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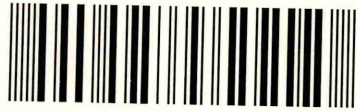
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BUSINESS EXCELLENCE FOR THE HONG KONG HOTEL INDUSTRY

LIU, CHUN KIT

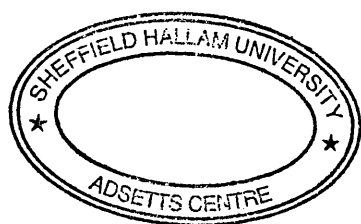
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BUSINESS EXCELLENCE FOR THE HONG KONG HOTEL INDUSTRY

ABSTRACT

The purpose of this research is to understand the state of art of total quality management in Hong Kong Hotel Industry and to develop a model of business excellence to help monitor and guide hoteliers in search of excellence. With this in mind, a preliminary study was conducted to understand the concepts, management practices, barriers to their implementations and future plan that are pertinent to total quality management.

Founded on Kanji's Business Excellence Model, the Business Excellence Model for Hong Kong Hotel Industry is developed, tested and applied using survey data from 28 members of the Hong Kong Hotels Association and the questionnaires are mainly responded by directorates of the hotels. To compliment the business excellence study, over 2,400 interviews were made from guests of 62 hotels to set up a customer satisfaction index for Hong Kong Hotel Industry. A full-scale study on customer satisfaction for three international and two Asian hotels is included as a case study.

Five critical success factors are identified in the preliminary study and they are People Management, External Customer-Satisfaction, Teamwork, Internal Customer-Satisfaction and Leadership. Under staffing is the major barrier to the hotel's implementation of TQM in terms of both frequency and degrees of difficulty, and the approach believed to be short-lived gimmicks or fads comes second.

The customer satisfaction survey 1999 reveals that *Customer Satisfaction* is mainly influenced by both *Expectation* and *Perceived Quality*. This, perhaps, gives the hoteliers the starting points for improving their customer satisfactions.

Contrasts between the two groups of hotels in the case study reveal that the Asian group outperforms the International group of hotels in all the five dimensions of the Customer Satisfaction Model for both sexes and for both ethnic groups of White and Chinese. This indicates that the difference is something fundamental, perhaps in their quality cultures, quality initiatives and, most importantly, leaderships.

C. K. LIU

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The author wishes to take this opportunity to thank himself for making this seemingly unreachable task of completing the present volume in 37 days, from start (18/6/2001) to finish (24/7/2001).

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1. INTRODUCTION

The business environment has been gloomy ever since the financial turmoil of October 1997, which adversely affected the economies of the whole Asia, and the aftermath is not over for Hong Kong. Unemployment remains high at 4.6% (Harrison, 2001b) ever since (HKMDS, 2001, p. 12), and it is likely to rise due to the amalgamations, consolidations and restructuring taking place in the local banking industry — particularly for the 12 members of the Hong Kong China Bank Group — to strengthen competitiveness as well as to maintain market-shares. Prices are going down slowly with no sign of revival for the property market (Harrison, 2001c). Hundreds of thousands of people spend their weekends in Shenzhen, taking away with it a lot of the businesses for the Hong Kong retail industries and the trend is growing.

As a major trade partner of Hong Kong, the US economic outlook for the second half of the year will not be as good (Harrison, 2001c; Lo, 2001), bringing down the local economic growth forecast for the year 2001 to 3% by the Government of HKSAR (Lo, 2001), 3.3% by Credit Suisse First Boston (CSFB) (Harrison, 2001a), 2.6% by the Deutsche Bank (Harrison, 2001b), 3.5% by the International Monetary Fund (IMF), 3.1% by Merrill Lynch, 2.5% by the National Australia Bank and 1.1% by the Asia Pacific Economic Co-operation (Apec), the lowest prediction yet made (Shamdasani et. al., 2001).

All these point to the fact that Hong Kong economy is going into deep trouble!

Crisis and opportunity are the two sides of the mirror, depending on how one sees the situation. Each time when there are crisis, there will be new opportunities, developments or even inventions, as documented in the British television series the Chain Reactions back in the late 1970s.

After the First World War, developments in agricultural research grew fast that gave birth to R. A. Fisher's F-distribution and, subsequently, the wide range of experimental designs (Fisher, 1947) aimed at the efficient use of land and fertilizers to increase crop yield as consequence to the urgent needs for food.

The field of management science, now termed decision science largely because of Carney and Williams (1997), arose during the Second World War, when there was a critical need to manage scarce resources. The British Air Force formed the first group to develop quantitative methods for solving these operational problems and named their efforts *operational research* (OR). Soon, the American armed forces formed a similar group, consisting physical scientists and engineers, five of whom later became Nobel laureates (Mathur & Solow, 1994, p. 3).

After the Second World War, in Japan, with its peculiar tradition of life-long employment and in a devastating state, Drs W. E. Deming and J. M. Juran were sent from the US to help rebuild its damaged industries (Kanji, 1990). Quality circles were formed voluntarily to discuss initially production problems faced on the shopfloor and subsequently product quality. These early steps were later extended to company-wide quality control (CWQC) and developed into the early framework for total quality management (TQM).

To defend the value of the Hong Kong currency and the stock market from the financial crisis of 1997, the Government of the Hong Kong Special

Administrative Region took radical reforms — widening the monetary base, removing doubts over short-selling and improving the monitoring of capital flow — and made incursion into the stock and futures markets which received a lot of controversies at the time. In defending the economy, \$118.1 billion was mobilised. (Tsang, HK Financial Secretary, 1999, pp.1-6)

Plans to revive the economy include: (ISD, 2000, pp.277-280)

1. development of Cyberport
2. development of Science Park
3. construction of the west rail;
4. construction of the Ma On Shan to Tai Wai rail link;
5. construction of the Kowloon-Canton Railway (KCR) extension from Hung Hom to Tsim Sha Tsui;
6. construction of the Sheung Shui to Lok Ma Chau spur line;
7. construction of the Mass Transit Railway (MTR) Tseung Kwan O extension;
8. development of the Hong Kong Disneyland which will comprise of a Disney theme park, a 1,400-room resort hotel complex and a retail, dining and entertainment centre, and;
9. the upgrading of the Hong Kong Tourist Association to the Hong Kong Tourist Board, reflecting the government's determination to promote tourism.

All these aim to increase business activities and employment, