing the information of customers widely throughout the organization, using customer data to set employee performance standards and to provide employees with performance

feedback. In sum, these practices are aimed at customer satisfaction and enhancing customers' perception of quality. It is clear that the TQM strategy of customer focus could enhance service quality.

3.1.10 Effect of Employee Involvement on perceived Service Quality

TQM programs emphasize the importance of employee participation in the continuous quality improvement process. A number of quality experts, such as Deming (1982), Feigenbaum (1983), and Ishikawa (1985), advocate employee involvement in decision-making. Cotton (1993) defined employee involvement as a participative process to use the entire capacity of workers and a design to encourage employee commitment to organizational success. Employee participation in the TQM process is a key determinant of a successful programme since people are the most important asset for achieving continuous quality improvement (Atkinson, 1990). Pfeffer (1994) argued that greater employee involvement leads to improved organizational performance. Indeed, a number of previous studies demonstrate that employee involvement is positively related to the success of TQM and enhanced customer perceptions of service quality (e.g., Ciampa, 1992; Hammer and Champy,

1993; Sun, 1999). Employers introducing TQM seek to gain employee commitment and co-operation rather than just compliance, and this requires a culture change, which includes the greater involvement of employees in the decision-making process (Wilkinson et al., 1997). Schalk (1988) argued that the lack of employee support is a barrier to company is accomplishing certain organizational goals. Swift et al. (1998) further explained that the people closest to a problem or an opportunity are in the best position to make decision for improvement if they are being empowered to solve problems appropriate to their levels in the organization.

3.1.11 Effect of Continuous Improvement on perceived Service Quality

TQM strives to create an organizational culture that fosters continuous improvement in every aspect of an organization's activities all the time (Pun, 2001). Continuous improvement has been considered as a key element of TQM by many researchers, the underlying principle of it is the belief of improving processes, and continuously meeting the increasingly stringent expectations of customers (Grandzol, 1996). TQM stresses satisfying customer requirements to both parties' advantages (Dean and Evans, 1994). It is advocated that when continuous improvement in processes is

sought, TQM may help an organization to improve itself, including the customers, suppliers, and employees relations, and the quality of its products or services, and ultimately improve organizational performance capability and achieve organizational effectiveness (Dale et al., 1997) A number of studies report that continuous improvement is significantly associated with organizational performance and customer satisfaction (Dean and Bowen, 1994; Hunt, 1992). As such, it is believed that meeting customers' expectations through continuous improvement in processes may improve the quality of an organization, and ultimately, enhance customer satisfaction.

3.1.12 Effect of the implementation of TQM on Organizational Citizenship Behaviour

3.1.13 Effect of the implementation of TQM on In-role Behaviour

All of the above stated hypotheses were tested simultaneously in the study.

3.2 RESEARCH DESIGN

Research design is the basic plan for a piece of research. The main idea is the choice of strategy which relies on the logic or rationale by which the study intends to proceed in order to answer the research questions (Punch, 1998). The research questions currently posed in this study determined the researcher's decision to use quantitative method. The key research question of the study is to find out if organizational citizenship behaviours, in-role behaviours and TQM programme likely to influence customers' perceived service quality. The design is appropriate as it shows how the variables are arranged, conceptually, in relation to each other. It outweighs the adoption of qualitative design which shows much more variability. Besides, the use of quantitative design can tap large scale structural features of hotel employees' organizational citizenship behaviours and in-role behaviours, while qualitative design tends to address small scale, behavioural aspects. In this study, decision was made to use deductive logic with the choice of a positivist approach. The research is driven by the researcher's concern and when related to the research cycle (Krathwohl, 1993), this research starts from service quality, TQM and organizational citizenship behaviours theories through deduction logic to the

predictions of service quality outcomes.

This research was empirical in nature, to gain a better insight into the interrelationship between the implementation of TQM, employees' in-role and extra-role behaviours, and customers' perception of service quality. This study assessed a set of relationships simultaneously, by employing structured equation modeling (SEM). In addition, the study identified the dimensions of service quality, employees' in-role behaviours, organizational citizenship behaviours, and total quality management, through principle component factor analysis.

To achieve the above objectives, a cross-sectional survey design with self-administrated questionnaire survey for front office employees, front office supervisors or managers, and hotel guests was adopted to collect the data for this study. Cross-sectional research involves measuring the characteristics, behaviours, and attitude of a population at a point of time (Biemer and Lyberg, 2003). Subject to time constraints, which made a longitudinal study impractical, cross-sectional research can be regarded as the best method of collecting information from a large group of different people. The survey design in a cross-sectional research uses a

standardized instrument, which makes the survey more reliable than other data collection methods, and is easier to analyze and interpret (Henderson, 1995). It can, therefore, reduce the chance of response bias. Given the nature of this study and the advantages of using survey design, a cross-sectional survey design was employed.

3.3 Development of the Survey Instruments

To answer the research questions posed in Chapter 1, it is necessary to take a step-by-step approach for the development of the instruments and the validation of the constructs. To achieve that, the study followed the guidelines suggested by Churchill (1979). First, to specify the dimensions of each construct by reviewing the relevant literature. Based on previous theory and research, the researcher initially identified the conceptual dimensions of TQM, OCB, and service quality. There is a broad range of topics covered by various researchers, including critical elements of TQM, dimensions of OCB, and the attributes for service quality evaluated by customers. Second, three different exploratory focus group interviews with hotel managers and supervisors were held to investigate the relevant items representing the dimensions of each construct. Incorporating the review of literature, three lists of items were

formulated for the three set of questionnaires. The first set was designed to measure service quality, the second set to measure employees' organizational citizenship behaviour and the third set was designed to measure TQM implementation. Third, the content validity of the three instruments was assessed by a panel of experts from the hotel industry and the academic institution (The Hong Kong Polytechnic University). They were chosen because of their knowledge in the hotel field. Finally, a pilot study with hotel employees, supervisors and managers and hotel guests was undertaken to assess the reliability of the items for the three instruments. Details of the undertakings in each stage (Stage I to Stage IV) are discussed in the following sections.

3.3.1 Stage I – Literature review

I. The instrument measuring Service Quality

Zeithaml et al. (1990) stress that enhancing service quality should begin with an understanding of the aspects of service quality. Therefore, the study first listed the essential service attributes used to assess the service quality of hotels. The general

determinants of service quality that may relate to any service were identified. In the study of Berry et al. (1985), these determinants include reliability, responsiveness, competence, access, courtesy, communication, credibility, security, understanding or knowing the customer, and tangibles. Based on a hotel study by Chung and Hahn (1992), it was reported that several determinants were ranked as specifically important attributes in evaluating the service quality of a hotel, they are access, communication, and understanding the customer. Most of these determinants, however, coincide with those determinants previously identified by Berry et al. (1985).

A recent study which sought to benchmark the quality of hotel services by Min and Min (1997), reported that the attribute considered the most important in forming service quality impression is the courtesy of hotel staff. The study further indicated that promptness of check-in/check-out and swift/smooth handlings of complaints were important attributes in evaluating front office services. In general, hotel guests appreciate the swift handling of customer complaints and it directly reflects the reliability of hotel services. The determinants identified by the previous researchers were so similar to the five service quality dimensions developed by Zeithaml,

Parasuraman, and Berry (1990). Therefore, it is believed that the service quality dimensions developed by Zeithaml et al. (1990) adequately represented the importance determinants of service quality attributes of the hotel industry.

The questionnaire for the study which measures customers' perception of service quality was based on the studies conducted by Zeithaml et al. (1990), who advocated five dimensions of service quality – tangibility, reliability, assurance, responsiveness, and courtesy. Among these five dimensions, four of them were included in this study with the exception of tangibility, which was considered not relevant to employees' behaviours and the nature of this study. The questions on the four service quality dimensions were asked in a standardized format according to Zeithaml et al. (1990), with minor changes made. A total of 24 items was developed to measure the service quality attributes of the hotel industry. The questionnaire was designed to address the demographic profiles, educational background and the experience level of the hotel guests and their perceived importance of hotel service determinants.

II. The instrument measuring employees' Organizational Citizenship Behaviour and employees' In-Role Behaviour

Based on the review of literature in the area of organizational citizenship behaviours, a number of dimensions and indicators of employees' extra-role behaviours were identified. Four dimensions of organizational citizenship behaviour measured in this study were altruism, civic virtue, sportsmanship, and compliance. The questions measuring these four dimensions were derived from several major studies in this area, including Organ (1998) and Podsakoff et al. (1997). A total of 26 items was developed to measure the extra-role behaviours of employees.

The employees' in-role behaviours specifically for the hotel industry have not been tested in the past. This study thoroughly reviewed the official job descriptions of the front office employees of several Hong Kong hotels. A total of 19 items measuring the in-role behaviours of employees was then derived from the job descriptions of the front office employees in four different four or five star hotels in Hong Kong. Altogether, the questionnaire contains 45 items used to measure employees' behaviours. Besides, the questionnaire addressed the demographic profiles, educational background and the working experience level of the hotel supervisors and managers.

III. The instrument measuring TQM implementation

The elements of TQM were developed from the conceptual literature and actual practices of hotels as evidenced through various cases studies. They are also rooted in the literature on quality management. Thus, the scales developed here are broader in scope and possess content validity. The questionnaire measuring TQM implementation in hotels was based on several key studies of TQM which empirically examined the effect of TQM on organizational performance, including Ahire et al. (1996); Black and Porter (1994), Breiter and Bloomquist (1998), Camiśon (1996), Flynn et al. (1994) and Saraph et al. (1989). The questions on the five critical elements of TQM were asked in a standardized format according to the above studies.

Furthermore, The Malcolm Baldridge Award model (NIST, 1995), the well established and recognized TQM framework, was taken as the reference for this questionnaire (Black and Porter, 1996). The award has attracted the participation of international hotel groups such as the Ritz Carlton and Holiday Inn. Hence, the scale

developed which was based on the Malcolm Baldridge Award model should be relevant to the hotel industry.

3.3.2 Stage II - Exploratory focus groups

Three different hotel groups were contacted because the researcher knows the three hotel managers from each group. In other words, convenience sampling is used in focus groups selection. The use of the focus groups from these three different hotel groups was to explore TQM strategies and practices, employees' in-role behaviours and customer perceptions of the hotel's service quality. To collect more information about the strategies and practices of TQM in the Hong Kong hotel industry, the first focus group was held to identify the critical elements of TQM. Eight managers from the three different hotels in Hong Kong and encompassing various departments, including human resources, front office, and quality assurances were invited to sit in the focus group. Respondents were asked about their strategies and implementation of TQM in their hotels and their attitude toward the important TQM elements such as process management, top management commitment and customer focus.

To identify the extra-role behaviours of the front office employees, a second focus group was conducted with a group of ten front office supervisors and managers from the three hotel groups. They were asked to identify the typical employees' in-role behaviours found among their employees. Other questions relating to their evaluation criteria of subordinates or actions taken into account by them when evaluations were asked.

In the third focus group, the aim was to gather more information about the evaluation criteria of customers toward service quality in the hotel industry. The focus group consisted of ten frequent foreign travellers and four mainland Chinese travelers who were introduced by the hotel managers to the researcher. According to the 2004 Hong Kong Tourism Board statistics, the visitors' arrivals number in Hong Kong reached a record high of 21.8 million, with 56 percent of them coming from Mainland China (HKTB, 2005). Other key source long haul or short haul markets include the United States, Canada, Australia, South Korea, Singapore, Malaysia and India. The selected 10 foreign travellers include Americans, Canadians, Singaporeans and Australians. The selected 4 Mainland Chinese are repeated travellers to Hong Kong. To identify the service attributes, the focus group participants were asked to evaluate the service

quality of the customer contact staff of the hotel front office. Questions were also asked about the most important behaviours that contribute to customer satisfaction.

The study instrument measuring customers' perception of service quality was originally designed in English but to improve the flexibility of questionnaires for Chinese respondents, the questionnaire was translated into Chinese with simplified characters by a professional Chinese translator. The questionnaire was translated back from the Chinese version into English in order to correct any translation mistakes and linguistic errors. The other two questionnaires for employees and supervisors or managers were in English only as it was the fact that they have the ability to understand and complete the questionnaires in English. The three sets of questionnaires are shown in Appendix 1.2, 1.3 and 1.4.

3.3.3 Stage III – Judgment from the experts

Content validity refers to the range of meanings included in the concept that an instrument can cover (Babbie, 1992). Zikmund (2000) defined content validity as the subjective agreement among professionals that a scale logically appears to reflect

accurately what it purports to measure. Content validity should be established through a systematic review of the literature and through expert judgment.

The instruments for this study were developed and designed based on a thorough review of the literature. Further to this, a total of eight supervisors or managers, whose duties required evaluating front office employees, were invited to review the content, the appropriateness of the attributes of each construct, the wordings and phrases, and the format of the three sets of questionnaires. The supervisors or managers in the front office work closely with the employees and are most knowledgeable about both the in-role and extra-role behaviours of their employees. The supervisors and managers were also asked to review the questionnaires to measure customers' perception of service quality and implementation of TQM, as they were considered to be knowledgeable about their customers and the policy of the organization. Furthermore, four academics studied and research in the service quality of the hospitality and tourism industry area were invited to examine the instruments' theoretical structure and the format of the scales, and to weed out inappropriate items such as ambiguous and sensitive questions. They were colleagues of the researcher and they are asked to give their views about the clarity and

understandability of the questionnaire's terms and wording.

Subsequently, several adjustments were made regarding the wordings, phrasings, measurement scales, and overall presentation of the questionnaires. The three instruments used in the present study received the approval of the participants. They agreed that the measures provided adequate coverage of the concept, and had clear and understandable questions. Therefore, the three instruments were considered theoretically sound.

3.3.4 Stage IV - Pilot tests

Prior to the rolling out of the questionnaires, pilot tests were conducted to test the reliability and the validity of the research instrument. The proposed qùestionnaire, in both English and Chinese, designed to measure customers' perception of service quality was distributed to thirty Masters of Business Administration students at the Hong Kong Polytechnic University. The students were executives and managers with various industrial background and were generally believed to have extensive experience of travel. Hence, it was the fact that they would be qualified to complete

the questionnaire in measuring the customers' perception of service quality. The problem encountered in the pilot test is the students need to recall the service they had encountered in the last hotel stay, they might not be able to remember their perception of the service quality at that time. As the respondents in the actual survey taken will be interviewed right after the service encounter, the problem of not remembering the kind of service will be reduced. As commented by the students, hotels' guest services are different among cities or countries. For example, in some parts of China, the service quality of the front office staff has a lower service standard compared to Hong Kong hotel staff due to language barriers and insufficient training. As the survey is carried out in Hong Kong, a city of East and West culture, front desk staff working in hotels which are of international standard should have sufficient training and cultural issues should not be a problem. There was a suggestion to use "customer service staff" rather than "customer contact staff" for fluency in reading the questionnaire. The term was changed to enhance fluency and better understanding of the questionnaire.

The questionnaire to be completed by the front office supervisors or managers in measuring employees' behaviours was disseminated to twenty five Masters of

Science students at the School of Hotel and Tourism Management at the Hong Kong Polytechnic University. This group was considered appropriate to complete the questionnaire as they are mostly executives and managers from hotels. A question about following procedures for issuing and closing safety deposit boxes used by the hotel guests was deleted. It is because most of the hotels in Hong Kong have installed in room safety deposit boxes and is no longer a duty of the front desk staff.

The questionnaire to be completed by front office employees was distributed to a group of twenty customer service staff of the front office at different hotels in Hong Kong. They were the part time students of the researcher at the School of Hotel and Tourism Management at the Hong Kong Polytechnic University. Respondents were asked to complete the questionnaire, and their feedback on the understandability and readability of questionnaires was collected. Respondents commented that they were able to comprehend the questions in English and Chinese translation is not necessary. Respondents have difficulties in understanding the question about the hotel's interaction with outside groups for mutual benefits of quality improvement. Examples were given to explain outside groups means from the education, business, trade or professional groups. Another problem is the two questions about operating

process are similar, one with the purpose of quality improvement, the other is without this purpose. The researcher decided to keep the two questions as they are, there might be different reasons other than quality improvement when operating process is reviewed.

In sum, all respondents from the different groups were asked to comment on the length of the instruments, the format of the scales, and any ambiguous wordings in the questionnaire. Upon completion of the pilot tests, several adjustments were made regarding the wordings, phrasings and overall presentation of the questionnaire.

3.4 Data Collection Method

The data collection was conducted from 19th July to 6thAugust, 2004. Most questionnaires were self-completed by the respondents. The required data for the study consisted of two major groups: staff data (including front-line staff, and supervisors or managers who are responsible for evaluating the performance of employees) and hotel guest data. The completed employees' questionnaires were collected from a closed collection box. To ensure the confidentiality, the collection

box was sealed with only one window in it. The collection box was given to the hotel manager and is picked up by the researcher after the collection period.

Hotel guests who were staying during the survey period were invited to participate in the survey. Guests were asked to fill in the questionnaire after front office services were provided. Front office services such as check in, check out, handling guest enquires and other front office guest services. The researcher has the permission granted by the hotel management to invite their hotel guests in the lobby to complete the questionnaire after receiving the mentioned front office services.

To ensure confidentiality and to reduce the possibility of bias from the respondents, they were informed that the questionnaire did not require them to indicate their name or any other identifying information. The hotel managers who were responsible for distributing questionnaire were instructed to communicate to the respondents that the data was being gathered strictly for research purposes only.

3.5 SAMPLE DESIGN

The following presented the three elements of sample design used in this study: sampling frame, sample section process, and size of the sample (Churchill, 1995).

3.5.1 Sampling Frame

The research population in this study composed of the populations of hotel guests, front office supervisor or managers and the front office employees. As the researcher wanted to study the effect of organizational citizenship behaviours, in-role behaviours and TQM programme on customers' perceived service quality, comparisons were made between employees' behaviours (data collected from the sample of front office supervisors and managers) and customers' perception of service quality (data collected from the sample of hotel guests), front office staff perception of the TQM programme (data collected from front office staff) and customers' perception of service quality (data collected from the sample of hotel guests).

A sampling frame is the list of the population elements from which the sample will be drawn; that is, the sampling frame determines which groups are to be covered by the research (Churchill, 1995). The sample frame for measuring employees'

perception toward the implementation of TQM in their hotels, was the employees within the front office of those hotels undertaking the survey. All the employees in the department were invited to participate in the survey.

For measuring the in-role and extra role behaviours of employees in front office, the sample frame was the supervisors or managers in the front office who are responsible for the evaluation of employees' performance. All supervisors and managers were invited to participate in the survey to evaluate the in-role and extra-role performance of each employee in the department.

Finally, with regard to the evaluation of service quality from the perspective of customers, the sample frame was drawn from the hotels' guest lists. All hotel guests who stayed in the selected hotels between 19th July and 6th August 2004 were the potential participants of the survey.

3.5.2 Sample selection process

The sample selection process requires that the form of the sample be specified

(Churchill, 1995). Probability sampling techniques have been used in many studies because they provide a more scientific and objective approach (e.g. Broadbridge and Marshall, 1995) and ensure that every person in the group to be interviewed has an equal opportunity of being included in the sample. However, due to the availability problem of appropriate cases for measuring employees' behaviours and their perception of TQM implementation in hotels, all the frontline employees in the front office were asked about their perception towards the implementation of TQM in their hotel, while all the supervisors or managers who were responsible for employee evaluation were invited to complete the questionnaire.

Hotel guests who stayed in the hotel where the survey was undertaken were the target sample of this study. A random sampling approach was employed towards the participants. Those responsible for the questionnaire were on standby next to the check-in counter. After the completion of registration, the guests were asked to complete the questionnaires. Only those guests who have direct contact with the front-line staff of the front office were qualified to participate in the survey. Only one customer from each room was asked to participate in the survey. Therefore, in most cases, the guests who have check in or check out were selected for the sample as they

would have more interaction with frontline employees of the front office, therefore, they would able to evaluate the performance of the customer service staff.

3.5.3 The sample size

Sample size refers to the number of elements to be included in the study to ensure an appropriate representation of the defined target population. The determination of the sample size depends on the study objectives, cost constraints, time constraints, access to potential participants, planned methods of analysis, the degree of accuracy and precision required, and sample sizes used in similar studies (Hair, Bush and Ortinau, 2000; Malhotra, 1999).

According to Hair, Anderson, Tatham, and Black (1995), in terms of the Structural Equation Model (SEM), the requirement for the sample size ranges from 100 to 200. As this study focus on only one department in the hotel – front office, it is estimated that the available cases of Front Office employees was less than 35 for each hotel. Moreover, there are not too many TQM hotels in Hong Kong, and as a result, the study has to restrict the sample size of employees to about 150. The researcher

invited 7 hotels but one hotel rejected the invitation as the hotel management think the interview might cause inconvenience to their hotel guests. Finally 6 hotels agreed to participate. The following table 3.1 shows the number of rooms and the estimated star quality of the 6 hotels surveyed. Based on the knowledge of the researcher who lived and worked in Hong Kong, the estimated star quality was provided as a reference because there is no recognized standard in star rating for Hong Kong hotels.

Table 3.1 Summary of the number of rooms and the estimated star quality of the hotels surveyed.

Name of the hotels	Number of rooms	Estimated Star Quality
Hotel Miramar Hong Kong	525	****
Metropole hotel	487	***
Hotel New Harbour	173	***
Hotel Concourse	430	***
Hyatt Regency Hong Kong	432	****
Metropark Hotel	266	***

The target sample size for measuring customer perception of service quality was about 450-600. We were able to measure the service quality of the front office staff if we have around 150 employees to be individually evaluated by three to four customers. Furthermore, a total of 150 employees would be evaluated by supervisors and managers for their in-role and organizational citizenship behaviours. Consequently, the target sample size of customers was 500, while the target size for employees and supervisors or managers were both 150.

3.6 Survey Instruments

3.6.1 The questionnaire

This study employed three different questionnaires to measure customers' perception of service quality toward a particular hotel, supervisors' or managers' perception of employees' in-role and extra-role performances (i.e. organizational citizenship behaviour), and employees' perception toward the TQM adoption in a particular hotel. The customer questionnaire measuring customers' perception of service quality aimed to evaluate the performance of customer-contact employees. The questionnaire

measuring employees' in-role and organizational citizenship behaviour was evaluated by supervisors or managers of the front office and the evaluation is employee specific. While the questionnaire measuring the adoption of TQM in a particular hotel was evaluated by the employees.

From the feedback and comments drawn from the experts' judgment and pilot tests, several adjustments were made accordingly.

I. Questionnaire measuring customers' perception of service quality in hotels

The final research instrument contained a total of thirty-three items and consisted of three sections. Section one was designed to identify the perception of service quality regarding the service encounter. There were altogether twenty-four items, respondents were asked to indicate their level of agreement with each of the items relating to front office services provided by the specific front office employee. The level of agreement ranges from strongly disagree (1) to strongly agree (7) in a seven point Likert scale type.

Section two has three questions which were designed to gather the travel information of the respondents, including the number of visits to Hong Kong, the purpose of travel, and the number of times they had stayed in the hotel where the survey was undertaken.

Section three has six questions which were designed to gather the demographic characteristics of the respondents including gender, age, nationality, education, occupation and income.

The items in section one is directly linked to the research hypotheses which aim at identifying the perception of service quality regarding the service encounter. Section two and three were respondents' background information which was not directly linked to the research hypotheses.

II. Questionnaire measuring employees' behaviour (including In-role Behaviour and Organizational Citizenship Behaviour)

The research instrument measuring employees' behaviour consisted of fifty-one

questions in two sections. Section one has forty-five questions and was designed to identify supervisors or managers' perception toward employees' in-role and extra-role behaviour. The first nineteen questions measured employees' in-role behaviour, while the rest of the twenty four questions measured employees' organizational citizenship behaviour. Respondents were asked to indicate their level of agreement with each of the items relating to the particular employee. The level of agreement ranges from strongly disagree (1) to strongly agree (7) in a seven point Likert scale type.

Section two has six questions and was designed to gather the demographic characteristics of the respondents, including gender, age, nationality, education, years of working experiences and their length of service at the hotel. This section provided respondents' background information and was not directly linked to the research hypotheses.

III. Questionnaire measuring employees' perception of TQM implementation in hotels

The final research instrument consisted of two sections. Section one contained twenty nine questions and was designed to investigate front office employees' perception toward the implementation of total quality management in their hotel. Respondents were asked to indicate their level of agreement with each of the items relating to the goal, strategies and procedures employed in the hotel. The level of agreement ranges from strongly disagree (1) to strongly agree (7) in a seven point Likert scale type.

Section two has six questions which were designed to gather the demographic characteristics of the respondents, including gender, age, nationality, education, income, and their length of service at the hotel. This section provided respondents' background information and was not directly linked to the research hypotheses.

3.6.2 Mulitple items response scale

As suggested by Churchill (1979), the use of a single-item measure should be avoided. The disadvantage of the one-item scale is that reliability cannot be assessed in the conventional way (i.e., in terms of internal consistency). On the contrary,

according to the classic Spearman-Brown formula, increasing the number of items increases the reliability of the scale. Using a multi-item scale may also prevent bias from adjective specificity with regard to the anchors (Ryan, 1982). Besides, multiple items can strengthen the reliability of the scale's components. Researchers who have used multi-item scales to measure service quality including Parasuraman et al. (1985), measuring organizational citizenship behaviours and TQM conducted by Organ (1988), and Black and Porter (1994) respectively. Likewise, in this study, the constructs of TQM, employees' in-role behaviours and organizational citizenship behaviours, and service quality were measured using at least three items per scale.

The scales measuring all of the constructs were developed in a seven-point Likert-type scale in the three questionnaires, ranging from strongly disagree (1) to strongly agree (7). Several of the items were also negatively worded in order to 'minimize the "halo" effect and other response biases' (Sekaran, 1984: 149). The questions in each questionnaire were briefly described as below.

I. Customers' perception of Service Quality

Recently, a number of studies advocate the measurement of perception only for indicators of service quality. Cronin and Taylor (1994) also present evidence that perceptions need only be measured in the determination of service quality. This study adopted the recommendation by measuring customers' perception toward service quality instead of measuring both the perception and expectation of service quality.

Four dimensions were assessed in the present study, including responsiveness, reliability, empathy, and assurance.

II. Employees' In-role Behaviour and Organizational Citizenship Behaviour

Nineteen statements were used to measure the performance of employees that required by their job duties. Three dimensions were classified according to the results from the exploratory factor analysis presented in chapter four, including the compliances with procedures, the compliance with customers' requests, and knowledge.

Twenty-four items were used to assess employees' organizational citizenship behaviours in the front office department of hotels. This measure assesses four

dimensions of OCB including altruism, civic virtue, courtesy, and sportsmanship. This measure was specifically developed for use in Eastern cultures after collecting the feedback from the focus group and the pilot test. Front Office supervisors or managers were asked to indicate their level of agreement with the items measuring employees' in-role behaviours and organizational citizenship behaviours.

III. Employees' perception toward implementation of TQM in hotels

Twenty-nine items were used to measure the implementation of TQM in hotels. Four dimensions were measured in the instrument. They are top management commitment, employee involvement, customer focus, and continuous improvement. Front office employees were asked to indicate their level of agreement toward the implementation of TQM in their working hotels.

3.7 DATA ANALYSIS

For the data input the analysis of the descriptive statistics, Statistical Package for Social Science (SPSS) for Windows was employed. To achieve the six stated

objectives, test the twelve hypotheses, estimate the parameters, and test the fitness of the proposed conceptual model (see Chapters one and two), the method of data analysis employed in this study was Structural Equation Modeling (SEM) with latent variables. The statistical program Analysis of Moment Structures (AMOS) attached to the SPSS package was used to perform the structural equation modeling analysis. In addition, in order to reduce the number of variables in each section of the questionnaires and to group these variables into key factors, Principal Components Analysis, a method of factor analysis was used.

3.7.1 Coding and data entry

A coding sheet was designed to code the negatively phrased questions in the questionnaire. General instructions on how each variable was coded were recorded in the coding sheet. The coded data was rechecked visually for the detection of any possible clerical errors. Data was initially imputed into the Statistical Packages for Social Science (SPSS, Windows Version 11.0) program.

3.7.2 Advantages of Structural Equation Modeling

The Structural Equation Model (SEM) describes the relationship between variables. It is an extension of several multivariate techniques, including multiple regression and factor analysis. However, SEM offers some important additional benefits over these techniques: an effective way of dealing with multi-collinearity and methods for taking into account the unreliability of consumer response data (Bacon and Bacon Ltd., and SPSS Inc., 1997). Many important marketing, psychological or cultural concepts are latent constructs, with unknown reliability measured by multiple observed variables. By using SEM, the important latent constructs in the study such as attitude, subjective norm, perceived behavioral control and intention could be modeled, while taking into account the reliability of the indicators.

Most of the multivariate analysis methods, such as multiple regression, factor analysis, and discriminant analysis, share one common limitation; that is, each method can examine only a single relationship at a time. Even the techniques allowing for multiple dependent variables, such as canonical analysis, still represent only a single relationship between the dependent and independent variables. SEM

can be a powerful method for dealing with multi-collinearity in sets of predictor variables. SEM allows the researchers to simultaneously examine a series of dependent relationships (Kaplan, 2000). It is particularly useful when one dependent variable becomes an independent variable of subsequent dependent variables (Hoyle, 1995).

The other most important advantage of SEM is the ability to take into account measurement errors, such as random errors and systematic measurement errors (Mackenzie, 2001). Empirical measures used to operationalize unobservable constructs should be reliable; that is, as free from random errors as possible (Hughes, Price and Marrs, 1986). Reliable measures can help researchers obtain a clear picture of the true relationships, while random errors tend to obscure relationships. The lower the reliability of the measurement, the less likely one is to observe relationships between latent variables and other variables. Random errors may occur due to the inherent difficulties of accurately measuring abstract concepts (e.g. customer evaluation, satisfaction, perception, and attitude). In addition, systematic errors may also occur due to contaminating factors (e.g. non-hypothesized constructs, social desirability, self-generated validity, or implicit theories), common method

factors (e.g. scale type, rater, or context), response biases (e.g. leniency, yea-saying, or nay-saying), or anything other than the hypothesized construct that has a systematic effect on the construct measures.

Furthermore, Cote and Bukley (1987) have shown that the bias factor between the true relationship and the estimated relationship due to measurement errors is 3.4 times greater in attitude research. By using SEM with multiple indicator variables, one can model important latent variables while taking into account the unreliability of the indicators. SEM allows for a global assessment of how well all the items in a scale measure the construct, offering several alternative statistics to determine the goodness of fit of a model.

Another advantage of SEM is the ability to take care of missing data (Wothke, 1996). Most multivariate methods require complete data, but most multivariate data are incomplete. Missing data are usually dealt with by list-wise or pair-wise deletion methods, which aim to fix the data so they can be analyzed by methods designed for complete data. This kind of approach is ad-hoc and has little theoretical justification.

By contrast, a theory-based approach to the treatment of missing data under the

assumption of multivariate normality, based on the direct maximization of the likelihood of the observed data, has long been known. The theoretical advantages of this full-information method are widely recognized, and its applicability in principle to structural equation modeling has been noted.

3.7.3 Application of Structural Equation Modeling

Structural Equation Modeling is a confirmatory approach to data analysis (Byrne, 1998), which is highly appropriate in the present context. It is because it has the ability to take into account measurement errors and unknown reliability in the measures, and to simultaneously examine a series of interrelated relationships between observed and latent variables.

Furthermore, some of the constructs in this study were quite abstract such as attitude, subjective norm, perceived behavior control and intention, which may contain potentially sizeable measurement errors. SEM is capable taking these errors into account. SEM estimates the unknown coefficients in a set of linear structural equations. Variables in the equation system may be either directly observed variables

(the results of the survey questions) or unmeasured latent variables that are not directly observed, but related to the observed variables.

In the present study, constructs were conceptualized as observable or latent variables, measured by indicators that were deemed to be observable. Moreover, the proposed model involved constructs that can both act as dependent and independent variables. SEM is particularly suitable for this type of problem. In particular, SEM is able to validate the latent constructs and identify the relationships among them.

The SEM used in this study aimed to achieve two major objectives:

1. To examine a series of interrelated relationships simultaneously between exogenous variables (i.e. service quality) and endogenous variables (i.e. TQM, OCB, In-roles behaviour).

2. To confirm the theoretical relationships in the model between the latent constructs and the observed variables, as well as to assess their statistical significance.

A structural equation model implies a set of unknown parameters that represent the variances and covariance of the indicators in the model. SEM attempts to find the 'best' solution, such that the covariance matrix derived from the data is similar to the matrix implied by the model. SEM will simultaneously analyze the equations in model and return a covariance matrix that resembles the data structure. The general structural equation model as outlined by Jöreskog (1993) consists of two parts: (a) the measurement part, linking observed variables to latent variables via a confirmatory factor model and (b) the structural part, linking latent variables to each other via systems of simultaneous equations. According to Jöreskog (1993) and Anderson and Gerbing (1988), a two-stage approach is preferable for testing structural equation models. In the first step, the measurement model between the observed variables (survey questions) and latent variables (constructs) is estimated without imposing any structural constraints. This allows inspection of the lack of fit, which is attributed to the measurement part alone. The measurement model provides an assessment of discriminant and convergent validity. The measurement model is estimated through a confirmatory factor analysis (CFA).

In the second stage of data analysis, the structural part involving structural

relationships proposed by the theoretical framework is examined to assess the fitness of the model. By using the two-stage approach, one avoids the confusion in interpretation that can result from the one-step approach (Anderson and Gerbing, 1988). Several methods of estimation in structural equation modeling can be used, including maximum likelihood (ML), unweighted least squares, and generalized least squares or asymptotic distribution free estimators (Holbert and Stephenson, 2002). In general, the use of ML is recommended, and this remains the most widely used estimator (Bollen, 1989; Chou and Bentler, 1995), because it creates computational simplicity, accuracy and correctness of statistical results.

Maximum Likelihood estimation seeks to maximize the log likelihood, which reflects how likely it is that the observed values of the dependents may be predicted from the observed values of the independents. Maximum likelihood is the most widely used estimation that has demonstrated robustness against the moderate violation of normality (Jöreskog, 1993). Maximum likelihood estimation allows the computation of assorted indices of goodness-of-fit and the testing of the significance of loadings and correlations between factors but requires the assumption of multivariate normality (Holbert and Stephenson, 2002). Unless there are severe

problems, ML estimation is recommended. This study adopted the two-stage approach and made assessments with maximum likelihood (ML) estimation using Analysis of Moment of Structure (AMOS).

The purpose of assessing a model's overall fit is to determine the degree to which the model as a whole is consistent with the empirical data at hand. The chi-square statistic is the traditional measure for evaluating overall model fit in covariance structure models and provides

> 'a test of perfect fit in which the null hypothesis is that the model fits the population data perfectly. A statistically significant chi-square causes rejection of the null hypothesis, implying imperfect model fit and possible rejection of the model' (Jaccard and Wan, 1996: 18).

However, Jöreskog and Sörbom (1989) argued that the chi-square is only valid for an experimental model or any model that is approximate to reality. The other problem is its insufficiency by itself to adequately assess model fit, generally because of sample size and power estimation problems or assumptions (Hu and Bentler, 1995). Large

sample sizes and departures from normality usually tend to increase the chi-square value. The chi-square often indicates an unacceptable fit when the fit actually is acceptable (Bagozzi and Yi, 1988). Hence, 'evaluation of model fit should derive from a variety of sources and be based on several criteria that can assess model fit from a diversity of perspectives' (Byrne, 1998: 119). In light of this, the chi-square measure of fit should not be taken a priori as the best indicator of the fit of a model; the inclusion of absolute and incremental indices of fit is recommended for the assessment of models (Hu and Bentler, 1999).

As recommended by Diamantopoulos and Siguaw (2000), the overall fit of the model was evaluated against a series of fit indices, including chi-square statistics, the standardized root mean square residual (Standardized RMR) (Diamantopoulos and Siguaw, 2000), the goodness-of-fit index (GFI) (Jöreskog and Sörbom, 1993), the root mean square error of approximation (RMSEA) (Browne and Cudeck, 1993), and the comparative fit index (CFI) (Bentler, 1990). These indices are explained below.

Chi-square

The chi-square value is considered as a test of the goodness-of-fit of the model to the

data. A non-significant chi-square goodness of fit is desired, indicating that the fit of the model to the sample data does not differ significantly from the population as a whole. However, a significant chi-square can be accepted, if other fit indices were shown to be under the acceptable value. The chi-square value can also be estimated based on the likelihood ratios of the chi-square to the degrees of freedom. The acceptable ratio is approximately 3:1 (Jöreskog and Sörbom, 1989). A large value of chi-square indicates a poor fit of the model to the data; hence, a small value indicates a good fit.

Standardized RMR

The standardized root mean square residual (RMR) index reflects the average discrepancy between a sample covariance (variance) and a fitted (i.e. model implied) covariance (variance). If the model is good, the fitted residuals should be of a small value. A value below 0.05 is indicative of acceptable fit (Diamantopoulos, 1994).

RMSEA

The root mean square error of approximation (RMSEA) shows 'how well would the model, with unknown but optimally chosen parameter values, fit the population

covariance matrix if it were available' (Browne and Cudeck, 1993: 137-138). A value of RMSEA of less than 0.05 is indicative of good fit, between 0.05 and 0.08 of reasonable fit, between 0.08 and 0.10 of mediocre fit, and >0.10 of poor fit (Diamantopoulos and Siguaw, 2000).

GFI

The goodness-of-fit index (GFI) is an indicator of the relevant amount of variance and covariance accounted for by the model, and thus shows how closely the model comes to perfectly reproducing the observed covariance matrix. It is generally recommended as the most reliable measure of absolute fit in most circumstances (Diamantopoulos and Siguaw, 2000). Values of GFI should range between 0 and 1, and values >0.90 are usually taken as reflecting acceptable fits.

CFI

The comparative fit index (CFI) compares the fit of two different models for the same data. It estimates how much better the test model is than the independent model. A CFI value of over 0.90 is desirable and indicates an acceptable fit of the model to the data (Bentler, 1992).

3.8 Conclusion

This study was empirical in nature, the aims of which were to gain insights into the interrelationship between the implementation of TQM, employees' in-role and extra-role behaviours, and customers' perception of service quality. Hypotheses were formulated to test the relationships among the three major constructs. To specify the dimensions of each construct, comprehensive literature review were conducted. In addition, exploratory focus groups were held to investigate the items representing the dimensions of each construct. Combining the results of literature reviews and focus group interviews, a list of items were formulated for the questionnaires. The next chapter presents the descriptive statistics, the reliability and validity test. Also the analysis and results of the survey are presented.

CHAPTER FOUR – ANALYSIS AND RESULTS

This chapter describes the analysis and results of the survey. The first section presents the demographic and behavioural profiles of the respondents. The second section reports the descriptive statistics of the variables used in this study. The third section presents the results of the reliability and validity of the survey instruments. The fourth section examines the psychometric properties of the instrument/measurement model using confirmatory factor analyses. The results and the model fit indices of the structural models are presented in the fifth section. The last section describes the results of testing each of the hypotheses of the hypothesized model.

4.1 DEMOGRAPHIC AND BEHAVIOURAL PROFILES OF THE RESPONDENTS

In a three week survey period, from 19th July to 6th August, 2004, a total of approximately 540 hotel guests were invited to complete the questionnaire, of which 483 respondents agreed to participate in the survey. The other 57 hotel guests refused to participate in the survey. The researcher was assisted by the Front Office managers

and staffs in the hotel when the survey was taken. The hotel guests who agreed to participate in the survey were either introduced by the Front Office manager and staff to the researcher after the service encounter or approached by the researcher who standby in the hotel lobby. Of the 483 returned questionnaires, 460 were found to be usable in this study and the rest were incomplete. Therefore, the response rate was 89.4%, which is legitimately acceptable.

This study involved conducting independent surveys with three different types of respondents; namely the hotel guests, hotel customer service staff, and front office supervisors or managers. The characteristics of each type of respondents are depicted in Table 4.1, 4.2, and 4.3, respectively.

Table 4.1 shows the demographic characteristics of the hotel guests. It was found that 59.1 per cent of the hotel guests were male and 40.9 per cent were female. Over three quarters (77.6%) of respondents were aged between 21 and 50; only 4.6 percent and 17.8 percent were aged under 20 and 50 or above, respectively. This reflects the fact that travellers were mostly young-to-middle-aged. Of the 460 hotel guests, around 65 percent had a university or postgraduate education; 33.5 percent had completed

secondary or post secondary education. The results of the survey also indicated that 26.3 percent of the respondents held professional positions; 18.4 percent held senior management/administration positions; 18.9 percent were self-employed; 9.2 percent were junior white collar workers; 11.3 percent were blue collar workers; and 15.9 percent were either students, housewives, or retired persons. Nearly a quarter of the respondents (24.1%) had a monthly income of less than US$2,500 (around HK$19,500); 34.6 percent had a monthly income between US$2,501 and US$5,000 (around HK$19,510 and HK$39,000); more than 20 percent of the respondents (22.2%) had a monthly income between US$5,001 and US$6,400 (around HK$39,001 and HK$49,900); 19.1 percent of the respondents had a monthly income over US$6,401 (around HK$49,930).

Table 4.1 Demographic profile of the hotel guests (N=460)

Sex	N	%	Education	N	%
Male	272	59.1	Primary school	7	1.5
Female	188	40.9	Secondary school	76	16.5
			Post-secondary school	78	17.0
			University or above	297	64.6

			Others	2	0.4

Age	N	%	Income	N	%
20 or below	21	4.6	US$1,200 or below	59	12.8
21 – 30	108	23.5	US$1,201 – 2,500	52	11.3
31 – 40	135	29.3	US$2,501 – 3,800	78	17.0
41 – 50	114	24.8	US$3,801 – 5,000	81	17.6
51 – 60	61	13.3	US$5,001 – 6,400	102	22.2
61 or above	21	4.5	US$6,401 or above	88	19.1

Nationality	N	%	Occupation	N	%
Hong Kong	17	3.7	Proprietor	87	18.9
China	144	31.3	Blue collar	52	11.3
Taiwan	43	9.3	Junior white collar	42	9.2
Asia	98	21.3	Senior white collar	85	18.4
UK	52	11.3	Professional	121	26.3
USA	51	11.1	Student	39	8.5
Australia	22	4.8	Retired	11	2.4

Europe	**33**	**7.2**	**Housewife**	**23**	**5**

Please note the percentage data in the table above are rounded by SPSS.

Table 4.2 shows the demographic characteristics of the front office supervisors or managers. It was found that 80 percent of the respondents were male and 20 percent were female. Nearly 40 percent of the respondents (39.3%) were aged between 31 and 40; 23 percent were aged between 21 and 30; 37.2 per cent were aged over 41; none of them were below 20. Only 75.9 percent of the respondents were local residents of Hong Kong; while nearly 25 percent of the respondents (24.1%) are non-local residents, they are either British or European. Of the 145 respondents, around 53 percent had a university or postgraduate education; 31.7 percent and 15.2 percent had completed secondary and post secondary education, respectively. The results of the survey indicated that 60 percent of the respondents interviewed had worked in the hotel for more than ten years; only 13.8 percent had worked for less than three years; and 26.2 percent had worked for four to five years. Over half of the respondents (51.7%) had a monthly income between US$3,801 and US$5,000 (around HK$29,650 and HK$39,000); 34.6 percent had a monthly income between US$2,501 and US$3,800 (around HK$19,510 and HK$29,600); 20 percent of them had a

monthly income between US$5,001 and US$6,400 (around HK$39,001 and HK$49,900); only 2.1 percent had a monthly income less than US$2,500 (around HK$19,500); none of them had a monthly income over US$6,401 (around HK$49,930).

Table 4.2 Demographic profile of the front office supervisors or managers (N=145)

Sex	N	%	Education	N	%
Male	116	80.0	Primary school	0	0
Female	29	20.0	Secondary school	46	31.7
			Post-Secondary school	22	15.2
			University or above	77	53.1
Age	**N**	**%**	**Income**	**N**	**%**
20 or below	0	0	US$1,200 or below	0	0
21 – 30	34	23.5	US$1,201 – 2,500	3	2.1
31 – 40	57	39.3	US$2,501 – 3,800	38	26.2
41 – 50	38	26.2	US$3,801 – 5,000	75	51.7
51 – 60	16	11.0	US$5,001 – 6,400	29	20.0
61 or above	0	0	US$6,401 or above	0	0
Nationality	**N**	**%**	**No. of years working in this hotel**	**N**	**%**

Hong Kong	110	75.9	0 – 3 years	20	13.8
UK	28	19.3	4 – 5 years	38	26.2
European	7	4.8	6 – 10 years	35	24.1
			11 – 15 years	22	15.2
			16 – 20 years	30	20.7

Please note the percentage data in the table above are rounded by SPSS.

Table 4.3 shows the demographic characteristics of the front office customer service staff. It was found that 59.3 percent of the Front office staff was male and 40.7 percent was female. Most of the staff (60%) were aged between 21 and 30; 26.2 percent were aged between 31 and 40; less than 15 percent of them (13.8%) were aged below 20 or over 41. The vast majority of the respondents (85.5%) were local Hong Kong residents; the rest of the respondents were either from Mainland China, Asia, or UK. The results of the survey indicated that 52.4 percent had a secondary education; 29 percent had completed post secondary education, and only 16.6 percent had university or postgraduate education. Of the 145 front office customer service staff, more than a third of the staff (33.1%) had worked in the hotel for less than one

year; 22.8 percent had worked in the hotel for two to three years; 15.2 percent had worked for the hotel for four to five years; and less than 10 percent of them (9.6%) had worked in the hotel for more than ten years. Nearly 63 percent of the staff (62.8%) had a monthly income between US$1,201 and US$2,500 (around HK$9,350 and HK$29,600); more than 30 percent of them (30.3%) had a monthly income less than US$1,200 (around HK$9,300); less than 7% had a monthly income between US$2,501 and US$3,800 (around HK$19,510 and HK$29,600).

Table 4.3 Demographic profile of the front office customer service staff (N=145)

Sex	N	%	Education	N	%
Male	86	59.3	Primary school	0	0
Female	59	40.7	Secondary school	79	54.4
			Post-Secondary school	42	29.0
			University or above	24	16.6
Age	N	%	Income	N	%
20 or below	6	4.1	US$1,200 or below	44	30.3

21 – 30	87	60.0	US$1,201 – 2,500	91	62.8
31 – 40	38	26.2	US$2,501 – 3,800	10	6.9
41 – 50	10	6.9	US$3,801 – 5,000	0	0
51 – 60	4	2.8	US$5,001 – 6,400	0	0
61 or above	0	0	US$6,401 or above	0	0

Nationality	N	%	Number of years working in the hotel	N	%
Hong Kong	124	85.5	1 year or less	48	33.1
China	14	9.6	2 – 3 years	33	22.8
Other Asian countries	4	2.8	4 – 5 years	22	15.2
UK	3	2.1	6 – 10 years	28	19.3
			11 years or above	14	9.6

Please note the percentage data in the table above are rounded by SPSS.

Table 4.4 indicates the behavioural characteristics of the hotel guests. Nearly 29 percent of the respondents were first time visitors to Hong Kong; while the rest were repeat visitors. Results indicated that around 50 percent of the hotel guests had

visited Hong Kong more than three times. More than 55 percent of the hotel guests came to Hong Kong for vacation; 37 percent were here for business; less than 8 per cent came to visit friends/relatives or have some other purposes of their visit. Over two-thirds of the hotel guests (68.9%) stayed in the hotel for the first time; 16.5 percent of them stayed in the hotel for the second time; less than 15 per cent had stayed in the hotel for more than three times.

Table 4.4 Behavioural characteristics of the hotel guests (N=460)

No. of visits to H.K.	N	%	Purposes of Travel	N	%
First time	133	28.9	Business	170	37.0
Second time	96	20.9	Leisure	255	55.4
Three to five times	130	28.3	Visiting friends / relatives	15	3.3
Six times or more	101	21.9	Others	20	4.3
No. of times staying in this Hotel[1]	N	%			
First time	317	68.9			

Second time	**76**	**16.5**
Three to five times	**49**	**10.7**
Six times or more	**18**	**3.9**

This Hotel[1] = The Hotel where the survey was undertaken

Please note the percentage data in the table above are rounded by SPSS.

4.2 DESCRIPTIVE STATISTICS ON MEASUREMENT CONSTRUCTS

Tables 4.5, 4.6, 4.7, and 4.8 illustrate the results of the measurement constructs of service quality, employees' in-role behaviours, organizational citizenship behaviours, and total quality management. These constructs were assessed on a seven-point Likert scale, ranging from strongly disagree (1) to strongly agree (7).

4.2.1 Means and Standard Deviation

I. Service Quality

The four dimensions of service quality assessed in the present study were assurance, responsiveness, reliability, and empathy. As shown in Table 4.5, six questions were used to measure assurance of service, they are (1) 'The customer service staff has the knowledge to answer most of my questions'; (2) 'The customer service staff was polite and courteous'; (3) 'The customer service staff was very competent'; (4) 'The customer service staff was very friendly'; (5) 'The customer service staff smiled a lot'; and (6) 'The customer service staff acted politely towards me'. The mean ratings of each of these items were: knowledge (6.06); courteous (6.29); competency (6.00); friendliness (6.29); smiled (6.05); and politeness (6.22). Courteous was rated the highest among the six items, and competency was the lowest. The overall mean rating of the construct of assurance was 6.15, with a standard deviation of 0.59. The relatively low standard deviation implies that the general feeling towards the assurance of hotel service varied with a relatively small dispersion of opinions among hotel guests. Hotel guests were very satisfied with the courtesy and competency of the front-line hotel staff.

Four questions were used to measure reliability of service. As shown in Table 4.5, these questions were phrased as (1) 'The customer service staff has the sense of

responsibility'; (2) 'The customer service staff followed my instructions and requests'; (3) 'The customer service staff did not make any mistake'; and (4) 'The customer service staff acted according to what I said'. The mean ratings of each of these items were: sense of responsibility (5.97); following instructions (6.10); made mistakes (5.92); and acted accordingly (6.03). Following hotel guests' instructions and requests was rated the highest among the four, and customer service staff had made mistakes was the lowest. The overall mean rating of the construct of reliability was 6.01, with a standard deviation of 0.61. The overall mean rating was relatively high while the standard deviation was relatively low. This implies that hotel guests generally agreed that the service provided by the front-line hotel staff was reliable, although mistakes sometimes did occur. The mean rating also reflected that customer service staff was able to follow guests' instructions or requests, however, their sense of responsibility and the ability to prevent mistakes were inadequate.

Responsiveness was examined by four items. As shown in Table 4.5, the statements were phrased as (1) 'The customer service staff responded to my requests and needs quickly; (2) 'The customer service staff understood my specific needs'; (3) 'The customer service staff provided quick service'; and (4) 'The customer service staff

showed concern with our needs'. The mean rating of each of these items was: responding to guests' requests (6.08); understanding guests' needs (5.52); providing quick service (6.10); and showing concern (5.69). Response quickly to customers' requests and providing quick service were both highly rated among the four items, while both understanding and showing concern to customers' needs were rated lower.

The overall mean rating of the construct of responsiveness was 5.85, with a standard deviation of 0.74. The relatively small standard deviation implied that hotel guests' generally agreed that the hotel service was moderately good with a relatively low dispersion of opinions. Hotel guests were very satisfied with the quick service provided by the frontline employees. Yet, the concern and understanding of hotel guests' needs was relatively low.

To measure the dimension of empathy, three statements were employed. As shown in Table 4.5, these statements includes (1) 'The customer service staff was very attentive'; (2) 'The customer service staff kept his/her promises'; and (3) 'The customer service staff engaged in small talk with me'. The mean rating of each of these items was: attentiveness (5.72); keeping guests' promises (5.42); and engaging in small talk (4.62). Attentiveness was rated the highest among the three items and

engaging in small talk was the lowest. The overall mean rating of the construct of empathy was 5.25, with a standard deviation of 0.91. The relatively large standard deviation implies that the general feeling towards the empathy of hotel staff varied with a relatively large dispersion of opinions among hotel guests. Compared to the other three dimensions of service quality, the mean rating of empathy is relatively low. In particular, the customer service staff seldom engaged in small talk with the hotel guests. This might explain the relatively low mean rating of the item of concerning and understanding customers' need. In other words, if the customer service staff can be more sociable and engage in more small talk with the hotel guests, it will not only help to strengthen the empathy feeling of customers, but also to show their concern and understanding to the customers.

Table 4.5 Means and standard deviations of the instrument measuring hotel guests' perception of service quality

Item	Description	Mean[1]	Standard Deviation
Assurance		***6.15***	***.059***
C1	The customer service staff has the knowledge to answer most of my questions.	6.06	0.61
C4	The customer service staff was polite and courteous.	6.29	0.57
C7	The customer service staff was competent.	6.00	0.67
C17	The customer service staff was friendly.	6.29	0.52
C19	The customer service staff smiled a lot.	6.05	0.59
C22	The customer service staff acted politely towards me.	6.22	0.57
Reliability		***6.01***	***.061***
C13	The customer service staff has the sense of responsibility.	5.97	0.61
C14	The customer service staff followed my instructions and requests.	6.10	0.58
C15	The customer service staff seldom made mistakes.	5.92	0.74
C16	The customer service staff acted according to what I said.	6.03	0.51
Responsiveness		***5.85***	***0.74***
C5	The customer service staff responded to my requests and	6.08	0.64

	needs quickly.		
C8	The customer service staff understood my specific needs.	5.52	0.86
C11	The customer service staff provided quick service.	6.10	0.63
C12	The customer service staff showed concern with our needs.	5.69	0.81
Empathy		***5.25***	***0.91***
C6	The customer service staff was very attentive.	5.72	0.85
C9	The customer service staff kept his/her promises.	5.42	0.82
C18	The customer service staff engaged in small talk with me.	4.62	1.05

Remark: For easy referencing, the description of each item has been simplified from the original statements in the questionnaire.

1 The constructs were measured using a seven-point Likert scale, from strongly disagree (1) to strongly agree (7).

II. Employees' In-role Behaviour

Three dimensions of in-role behaviour were assessed in this study, including the compliance with procedures, the compliance with customers' requests, and product knowledge. Ten questions were used to measure employees' compliance with procedures. As shown in Table 4.6, the statements were phrased as (1) 'The front

office staff registers and assigns rooms properly"; (2) 'The front office staff uses suggestive selling techniques to sell rooms and to promote other services the hotel'; (3) 'The front office staff handles cash, travellers' checks, credit cards and direct billing requests properly'; (4) 'The front office staff follows up outstanding items from previous shift'; (5) 'The front office staff answers the telephone promptly and courteously'; (6) 'The front office staff greets all arriving guests in a courteous manner'; (7) 'The front office staff maintains the working area in a clean and organized manner'; (8) 'The front office staff compiles with the room key procedures'; (9) 'The front office staff informs the telephone operators of all wake up call details'; (10) 'The front office staff prepares the rooming lists in advance for guests' arrival'. The mean ratings of each of these items were: registering guests and assigning rooms (5.43); suggestive selling (5.42); cashiering (6.07); follow up work (5.43); answering phone calls (5.85); greeting hotel guests (5.72); maintaining a clean and organized working area (5.08); handling room key procedures (5.93); placing wake up call (5.60); preparing rooming lists (5.49). Cashiering was rated the highest among the ten items, and maintaining a clean and organized working area was the lowest.

The overall mean rating of the construct of compliance with procedures was 5.60, with a standard deviation of 0.99. The standard deviation and the overall mean rating were moderate. This finding implies that employees generally work under the compliance with the operating procedures set by the management. Amongst all the compliance procedures was particularly good. This is a typical phenomenon in hotels. Many hotel staffs are particularly cautious when handling a guest's bill as wrong posting or losing money is a serious mistake in any business. Maintaining a clean and organized working area has a low rating, using suggestive selling techniques to sell rooms and to promote other services of the hotel were also relatively low. This point would seem to reflect that guests' registration, promoting other services is not well performed by hotel staff.

Compliance with guests' requests and product knowledge was measured by three questions each. As shown in Table 4.6, the compliance with guests' requests, these statements were phrased as (1) 'Accommodating guests' special requests'; (2) 'Responding to guests' requests and needs quickly'; and (3) 'Providing courteous and efficient service and compiling with every guest request'. The mean ratings of each of these items were: requests (5.68); response quickly (5.51); efficient service

(5.75). Providing efficient service was rated the highest among the three items, and response to guests' request quickly was the lowest. The overall mean rating of the construct of compliance with guests' requests was 5.65, with a standard deviation of 0.87. The relatively small standard deviation implied that the general feeling towards the guests' response to customers' requests varied with a relatively low dispersion of opinions among the front office supervisors or managers. Overall, the managers believed that the customer service staffs were able to comply with the requests of hotel guests.

The items used to measure product knowledge were stated as (1) 'Aware of daily activities and meetings taking place in the hotel'; (2) 'Familiarize and compiles with the hotel policies and regulations'; and (3) 'Familiarize with the hotel facilities, places of interest, commercial centers, nearby hotels and restaurants and other cultural and sporting activities in town'. The mean ratings of each of these items were: daily activities (4.87); hotel policies (5.39); places of interest (5.23). Familiar with hotel policy was rated the highest and familiar with the daily activities and meetings taking place in the hotel was the lowest. The overall mean rating of the construct of product knowledge was 5.16, with a standard deviation of 1.20. The

relatively large standard deviation implies that the general feeling towards employees' product knowledge on hotel policies, daily activities and places of interest varied with a relatively large dispersion of opinions among the supervisors/managers. Overall, the supervisors/managers believed that the front-line employees were not totally aware of the daily activities taking place in the hotel, they did not possess sufficient knowledge of the places of interest, and other cultural and sporting activities in town.

Table 4.6 Means and standard deviations of the instrument measuring the in-role behaviour of employees

Item	Description	Mean[1]	Standard Deviation
Compliance with Procedures		***5.60***	***0.99***
S1	Registers guests and assigns rooms properly.	5.43	1.26
S3	Use suggestive selling techniques to sell rooms and to promote other services of the hotel.	5.42	0.70
S8	Handles cash, travelers' checks, credit cards and direct billing requests properly.	6.07	0.65
S10	Follows up outstanding items from the previous shift.	5.43	1.18
S13	Answers the telephone promptly and courteously.	5.85	0.92

S14	Greets all arriving guests in a courteous manner.	5.72	0.92
S15	Maintains the working area in a clean and organized manner at all times.	5.08	1.46
S16	Compiles with the room key procedures.	5.93	0.84
S17	Informs the telephone operators of all wakeup call details.	5.60	0.92
S18	Prepares rooming lists in advance for guests' arrival.	5.49	1.08
Compliance with Customers' Requests		***5.65***	***0.87***
S2	Accommodates customers' special requests.	5.68	0.74
S4	Response to customers requests and needs quickly.	5.51	0.97
S12	Provide courteous and efficient service and compiles with every guest request.	5.75	0.89
Product knowledge		***5.16***	***1.20***
S6	Aware of daily activities ad meetings taking place in the hotel.	4.87	1.44
S9	Familiarize and compiles with the hotel policies and regulations.	5.39	1.19
S11	Familiarize with the hotel facilities, places of interest, and other cultural and sporting activities in town.	5.23	0.96

Remark: For easy referencing, the description of each item has been simplified from the original statements in the questionnaire.

1 The constructs were measured using a seven-point Likert scale, from strongly disagree (1) to strongly agree (7).

III. Employees' Organizational Citizenship Behaviour

This measure assesses four dimensions of OCB, including altruism, civic virtue, courtesy, and sportsmanship. Altruism was measured by four items, as shown in Table 4.7. The questions included (1) 'Not required by their job duties, this employees helps others who have been absent'; (2) 'This employee willingly gives his/her time to help others who have heavy workload or work-related problems'; (3) 'This employee helps to orient new comers even though it is not part of his/her duties'; and (4) 'This employee cooperates well with those around him/her'. The mean ratings of each of these items were: helping others when someone is absent (5.50); helping others with heavy workload (5.72); helping to orient new comers (5.32); cooperates well with others (5.56). Willing to help others who have heavy workload was rated the highest among the four, and helping to orient new comers was the lowest. The overall mean rating of the construct of altruism was 5.53, with a standard deviation of 0.89. The relatively small standard deviation implies that the general feeling towards the altruism of employees does not vary with a relatively large dispersion of opinions among front office supervisors/managers. In other words,

the front office supervisors/managers agreed that the front-line employees in general are willing to help others regardless they were absent or with heavy workload, while helping new comers was relatively weak.

The behaviour of civic virtue was measured by four items. As shown in Table 4.7, the statements were phrased as (1) 'Takes steps to prevent problems with other colleagues'; (2) 'This employee keeps abreast of changes in the company'; (3) 'This employee attends functions that are not a part of his/her duties, which help the company image'; and (4) 'This employee sometimes pretends to look busy but is doing nothing'. The mean ratings of each of these items were: prevent problems (5.25); changes (5.57); attends functions (6.35); look busy (recode) (4.12). Attends functions was rated the highest among the four, and pretending to be busy was the lowest. The overall mean rating of the construct of civic virtue was 5.32, with a standard deviation of 1.16. The relatively large standard deviation implies that the general feeling towards the civic virtue of frontline employees varied with a relatively large dispersion of opinions among the managers, particularly the perception of whether employees' keep abreast of changes in the company and pretending to be busy. The mean rating indicated that even though employees might

sometimes pretend to look busy, they are willing to attend functions that are not part of their duties.

In Table 4.7, Sportsmanship was measured by five items. The statements included (1) 'This employee constantly talks about quitting his/her job'; (2) 'This employee always focuses on what's wrong with his/her own situation, rather than on the positive side'; (3) 'This employee resists changes from others, including boss'; (4) 'This employee often speaks ill of the supervisors or colleagues behind their back'; and (5) 'This employee conducts personal business during office hours'. The mean rating of each of these items was: talks (5.81); focuses (4.91); resists changes (5.00); speaks ill (4.55); personal business (5.21). Constantly talks about quitting was rated the highest among the five items, and often speaks ill of supervisors was the lowest. The overall mean rating of the construct of sportsmanship was 5.10, with a standard deviation of 1.21. The relatively large standard deviation implies that the general feeling towards the sportsmanship of employees varied with a relatively large dispersion of opinions among managers, particularly with regard to whether employees' resist changes from others and conducting personal business during office hours. Overall, the supervisors/managers thought that some staff resist changes

from others and conduct personal business during office hours. There is a large variation of the mean rating among the items. This implied that some employees may at least engage in some anti-sportsmanship behaviors.

Three statements were used to measure compliance (see Table 4.7). The questions include (1) 'This employee does not take extra breaks'; (2) 'This employee obeys company rules, regulations, and procedures even when no one is supervising'; and (3) 'This employee gives advances notice if he/she is unable to come to work'. The mean ratings of each of these items were: extra breaks (recode) (5.62); obeys rules (5.87); advances notice (6.06). Taking extra breaks was rated the highest among the three, and giving advance notice the lowest. The overall mean rating of the construct of compliance was 5.85, with a standard deviation of 0.69. The relatively small standard deviation implies that the general feeling towards employees' compliance to hotel policy varied with a relatively small dispersion of opinions among managers. That said, the managers agreed that the frontline employees have a high tendency to comply with the hotel policy.

Table 4.7 Means and standard deviations of the instrument measuring employees' organization citizenship behaviours

Item	Description	Mean[1]	Standard Deviation
Altruism		***5.53***	***0.89***
S20	Not required by the job duties, this employee helps others who have been absent.	5.50	0.94
S21	Willingly gives his/her time to help others who have heavy workload or work-related problems.	5.72	0.80
S23	Helps to orient new comers even though it is not part of his/her duties.	5.32	0.90
S36	Cooperates well with those around him/her.	5.56	0.93
Civic Virtue		***5.32***	***1.16***
S24	Takes steps to prevent problems with other colleagues.	5.25	0.96
S29	Keeps abreast of changes in the company.	5.57	1.23
S31	Attends functions that are not part of his/her duties.	6.35	0.95
S33	Sometimes pretends to look busy but is doing nothing.	4.12	1.49
Sportsmanship		***5.10***	***1.21***
S25	Constantly talks about quitting his/her job.	5.81	0.99
S30	Always focuses on what's wrong with his/her own situation, rather than on the positive side.	4.91	1.24

S35	Resists changes from others, including boss.	5.00	1.37
S43	Often speaks ill of the supervisors behind their back.	4.55	1.05
S44	Conducts personal business during office hours.	5.21	1.38
Compliance		***5.85***	***0.69***
S27	Will not take extra breaks.	5.62	0.75
S28	Obeys company rules, regulations, and procedures even when no one is supervising.	5.87	0.75
S38	Gives advances notice if he/she is unable to come to work.	6.06	0.57

Remark: For easy referencing, the description of each item has been simplified from the original statements in the questionnaire.

[1] The constructs were measured using a seven-point Likert scale, from strongly disagree (1) to strongly agree (7).

IV. Employees' Perception toward Implementation of TQM in hotels

Four dimensions of total quality management were measured in the instrument. They are top management commitment, employee involvement, customer focus, and continuous improvement. Management commitment was measured by four statements, customers focus and continuous improvements were assessed by three

items each (see Table 4.8). The items included (1) 'There is a strong commitment to quality at all levels in this hotel'; (2) 'Employees of this hotel show concern about the need of quality'; (3) 'Providing quality service is the company's goal'; and (4) 'The top management is committed to quality improvement through involvement and viability in quality activities and communication of quality values'. The mean ratings of each of these items were: commitment (5.49); show concern (5.94); goal (6.29); involvement (5.84). Company's goal was rated the highest among the four items, and strong commitment to quality the lowest. The overall mean rating of the construct of management commitment was 5.89, with a standard deviation of 0.93. The mean ratings of the items are relatively high with a moderate standard deviation. This implies that the general feeling towards management' commitment to quality is high and varied with relatively small dispersion of opinions among employees. That said, frontline employees agreed that management was committed to quality and its improvement, and providing quality service is the goal of company

Furthermore, as shown in Table 4.8, customer focus and continuous improvements were assessed by three items each. Items used to assess continuous improvement included (1) 'The top management is concerned about the assessment and

improvement of the service delivery processes'; (2) 'This hotel interacts with outside groups (e.g. education, business, trade, and professional groups) for mutual benefits of quality improvement'; and (3) 'This hotel employs procedures (e.g. regular reviews) to ensure reliability, consistency, and rapid access to data and information'. The mean rating of each of these items was: assessment (5.55); interacts (4.99); employs procedures (5.29). Concerning about the improvement of service delivery processes was rated the highest among the three items, and interacting with outside groups the lowest. The overall mean rating of the construct of continuous improvement was 5.28, with a standard deviation of 1.01. The mean ratings of the statements were relatively low compared to the other three dimensions of total quality management, particularly the feelings toward interacting with outside groups for quality improvement. This indicated that from the employees' perception, management interacting with outside groups was not very much. The standard deviations of the items were moderate. This implies that the perception of continuous improvement in the hotel was varied among employees.

Statements measuring customer focus were phrased as (1) 'This hotel evaluates and improves its service regularly'; and (2) 'Guests are encouraged to give feedback on

hotel's performance'; and (3) 'This hotel is committed to customer service through ongoing strengthening of policies, promises, and guarantees'. The mean rating of each of these items was: evaluates (5.66); feedback (5.76); guarantee (5.63). Encouraging customer background was rated the highest among the four items, and strengthening guarantees was the lowest. The overall mean rating of the construct of customer focus was 5.68, with a standard deviation of 0.88. The relatively low standard deviation implies that the general feeling towards customer focus do not vary much among the frontline employees. That said, the employees thought that customers' needs were the focus of the management and the hotel.

Employee involvement was assessed by four items as shown in Table 4.8. These statements were stated as (1) 'Most employee suggestions are listened and valued'; (2) 'The company's goal and information is shared by all employees'; (3) 'Feedback on the performance of service delivery is provided to employees'; and (4) 'Building quality awareness is ongoing among employees'. The mean rating of each of these items was: suggestions (5.69); shared (5.05); feedback (5.21); awareness (5.53). Employees' suggestion was rated the highest among the four, and the share of company's goal the lowest. The overall mean rating of the construct of employee

involvement was 5.37, with a standard deviation of 1.02. The mean ratings and the standard deviations of the items were moderate. This implies that employees' perception of involvement in service improvement was moderate with a low variation in the opinions among the frontline employees.

Table 4.8 Means and standard deviations of the instrument measuring employees' perception of TQM implementation in hotels

Item	Description	Mean[1]	Standard Deviation
Top Management Commitment		***5.89***	***0.93***
T1	There is a strong commitment to quality at all levels.	5.49	0.97
T2	Employees show concern about the need of quality.	5.94	1.12
T3	Providing quality service is the company's goal.	6.29	0.70
T4	Top management is committed to quality improvement through involvement and viability in quality activities.	5.84	0.92
Continuous Improvement		***5.28***	***1.01***
T10	Top management is concerned about the assessment and improvement of the service delivery processes.	5.55	1.04
T11	Interacts with outside groups for mutual benefits of	4.99	1.14

	quality improvement.		
T12	Employs procedures to ensure reliability, consistency, and rapid access to data and information.	5.29	0.83
Customer Focus		***5.68***	***0.88***
T14	Evaluates and improves its service regularly.	5.66	0.81
T15	Customers are encouraged to give feedback on hotel's performance.	5.76	0.89
T16	Committed to customers' service through ongoing strengthening of policies, promises, and guarantees.	5.63	0.92
Employee Involvement		***5.37***	***1.02***
T17	Most employee suggestions are listened.	5.69	0.96
T18	Company's goal/information is shared by all employees.	5.05	1.13
T19	Feedback on the performance of service delivery is provided to employees.	5.21	1.10
T20	Building quality awareness is ongoing among employees.	5.53	0.88

Remark: For easy referencing, the description of each item has been simplified from the original statements in the questionnaire.

[1]The constructs were measured using a seven-point Likert scale, from strongly disagree (1) to strongly agree (7).

In summary, despite variability in each of the dimensions of service quality, in-role behaviours, organizational citizenship behaviours, and total quality management, hotel guests generally have a good feeling towards the quality of services provided by the hotels; front office supervisors/managers were satisfied with the employees' in-role and extra-role behaviours; while employees held a moderate believe towards management's commitment to total quality.

4.3 RELIABILITY AND VALIDITY OF THE INSTRUMENTS

Reliability and validity tests were conducted to assess the effectiveness and reliability of the three research instruments. Reliability is the extent to which the different items in the test measure the same trait (Nunnally, 1970). Validity is the degree to which there is agreement between the operational definition and the theoretical definition. Measured values will represent the theoretically defined characteristics of the instrument when validity is present. Validity and reliability were assessed through a construct validity test and a reliability test, respectively.

4.3.1 Exploratory Factor Analysis

To ensure the development of a reliable, valid and generalisable scale to measure the four constructs of service quality, TQM, organizational citizenship behaviour and employees' in-role behaviour, the estimation of their underlying dimensionality would be necessary. To accomplish this, the data were analyzed using exploratory factor analysis method.

Exploratory factor analysis is a useful scale development technique for reducing a large number of items under study to a more manageable set (Gerbing and Anderson, 1988; Kline, 1999). It is a statistical method for determining how many factors are needed to account for the inter-correlations between a set of variables (Brown, 1983). A factor is a combination of variables that are inter-correlated and thus measure the same characteristic (Brown, 1983).

Data reduction and substantive interpretation are the two major purposes of factor analysis (Churchill and Iacobucci, 2002). The first purpose, data reduction, is to summarize the important information into a set of factors common among the

observed variables. The second purpose, substantive interpretation, is to identify the factors underlying the overall set of items. Therefore, the factors extracted can be used to suggest dimensions (Churchill, 1999).

The two basic approaches of factor analysis are principal component analysis and common factor analysis (principal axis factoring). The first analysis considered the total variance in the data, while the latter estimated the factors solely based on the common variance (Malhotra, 1999).

The principal components analysis method is an optimal approach to condense the data before rotating the factors. The weights are derived so that one maximizes the amount of the squared loadings on each factor extracted in turn. This maximizes the amount of variance accounted for, and as a result, each principal component factor explains more variance than any other factor. In this study, the primary concern was to determine the minimum number of factors that could account for the maximum variance in the data for subsequent analysis, hence, principal components analysis method was opted.

The factors are correlated with many variables, when a factor matrix was rotated, factors can be interpreted easily, and it is especially true when several factors have high loadings with the same variables (Malhotra, 1999). In other words, the goal of rotation is to obtain a clearer, easier-to-interpret factor matrix. Rotation would not affect the communalities or the percentage of total variance explained. It does, however, change the percentage of variance accounted for by each factor. The result can help to clarify the relationship among the factors. The common rotation method used in factor analysis is the Varimax procedure which is an orthogonal method. It minimizes the number of variables with high loadings on a factor, thereby enhancing the interpretability of the factors (Malhotra, 1999).

In the study principal components analysis with varimax rotation procedure was performed. The analytical process started with a matrix of correlations between the variables, which was constructed for each scale. An examination of these matrices indicated that the correlation for each set of variables was significant. This indicated that factor analysis is initially appropriate. Additional statistical testing of the appropriateness of the factor models using Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy were also used (Malhotra,

1999). With the aim to explore the dimensions of the four measurement scales, the results of performing principal component factor analysis are discussed below.

I. Service Quality

Principal component factor analysis with varimax rotation yields a four-factor solution that accounted for 75.7% of the total variance. As shown in Table 4.9, the two items (C1 and C12) had relatively low factor loadings and were therefore deleted. The four items (C15, C16, C11, and C22) had factor loadings slightly lower than the acceptable value of 0.70 and therefore were retained. This resulted in Factor 1, 2, 3 each containing four items related to assurance, reliability, and responsiveness, while Factor 4 contains three items related to empathy.

Table 4.9 Summary of the factor loadings and coefficient alphas of the factor - *Service Quality*

Item	Description	Factor Loading[1]
Assurance (22.45 %variance, α=0.92)		
C1	The customer service staff has the knowledge to answer most of	.541*

	my questions.	
C4	The customer service staff was polite and courteous.	.839
C7	The customer service staff was competent.	.682
C17	The customer service staff was friendly.	.756
C19	The customer service staff smiled a lot.	.707
C22	The customer service staff acted politely toward me.	.641
Reliability (18.1% variance, α=0.86)		
C13	The customer service staff has sense of responsibility.	.757
C14	The customer service staff followed my instructions & requests.	.815
C15	The customer service staff seldom made mistakes.	.669
C16	The customer service staff acts according to what I said.	.655
Responsiveness (18.1% variance, α=0.85)		
C5	The customer service staff responded to my requests and needs quickly.	.768
C8	The customer service staff understood my specific needs.	.784
C11	The customer service staff provided quick service.	.698
C12	The customer service staff showed concern with our needs.	.559*
Empathy (17.1% variance, α=0.89)		
C6	The customer service staff was very attentive.	.784
C9	The customer service staff kept his/her promises.	.787
C18	The customer service staff. engaged in small talk with me.	.767
	Whole scale: 75.7% variance	

KMO:.91, significant at the .01 level

Remark: For easy referencing, the description of each item has been simplified from the original statements in the questionnaire.

*Due to the low factor loading, the item was deleted

[1] A factor loading with a value of larger than .70 was shown to have high validity

II. Employees' In-Role Behaviours

Table 4.10 shows the results of the factor analysis of the employees' in-role behaviours. The principal component factor analysis yielded a three-factor solution that accounted for 83.3% of total variance. A close examination of the items revealed that two items (S3 and S16) had low factor loadings across all factors and were therefore deleted. All the other items yield high factor loadings, ranging from 0.736 to 0.924. This resulted in Factor 1 containing eight items related to compliance with procedures, Factor 2 containing four items related to compliance with customers' request, and Factor 3 containing three items related to employees' knowledge. Since all factors yield very high coefficient alphas ranging from 0.92 to 0.96, it appeared that the instrument could be reduced to three factors.

Table 4.10 Summary of the factor loadings and coefficient alphas of the factor –

In-Role Behaviours

Item	Description	Factor Loading[1]
Compliance with Procedures (41.4% variance, α=0.96)		
S1	Registers guests and assigns rooms properly.	.918
S3	Use suggestive selling techniques to sell rooms and to promote other services of the hotel.	.617*
S8	Handles cash, travelers' checks, credit cards and direct billing requests properly.	.882
S10	Follows up outstanding items from the previous shift.	.868
S13	Answers the telephone promptly and courteously.	.833
S14	Greets all arriving guests in a courteous manner.	.774
S15	Maintains the working area in a clean and organized manner at all times.	.736
S16	Compiles with the room key procedures.	.614*
S17	Informs the telephone operators of all wakeup call details.	.854
S18	Prepares rooming lists in advance for guests' arrival.	.902
Compliance with Customers' Requests (23.2 % variance, α=0.93)		
S2	Accommodates customers' special requests.	.797
S4	Response to customers requests and needs quickly.	.820
S12	Provides courteous and efficient service.	.883

Knowledge (16.7% variance, α=0.92)		
S6	Aware of daily activities ad meetings taking place in the hotel.	.872
S9	Familiarizes and compiles with the hotel policies and regulations.	.827
S11	Familiarizes with the hotel facilities, place of interest, and other cultural and sporting activities in town.	.924
	Whole scale: 81.3% variance	
	KMO:.79, significant at the .01 level	

Remark: For easy referencing, the description of each item has been simplified from the original statements in the questionnaire.

*Due to the low factor loading, the item was deleted

[1] A factor loading with a value of larger than .70 was shown to have high validity

III. Organizational Citizenship Behaviour

Table 4.11 shows the results of the factor analysis of organizational citizenship behaviours. The original results yield a five-factor solution that accounted for 78.33% of the total variance. However, there is a single factor which contained less than two items. Cattel's (1966) scree test was performed and the eigen values started

to level off at Factor 5. As a result, only four factors were retained for further analysis. A close examination of the items revealed that four items (S36, S33, S30, S28) in each of the factor had low factor loadings of 0.672, 0.678, 0.677, and 0.652, respectively. As the factor loadings of these items were only slightly lower than the recommended value of 0.70, they were retained in the final instrument. Finally, Factor 1, 2, and 3 each contains four items related to altruism, civic virtue, and sportsmanship, while Factor 4 contains three organizational compliance items. The variance explained by the four factors was 69.8%. Since all factors yield very high coefficient alphas, ranging from 0.702 to 0.936, it appeared that the instrument could be reduced to four factors.

Table 4.11 Summary of the factor loadings and coefficient alphas of the factor – *Organizational Citizenship Behaviours*

Item	Description	Factor Loading[1]
Altruism (20.6% variance, α=0.82)		

S20	Not required by the job duties, this employee helps others who have been absent.	.883
S21	Willingly gives his/her time to help others who have heavy workload or work-related problems.	.892
S23	Helps to orient new comers even though it is not part of his/her duties.	.722
S36	Cooperates well with those around him/her.	.672
Civic Virtue (17.8% variance, α=0.77)		
S24	Takes steps to prevent problems with other colleagues.	.852
S29	Keeps abreast of changes in the company.	.820
S31	Attends functions that are not a part of his/her duties.	.702
S33	Sometimes pretends to look busy doing nothing.	.678
Sportsmanship (16.1% variance, α=0.81)		
S25	Constantly talks about quitting his/her job.	.705
S30	Always focuses on what's wrong with own situation, rather than on the positive side.	.677
S43	Often speaks ill of the supervisors behind their back.	.936
S44	Conducts personal business during office hours.	.900
Organization Compliance (15.2% variance, α=0.76)		
S27	Will not take extra breaks.	.882
S28	Obeys company rules, regulations, and procedures even when no one is supervising.	.652
S38	Gives advances notice if he/she is unable to come to work.	.803

Whole scale: 69.8% variance

KMO:.67, significant at the .01 level

Remark: For easy referencing, the description of each item has been simplified from the original statements in the questionnaire.

[1] A factor loading with a value of larger than .70 was shown to have high validity

IV. Total Quality Management

The initial analysis identified four factors accounting for 76.5%. Three items (T1, T10, and T14) had a low factor loadings of 0.686, 0.677, and 0.606. Items T1 and T10 were only slightly lower than the acceptable value of 0.70; therefore, they were retained in the instrument. For item T14 in Factor 4, based on the consideration that further reduction of an item may weaken the reliability of this factor which has only three items included, Item T14 was also retained. This resulted in Factor 1 contains four items relates to top management commitment, Factor 2 contains three items related to continuous improvement, Factor 3 contains three items related to customer focus, and Factor 4 contains four items related to employee involvement. Since the majority of the factors yield very high coefficient alphas, ranging from 0.703 to 0.916, it appeared that the instrument could be reduced to four factors.

Table 4.12 Summary of the factor loadings and coefficient alphas of the factor – *Total Quality Management*

Item	Description	Factor Loading[1]

Top Management Commitment (24.4% variance, α=0.82)		
T1	There is a strong commitment to quality at all levels.	.686
T2	Employees show concern about the need of quality.	.742
T3	Providing quality service is the company's goal.	.698
T4	Top management is committed to quality improvement through involvement and viability in quality activities.	.821
Continuous Improvement (20.4 % variance, α=0.81)		
T10	Top management is concerned about the assessment and improvement of the service delivery processes.	.677
T11	Interacts with outside groups for mutual benefits of quality improvement.	.883
T12	Employs procedures to ensure reliability, consistency, and rapid access to data and information.	.776
Customer Focus (17.2% variance, α=0.79)		
T14	Evaluates and improves its service regularly.	.606
T15	Customers are encouraged to give feedback on hotel's performance.	.916
T16	Committed to customers through ongoing strengthening of policies, promises, and guarantees.	.709
Employee Involvement (14.6% variance, α=0.92)		
T17	Most employee suggestions are listened.	.784
T18	Company's goal/information is shared by all employees.	.871
T19	Feedback on the performance of service delivery is provided to	.819

	employees.	
T20	Building quality awareness is ongoing among employees.	.703

Whole scale: 76.5% variance

KMO:.86, significant at the .01 level

Remark: For easy referencing, the description of each item has been simplified from the original statements in the questionnaire.

[1] A factor loading with a value of larger than .70 was shown to have high validity

4.3.2 Reliability

Reliability refers to the stability and consistency of the results derived from the research (Chisnall, 2001). The purpose of measuring reliability is to make sure that errors in measurement are at a minimum and that there is homogeneity among the test items. In order to measure the reliability of the instrument used in the study, reliability tests in measuring coefficient alphas were used to evaluate the internal consistency of the measurements of dimensions in each questionnaire.

Internal consistency can be measured using the coefficient alpha, which is the degree

to which the items in the scale, or domains, measure the same construct. Coefficient alpha is the most popular method of assessing reliability because of the high degree of sensitivity this method offers over its alternatives (Nunnally, 1970). Coefficient alpha measures the correlation between the scale and all other items measuring the same concept. It is 'the preferred measure of internal consistency reliability' (Judd, Smith, & Kidder, 1991: 52). For a multi-dimensional construct, if several items are used for each dimension, internal consistency reliability can be computed (Malhotra, 1999).

Reliability also refers to the consistency of the measure and that a part of the measure is free of random errors (Bollen, 1989). The most commonly used reliability coefficient is Cronbach's alpha. A drawback to the coefficient alpha is that it makes no allowance for correlated errors of similar measures or for the effects of more than one latent variable on any observed variable (Bollen, 1989). An alternative suggested by Bollen (1989) was using the squared multiple correlation (SMC). It shows the proportion of variance in an indicator that is explained by its underlying latent variable, and the amount of the measurement error. A high squared multiple correlation value denotes a high reliability and low measurement error for the

indicators. Considering the advantages of SMC over the Cronbach's alpha coefficient, both coefficient alpha methods and a data analysis of the reliability estimates in this study were conducted using SMC.

I. Coefficient alpha

Coefficient Alpha is quantified as a coefficient *r* that ranges from 0 to 1, which indicates the percentage of the variance that the items share in common. Nunnally (1978) suggested that alphas greater than or equal to 0.50 are generally considered acceptable and are a good indication of construct reliability. While Churchill (1979) recommended that an alpha value of at least 0.70 is considered acceptable as the minimum estimate of reliability for basic research, while for exploratory research, 0.5 and 0.6 is an acceptable range.

The summaries of coefficient alpha values of the different dimensions in the three instruments are presented in Tables 4.9, 4.10, 4.11, 4.12. The coefficient alpha estimates were analyzed using the SPSS software. The coefficient alpha values of the three questionnaires were ranging from 0.75 to 0.95. The reliability coefficients of

the constructs were high, which indicated that the items performed reasonably well in capturing the constructs. The coefficient alphas in the study were consistently above the minimum acceptable levels identified by Churchill (1979) and Nunnally (1978). Most of the variables in each instrument were found to correlate with other items, indicating homogeneity in the scale. This suggested that internal consistency of the items to the total scale score of the scores of the constructs was achieved and all of the three questionnaires were reliable measurement tools.

The results outlined in Tables 4.9, 4.10, 4.11 and 4.12 also indicate that the KMO values of service quality, in-role behaviours, organizational citizenship behaviours, and total quality management were 0.91, 0.79, 0.67, and 0.86, respectively. Bartlett's test of sphericity significant at the 0.01 level, the results of the varimax factor analysis were shown to be within the acceptable limits. Therefore, the final components of service quality contained four factors, including assurance, reliability, responsiveness, and empathy. The construct of in-role behaviours contained three factors; they are compliance with procedures, compliance with customers' requests, and knowledge. Meanwhile, organizational citizenship behaviours contained four dimensions, including altruism, civic virtue, sportsmanship, and organization

compliance. The construct of total quality management included four factors; they are management commitment, employee involvement, customer focus, and continuous improvement.

II. Squared Multiple Correlation (SMC)

The Squared Multiple Correlation (SMC) was reflected by the squared factor loading. Evidence of validity is established when the squared factor loadings are larger than 0.50 (Steenkamp and Van Trijp, 1991). The closer the squared factor loading approaches 1.00, the higher the validity of the measure (Jöreskog and Sörbom, 1989).

The squared multiple correlations of four measuring constructs, including service quality, in-role behaviours, organizational citizenship behaviours, and total quality management, are summarized in Tables 4.13, 4.14, 4.15 and 4.16, respectively.

In Table 4.13, most of the items used to measure service quality had SMCs larger than 0.50, ranging from 0.50 to 0.70. Two items (i.e. C1 & C12) measuring the dimension of assurance and responsiveness obtained a low values of SMC were deleted. Several items (i.e., C7, C22, C16, C15, and C11) obtained slightly lower

values of SMC, ranging from 0.43 - 0.46 which are lower than the recommended value (Steenkamp and van Trijp, 1991). These items were not deleted under the consideration that they were only slightly lower than the acceptable value of 0.50; also the composite reliability and the variance extracted after including these items satisfied the recommended value.

Table 4.13 Reliability measures of service quality

Item	Description	SMC[1]	Composite Reliability	Variance Extracted
	Assurance		*0.85*	*0.53*
C1	The customer service staff has the knowledge to answer most of my questions.	0.29*		
C4	The customer service staff was polite and courteous.	0.70		
C7	The customer service staff was competent.	0.46		
C17	The customer service staff was friendly	0.57		
C19	The customer service staff was smiled a lot	0.50		
C22	The customer service staff acted politely toward me	0.43		
	Reliability		*0.82*	*0.53*

C13	The customer service staff has sense of responsibility	0.57		
C14	The customer service staff followed my instructions & requests	0.66		
C15	The customer service staff seldom made mistakes	0.45		
C16	The customer service staff acts according to what I said	0.44		
	Responsiveness		*0.79*	*0.56*
C5	The customer service staff responded to my requests and needs quickly	0.59		
C8	The customer service staff understood my specific needs	0.61		
C11	The customer service staff provided quick service	0.48		
C12	The customer service staff showed concern with our needs	0.29*		
	Empathy		*0.82*	*0.61*
C6	The customer service staff was very attentive	0.62		
C9	The customer service staff kept his/her promises	0.61		
C18	The customer service staff engaged in small talk with me	0.59		

SMC[1]=Squared Multiple Correlations

Remark: For easy referencing, the description of each item has been simplified from the

original statements in the questionnaire.

*Items have been dropped due to the low SMC value.

For the construct of in-role behaviours as shown in Table 4.14 , results indicated that all of the values of SMC were higher than 0.5, ranging from 0.54 to 0.81, except two items (i.e. S3, S17) measuring employees' compliance with procedures, these two items were deleted in the final instrument. The reliability measures of in-role behaviours indicated that the measurement error in the items was low, and the reliability was high.

Table 4.14 Reliability measures of In-Role Behaviour

Item	Description	SMC[1]	Composite Reliability	Variance Extracted
	Compliance with procedures		*0.97*	*0.78*
S1	Registers guests and assigns rooms properly.	0.70		
S3	Use suggestive selling techniques to sell rooms and to promote other services of the hotel.	0.38*		
S8	Handles cash, travelers' checks, credit cards and direct billing requests properly.	0.81		
S10	Follows up outstanding items from the previous shift.	0.76		
S13	Answers the telephone promptly and courteously.	0.69		
S14	Greets all arriving guests in a courteous manner.	0.59		
S15	Maintains the working area in a clean and organized manner at all times.	0.54		
S16	Compiles with the room key procedures.	0.48*		
S17	Informs the telephone operators of all wakeup call details.	0.78		
S18	Prepares rooming lists in advance for guests' arrival.	0.81		
	Compliance with customers' requests		*0.84*	*0.64*
S2	Accommodates customers' special requests.	0.61		
S4	Response to customers requests and needs quickly.	0.64		
S12	Provide courteous and efficient service.	0.67		
	Knowledge		*0.91*	*0.77*

S6	Aware of daily activities and meetings taking place in the hotel.	0.68
S9	Familiarize and compiles with the hotel policies and regulations.	0.76
S11	Familiarized with the hotel facilities, place of interest, and other cultural and sporting activities in town.	0.85

SMC[1]=Squared Multiple Correlations

Remark: For easy referencing, the description of each item has been simplified from the original statements in the questionnaire.

*Items have been dropped due to the low SMC value.

In Table 4.15, it is reported that five items (S36, S31, S33, S30, S28) obtained SMC values of 0.45, 0.49, 0.46, 0.46, and 0.48 which were lower than the acceptable value of 0.50. These five indicators had low factor loadings as reported in Table 4.11; therefore, they had low values of SMC. Except for these five items, all indicators of constructs in the instrument had SMC values larger than 0.50, ranging from 0.50 to 0.86. Such findings showed that most of the indicators were capable of reflecting the underlying meaning of the constructs and that the indicators of the construct were reliable.

Table 4.15 Reliability measures of Organizational Citizenship Behaviour

Item	Description	SMC[1]	Composite Reliability	Variance Extracted
	Altruism		*0.87*	*0.63*
S20	Not required by the job duties, this employee helps others who have been absent	0.77		
S21	Willingly gives his/her time to help others who have heavy workload or work-related problems.	0.79		
S23	Helps to orient new comers even though it is not part of his/her duties	0.52		
S36	Cooperates well with those around him/her	0.45		
	Civic Virtue		*0.85*	*0.58*
S24	Takes steps to prevent problems with other colleagues	0.72		
S29	Keeps abreast of changes in the company	0.67		
S31	Attends functions that are not a part of his/her duties	0.49		
S33	Sometimes pretends to look busy doing nothing	0.46		
	Sportsmanship		*0.88*	*0.65*

S25	Constantly talks about quitting his/her job	0.50
S30	Always focuses on what's wrong with own situation, rather than on the positive side	0.46
S43	Often speaks ill of the supervisors behind their back	0.86
S44	Conducts personal business during office hours	0.81
	Organization Compliance	*0.82* *0.61*
S27	Does not take extra breaks	0.77
S28	Obeys company rules, regulations, and procedures even when no one is supervising	0.48
S38	Gives advances notice if he is unable to come to work	0.64

SMC[1]=Squared Multiple Correlations

Remark: For easy referencing, the description of each item has been simplified from the original statements in the questionnaire.

Meanwhile, as shown in Table 4.16, three items (T1, T10, and T14) in the construct of total quality management also obtained SMCs values of 0.46, 0.46, and 0.48. Based on the explanation given above, these items were retained in the final instrument. Other than these three items, all indicators of constructs in the instrument had SMC values larger than 0.50, ranging from 0.50 to 0.83. Such findings showed that most of the indicators were capable of reflecting the underlying meaning of the

construct of total quality management and that the indicators of the construct were reliable. As a whole, the value of the squared multiple correlations of the four constructs supported the validity of the three measurements in this study.

Table 4.16 Reliability measures of Total Quality Management

Item	Description	SMC[1]	Composite Reliability	Variance Extracted
	Management Commitment		*0.83*	*0.54*
T1	There is a strong commitment to quality at all levels.	0.46		
T2	Employees show concern about the need of quality.	0.55		
T3	Providing quality service is the company's goal.	0.50		
T4	Top management is committed to quality improvement.	0.67		
	Continuous Improvement		*0.83*	*0.62*
T10	Top management is concerned about the assessment and improvement of the service delivery processes.	0.46		
T11	Interacts with outside groups for mutual benefits of quality improvement.	0.77		
T12	Employs procedures to ensure reliability, consistency, and rapid access to data and information.	0.61		
	Customer Focus		*0.79*	*0.57*

T14	Evaluates and improves its service regularly.	0.45
T15	Customers are encouraged to give feedback on hotel's performance.	0.83
T16	Committed to customers through ongoing strengthening of policies, promises, and guarantees.	0.50
	Employee Involvement	*0.87* *0.64*
T17	Most employee suggestions are listened.	0.62
T18	Company's goal/information is shared by all employees.	0.76
T19	Feedback on the performance of service delivery is provided to employees.	0.67
T20	Building quality awareness is ongoing among employees.	0.51

SMC[1]=Squared Multiple Correlations

Remark: For easy referencing, the description of each item has been simplified from the original statements in the questionnaire.

III. Composite Reliability

In addition to assessing the reliability of the individual indicators, it is useful to calculate a composite reliability value for each latent variable (i.e. service quality, in-role behaviours, organizational citizenship behaviours, and total quality management). Composite reliability reflects the ability of observed variables to tap a similar underlying construct. The composite reliability value can be assessed from 0 to 1. A composite reliability value greater than 0.60 is regarded as desirable, while a value of 0.70 or higher suggests evidence of strong composite reliability (Bagozzi and Yi, 1988). Composite reliability in this study was calculated using an equation suggested by Hair et al. (1995). The formula measuring composite reliability is depicted below:

$$\rho_c = (\Sigma\lambda)^2 / [(\Sigma\lambda)^2 + \Sigma(\theta)]$$

ρ_c = composite reliability

λ = indicator loading

Σ = indicator error variance

θ = summation of the indicators of the latent variables

Tables 4.13, 4.14, 4.15, and 4.16 report the composite reliability values for the four constructs – service quality, in-role behaviours, organizational citizenship behaviours, and total quality management, respectively. All of the composite values were higher than 0.7, ranging from 0.79 to 0.97, and majority of them were higher than 0.80. Such results reflected that all factors yielded high construct reliability. The high composite reliability values supported strong construct reliability among the four constructs.

IV. The Value of Variance Extracted

Another complementary measure to composite reliability is the average variance extracted. This variance shows the amount of the average variance that is captured by the construct in relation to the amount of the variance due to measurement errors (Fornell and Larcker, 1981). A value for the average variance extracted of less than .50 indicates that the measurement error accounts for a greater amount of variance in the indicators than does the underlying latent variable. If the value is

greater than .50, it is concluded that a substantially higher amount of variance in the indicators is captured by the construct compared to that accounted for by measurement errors (Diamantopoulos and Siguaw, 2000).

The amount of variance extracted in each construct is also summarized in Tables 4.10, 4.11, and 4.12. The data analysis of the variance extracts by each of the constructs indicated that all of the four constructs (i.e. service quality, in-role behaviours, organizational citizenship behaviours, and total quality management) reported high values of variance extracted, ranging from 0.53 to 0.78. Fornell and Larcher (1981) suggested that the amount of variance account for by each construct should be greater than the variance accounted for by measurement errors. Other than one of the constructs, variances extracted by all constructs were larger than 0.50. Such results reflected strong reliability in each of the constructs across the three models.

As a whole, the test of coefficients alpha, squared multiple correlations, composite reliability and the amount of variance extracted provided strong support for the validity and reliability of the four measurements. Based on the rule of interpretation, the values of SMC should be larger than 0.5 for a reliable instrument. Despite the

fact that the SMC values of several items in the constructs of service quality, organizational citizenship behaviours, and total quality management were below the acceptable values of 0.50. However, the composite reliability and amount of variance extracted of by these constructs were larger than the acceptable values of 0.70 and 0.50, respectively. With relatively high value of composite reliability and the goodness of fit in various model fit indices in the switching model, the measurements in the model deemed to be reliable and valid, given the consideration that the deletion of any one of the indicators did not lead to improvements in the validity of the instrument. On the contrary, with fewer indicators, the construct was deemed to be unreliable, and the model fit indices became poor. Subject to the above consideration, these items were retained in the measurement.

Overall, the high values of factor loadings, squared multiple correlations and composite reliability, and the variance extracted by each construct demonstrated that the instrument in this study had high validity and reliability across the four measurements.

4.3.3 Validity

Validity indicates the degree to which an instrument measures the construct under investigation (Rossi, Wright and Anderson, 1983). It refers to the extent to which differences in scores on a measuring instrument reflect true differences among individuals in the characteristics of interest (Churchill and Iacobucci, 2002). The main methods for assessing the validity of measurement are content validity and construct validity.

I. Content Validity

Content validity which is also referred to as face validity, is a subjective agreement among professionals that a scale logically appears to reflect accurately what it purports to measure (Zikmund, 1997). The aim is to assess the appropriateness of the research measure used (Chisnall, 2001). It focuses on the adequacy with which the domain of the characteristic is captured by the measure (Churchill and Lacobucci, 2002) by testing the representing the representativeness of the measurable components of a construct to that construct (Hair, Bush and Ortinau, 2000). The instruments used in the present study received professional agreement that the

measures provided adequate coverage of the concept and had clear and understandable questions. Additionally, the instruments for this study were developed and designed considering the literature review in Chapter 2; therefore, they were considered theoretically valid.

II. Construct Validity

Construct Validity refers to the understanding of the factors that underlie the obtained measurement. It involves understanding the theoretical rationale underlying the obtained measurement (Kinnear and Taylor, 1987). It can be viewed as the extent to which the variables under investigation are completely and accurately identified (Hair et al., 2000). It concerns the degree to which the construct or concept is being measured by the instrument. It is the most complex form of validity (Tull and Hawkins, 1987), and requires the research to be grounded in a sound theory of the nature of the concept being measured, and how it relates to other concepts (Malhotra, 1999). Additional evidence of construct validity can be obtained through the assessment of convergent validity (Hair et al., 2000).

III. Convergent validity

Convergent validity is the extent to which the scale correlates positively with other measures of the same construct (Malhotra, 1999). The tests for convergent validity examine the uni-dimensionality and internal consistency of responses to the items designed to measure the same construct. That is, indicators specified to measure a common underlying factor should have relatively high loadings on that factor (Anderson and Gerbing, 1988; Kline, 1998) High factor loadings imply strong correlations on the posited underlying construct, and that the measurement scales are measuring what they are intended to measure (Kline, 1998). The convergent validity was assessed by the item-total correlations and the estimated factor loading of the indicators. Item-total correlations were analyzed using the SPSS software.

IV. Item-Total Correlation

Nunnally (1978) recommended that those items with correlations below 0.3 be deleted from the subscales (Nunnally, 1978). As shown in Tables 4.17, 4.18, 4.19, and 4.20, all the items in the three questionnaires have inter-item correlation values

of between 0.55 and 0.89. Except one item with inter-item correlation values at 0.409, most of the items obtained values of above 0.5. This reflected the fact that the inter-item correlation values of the indicators in each scale were at a high level. The high correlation indicates that convergent validity exists.

Table 4.17 Coefficient alpha and item-total correlation of the instrument measuring customers' perception of Service Quality.

Item No.[1]	Item Description	Item-Total Correlation	Alpha if Item Deleted
Assurance	***Coefficient Alpha: .922***		
C1	The customer service staff has the knowledge to answer most of my questions.	.700	.918
C4	The customer service staff was polite and courteous.	.770	.909
C7	The customer service staff was competent.	.815	.904
C17	The customer service staff was friendly.	.854	.900
C19	The customer service staff smiled a lot.	.830	.901
C22	The customer service staff acted politely toward me.	.727	.915
Reliability	***Coefficient Alpha: .857***		
C13	The customer service staff has the sense of responsibility.	.761 .742	.792 .802

C14	The customer service staff followed my instructions and requests.	.691	.834
C15	The customer service staff seldom made mistakes.	.650	.841
C16	The customer service staff acts according to what I said.		
Responsiveness	***Coefficient Alpha: .848***		
C5	The customer service staff responded to my requests and needs quickly.	.757	.785
C8	The customer service staff understood my specific needs.	.725 .696	.794 .808
C11	The customer service staff provided quick service.	.617	.841
C12	The customer service staff showed concern with our needs.		
Empathy	***Coefficient Alpha: .892***		
C6	The customer service staff was very attentive.	.774	.860
C9	The customer service staff kept his/her promises.	.808	.837
C18	The customer service staff engaged in small talk with me.	.815	.839

Remark: For easy referencing, the description of each item has been simplified from the original statements in the questionnaire.

Table 4.18 Coefficient alpha and item-total correlation of the instrument measuring the in-role behaviour of employees

Item No.	Item Description	Item-Total Correlation	Alpha if Item Deleted
Compliance with Procedures	***Coefficient Alpha: .936***		
S1	Registers guests and assigns rooms properly	.898	.947
S3	Use suggestive selling techniques to sell rooms and to promote other services of the hotel	.636	.957
S8	Handles cash, travelers' checks, credit cards and direct billing requests properly	.889	.947
S10	Follows up outstanding items from the previous shift	.835	.951
S13	Answers the telephone promptly and courteously	.875	.949
S14	Greets all arriving guests in a courteous manner	.847	.950
S15	Maintains the working area in a clean and organized manner at all times	.860	.894
S16	Compiles with the room key procedures	.762	.953
S17	Informs the telephone operators of all wakeup call details	.887	.948
S18	Prepares rooming lists in advance for guests' arrival	.791	.952
Compliance with Customers' Requests	***Coefficient Alpha: .906***		
S2	Accommodates customers' special requests	.765	.925
S4	Response to customers requests and needs quickly	.815	.907
S12	Provides courteous and efficient service and compiles with every guest request	.885	.884

Knowledge	***Coefficient Alpha: .917***		
S6	Aware of daily activities ad meetings taking place in the hotel	.881	.849
S9	Familiarize and compiles with the hotel policies and regulations	.862	.861
S11	Familiarize with the hotel facilities, place of interest, and other cultural and sporting activities in town	.781	.922

Remark: For easy referencing, the description of each item has been simplified from the original statements in the questionnaire.

Table 4.19 Coefficient alpha and item-total correlation of the instrument measuring employees' Organization Citizenship Behaviours

Item No.[1]	Item Description	Item-Total Correlation	Alpha if Item Deleted
Altruism	***Coefficient Alpha: .816***		
S20	Not required by their job duties, this employee helps others who have been absent.	.651	.763
S21	Willingly gives his/her time to help others who have heavy workload or work-related problems.	.846	.680
S23	Helps to orient new comers even though it is not part of his/her duties.	.556	.810
S36	Cooperates well with those around him/her.	.550	.815
Civic Virtue	***Coefficient Alpha: .767***		
S24	Takes steps to prevent problems with other colleagues.	.697	.664
S29	Keeps abreast of changes in the company.	.572	.711
S31	Attends functions that are not a part of his/her duties.	.589	.745
S33	Sometimes pretends to look busy doing nothing.	.577	.730
Sportsmanship	***Coefficient Alpha: .801***		
S25	Constantly talks about quitting his/her job.	.541	.778
S30	Always focuses on what's wrong with own situation, rather than on the positive side.	.508	.780
S35	Resists changes from others, including boss.	.409	.812

S43	Often speaks ill of the supervisors or colleagues behind their back.	.800	.703
S44	Conducts personal business during office hours.	.745	.702
Compliance	***Coefficient Alpha: .753***		
S27	Will not take extra breaks.	.705	.512
S28	Obeys company rules, regulations, and procedures even when no one is supervising.	.562	.700
S38	Gives advances notice if he/she is unable to come to work.	.551	.749

Remark: For easy referencing, the description of each item has been simplified from the original statements in the questionnaire.

Table 4.20 Coefficient alpha and item-total correlation of the instrument measuring employees' perception of TQM implementation in hotels

Item No.[1]	Item Description	Item-Total Correlation	Alpha if Item Deleted
Top Management Commitment	***Coefficient Alpha: .823***		
T1	There is a strong commitment to quality at all levels.	.695	.755
T2	Employees show concern about the need of quality.	.706	.756
T3	Providing quality service is the company's goal.	.637	.796
T4	Top management is committed to quality improvement. through involvement and viability in quality activities.	.610	.795
Continuous Improvement	***Coefficient Alpha: .807***		
T10	Top management is concerned about the assessment and improvement of the service delivery processes.	.654	.738
T11	Interacts with outside groups for mutual benefits of quality improvement.	.657	.748
T12	Employs procedures to ensure reliability, consistency, and rapid access to data and information.	.694	.725
Customer Focus	***Coefficient Alpha: .789***		
T14	Evaluates and improves its service regularly.	.598	.759
T15	Customers are encouraged to give feedback on hotel's performance.	.662	.678

T16	Committed to customers through ongoing strengthening of policies, promises, and guarantees.	.643	.700
Employee Involvement	***Coefficient Alpha: .922***		
T17	Most employee suggestions are listened.	.803	.906
T18	Company's goal and information is shared by all employees.	.833	.895
T19	Feedback on the performance of service delivery is provided to employees.	.794	.908
T20	Building quality awareness is ongoing among employees.	.855	.888

Remark: For easy referencing, the description of each item has been simplified from the original statements in the questionnaire.

V. Parameter estimation

Evidence of convergent validity is established if all factor loadings are statistically significant (Anderson and Gerbing, 1989), and the regression estimates are larger than 0.50 (Steenkamp and VanTrijp, 1991). To demonstrate convergent validity, the parameter estimates should be high in value and the corresponding t-values should be statistically significant (Anderson and Gerbing, 1988). The t-value (denoted as critical ratio – C.R. in AMOS), which represents the parameter estimates divided by

its standard error, and regression estimates, which examines the extent to which the measurement model adequately represents the observed indicators, are also used to estimate the reliability of the indicators (Bollen, 1989; Mueller, 1996). According to Byrne (2001), the t-value should be greater than ±1.96 at the 0.05 significant levels to be an important indicator of the associated construct. The regression estimates, ranging from 0.00 to 1.00, should be high (Bryne, 2001; Kline, 1998).

Table 4.21 represents the results of the regression weights and the statistical tests. The parameter estimates of the four constructs showed acceptable convergent validity, with each measure being significantly related to its underlying factor (estimated standardized regression weights ranged from 0.51 to 0.89), and the t-values (greater than ±1.96) were statistically significant.

Table 4.21 Parameter estimates and test statistics for the constructs

Parameters	Regression Weights	C.R.[1]
Service Quality		
βSQ1	1.00	
βSQ2	.83	12.95

βSQ3	.83	12.62
βSQ4	.89	14.16
In-Role Behaviours		
βIR1	1.00	
βIR2	.82	7.28
βIR3	.88	7.21
Organization Citizenship Behaviours		
βOC1	1.00	
βOC2	.59	3..07
βOC3	.54	2.86
βOC4	.51	2.68
Total Quality Management		
βTQ1	1.00	
βTQ2	.75	11.41
βTQ3	.73	10.93
βTQ4	.84	13.81

C.R.[1] = Critical Ratio (denotes as t-values which should be greater than ±1.96)

βSQ1 = Assurance

βSQ2 = Responsiveness

βSQ3 = Reliability

βSQ4 = Empathy

βIR1 = Knowledge

βIR2 = Compliance with customers' requests

βIR3 = Compliance with procedures

βOC1 = Civic Virtue

βOC2 = Organization compliance

βOC3 = Sportsmanship

βOC4 = Altruism

βTQ1 = Customer focus

βTQ2 = Continuous improvement

βTQ3 = Management commitment

βTQ4 = Employee involvement

In conclusion, the three questionnaires showed validity and the reliability of the three questionnaires, for measuring values used in further investigation.

VI. Control Common Method Variance

Some critics argue that when both predictor and criterion variable were obtained from the same source, there is the possibility that common method variance may bias the estimated relationship. For example, in Motowidlo and Van Scotter's (1994) study of 421 Air Force mechanics, the in-role measure was obtained from one supervisor, the contextual performance measure was obtained from a second supervisor, and the overall performance evaluation was obtained from a third supervisor.

Podsakoff et al. (2000) reported that in the four studies for which common method was not controlled the overall proportion of variance explained by in-role and contextual performance averaged 53.5%, while in the four studies in which this bias was controlled, the overall proportion of variance averaged 30.5%. Podsakoff et al. (2000) noted that future research needs to take steps to control the contaminating effects of common method variance. He suggested two possible ways to control this type of bias. One is a statistical form of control, which involves adding a first-order method construct to the hypothesized latent variable structural equation model (MacKenzie et al., 1991, 1993). Another way is by designing the study so that the measures of the predictor and criterion variables are obtained from different sources (Borman et al., 1995; Van Scotter and Motowidlo, 1996). Glick, Jenkins, and Gupta (1986) said that instead of assuming observer data as the best, it is more appropriate to use different sources to answer specific questions. This study adopted Podsakoff et al.'s (2000) suggestion by obtaining data from different sources (i.e. employees, supervisors or managers, and hotel guests) in order to control different common method variance.

4.4 THE MEASUREMENT MODEL

Before a detailed evaluation of the structural part of the model, an evaluation of the measurement part should proceed first (Anderson and Gerbing, 1988). The measurement model included all of the items used to measure both the independent constructs and those measuring the dependent constructs. The purpose of evaluating the measurement model is to investigate the relationships between the latent variables and their indicators (observed variables), and to determine the validity and reliability of the measures used to represent the constructs of interest (Jöreskog and Sörbom, 1989). The reliability and validity of the instrument were assessed through confirmatory factor analyses (CFA).

4.4.1 Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) is a theory-testing model, as opposed to theory-generating method like exploratory factor analysis. In CFA, the model specifies which variables will be correlated with which factors, and which factors are

correlated. It offers a more viable method for evaluating construct validity (Bagozzi, Yi & Philips, 1991), because it provides explicit hypothesis testing for factor analysis problems (Gorsuch, 1983). The CFA model provides the following advantages:

- it allows methods to affect measures of traits to different degrees and to correlate freely among themselves; and

- measures of the overall degrees of fit are provided in any particular application.

For model evaluation, there are basically two types of fit indices that can be used to evaluate the model fit: absolute fit indices and incremental fit indices (Bollen, 1989; Gerbing and Anderson, 1993; Hu and Bentler, 1995). Absolute fit indices determine if the proposed model is consistent with the data without the use of a reference mode. They are simply derived from the fit of the obtained and implied covariance matrices and the ML minimization function. In contrast, incremental fit indices judge the proportional improvement in fit by comparing the hypothesized model with a nested baseline model (Holbert and Stephenson, 2002). The most common absolute fit

indices are the $\chi 2$ goodness-of-fit, the $\chi 2$ /df ratio, the goodness-of-fit index (GFI), the comparative fit index (CFI), the root-mean-square-residual index (RMR), and the root mean square error of approximation (RMSEA).

To examine the construct validity of the four measurement scales, each measurement model of the construct was examined through a process of CFA with maximum likelihood estimation using AMOS 5.0. A CFA is used to test the measurement model specifying the posited relations of the observed variables to the underlying constructs. This CFA approach examines whether or not the collected data are consistent with a highly constrained hypothesized model (Byrne, 2001). Thus CFA allows identification and clustering of the observed variables in a pre-specified, theory-driven hypothesized model to evaluate the extent to which a particular collected data set confirms the underlying theoretical constructs (Mueller, 1996).

The factor structures and uni-dimensionality of the measurement model, including service quality, in-role behaviours, organizational citizenship behaviours, and total quality management were examined by a confirmatory factor analysis. Specifically, a measurement model was estimated in which every item was restricted to load on its a

priori specified factor, and the factors themselves were allowed to correlate (Anderson and Gerbing, 1988). The validity of the instrument was examined by estimations of the standardized validity coefficients. The standardized validity coefficients allow the relative influence of both latent variables on observed variables and the error variances of the various observed variables to be compared. Standardized validity coefficients were indicated by the standardized regression weights of the indicators. Evidence of validity is established if all standardized regression weights are statistically significant (Anderson & Gerbing, 1988).

The standardized regression weights of the four measurements are summarized in Tables 4.22. The results in Table 4.22 show that the exogenous variables in the measurement model for service quality fitted the data very well (χ^2=4.057, df=2, p>.05, RMR =.003, RMSEA=.085, CFI=.994, GFI=.986). According to the rules put forward by Diamantopoulos and Siguaw (2000), a model that is considered to fit well to the data should have a small RMR value that is lower than .05; the value of CFI and GFI should be larger than .09; and the value of RMSEA should be lower than .10. Besides the smaller chi-square value, the ratio of the chi-square value to the degree of freedom should be within the threshold of 3:1 (Jöreskog and Sörbom, 1989; Marsh,

1988). The various model fit indices in this study indicated that the data fit the measurement model well. All the values of standardized regression weights were significant at 0.05 and high, ranging from .83 to .89. Therefore, the initial model of exogenous variables was accepted and no modifications were made.

Table 4.22 Summary of the factor loadings of service quality

Item	Description				Factor Loading[1]
Service Quality					
ASS<—SQ	Assurance				.871
RESP<—SQ	Responsibility				.832
REL<—SQ	Reliability				.832
EMP<—SQ	Empathy				.886
	CMIN 4.057	***DF 2***	***P .132***	***CMIN/DF 2.028***	
	GFI .986	***CFI .994***	***RMR .003***	***RMSEA .085***	
In-role Behaviour					
PRO<—IN	Compliance with Procedures				.686
CUS<—IN	Compliance with Customers' Requests				.394
KNO<—IN	Knowledge				.252
	CMIN 1.389	***DF 1***	***P .533***	***CMIN/DF 1.389***	
	GFI .998	***CFI .999***	***RMR .011***	***RMSEA .030***	
TQM					
CF<—TQM	Customer Focus				.948
IP<—TQM	Continuous Improvement				.749
CPL<—TQM	Top Management Commitment				.730
EL<—TQM	Employee Involvement				.835
	CMIN 3.409	***DF 2***	***P .182***	***CMIN/DF 1.705***	

	GFI .988	***CFI .996***	***RMR .004***	***RMSEA .070***	
OCB					
CV<—OCB	Civic Virtue				.642
COM<—OCB	Organization Compliance				.887
SPM<—OCB	Sportsmanship				.868
ALT<—OCB	Altruism				.959
	CMIN 4.298	***DF 2***	***P .038***	***CMIN/DF 2.298***	
	GFI .986	***CFI .993***	***RMR .005***	***RMSEA .081***	

Remark: The p-values of all items are significant at 0.05 level

For the measurement model for in-role behaviours, the data were fitted with the model very well (χ^2=1.389, df=1, p>.05, RMR =.011, RMSEA=.030, CFI=.999, GFI=.998). According to the rules put forward by Diamantopoulos and Siguaw (2000), all the values of RMR, CFI, GFI, RMSEA achieved the acceptable levels. Besides the smaller chi-square value, the ratio of the chi-square value to the degree of freedom was also within the threshold of 3:1 (Jöreskog and Sörbom, 1989; Marsh, 1988). The various model fit indices in this study indicated that the data fit the measurement model well. All the values of standardized regression weights were significant at 0.05 level, ranging from .25 to .69.

For the measurement model for organizational citizenship behaviours also fitted the data very well (χ^2=4.298, df=1, p>.05, RMR =.005, RMSEA=.081, CFI=.993,

GFI=.986). Based on the rules put forward by Diamantopoulos and Siguaw (2000), all the values of RMR, CFI, GFI, RMSEA achieved the acceptable levels. Besides the smaller chi-square value, the ratio of the chi-square value to the degree of freedom was also within the threshold of 3:1 (Jöreskog & Sörbom, 1989; Marsh, 1988). The various model fit indices in this study indicated that the data fit the measurement model well. All the values of standardized regression weights were significant at 0.05 level and high, ranging from .64 to .96. The measurement model of exogenous variables was deemed to be acceptable and no modifications were made.

As shown in Table 4.22, the measurement model for total quality management also fitted the data very well (χ^2=3.409, df=2, p>.10, RMR =.004, RMSEA=.070, CFI=.996, GFI=.988). According to the rules put forward by Diamantopoulos and Siguaw (2000), all the values of RMR, CFI, GFI, RMSEA achieved the acceptable levels. Besides the smaller chi-square value, the ratio of the chi-square value to the degree of freedom was also within the threshold of 3:1 (Jöreskog and Sörbom, 1989; Marsh, 1988). The various model fit indices in this study indicated that the data fit the measurement model well. Most of the standardized regression weights were

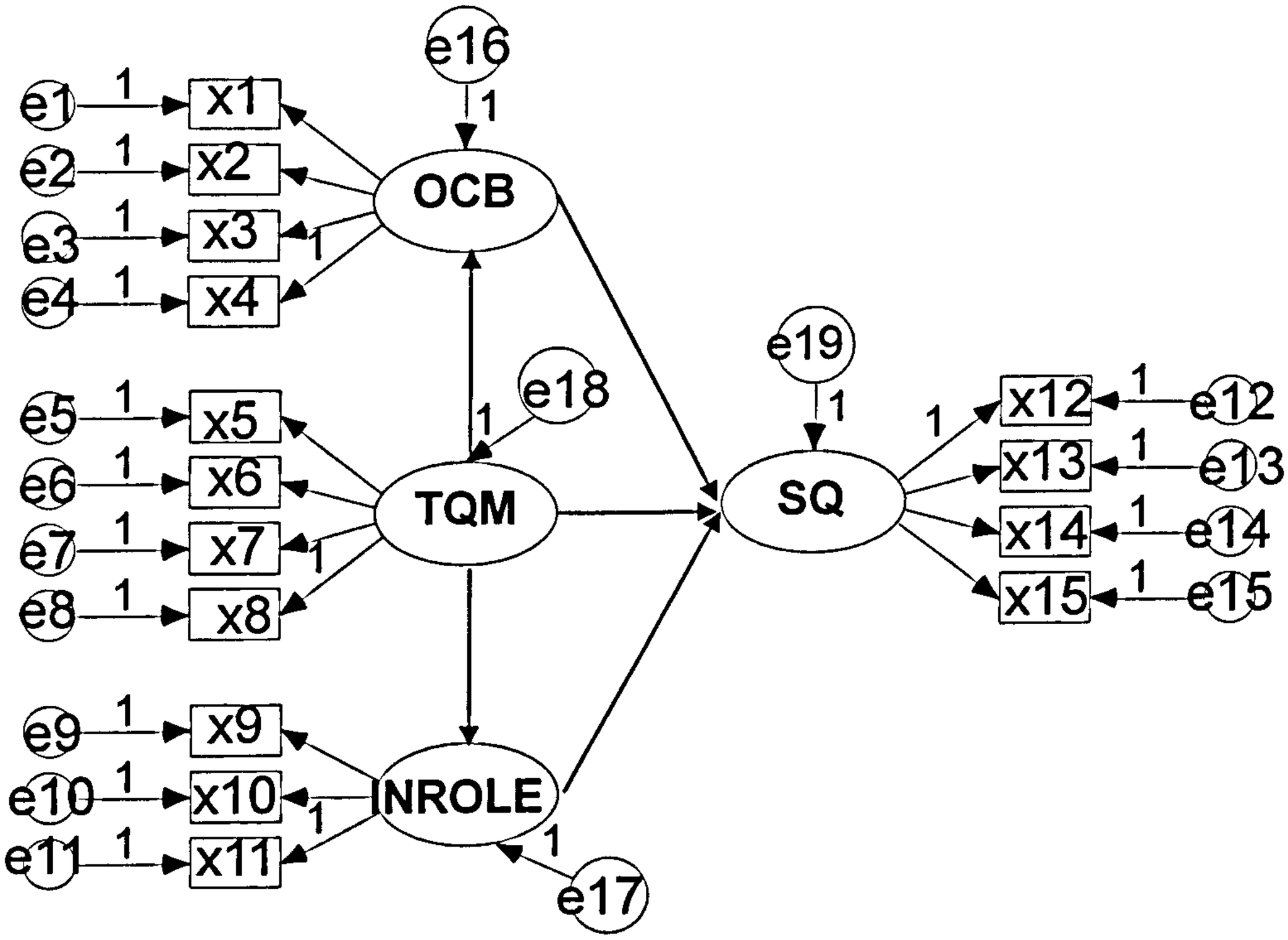
significant at 0.05 and high, ranging from 0.73 to 0.95. The measurement model of TQM was deemed to be acceptable and no modifications were made.

As a whole, the various model fit indices of the four measurement models (i.e. service quality, in-role behaviours, organizational citizenship behaviours, and total quality management) and the high values of factor loadings across the four scales substantially supported that the four measurement scales fit the data very well and it also provided strong evidence of the reliability of the instrument in this study. This allowed further restrictive analyses to be performed.

4.4.2 The structural model

In this last part of the analysis, the structural relationships among the variables as proposed in Chapter 2 were assessed simultaneously via variance-covariance analysis. The initial model in Figure 2.1 proposed the relationship between employees' organizational citizenship behaviours, in-role behaviours and total quality management on customers' perceived service quality. In addition, the relationship between total quality management on employees' organizational citizenship behaviour and in-role behaviours were also proposed. Maximum Likelihood (ML) estimation was used to estimate the parameters in the structural model proposed in Figure 2.1. The ML estimation method has been described as being well suited to the testing and development of theories (Kim and Cha, 2002). An estimation of parameters using the structural modeling method is performed, and overall goodness-of-fit index is examined. Structural equation modeling (SEM) using AMOS 5.0 was performed on the structural model (Figure 4.1) The structural model was developed to examine the hypothesized relationships of the proposed model in this study.

Figure 4.1 The Structural Model



SQ = Service Quality

OCB = Organization Citizenship Behaviours

TQM = Total Quality Management

INROLE = In-Role Behaviours

The overall model fit was assessed in terms of nine measures from three perspectives: absolute fit, incremental fit and parsimonious model fit (Hair, Anderson, Tathan & Black, 1998). Absolute fit measures assess the overall fit of a structural model to a set of empirical observations. They provide a means to assess the fit of the entire model to the sample data and identify problems not revealed by components of the model, such as the magnitude and significance of parameter estimates (Bollen, 1989). Measures of incremental fit explicitly contrast the fit of the maintained model with that of a competing or baseline model. Incremental fit indices capture the relative improvement in the fitting function when moving from the baseline model to the maintained model (Bollen, 1989). Parsimonious fit measures reflect the ratio of estimated parameters to the potential number of degrees of freedom available in the data (Mulaik et al., 1989). They are helpful in revealing the level of model fit simply by estimating a large number of parameters.

Among the absolute fit measures used to evaluate the structural model are the chi-square χ^2 statistic, the GFI, RMR, and RMSEA. The incremental fit measures used are the comparative fit index (CFI) and the normed fit index (NFI). The parsimonious fit measures used to evaluate the level of model fit are the normed chi-square (the

ratio of the chi-square divided by the degrees of freedom -χ^2 / *df)*, the parsimonious goodness-of-fit index (PGFI) and the parsimonious normed fit index (PNFI). The structural model reflected an acceptable fit to the data in all three types of fit measures. A summary of these fit indices of the structural model is given in Table 4.23.

Table 4.23 Summary of the overall fit indices of the structural model

Fit Index		Value	Level of acceptable fit
Absolute fit measures	χ^2	100.5 (*df*=71)	Near to *df*
	GFI	.93	≥.9
	RMR	.03	<.05
	RMSEA	.054	<.1
Incremental fit measures	CFI	.97	≥.9
	NFI	.92	≥.9
Parsimonious fit measures	χ^2 / *df*	1.42	<.3
	PGFI	.55	The higher, the better
	PNFI	.63	The higher, the better

Measures of component fit complement the three general types of model fit. Such results reflected that the proposed structural model relating with service quality, in-role behaviours, organizational citizenship behaviours, and total quality management was perfect fit to the data. Meanwhile, the research hypotheses were tested by the significance, direction and magnitude of the parameter estimates that captured the relationships between the latent constructs. A summary of the parameter estimates and test statistics is given in Table 4.24.

Table 4.24 Summary of the overall fit indices of the structural model

Parameters	Descriptions of Parameters	Parameter Estimates[1]	C.R.[2]
β1	Sportsmanship	1.00	
β2	Civic Virtue	.58	4.97
β3	Compliance	.38	3.35
β4	Altruism	.79	4.68
β5	Compliance with procedures	1.00	
β6	Compliance with customers' requests	.84	5.54
β7	Product knowledge	.73	5.94
β8	Employee involvement	1.00	
β9	Management commitment	.74	9.76
β10	Continuous improvement	.76	10.13

β11	Customer focus	.93	12.67
β12	Assurance	1.00	
β13	Reliability	.78	7.27
β14	Responsiveness	.76	9.11
β15	Empathy	.83	9.86
γ1	TQM → OCB	1.00	
γ2	TQM → IN	.37	3.18
γ3	TQM → SQ	.63	5.76
γ4	OCB → SQ	.84	2.23
γ5	IN → SQ	.61	2.76

Parameter Estimates[1] = standardized regression weights were given

C.R.[2]: C.R. value (t-value) exceeding 1.96 indicates the indicator as statistically significant

TQM = Total Quality Management

SQ = Service Quality

IN = In-Role Behaviours

OCB = Organizational citizenship Behaviours

Results from Table 4.24 indicate that civic virtue, organization compliance and altruism explained 58%, 38%, and 79% of variance of organizational citizenship behaviours when sportsmanship was treated as the fixed parameter. The findings

seem to reflect that altruism is the most important dimension of employees' organizational citizenship behaviours. For the construct of in-role behaviours, compliance with customers' requests, and product knowledge explained 84% and 73% of variance of employees' in-role behaviours respectively when compliance with procedures was treated as the fixed parameter. This point implies that both compliance with customers' requests and the product knowledge are significant dimensions of employees' in-role behaviour. Results from the standardized regression weight also reported that, management commitment, continuous improvement, and customer focus explained 74%, 76%, and 93% of variance of total quality management respectively when employee involvement was treated as fixed parameter. Meanwhile, reliability, responsiveness, and empathy explained 78%, 76%, and 83% of variance of service quality respectively when assurance was treated as fixed parameter.

Results from the standardized regression weights also illustrated that the total quality management, organizational citizenship behaviours and in-role behaviours explained 63%, 84%, and 61% of service quality respectively. Such results indicate that the implementation of total quality management in hotel might enhance customers'

perception of service quality towards the hotel. Meanwhile, employees' behaviour, including their in-role behaviours and the organizational citizenship behaviours would definitely improved customers' perception of service quality towards hotels. In particular, employees' organizational citizenship behaviours/extra-role behaviours might greatly enhance the quality perception of customers. The standardized regression weights also indicated that the implementation of total quality management in the hotels have substantial effect on employees' in-role behaviour.

4.4.3 Testing the hypotheses

In the following section, the hypotheses testing are discussed based on the findings of this study. Table 4.25 summarizes the results of the tests of the hypotheses carried out using maximum likelihood analyses. The standardized path coefficients and *t*-values of all relationships hypothesized in the full model were reported. The standardized path coefficients represented values of the parameters, and the coefficients showed the change in an endogenous variable resulting from a unit change in an exogenous variable, with all other exogenous variables being held constant. The sign on the coefficient indicated the direction of the relationship [i.e.

positive (+) or negative (-)]. The *t*-value indicated whether the corresponding path coefficient was significantly different from zero. Coefficients with *t*-values of between –1.96 and +1.96 are considered statistically insignificant (Diamantopoulos and Siguaw, 2000). Table 4.28 reported that all the hypothesized paths were statistically significant, supporting the hypotheses related to the structural model. The constructs of total quality management, organizational citizenship behaviours, and in-role behaviours have a substantial impact on the quality perception of customers.

Table 4.25 Summary of the results of the hypothesized paths

Hypotheses	Descriptions of Parameters	Parameter Estimates[1]	C.R.[2]	Result
H1	OCB → SQ	.84	2.23	Supported
H2	IN → SQ	.61	2.76	Supported
H3	TQM → SQ	.63	5.76	Supported

Parameter Estimates[1]: standardized regression weights were given

C.R.[2]: C.R. value (t-value) exceeding 1.96 indicates the indicator as statistically significant

TQM = Total Quality Management

SQ = Service Quality

IN = In-Role Behaviours

OCB = Organizational citizenship Behaviours

4.4.4 Direct and total effects

Table 4.26 reports the direct and total effects between exogenous and endogenous variables. Indirect effects between variables were not reported in the structural model.

The effect size of the variables was interpreted by the respective estimated

standardized path coefficients. The size of the direct effect was estimated from the total effect of each variable on service quality, including both direct and indirect effects. The path coefficients of a model can be regarded as a different type of regression coefficient. The path coefficient of each path shows the unit of increase in the endogenous variable for a unit of increase in the exogenous variable, or the increase in the exogenous variable for a unit of increase in the endogenous variable (Kaplan, 2000).

Table 4.26 Summary of direct and total effects among constructs

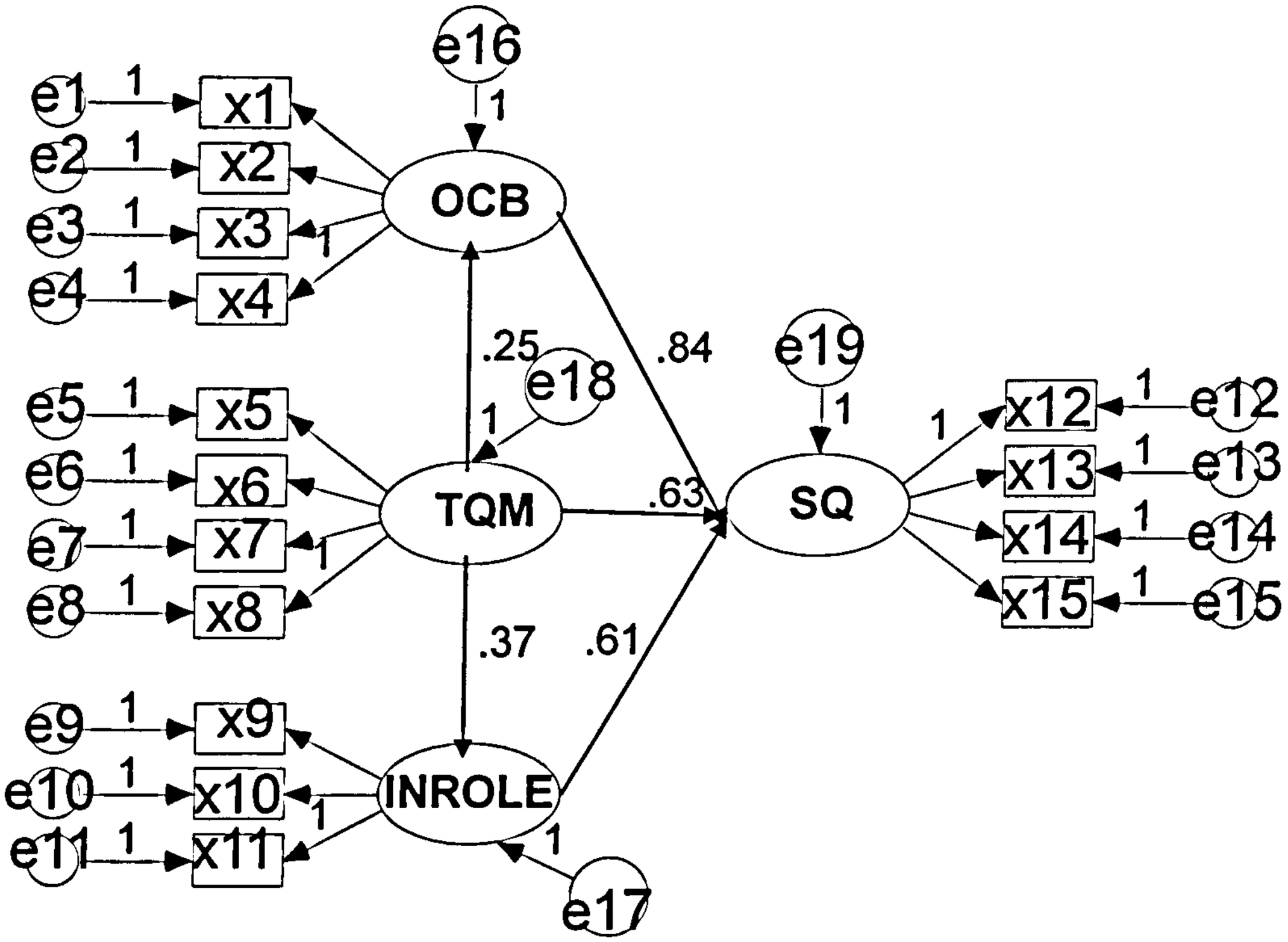
Type of Effect	Variables	TQM	IN	OCB	SQ
Standardized Direct Effects	**IN**	**.366**	**-**	**-**	**-**
	OCB	**.248**	**-**	**-**	**-**
	SQ	**.631**	**.611**	**.838**	**-**
Standardized Total Effects	**IN**	**.366**	**-**	**-**	**-**
	OCB	**.248**	**-**	**-**	**-**
	SQ	**.631**	**.611**	**.838**	**-**

- = Not available

Remark: Indirect effects between variables were not reported in the structural model

The results from the AMOS output as shown in Figure 4.2 indicated that total quality management, employees' in-role and organizational citizenship behaviours were significant attributes of service quality. The direct effects of these three constructs on service quality were 0.63, 0.611, and 0.84, respectively. Furthermore, results also indicated that total quality management has a significant impact on in-role behaviours. Meanwhile, these three constructs - total quality management, employees' in-role behaviour and organizational citizenship behaviours - only have a significant direct effect on service quality. As mediating effects of any variables were not available in the hypothesized model, indirect effects were not reported between variables.

Figure 4.2 Standardized Regression Weights of Constructs



4.5 Summary

This chapter describes the analysis and results of the survey. The demographic and behavioural profiles of the respondents and the descriptive statistics of the variables used in this study were presented.

To test the reliability and validity of the survey instrument, content validity of the instruments were used. Exploratory factor analysis showed that the coefficient alpha values of the three questionnaires indicated that the items were able to capture the constructs. The results of the KMO values and the Bartlett's test of sphericity were shown to be within the acceptable limits. The squared multiple correlations which were used to measure reliability showed that the three constructs were low in measurement error. The composite reliability values and the amount of variance extracted provided strong support for the validity and reliability of the four measurements. To demonstrate convergent validity, the parameter estimates of the four constructs showed to be acceptable with each measure being significantly related to its underlying factor and the t-values were statistically significant. To analyze the data, SPSS for Windows was used and AMOS attached to the SPSS package was used to perform the structural equation modeling. The purpose of

employing SEM is to assess a set of relationships simultaneously and in this study the dimensions of service quality, employees' in-role behaviours, organizational citizenship behaviours, and total quality management were identified through principle component factor analysis.

Furthermore, Confirmatory factor analysis supported the validity and reliability of the measurements of the four measurement scales in this study. Goodness-of-fit statistics indicated that the hypothesis model of service quality fitted very well to the data. Various significant causal relationships from total quality management, employees' in-role and organizational citizenship behaviours to service quality were evident in the structural model. Finally, all the hypotheses proposed in this study were supported by the data.

CHAPTER FIVE –

CONCLUSIONS AND IMPLICATIONS

This chapter presents a summary of the study. The implications of the results and recommendations for future studies are also discussed. Section one summarizes and discusses the findings from Chapter 4. Implications from the results are illustrated in section two. Theoretical, methodological, managerial implications and implications for students and customers are discussed in this section. The key recommendations and recommendations for further study are discussed in section three. A final conclusion is presented in the last section.

5.1 SUMMARY OF THE FINDINGS

The confirmatory factor analyses provided strong evidence of the reliability and validity of the hypothesized model of service quality in this study. In an exploration of content validity, the squared multiple correlations, construct validity (composite reliability) and value of the variance extracted yielded satisfactory reliability and validity of the measurements. The hypothesized model of service quality

incorporated the variables of total quality management, employees' in-role and organizational citizenship behaviours, and service quality. A set of relationships between these four variables were hypothesized and tested.

A series of problem statements were formulated in this study and the following section assesses how well this study has answered the two questions raised.

1. To what extent do employees in-role behaviours influence customers' perception towards service quality of hotel?

2. To what extent do organizational citizenship behaviours influence customers' perception towards service quality of hotel?

Table 5.1 summarizes the regression weights of the hypothesized paths between constructs, including total quality management, employees' in-role and organizational citizenship behaviours, and service quality. The various goodness-of-fit indices indicated that the hypothesized model was a parsimonious model and fitted well to the data. Such results provide evidence to the significant relationship

between variables. Table 5.1 also illustrated that both employees' in-role behaviours and organizational citizenship behaviours have a substantial effect on customers' perception of service quality. Employees' in-role behaviours and organizational citizenship behaviours explained 61% (γ=.61) and 84% (γ=.84) variance of service quality. Such a result was consistent with that of previous studies such as that of Walz and Nieoff (2000) where organizational citizenship behaviour was found to be significantly associated with customers' assessments of service quality. The relationship between in-role behaviours and the perception of service quality has seldom been empirically tested in previous studies. The only empirical study found is that of Hsieh and Hsieh (2001) which indicated job standardization is positively related to the perception of service quality. However, their study did not examine job required behaviours. The results from this study confirmed that employees' behaviours which are prescribed by their jobs greatly affect customers' perception of service quality. Cohen (1988) provided a rule of thumb for interpreting the practical importance in behavioural sciences of regression coefficients, describing .1, .3, and .5 as small, medium, and large effects, respectively. The results indicated that both employees' in role behaviours (γ=.61) and organizational citizenship behaviours (γ=.84) have a high effect of service quality. Organizational citizenship behaviours,

which were not prescribed by their jobs, have a higher impact on customers' assessment of service quality when compared to employees' in role behaviour.

Table 5.1 Summary of the parameters estimates among constructs

Constructs	R^2	χ^2	RMR	RMSEA	GFI	CFI	NFI	PGIF	PNIF	χ^2 to df Ratio [a]
		100.5	**0.3**	**0.5**	**.93**	**.97**	**.92**	**.55**	**.62**	**1.42**
IN → SQ	.61									
OCB → SQ	.84									
TQM → SQ	.63									
TQM → IN	.37									
TQM → OCB	.25									

[a] χ^2 to df Ratio [a] = The Ratio of Chi-Square to Degree of Freedom

TQM = Total Quality Management

SQ = Service Quality

IN = In-Role Behaviours

OCB = Organizational Citizenship Behaviours

3. To what extent does each element of total quality management affect customers' perception of service quality towards the hotel?

The results from the structural equation modeling point to a significant positive relationship between total quality management (γ=.63), and service quality. Total quality management explained 63% variance of service quality. According to the rule of thumb suggested by Cohen (1988), regression coefficient of .63 can be interpreted as high effect. Such result implied that the implementation of total quality management in hotel will greatly improve the service quality in the hotel. In other words, customers' perception of service quality is a function of total quality management. This result support the previous study of Waldman and Gopalakrishnan (1996) in examining the relationship between TQM and business unit performance as measured by customer perception of service quality, confirming that customer perception would be a function of operational, organizational and human resource factors that have been associated with TQM. Similarly, in comparing organization adopting TQM and not adopting TQM, Terziovski and Samson (1999) found that organization is more likely to achieve better organizational performance in employee relations, customer satisfaction, operational performance and business performance with TQM than without TQM. That is, TQM has certain influences on service quality.

The other two problems related to the implementation of TQM and employees' behaviour are as follows:

4. To what extent does the implementation of total quality management has on employees' organizational citizenship behaviours?

5. To what extent does the implementation of total quality management influence employees' in-role behaviours?

Table 5.1 showed the positive significant relationships between total quality management and employees' in-role (γ=.37) and organizational citizenship behaviours (γ=.25). The results reported demonstrate that the implementation of total quality management in the hotel explained 37% and 25% variance of in-role behaviours and organizational citizenship behaviours, respectively. Based on the rule of thumb suggested by Cohen (1988), regression coefficient of .37 and .25 can be interpreted as moderate effect. Such results reflect that the implementation of total quality management might, to some extent, improve the performance of employees' behaviours which are prescribed by their jobs. Meanwhile, the implementation of

total quality management cannot significantly enhance employees' organizational citizenship behaviours. Specifically, the implementation of total quality management requires the dissemination of the goal clearly to the employees, and the development of organized systems and procedures for employees to follow. These aspects might improve employees' performance which is required by their roles. On the contrary, employees' organizational citizenship behaviours were not prescribed by their jobs, and are discretionary and volitional behaviours that go beyond existing role expectations. The implementation of total quality management required the employees' involvement in the service improvement such that employees may have some flexibility and power to handle customers. In a study of strategies and practices of TQM, Ugboro and Obeng (2000) found positive correlation between job satisfaction and customer satisfaction. Such relationships may ultimately enhance employees' job satisfaction and stimulate organizational citizenship behaviours. It is confirmed in the study of Yoon and Suh (2003) that OCB has a positive relationship with job satisfaction. Thus, the implementation of total quality management may to some degree enhance employees' organizational citizenship behaviours when employees are satisfied with their jobs.

5.2 IMPLICATIONS OF THE STUDY

5.2.1 Theoretical and methodological implications

There are three theoretical and methodological implications from this study. First, this study took into account the effect of employees' behaviour, both in-role and organizational citizenship behaviours on customer's perception of service quality. Although a number of studies agreed that employees' behaviours directly affect customers' perception of service quality, a limited number have taken into account the discretionary behaviours of employees. This study investigated these two types of employees' behaviours simultaneously in a study. The empirical results of this study demonstrated that both employees' in-role behaviours and organizational citizenship behaviours play a substantial role in the perception of service quality. The results of this study therefore contribute to the advancement of knowledge of employees' behaviours and service quality.

Second, despite the fact that it is generally agreed by researchers and practitioners that employees' behaviours are directly related to service quality, the behaviours that

are prescribed by employees' jobs were under-examined in previous research. This study successfully developed a measurement scale to assess employees' in-role behaviours and categorizes employees' performance that is prescribed by their roles into three dimensions of in-role behaviours, namely the compliance with procedures, compliance with customers' requests, and product knowledge. The results demonstrated that employees' compliance with customers' requests and the possession of product knowledge on the company's policy or the cultural facilities in town are less important than the compliance with procedures when performance evaluation is conducted by management. Furthermore, the results of this study demonstrated the direct impact of employees' in-role behaviours on customers' assessment of service quality. The present study was the first attempt to empirically test the in-role behaviours of hotel Front Office employees and examined the impact of in-role behaviours on service quality. The result of the study provides further insight into employees' in-role behaviours.

Third, this study successfully measured the impact of total quality management on employees' in-role and organizational citizenship behaviours. Most of the studies on total quality management focused its impact on organization performance, in terms

of financial performance and organizational effectiveness, there is no previous study attempted to examine the TQM effect on employees' performance, particularly on employees' organizational citizenship behaviours. The results of this study shed light on the knowledge of total quality management.

5.2.2 Managerial implications

Several implications to supervisors and managers may be drawn from the results of this study. First, the results demonstrated that organizational citizenship behaviour was positively associated with service quality. In comparing employees' in-role behaviours and organizational citizenship behaviours, it is clear that the latter has a far greater effect on customers' perception of service quality. The results of this study highlight the importance of organizational citizenship behaviour to organizational success in the hotel industry. In order to improve the service quality in hotels either in Hong Kong or in other countries, other than the development of clear operational procedures and providing extrinsic rewards, such as bonuses the most important aspect of all, is to enhance organizational citizenship behaviours. Since organizational citizenship behaviour is discretionary behaviour that goes far beyond

employees' existing role, and done without the expectation of reward, management cannot punish employees for not performing them. The only solution is to "stimulate" organizational citizenship behaviours.

There are various methods that managers can use to motivate organizational citizenship behaviours among employees. One of the methods is to enhance employees' job satisfaction through empowerment, or job rotation. Employees who have high job satisfaction are more committed to their work and organization. They are more willing to act outside of their expected duties in the hope that the organization can perform better, and the operation can be operated more effectively. For instance, satisfied, committed and happy employees may help others when they are busy or help to orient newcomers. The other method is to include organizational citizenship behaviours in performance appraisal. Organizational citizenship behaviours may not necessarily be a compulsory item in the appraisal form, but employees may be encouraged to add value to their performance. For example, those who have demonstrated organizational citizenship behaviours may have bonus points on their appraisal. Furthermore, intrinsic rewards rather than extrinsic rewards can be used at the same time to encourage employees' engagement in organizational

citizenship behaviours. Complimenting employees who perform organizational citizenship behaviours publicly or in front of other employees; and delegating important tasks to employees who perform organizational citizenship behaviours can be a form of intrinsic rewards for employees.

Second, the results from the exploratory factor analysis classified employee's in-role behaviours into three dimensions, namely the compliance with procedures, the compliance with customers' requests, and the possession of product knowledge. The results also revealed that management rated highly the employees' ability to comply with customers' requests and to possess product knowledge, both of which were found to be less important than comply with procedures. It seems that the ability to compliance with procedures is considered to be the most important factor by management in the performance evaluation, while the ability to compliance with customers' requests, and the possession of product knowledge are viewed as important factors. That is, management when evaluating employees' performance will tend to consider that the ability to compliance with procedures as a necessary behaviours, while the ability to compliance with customers' requests, and possession of product knowledge on hotel policy and cultural facilities in town are also

important. Hence, hotel managers should communicate to employees that their performances were being evaluated based on the three main dimensions identified in this study.

5.2.3 Implications to students

The results of the study supported the three main hypotheses of the positive influences of organizational citizenship behaviour, in-role behaviour and TQM on customers' perception of service quality. Tourism and hospitality students can use different methodology learned from the subject Quantitative Methods for Business or other Statistics subject to examine the relationship between the three major constructs. Also, students can refine the model to include other constructs such as other human resources practices learned from the Human Resources subject.

The exploratory factor analysis identified three dimensions of in-role behaviours for hotel Front Office employees. Students can try to examine the in-role behaviours of customer service employees working in the retail industries or other sectors of the tourism industry.

Finally, the findings revealed that OCB is vital to customers' perception of service quality. To the hospitality and tourism students who are interested in pursuing customer service job should note the importance of developing OCB so as to improve their job performance in satisfying customers' requests.

5.2.4 Implications to customers

The finding suggests that customers' perceived service quality is influenced by in-role behaviour and organizational citizenship behaviour of the customer service staff. When selecting a hotel, customer should look for hotels with a management team who is able to motivate the in-role behaviour and organizational citizenship behaviour of their customer service staff. Furthermore, as in-role behaviour is a voluntary behaviour not directly linked to reward, customers should know giving tips to the customer service staff might not be a way to encourage better service.

5.3 LIMITATIONS OF THE STUDY

Some limitations of this study need to be acknowledged. These limitations include:

5.3.1 Sample Size

One of the problems is the lack of available hotels to sample for this study. As there are only a few hotels implementing total quality management in Hong Kong, and the small number of total frontline employees in the front office, the study only collected 145 questionnaires from employees and supervisors in this study. This sample size is relatively small for using structural equation modeling as data analysis. This may reduce the external validity of the study.

5.3.2 Sample Selection

The sampling frame of the research was limited to front-line employees from the front office in the hotel. Other customer-contact employees from various departments, such as housekeeping and the food and beverage departments, were not included in the study. The findings of this study therefore can only be generalized to the front-line employees from the front office of other hotels, but they could not be generalized to the employees from others department as the types of in-role

behaviours and the degree of the implementation of total quality management may differ between departments.

Furthermore, the survey was conducted in a short time frame. The survey was only undertaken in three weeks in July and August; and customers who travel in other periods of the year were not covered. The sample collected in this study may not be entirely representative.

5.4 RECOMMENDATIONS

5.4.1 Key Recommendations

The results of the study suggested that employees' in-role behaviours and organizational citizenship behaviours have a substantial impact on customers' perception toward service quality in the hotels. In order to improve the service quality in hotels, other than the development of clear operational procedures and providing extrinsic rewards, such as bonuses the most important aspect of all, is to enhance organizational citizenship behaviours.

The results also showed that the implementation of total quality management in the hotel has a moderate effect on employees' in-role behaviours and organizational citizenship behaviours. To enhance organizational citizenship behaviour which has a substantial impact on service quality, it is suggested that when implementing TQM, management should set goal on employees' job satisfaction which has a positive influence to their organizational citizenship behaviours.

5.4.2 Recommendations to Future Research

Several areas have emerged from the present study which should be addressed in future research. First, the study could be extended to the frontline employees of other departments in the hotel, such as the housekeeping and food and beverage departments, in order to provide a more holistic view on the employees' in-role behaviours and organizational citizenship behaviours in the hotel industry.

A further issue is that, more research on the measures that were used in this study is needed. For example, the development of the scale of employees' in-role behaviours,

future research should ask the job holders how they feel about the job descriptions. Besides, the development of the scale to understand the impact of employees' in-role behaviours and organizational citizenship behaviours on total quality management would be a major contribution to the literature.

Future study should also develop a comprehensive model of employees and service quality by incorporating employees' emotion with employees' in-role behaviours and organizational citizenship behaviours in a model to simultaneously measure the impact of different aspects of employees on customers' perception of service quality.

5.5 Main Conclusion

This study examined the impact of employees' in-role behaviours and organizational citizenship behaviours on service quality in TQM hotels. The hypothesized model was developed based on the human resources management, TQM, and tourism literatures, and is strictly tested for its reliability and validity. A measurement scale of employees' in-role behaviours was developed by employing exploratory factor analysis. Finally, three dimensions of in-role behaviours were developed, namely the

compliance with procedures, the compliance with customer requests, and product knowledge. The results suggested that employees' in-role behaviours and organizational citizenship behaviours have a substantial impact on customers' perception toward service quality in hotel. Furthermore, the results also showed that the implementation of total quality management in the hotel has a moderate effect on employees' in-role behaviours and organizational citizenship behaviours. The findings of this study contribute to the advancement of the knowledge on TQM and service quality. This study also contributes to the knowledge of hotel management by successfully developing a measurement scale of employees' in-role behaviours. Finally, this study also contributes by offering some suggestions for further research to enrich the understanding and the development of service quality in the hotel industry.

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Appendix 1.1

School of HTM
Hotel & Tourism Management
酒店及旅遊業管理學院

Ms. Catherine Cheung
School of Hotel and Tourism Management
The Hong Kong Polytechnic University
Hunghom, Kowloon
Hong Kong

12th July, 2004

Dear Mr. XXX,

I am conducting a survey for my PhD study and would be grateful if you can assist me to complete the research. In general, the study is to investigate the impact of employees' behaviour and total quality management on the service quality of a hotel. Research outcomes are expected to be beneficial to hotels in Hong Kong to improve service quality. The following is the plan for the implementation of the survey:

1. We will explain to the Front Office Manager or the Assistant Front Office Manager about the Employees' Performance questionnaire and it will takes about 30 to 40 minutes of their time to complete the questionnaire.

2. We will randomly distribute the Employees' Perception questionnaire to 20 Front Office employees which takes 10 to 15 minutes of their time to complete the questionnaire.

3. We will tactfully and carefully approach 50 hotel guests in the lobby, ensuring that they are not disturbed and agreed to fill in the Hotel Guest Perception questionnaire for us which takes about 10 to 15 minutes of their time.

All responses will be kept strictly confidential. I would be grateful if you can

nominate the Front Office Manager (Name: _____, phone:_____) or the Assistant Front Office Manager (Name: _____, phone:_____) to participate in this survey. Please fax this sheet to fax no. 2362-9362 by 16th July 2004. I will be contacting the nominee shortly.

Your assistance is very important to the successful completion of this research. If you have any query, please feel free to contact me at 2766-4581 or hmcat@polyu.edu.hk.

Thank you very much for your generous help in supporting this study.

Yours sincerely,

Catherine Cheung
PhD candidate, Lecturer
School of Hotel and Tourism Management
The Hong Kong Polytechnic University

Appendix 1.2

Coding Number: 00__

Survey on Hotel Guests Satisfaction on the Hotel Performance
酒店住客對酒店服務員表現的滿意程度調查

The School of Hotel and Tourism Management of the Hong Kong Polytechnic University is conducting a study about hotel guests' satisfaction on the performance of the contact-employee. We would like you to spare 10 minutes of your time to complete the questionnaire. Thank You! 香港理工大學酒店及旅遊管理學系現正進行一項有關酒店住客對酒店服務表現的滿意程度調查。煩請你填寫本問卷，只需十分鐘便能完成。多謝！

Part I: Please circle your responses to the following statements.第一部份：請根據以下陳述，在右方圈出你的意見	Strongly agree 極之	Agree 同意	Somewhat agree 部份	Neither agree nor	Somewhat disagree 部	Disagree 不同意	Strongly disagree 極
1.1. The customer service staff has the knowledge to answer most of my questions. 這名接待員具備充份的知識，能解答我所有問題。	7	6	5	4	3	2	1
1.2. The customer service staff was never too busy to respond to my requests. 這名接待員從容不迫地回應我的需要。	7	6	5	4	3	2	1
1.3. The customer service staff was very competence. 這名接待員十分能幹。	7	6	5	4	3	2	1
1.4. The customer service staff was polite and courteous. 這名接待員待人有禮。	7	6	5	4	3	2	1
1.5. The customer service staff responded to my requests and needs quickly. 這名接待員迅速回應我的要求及需要。	7	6	5	4	3	2	1
1.6. The customer service staff was very attentive. 這名接待員十分體貼入微。	7	6	5	4	3	2	1
1.7. The customer service staff was willing to help. 這名接待員樂於助人。	7	6	5	4	3	2	1
1.8. The customer service staff understood my specific needs. 這名接待員了解我的特別需要。	7	6	5	4	3	2	1
1.9. The customer service staff kept his/her promises. 這名接待員信守承諾。	7	6	5	4	3	2	1
1.10. I have confidence in this customer service staff. 我對這名接待人員充滿信心。	7	6	5	4	3	2	1
1.11. The customer service staff provided quick service. 這名接待員迅速提供服務。	7	6	5	4	3	2	1

1.12. The customer service staff showed concern with our needs. 這名接待員很關心我們的需要。	7	6	5	4	3	2	1
Part I: Please circle your responses to the following statements.第一部份：請根據以下陳述，在右方圈出你的意見	**Strongly agree 極之**	**Agree 同意**	**Somewhat agree 部份**	**Neither agree nor**	**Somewhat disagree 部**	**Disagree 不同意**	**Strongly disagree 極**
1.13. The customer service staff has the sense of responsibility. 這名接待員有責任感。	7	6	5	4	3	2	1
1.14. The customer service staff followed my instructions and requests. 這名接待員遵照我的指示及要求。	7	6	5	4	3	2	1
1.15. The customer service staff seldom made mistakes. 這名接待員很少出錯。	7	6	5	4	3	2	1
1.16. The customer service staff acts according to what I said. 這名接待員遵照我的說話去提供服務。	7	6	5	4	3	2	1
1.17. The customer service staff was very friendly. 這名接待員十分友善。	7	6	5	4	3	2	1
1.18. The customer service staff engaged in small talk with me. 這名接待員會與我閒話家常。	7	6	5	4	3	2	1
1.19. The customer service staff smiled a lot. 這名接待員經常面帶笑容。	7	6	5	4	3	2	1
1.20. The customer service staff provides full-range of services. 這名接待員提供全面的服務。	7	6	5	4	3	2	1
1.21. The customer service staff does not ignore me. 這名接待員並沒有忽略我。	7	6	5	4	3	2	1
1.22. The customer service staff acted politely toward me. 這名接待員對我彬彬有禮。	7	6	5	4	3	2	1
1.23. I was satisfied with the service provided by this customer service staff. 我對這名接待員所提供的服務感到滿意。	7	6	5	4	3	2	1
1.24. I had satisfactory interactions with this customer service staff. 我與這名接待員的接觸感到滿意。	7	6	5	4	3	2	1

PART II: TRAVELING INFORMATION 第二部份：旅程資料

2.1. This was your _____ time(s) to travel to this destination.這是你第_____次蒞臨這個目的地。

2.2. Purpose of Travel or Visit:旅程目的：

☐ Business 公幹
☐ Leisure 休閒
☐ Visiting Friends or Relatives 探訪親友
☐ Others 其他

2.3. This was your _____ time(s) to stay in this hotel.這是你第_____次入住這家酒店。

PART III: PERSONAL INFORMATION 第三部份：個人資料

3.1. Gender 性別 ☐ Male 男 ☐ Female 女

3.2. Nationality 國籍 _____

3.3. Age 年齡

☐ 20 or below 或以下 ☐ 31-40 ☐ 51-60
☐ 21-30 ☐ 41-50 ☐ 61 or above 或以上

3.4. Education level 教育水平

☐ Primary 小學
☐ Secondary 中學
☐ Post-Secondary (Higher Diploma, Diploma, Certificate) 專上教育（高級文憑、文憑、證書
☐ University and above 大學或以上
☐ Others, please specify 其他，請說明 _____

3.5. Occupation 職業

☐ Proprietor (Business Owner) 公司東主（老闆）
☐ Blue Collar 藍領 (Manager /Supervisory level 經理／主管職級)
☐ Junior White Collar 初級白領
☐ Senior White Collar 高級白領
☐ Professional 專業人士
☐ Student 學生
☐ Retired 退休人士

☐ Housewife 家庭主婦

☐ Others, please specify 其他，請說明 _____

3.6. Monthly personal income (US$)個人每月入息（美金）

☐ 1,200 or Below 或以下

☐ 1,201-2,500

☐ 2,501-3,800

☐ 3,801-5,000

☐ 5,001-6,400

☐ 6,401 or above 或以上

This is the end of the questionnaire. Thank you very much for your participation!

問卷完，多謝你的寶貴意見！

Appendix 1.3

Coding Number: 0_ _

Survey on Employees' (Front Office Staff) Performance Evaluated by Supervisors

The School of Hotel and Tourism Management of the Hong Kong Polytechnic University is conducting a study to examine the effect of employees' (Front Office Staff) performance on customers' perceived service quality. We would like you to spare 10 minutes of your time to complete the questionnaire. Thank You!

Part I: Please circle your responses to the following statements.	**Strongly agree**	**Agree**	**Somewhat agree**	**Neither agree nor disagree**	**Somewhat disagree**	**Disagree**	**Strongly disagree**
1.1. This employee registers guests and assigns rooms properly.	7	6	5	4	3	2	1
1.2. This employee accommodates customers' special requests whenever possible.	7	6	5	4	3	2	1
1.3. This employee uses suggestive selling techniques to sell rooms and to promote other services of the hotel.	7	6	5	4	3	2	1
1.4. This employee responds to customers requests and needs quickly.	7	6	5	4	3	2	1
1.5. This employee does not adopt proper mail, package and message handling procedures.	7	6	5	4	3	2	1
1.6. This employee is aware of daily activities and meetings taking place in the hotel.	7	6	5	4	3	2	1
1.7. This employee is aware of safety and emergency procedures and accident prevention policies.	7	6	5	4	3	2	1
1.8. This employee handles cash, travelers' checks, credit cards, foreign currency, and direct billing requests properly.	7	6	5	4	3	2	1
1.9. This employee familiarizes and complies with the Hotel policies and regulations.	7	6	5	4	3	2	1
1.10. This employee never follows up outstanding items from the previous shift.	7	6	5	4	3	2	1
1.11. This employee is fully familiarized with our hotel facilities, places of interest, commercial centers, hotels and restaurants and other cultural and sporting activities in town.	7	6	5	4	3	2	1
1.12. This employee provides courteous and efficient service and complies with every guest request.	7	6	5	4	3	2	1
1.13. This employee answers the telephone promptly and courteously.	7	6	5	4	3	2	1
1.14. This employee greets all arriving guests in a courteous manner and checks them in	7	6	5	4	3	2	1

MISSING

PAGES

NOT

AVAILABLE

1.32. This employee attends and participates in meetings related to the company.	7	6	5	4	3	2	1
1.33. This employee comes up with new ideas about the work.	7	6	5	4	3	2	1
Part I: Please circle your responses to the following statements.	**Strongly agree**	**Agree**	**Somewhat agree**	**Neither agree nor disagree**	**Somewhat disagree**	**Disagree**	**Strongly disagree**
1.34. This employee sometimes pretends to look busy doing nothing	7	6	5	4	3	2	1
1.35. This employee resists change from others, including boss.	7	6	5	4	3	2	1
1.36. This employee cooperates well with those around him/her.	7	6	5	4	3	2	1
1.37. This employee exhibits punctuality in arriving at work in the morning and after lunch and breaks.	7	6	5	4	3	2	1
1.38. This employee gives advance notice if he/she is unable to come to work.	7	6	5	4	3	2	1
1.39. This employee does not spend a great deal of time in idle conversation.	7	6	5	4	3	2	1
1.40. This employee is willing to stand up to protect the reputation of the company.	7	6	5	4	3	2	1
1.41. This employee is eager to tell outsiders good news about the company and clarify misunderstanding about the company.	7	6	5	4	3	2	1
1.42. This employee takes one's job seriously and rarely makes mistakes.	7	6	5	4	3	2	1
1.43. This employee often speaks ill of the supervisor or colleagues behind their backs.	7	6	5	4	3	2	1
1.44. This employee conducts personal business during office hours.	7	6	5	4	3	2	1
1.45. This employee view sick leave as benefit and makes excuse to call sick.	7	6	5	4	3	2	1

PART II: EVALUATOR'S (SUPERVISOR'S) PERSONAL INFORMATION

3.1. Gender of the evaluator/supervisor ☐ Male ☐ Female

3.2. Nationality _____

3.3. Age of the evaluator/supervisor

☐ 20 or below ☐ 31-40 ☐ 51-60

☐ 21-30 ☐ 41-50 ☐ 61 or above

3.4. Education level of the evaluator/supervisor

☐ Primary
☐ Secondary
☐ University or above
☐ Others, please specify

_____

☐ Post-Secondary (Higher Diploma, Diploma, Certificate)

3.5. Your working experience is _____ year(s).

3.6. You have been serving for this company for _____ year(s).

This is the end of the questionnaire. Thank you very much for your participation!

Appendix 1.4

Survey on Employee's Perception of Total Quality Management Implementation in Hotel

The School of Hotel and Tourism Management of the Hong Kong Polytechnic University is conducting a study about employee's perception of total quality implementation in hotel. We would like you to spare 10 minutes of your time to complete the questionnaire. Thank You!

Part I: Please circle your responses to the following statements.	Strongly agree	Agree	Somewhat agree	Neither agree nor	Somewhat disagree	Disagree	Strongly disagree
1.1. There is a strong commitment to quality at all levels on this hotel.	7	6	5	4	3	2	1
1.2. Employees of this hotel show concern about the need of quality.	7	6	5	4	3	2	1
1.3. Providing quality service is the company's goal.	7	6	5	4	3	2	1
1.4. The top management is committed to quality improvement through involvement and viability in quality activities and communication of quality values.	7	6	5	4	3	2	1
1.5. The top management follows up on employees' suggestion for improvement.	7	6	5	4	3	2	1
1.6. Managers in my department set clear goals for quality improvement.	7	6	5	4	3	2	1
1.7. Employees are consistently rewarded for good suggestion and quality improvement.	7	6	5	4	3	2	1
1.8. Employees in my department believe that continuous quality improvement is their responsibility.	7	6	5	4	3	2	1
1.9. Employees in my department analyze their work performance to look for better ways to do the job.	7	6	5	4	3	2	1
1.10. The top management is concerned about the assessment and improvement of the service delivery processes.	7	6	5	4	3	2	1
1.11. This hotel interacts with outside groups (e.g.., education, business, trade, professional groups) for mutual benefits of quality	7	6	5	4	3	2	1

improvement.							
Part I: Please circle your responses to the following statements.	**Strongly agree**	**Agree**	**Somewhat agree**	**Neither agree nor disagree**	**Somewhat disagree**	**Disagree**	**Strongly disagree**
1.12. This hotel employs procedures (e.g., regular reviews and update) to ensure reliability, consistency, and rapid access to data and information throughout the company.	7	6	5	4	3	2	1
1.13. Employees in my department know who their customers are.	7	6	5	4	3	2	1
1.14. This hotel evaluates and improves its services regularly.	7	6	5	4	3	2	1
1.15. Customers are encouraged to give feedback on hotel's performance.	7	6	5	4	3	2	1
1.16. This hotel is committed to customers through ongoing strengthening of policies, promises, and guarantees.	7	6	5	4	3	2	1
1.17. Customers' requirements are effectively disseminated and understood throughout our employees.	7	6	5	4	3	2	1
1.18. This hotel regularly measures the satisfaction and needs of customers.	7	6	5	4	3	2	1
1.19. The job duties or operating instructions given to employees are clear.	7	6	5	4	3	2	1
1.20. Process simplification and reengineering frequently occurred in our company.	7	6	5	4	3	2	1
1.21. The operating process is reviewed regularly for the purpose of quality improvement.	7	6	5	4	3	2	1
1.22. Operating process is regular inspected, reviewed and checked.	7	6	5	4	3	2	1
1.23. The operating process is clearly documented.	7	6	5	4	3	2	1
1.24. Quality circle or employee involvement type quality improvement programs are implemented in my department.	7	6	5	4	3	2	1
1.25. Employees are encouraged to provide suggestion and participate in the decision making process on quality improvement.	7	6	5	4	3	2	1
1.26. Most employee suggestions are listened and valued.	7	6	5	4	3	2	1

Part I: Please circle your responses to the following statements.	Strongly agree	Agree	Somewhat agree	Neither agree nor	Somewhat disagree	Disagree	Strongly disagree
1.27. The company's goal and information is shared by all employees.	7	6	5	4	3	2	1
1.28. Feedback on the performance of service delivery is provided to employees.	7	6	5	4	3	2	1
1.29. Building quality awareness is ongoing among employees.	7	6	5	4	3	2	1

PART II: PERSONAL INFORMATION

3.1. Gender ☐ Male ☐ Female

3.2. Nationality _____

3.3. Age

☐ 20 or below ☐ 31-40 ☐ 51-60

☐ 21-30 ☐ 41-50 ☐ 61 or above

3.4. Education level

☐ Primary ☐ University or above

☐ Secondary ☐ Others, please specify

_____

☐ Post-Secondary (Higher Diploma, Diploma, Certificate)

3.5. Have been serving for this company for _____ year(s).

3.6. Monthly personal income (US$)

☐ 1,200 or Below ☐ 2,501-3,800 ☐ 5,001-6,400

☐ 1,201-2,500 ☐ 3,801-5,000 ☐ 6,401 or above

This is the end of the questionnaire. Thank you very much for your participation!

Appendix 1.5 SPSS statistics summary

PART IA DEMOGRAPHIC PROFILE OF HOTEL CUSTOMERS

Table 1 Gender of Customer

customer gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	272	59.1	59.1	59.1
	Female	188	40.9	40.9	100.0
	Total	145	100.0	100.0	

Table 2 Nationality of Customer

customer nationality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Aisa	2	.4	.4	.4
	America	5	1.1	1.1	1.5
	Australia	22	4.8	4.8	6.3
	India	8	1.7	1.7	8.0
	Canada	9	2.0	2.0	10.0
	China	144	31.3	31.3	41.3
	France	7	1.5	1.5	42.8
	German	9	2.0	2.0	44.8
	Hong Kong	17	3.7	3.7	48.5
	Indonesia	8	1.7	1.7	50.2
	Irish	3	.6	.6	50.8
	Japan	32	6.9	6.9	57.7
	Malaysia	18	3.9	3.9	61.6
	Netherland	5	1.1	1.1	62.7
	Philippine	11	2.4	2.4	65.1
	Portuguise	3	.7	.7	65.8
	Singapore	19	4.1	4.1	69.9
	Spanish	6	1.3	1.3	71.2
	Taiwan	43	9.4	9.4	80.6
	UK	52	11.3	11.3	91.9
	US	37	8.1	8.1	100.0
	Total	460	100.0	100.0	

Table 3 Age of Customer

customer age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20 below	21	4.6	4.6	4.6
	21_30	108	23.5	23.5	28.1
	31 40	135	29.3	29.3	57.4
	41 50	114	24.8	24.8	82.2
	51 60	61	13.3	13.3	95.5
	60 above	21	4.6	4.6	100.0
	Total	460	100.0	100.0	

Table 4 Education of Customer

customer education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Primary	7	1.5	1.5	1.5
	Secondary	76	16.5	16.5	18.0
	Post Secondary	78	17.0	17.0	35.0
	University	297	64.6	64.6	99.6
	Others	2	.4	.4	100.0
	Total	460	100.0	100.0	

Table 5 Customers' Occupation

customer occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Proprietor	87	18.9	18.9	18.9
	Blue Collar	52	11.3	11.3	30.2
	Jun. White Collar	42	9.1	9.1	39.3
	Sen. White Collar	85	18.5	18.5	57.8
	Professional	121	26.3	26.3	84.1
	Student	39	8.5	8.5	92.6
	Retired	11	2.4	2.4	95.0
	Housewife	23	5.0	5.0	100.0
	Total	460	100.0	100.0	

Table 6 Customers' Income

customer income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	$1200 below	59	12.8	12.8	12.8
	$1201 2500	52	11.3	11.3	24.1
	2501 3800	78	17.0	17.0	41.1
	3801 5000	81	17.6	17.6	58.7
	5001 6400	102	22.2	22.2	80.9
	$6401 above	88	19.1	19.1	100.0
	Total	460	100.0	100.0	

Table 7 Customers' Number of Time Visiting to Hong Kong

customer no. of time to HK

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	133	28.9	28.9	28.9
	2.00	96	20.9	20.9	49.8
	3.00	58	12.6	12.6	62.4
	4.00	15	3.3	3.3	65.7
	5.00	57	12.4	12.4	78.1
	6.00	11	2.4	2.4	80.5
	8.00	5	1.1	1.1	81.6
	9.00	4	.9	.9	82.5
	10.00	47	10.2	10.2	92.7
	20.00	34	7.3	7.3	100.0
	Total	460	100.0	100.0	

Table 8 Customers' Travel Purpose

customer travel purpose

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Business	170	37.0	37.0	37.0
	Leisure	255	55.4	55.4	92.4
	Visiting friends	15	3.3	3.3	95.7
	other	20	4.3	4.3	100.0
	Total	460	100.0	100.0	

Table 9 Customers' No. of Time Staying in the Surveying Hotel

customer no. of time stay in the survey hotel

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	317	68.9	68.9	68.9
	2.00	76	16.5	16.5	85.4
	3.00	31	6.7	6.7	92.1
	4.00	5	1.1	1.1	93.2
	5.00	13	2.8	2.8	96.0
	6.00	3	.7	.7	96.7
	8.00	5	1.1	1.1	97.8
	10.00	5	1.1	1.1	98.9
	10.00+	5	1.1	1.1	100.0
	Total	460	100.0	100.0	

PART IB DEMOGRAPHIC PROFILE OF SUPERVISORS

Table 10 Gender of Supervisor

supervisor gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	116	80.0	80.0	80.0
	Female	29	20.0	20.0	100.0
	Total	145	100.0	100.0	

Table 11 Nationality of Supervisor

supervisor nationality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Hong Kong	110	75.9	75.9	75.9
	UK	28	19.3	19.3	95.2
	Europe	7	4.8	4.8	100.0
	Total	145	100.0	100.0	

Table 12 Age of Supervisor

supervisor age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	21_30	34	23.4	23.4	23.4
	31 40	57	39.3	39.3	62.8
	41 50	38	26.2	26.2	89.0
	51 60	16	11.0	11.0	100.0
	Total	145	100.0	100.0	

Table 13 Education of Supervisor

supervisor education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary	46	31.7	31.7	31.7
	Post Secondar	22	15.2	15.2	46.9
	University	77	53.1	53.1	100.0
	Total	145	100.0	100.0	

Table 14 Income of Supervisor

supervisor income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	$1201-2500	3	2.1	2.1	2.1
	$2501-3800	38	26.2	26.2	28.3
	$3800-5000	75	51.7	51.7	80.0
	$5001-6400	29	20.0	20.0	100.0
	Total	145	100.0	100.0	

Table 15 The Working Year of Supervisor in the Surveying Hotel

supervisor work in this hotel year

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0_3	20	13.8	13.8	13.8
	4 5	38	26.2	26.2	40.0
	6 10	35	24.1	24.1	64.1
	11 15	22	15.2	15.2	79.3
	16 20	30	20.7	20.7	100.0
	Total	145	100.0	100.0	

PART IC DEMOGRAPHIC PROFILE OF HOTEL EMPLOYEES

Table 16 Gender of Staff

staff gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	86	59.3	59.3	59.3
	Female	59	40.7	40.7	100.0
	Total	145	100.0	100.0	

Table 17 Nationality of Staff

staff nationality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	China	14	9.6	9.6	9.6
	Hong Kong	124	85.5	85.5	95.1
	Asian	4	2.8	2.8	97.9
	UK	3	2.1	2.1	100.0
	Total	145	100.0	100.0	

Table 18 Age of Staff

staff age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20 below	6	4.1	4.1	4.1
	21 30	87	60.0	60.0	64.1
	31 40	38	26.2	26.2	90.3
	41 50	10	6.9	6.9	97.2
	51 60	4	2.8	2.8	100.0
	Total	145	100.0	100.0	

Table 19 Education of Staff

staff eudcation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary	79	54.4	54.4	54.4
	Post Secondary	42	29.0	29.0	83.4
	University	24	16.6	16.6	100.0
	Total	145	100.0	100.0	

Table 20 Income of Staff

staff income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	$1200 below	44	30.3	30.3	30.3
	$1201-2500	91	62.8	62.8	93.1
	$2501-3800	10	6.9	6.9	100.0
	Total	145	100.0	100.0	

Table 21 The Working Year of Staff

staff working year

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	48	33.1	33.1	33.1
	2.00	8	5.5	5.5	38.6
	3.00	25	17.2	17.2	55.9
	4.00	18	12.4	12.4	68.3
	5.00	4	2.8	2.8	71.0
	7.00	6	4.1	4.1	75.2
	8.00	16	11.0	11.0	86.2
	9.00	6	4.1	4.1	90.3
	12.00	6	4.1	4.1	94.5
	15.00	6	4.1	4.1	98.6
	31.00	2	1.4	1.4	100.0
	Total	145	100.0	100.0	

PART II FREQUENCY DISTRIBUTION

Table 22 Mean and Standard Deviation

Descriptive Statistics

	N	Mean	Std. Deviation
c1 knowledge to answer	145	6.0632	.61373
c4 polite	145	6.2943	.55660
c5 response quick	145	6.0782	.64060
c19 smile a lot	145	6.0460	.59770
c7 competent	145	6.0000	.67372
c8 understood needs	145	5.5207	.86181
c11 quick service	145	6.1000	.63424
c12 concern my needs	145	5.6885	.81378
c13 sense of repsonsibility	145	5.9713	.60750
c14 follow instruction	145	6.1034	.57570
c15 seldom made mistake	145	5.9207	.73528
c16 act accordingly	145	6.0299	.50658
c17 friendly	145	6.2874	.52226
c9 keep her promises	145	5.4178	.82277
c18 engage small talk	145	4.6184	1.05307
c6 attentive	145	5.7195	.85147
c22 act politely	145	6.220	.5721
c23 satisfied	145	6.1713	.54828
c24 satisfactory interaction	145	6.1586	.56956
percent attriute to repurchase	145	3.8425	.77716
s1 register properly	145	5.4345	1.25728
s2 accommodate cust needs	145	5.6828	.74259
s3 use suggestive selling tecnique	145	5.4207	.70385
s4 repsonse needs quicky	145	5.5103	.96550
s6 aware daily activity	145	4.8690	1.44460
s8 handle cash properly	145	6.0690	.65251
s9 familiarize w/ hotel policy	145	5.3931	1.18613
s10 follow up outstanding item	145	5.4276	1.18289
s11 faimilar w/ hotel facilties	145	5.2276	.96281
s12 courtsous and efficient servic	145	5.7517	.89389
s13 answer telpehone properly	145	5.8483	.92294
s14 greeting courteously	145	5.7241	.91654
s15 clean area	145	5.0828	1.46013
s16 complie room key procedure	145	5.9310	.83878
s17 inform message	145	5.6000	.92346
s18 prepare room lists	145	5.4901	1.08424
s21 willing help others	145	5.7241	.80349
s24 prevent problem	145	5.2552	.95583
s25 quitting	145	5.8138	.98592
s20 helps other absent	145	5.5021	.94235
s27 does not take extra break	145	5.6207	.74600
s28 obeys rule	145	5.8690	.74773
s29 keep abreast chang	145	5.5655	1.22935
s38 give advance notice	145	6.0552	.57469
s43 speak ill of supervisor	145	4.5517	1.04703
s33 pretends busy	145	4.1241	1.49017
s35 resist influence fr other	145	5.0000	1.36931
s36 cooperate well with other	145	5.5586	.92703
s30 focus on what's wrong	145	4.9103	1.24118
s23 orient new comer	145	5.3241	.89662
s44 personal business	145	5.2069	1.37889
s31 attent function	145	6.3517	.94671
t1 commitment	145	5.4897	.97266
t2 show concern to quality	145	5.9448	1.11666
t3 sq as goal	145	6.2897	.69639
t4 involve in sq activity	145	5.8414	.91800
t10 top man concern improve	145	5.5517	1.04037
t11 interact w/ outside group	145	4.9931	1.13955
t12 employee procedure	145	5.2897	.82426
t14 regularly evaluate	145	5.6621	.80984
t15 encourage feedback	145	5.7586	.89299
t16 ongoing guarantee	145	5.6276	.91596
t17 ee suggest are listen	145	5.6915	.96370
t18 goal share w/ ee	145	5.0541	1.13387
t19 feedback on performance	145	5.2103	1.10250
t20 build quality awareness	145	5.5324	.88432
Valid N (listwise)	145		

Part III FACTOR LOADINGS & RELIABILITIES OF FACTORS

Table 23 Results for Factor Analysis - Service Quality

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.907
Bartlett's Test of Sphericity	Approx. Chi-Square	1987.620
	df	136
	Sig.	.000

Total Variance Explained

Compon	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.797	57.630	57.630	9.797	57.630	57.630	3.817	22.452	22.452
2	1.131	6.654	64.284	1.131	6.654	64.284	3.075	18.090	40.543
3	1.011	5.945	70.230	1.011	5.945	70.230	3.073	18.077	58.620
4	.937	5.509	75.739	.937	5.509	75.739	2.910	17.119	75.739
5	.603	3.550	79.289						
6	.566	3.330	82.619						
7	.465	2.737	85.355						
8	.428	2.517	87.873						
9	.382	2.248	90.121						
10	.336	1.975	92.096						
11	.301	1.769	93.865						
12	.269	1.582	95.447						
13	.218	1.285	96.732						
14	.194	1.139	97.870						
15	.147	.866	98.737						
16	.117	.689	99.426						
17	.098	.574	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component			
	1	2	3	4
c4 polite	.839			
c17 friendly	.756			
c19 smile a lot	.707			
c7 competent	.682			
c22 act politely	.641			
c1 knowledge to answer	.541			
c14 follow instruction		.815		
c13 sense of responsibility		.757		
c15 seldom made mistake		.669		
c16 acts accordingly		.655		
c8 understood needs			.784	
c5 response quick			.768	
c11 quick service			.698	
c12 show concern our needs			.559	
c9 keep her promise				.787
c6 attentive				.784
c18 engage small talk				.767

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Table 24 Results for Factor Analysis - In-role Behaviour

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.790
Bartlett's Test of Sphericity	Approx. Chi-Square	2936.612
	df	136
	Sig.	.000

Total Variance Explained

Compon	Initial Eigenvalues			Extraction Sums of Squared Loadin			Rotation Sums of Squared Loadin		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.480	55.766	55.766	9.480	55.766	55.766	7.036	41.391	41.391
2	3.080	18.119	73.885	3.080	18.119	73.885	3.949	23.231	64.621
3	1.263	7.427	81.312	1.263	7.427	81.312	2.837	16.691	81.312
4	.592	3.481	84.793						
5	.528	3.103	87.897						
6	.437	2.569	90.466						
7	.310	1.822	92.288						
8	.255	1.502	93.790						
9	.222	1.304	95.094						
10	.192	1.128	96.222						
11	.160	.941	97.163						
12	.145	.855	98.019						
13	.108	.638	98.657						
14	.087	.512	99.169						
15	.057	.335	99.504						
16	.050	.297	99.800						
17	.034	.200	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component		
	1	2	3
s1 register guest	.918		
s18 prepare roomlist in advance	.902		
s8 handle cash properly	.882		
s10 follow up outstanding	.868		
s17 inform message	.854		
s13 answer telpehone properly	.833		
s14 greet guest	.774		
s15 clean area	.736		
s16 complie room key procedure	.684	.458	
s3 use suggestive selling tecnique	.657		
s12 courtsous and efficient service		.883	
s2 accommodate cust needs		.797	
s4 repsonse needs quicky		.821	
s11 faimilar w/ cultureal activities			.924
s6 aware daily activities			.872
s9 familiar w policy			.827

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Table 25 Results for Factor Analysis - Organizational Citizenship Behaviour

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.667
Bartlett's Test of Sphericity	Approx. Chi-Square	2437.131
	df	190
	Sig.	.000

Total Variance Explained

Compon	Initial Eigenvalues			Extraction Sums of Squared Loadi			Rotation Sums of Squared Loadir		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.635	28.970	28.970	4.635	28.970	28.970	3.304	20.650	20.650
2	2.454	15.335	44.305	2.454	15.335	44.305	2.847	17.794	38.444
3	2.246	14.040	58.345	2.246	14.040	58.345	2.588	16.173	54.617
4	1.839	11.493	69.838	1.839	11.493	69.838	2.435	15.220	69.838
5	1.176	7.349	77.187						
6	.796	4.978	82.165						
7	.622	3.886	86.051						
8	.500	3.128	89.179						
9	.488	3.048	92.227						
10	.375	2.345	94.572						
11	.267	1.672	96.243						
12	.189	1.181	97.425						
13	.146	.912	98.337						
14	.116	.727	99.064						
15	.088	.553	99.617						
16	.061	.383	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component			
	1	2	3	4
s43 speak ill of supervisor	.936			
s44 conduct personal busine	.900			
s25 talks about quitting	.705			
s30 focus on what's wrong	.677			
s21 willing help others		.892		
s20 helps other absent		.883		
s23 orient new comer		.722		
s36 cooperate well with othe		.672		
s24 prevent problem			.852	
s29 keep abreast chang			.820	
s33 pretends busy			.702	
s31 attent function			.678	
s27 not take extra break				.882
s38 give advance notice				.803
s28 obeys rule				.632

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Table 26 Results for Factor Analysis - Total Quality Management

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.861
Bartlett's Test of Sphericity	Approx. Chi-Square	1396.180
	df	91
	Sig.	.000

Total Variance Explained

Compon	Initial Eigenvalues			action Sums of Squared Loadi			tation Sums of Squared Loadir		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.156	51.115	51.115	7.156	51.115	51.115	3.413	24.381	24.381
2	1.497	10.692	61.807	1.497	10.692	61.807	2.848	20.343	44.724
3	1.103	7.881	69.688	1.103	7.881	69.688	2.407	17.194	61.918
4	.956	6.826	76.514	.956	6.826	76.514	2.043	14.595	76.514
5	.642	4.585	81.099						
6	.539	3.853	84.952						
7	.493	3.519	88.471						
8	.369	2.632	91.104						
9	.298	2.129	93.233						
10	.276	1.975	95.207						
11	.213	1.521	96.729						
12	.188	1.342	98.071						
13	.154	1.099	99.169						
14	.116	.831	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix[a]

	Component			
	1	2	3	4
t18 goal share w/ ee	.871			
t19 feedback on perf. to ee	.819			
t17 listen ee suggestion	.784			
t20 build sq awareness	.703			
t3 sq as goal		.698		
t2 show concern to quality		.742		
t4 involve in sq activity		.821		
t1 commitment		.686		
t11 interact w/ outside group			.883	
t12 employee procedure			.776	
t10 top man concern improve			.677	
t15 encourage feedback				.916
t16 ongoing guarantee				.709
t14 regularly evaluate				.606

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Part IV RELIABILITIES OF FACTORS

Table 27 Reliability of Service Quality

Empathy

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
ATTE_C6	10.3379	3.1539	.8084	.8602
TALK_C18	11.1373	2.4166	.8148	.8397
PROM_C9	10.0362	3.1337	.7744	.8370

Reliability Coefficients

N of Cases = 145.0 N of Items = 3

Alpha = .8919

Responsiveness

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
RESPO_C5	17.3092	3.7885	.7575	.7845
NEED_C8	17.8667	3.1337	.7248	.7940
QUIC_C11	17.2874	3.9337	.6963	.8078
CON_C12	17.6989	3.5374	.6168	.8405

Reliability Coefficients

N of Cases = 145.0 N of Items = 4

Alpha = .8476

Reliability

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
SENS_C13	18.0540	2.3897	.7612	.7915
INST_C14	17.9218	2.5050	.7419	.8016
MIST_C15	18.1046	2.1552	.6914	.8338
ACT_C16	17.9954	2.8246	.6502	.8409

Reliability Coefficients

N of Cases = 145.0 N of Items = 4

Alpha = .8565

Assurance

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
COMP_C7	30.9103	5.9352	.8150	.9038
POLIT_C4	30.6161	6.5595	.7699	.9093
KNOW_C1	30.8471	6.5144	.6937	.9198
FRIE_C17	30.6230	6.5137	.8545	.8998
POLI_C22	30.6908	6.6000	.7270	.9147
SMIL_C19	30.8644	6.2326	.8292	.9009

Reliability Coefficients

N of Cases = 145.0 N of Items = 6

Alpha = .9223

Table 28 Reliability of In-role Behaviour

Compliance with Customers' Requests

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
SPEC_S2	16.2621	9.9031	.7653	.9254
RESPI_S4	16.4966	8.8628	.8159	.9079
EFF_S12	16.3586	8.3844	.8855	.8840

Reliability Coefficients

N of Cases = 145.0 N of Items = 3

Alpha = .9062

Knowledge

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
AWAR_S6	11.0483	3.5463	.8810	.8491
POLI_S9	10.6483	4.4518	.8618	.8611
FFAC_S11	11.2966	4.6962	.7810	.9219

Reliability Coefficients

N of Cases = 145.0 N of Items = 3

Alpha = .9168

Compliance with Procedures

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
SELL_S3	48.7034	81.1406	.6365	.9579
CASH_S8	49.2552	66.2330	.9096	.9474
REG_S1	49.3724	69.6937	.8979	.9471
CLEA_S15	48.7310	71.9063	.8601	.8944
GREE_S14	48.3724	75.7215	.8476	.9505
TELE_S13	48.2759	74.8817	.8748	.9493
FOLL_S10	49.0414	67.5261	.8355	.9515
KEYP_S16	48.1931	77.7263	.7625	.9536
MESS_S17	48.5241	74.6817	.8879	.9489
PKEY_S18	48.6483	70.6879	.7912	.9523

Reliability Coefficients

N of Cases = 145.0 N of Items = 10

Alpha = .9357

Table 29 Reliability of Organizational Citizenship Behaviour

Compliance

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
BREA_S27	11.9241	1.1956	.7052	.5123
NOTI_S38	11.4897	1.7239	.5504	.7488
OBEY_S28	11.6759	1.4289	.5622	.7021

Reliability Coefficients

N of Cases = 145.0 N of Items = 3

Alpha = .7528

Altruism

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
HELP_S20	16.6069	4.6986	.6508	.7629
HELP_S21	16.3862	4.6693	.8457	.6795
ORIE_S23	16.7862	5.2109	.5564	.8104
COOP_S36	16.5517	5.1240	.5504	.8150

Reliability Coefficients

N of Cases = 145.0 N of Items = 4

Alpha = .8163

Civic Virtue

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
PREV_S24	16.0414	8.3038	.6971	.6640
KCHA_S29	15.7310	7.6563	.5717	.7104
FUNC_S31	14.9448	9.2330	.5890	.7453
PRET_S33	17.1724	6.4631	.5772	.7292

Reliability Coefficients

N of Cases = 145.0 N of Items = 4

Alpha = .7674

Sportsmanship

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
QUIT_S25	19.6690	15.4035	.5403	.7782
SPEA_S43	20.9310	13.3008	.8006	.7029
COND_S44	20.2759	11.5761	.7454	.7017
FOCU_S30	20.5724	14.2603	.5075	.7809
RESI_S35	20.4828	14.5153	.4093	.8122

Reliability Coefficients

N of Cases = 145.0 N of Items = 5

Alpha = .8009

Table 30 Reliability of Total Quality Management

Continuous Improvement

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
MGAS_T10	10.2828	3.1348	.6536	.7380
QIMP_T11	10.8414	2.8149	.6569	.7483
PROC_T12	10.5448	3.7358	.6936	.7253

Reliability Coefficients

N of Cases = 145.0 N of Items = 3

Alpha = .8071

Customer Focus

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
EVAL_T14	11.3862	1.8637	.5980	.7596
FEED_T15	11.2897	1.7905	.6619	.6788
COMM_T16	11.4207	1.9815	.6437	.7033

Reliability Coefficients

N of Cases = 145.0 N of Items = 3

Alpha = .7894

Top Management Commitment

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
COMMI_T1	18.0759	5.1817	.6951	.7547
CONCE_T2	17.6207	4.5843	.7057	.7560
CGOAL_T3	17.2759	6.4650	.6370	.7957
MGCOM_T4	17.7241	5.7011	.6072	.7954

Reliability Coefficients

N of Cases = 145.0 N of Items = 4

Alpha = .8234

Employee Involvement

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
LIST_T17	15.8828	9.4237	.8028	.9055
GOSH_T18	15.7517	9.2574	.8333	.8948
FEED_T19	15.6897	9.8127	.7942	.9078
AWAR_T20	15.6759	9.6234	.8550	.8883

Reliability Coefficients

N of Cases = 145.0 N of Items = 4

Alpha = .9224

Table 31 Model Fit and Standardized Regression Weights for the Measurement Model of Service Quality

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	8	3.409	2	.182	1.705
Saturated model	10	.000	0		
Independence model	4	408.140	6	.000	68.023

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.004	.988	.940	.198
Saturated model	.000	1.000		
Independence model	.173	.383	-.028	.230

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.992	.975	.997	.989	.996
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.333	.331	.332
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	1.409	.000	10.788
Saturated model	.000	.000	.000
Independence model	402.140	339.583	472.104

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.024	.010	.000	.075
Saturated model	.000	.000	.000	.000
Independence model	2.834	2.793	2.358	3.279

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.070	.000	.194	.290
Independence model	.682	.627	.739	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	19.409	19.985	43.223	51.223
Saturated model	20.000	20.719	49.767	59.767
Independence model	416.140	416.428	428.047	432.047

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.135	.125	.200	.139
Saturated model	.139	.139	.139	.144
Independence model	2.890	2.455	3.376	2.892

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	254	390
Independence model	5	6

Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
ASS <--- SQ	1.000				
RESP<--- SQ	1.182	.092	12.884	***	par_1
REL <--- SQ	.981	.078	12.552	***	par_2
EMP <--- SQ	1.197	.086	13.992	***	par_3

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
ASS <--- SQ	.871
RESP<--- SQ	.832
REL <--- SQ	.832
EMP <--- SQ	.886

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
SQ	.187	.029	6.430	***	par_4
e5	.059	.010	5.908	***	par_5
e6	.116	.017	6.657	***	par_6
e7	.080	.012	6.688	***	par_7
e8	.073	.013	5.512	***	par_8

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
EMP	.785
REL	.693
RESP	.692
ASS	.759

Table 32 Model Fit and Standardized Regression Weights for the Measurement Model of TQM

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	8	4.057	2	.132	2.028
Saturated model	10	.000	0		
Independence model	4	347.527	6	.000	57.921

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.003	.986	.932	.197
Saturated model	.000	1.000		
Independence model	.066	.426	.044	.256

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.988	.965	.994	.982	.994
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.333	.329	.331
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	2.057	.000	12.020
Saturated model	.000	.000	.000

Model	NCP	LO 90	HI 90
Independence model	341.527	284.123	406.342

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.028	.014	.000	.083
Saturated model	.000	.000	.000	.000
Independence model	2.413	2.372	1.973	2.822

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.085	.000	.204	.227
Independence model	.629	.573	.686	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	20.057	20.632	43.871	51.871
Saturated model	20.000	20.719	49.767	59.767
Independence model	355.527	355.815	367.434	371.434

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.139	.125	.208	.143
Saturated model	.139	.139	.139	.144
Independence model	2.469	2.070	2.919	2.471

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	213	327
Independence model	6	7

Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
CF <--- TQM	1.000				
IP <--- TQM	1.078	.095	11.405	***	par_1
CPL <--- TQM	.839	.077	10.928	***	par_2
EI <--- TQM	.854	.062	13.804	***	par_3

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
CF <--- TQM	.948
IP <--- TQM	.749
CPL <--- TQM	.730
EI <--- TQM	.835

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
TQM	.095	.013	7.308	***	par_4
e5	.011	.004	2.636	.008	par_5
e6	.087	.012	7.523	***	par_6
e7	.059	.008	7.642	***	par_7
e8	.030	.005	6.480	***	par_8

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
EI	.698
CPL	.532
IP	.561
CF	.898

Table 33 Model Fit and Standardized Regression Weights for the Measurement Model of Organisational Citizenship Behaviour

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	9	2.298	1	.038	2.298
Saturated model	10	.000	0		
Independence model	4	447.438	6	.000	74.573

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.005	.986	.855	.099
Saturated model	.000	1.000		
Independence model	.187	.389	-.019	.233

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.990	.942	.993	.955	.993
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.167	.165	.165
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	3.298	.121	13.824
Saturated model	.000	.000	.000

Model	NCP	LO 90	HI 90
Independence model	441.438	375.745	514.537

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.030	.023	.001	.096
Saturated model	.000	.000	.000	.000
Independence model	3.107	3.066	2.609	3.573

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.081	.029	.310	.074
Independence model	.715	.659	.772	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	22.298	22.946	49.089	58.089
Saturated model	20.000	20.719	49.767	59.767
Independence model	455.438	455.726	467.345	471.345

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.155	.133	.228	.159
Saturated model	.139	.139	.139	.144
Independence model	3.163	2.707	3.670	3.165

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	129	223
Independence model	5	6

Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
CV <--- OCB	1.000				
COM <--- OCB	1.394	.157	8.883	***	par_1
SPM <--- OCB	1.466	.152	9.624	***	par_2
ALT <--- OCB	1.753	.190	9.213	***	par_3

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
CV <--- OCB	.642
COM <--- OCB	.887
SPM <--- OCB	.868
ALT <--- OCB	.959

Covariances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
e4 <--> e2	.026	.012	2.160	.031	par_4

Correlations: (Group number 1 - Default model)

	Estimate
e4 <--> e2	.217

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
OCB	.119	.028	4.205	***	par_5
e4	.170	.021	8.069	***	par_6
e3	.063	.010	6.155	***	par_7
e2	.083	.013	6.599	***	par_8
e1	.032	.012	2.726	.006	par_9

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
ALT	.919
SPM	.754
COM	.786
CV	.412

Table 34 Standardized Regression Weights for the Measurement Model of In-role Behaviour

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	5	.389	1	.533	.389
Saturated model	6	.000	0		
Independence model	3	101.335	3	.000	33.778

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.011	.998	.989	.166
Saturated model	.000	1.000		
Independence model	.228	.722	.444	.361

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.996	.988	1.006	1.019	.990
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.333	.332	.333
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	.000	.000	5.058
Saturated model	.000	.000	.000
Independence model	98.335	69.093	134.998

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.003	.000	.000	.035
Saturated model	.000	.000	.000	.000
Independence model	.704	.683	.480	.937

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.030	.000	.187	.601
Independence model	.477	.400	.559	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	10.389	10.675	25.273	30.273
Saturated model	12.000	12.343	29.860	35.860
Independence model	107.335	107.507	116.265	119.265

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	.072	.076	.112	.074
Saturated model	.083	.083	.083	.086
Independence model	.745	.542	1.000	.747

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	1423	2457
Independence model	12	17

Estimates (Group number 1 - Default model)

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
PRO <--- IN	.686
cus <--- IN	.394
KNO <--- IN	.252

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
IN	.354	.075	4.706	***	par_3
e10	.281	.043	6.236	***	par_4
e11	.398	.047	8.485	***	par_5
e9	.722	.085	8.485	***	par_6

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
KNO	.063
cus	.172
PRO	.470

Table 35 Standardized Regression Weights for the Structural Model

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	49	100.542	71	.012	1.416
Saturated model	120	.000	0		
Independence model	15	1218.356	105	.000	11.603

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.027	.924	.871	.547
Saturated model	.000	1.000		
Independence model	.113	.357	.266	.313

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.917	.878	.974	.961	.973
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.676	.620	.658
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

NCP

Model	NCP	LO 90	HI 90
Default model	29.542	6.950	60.154
Saturated model	.000	.000	.000
Independence model	1113.356	1004.706	1229.434

FMIN

Model	FMIN	F0	LO 90	HI 90
Default model	.698	.205	.048	.418
Saturated model	.000	.000	.000	.000
Independence model	8.461	7.732	6.977	8.538

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.054	.026	.077	.381
Independence model	.271	.258	.285	.000

AIC

Model	AIC	BCC	BIC	CAIC
Default model	198.542	210.792	344.402	393.402
Saturated model	240.000	270.000	597.208	717.208
Independence model	1248.356	1252.106	1293.007	1308.007

ECVI

Model	ECVI	LO 90	HI 90	MECVI
Default model	1.379	1.222	1.591	1.464
Saturated model	1.667	1.667	1.667	1.875
Independence model	8.669	7.915	9.475	8.695

HOELTER

Model	HOELTER .05	HOELTER .01
Default model	132	146
Independence model	16	17

Estimates (Group number 1 - Default model)

Maximum Likelihood Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
OCB	<---	TQM	.315	.142	2.224	.026	par_13
INROLE	<---	TQM	.468	.147	3.182	.001	par_14
SQ	<---	TQM	.956	.166	5.756	***	par_12
SQ	<---	OCB	1.000				
SQ	<---	INROLE	.723	.262	2.756	.006	par_15
EI	<---	TQM	1.000				
CPL	<---	TQM	.993	.102	9.754	***	par_1
IP	<---	TQM	1.279	.126	10.126	***	par_2
CF	<---	TQM	1.138	.090	12.670	***	par_3
CV	<---	OCB	.997	.200	4.973	***	par_4
COM	<---	OCB	.454	.136	3.350	***	par_5
SPM	<---	OCB	1.000				
ALT	<---	OCB	1.654	.354	4.678	***	par_6
PRO	<---	INROLE	1.000				
CUS	<---	INROLE	.364	.391	5.537	***	par_7
KNO	<---	INROLE	.687	.116	5.941	***	par_8
REL	<---	SQ	1.000				
ASS	<---	SQ	.972	.134	7.270	***	par_9
RESP	<---	SQ	1.072	.118	9.115	***	par_10
EMP	<---	SQ	1.166	.118	9.857	***	par_11

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
OCB	<---	TQM	.248
INROLE	<---	TQM	.366
SQ	<---	TQM	.631
SQ	<---	OCB	.838
SQ	<---	INROLE	.611
EI	<---	TQM	.801
CPL	<---	TQM	.743
IP	<---	TQM	.763
CF	<---	TQM	.927
CV	<---	OCB	.580
COM	<---	OCB	.277
SPM	<---	OCB	.382
ALT	<---	OCB	.787
PRO	<---	INROLE	.470
CUS	<---	INROLE	.840
KNO	<---	INROLE	.730
REL	<---	SQ	.780
ASS	<---	SQ	.662
RESP	<---	SQ	.754
EMP	<---	SQ	.828

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
TQM	.070	.012	5.703	***	par_31
e21	.106	.044	2.439	.015	par_32
e23	.100	.039	2.590	.010	par_33
e22	.082	.018	4.500	***	par_34
e5	.039	.006	6.982	***	par_35
e6	.057	.008	7.436	***	par_36
e7	.082	.011	7.283	***	par_37
e8	.015	.004	3.525	***	par_38
e4	.222	.028	7.902	***	par_39

	Estimate	S.E.	C.R.	P	Label
e3	.281	.034	8.297	***	par_40
e2	.365	.080	8.343	***	par_41
e1	.191	.034	5.578	***	par_42
e13	.407	.052	7.871	***	par_43
e14	.225	.050	4.519	***	par_44
e15	.048	.007	6.766	***	par_45
e12	.104	.016	6.373	***	par_46
e11	.231	.029	8.000	***	par_47
e10	.141	.021	6.619	***	par_48
e9	.101	.018	5.490	***	par_49

Squared Multiple Correlations: (Group number 1 - Default model)

	Estimate
INROLE	.134
OCB	.062
SQ	.490
EMP	.686
RESP	.568
ASS	.338
REL	.608
KNO	.533
CUS	.706
PRO	.221
ALT	.619
SPM	.146
COM	.077
CV	.337
CF	.860
IP	.583
CPL	.552
EI	.641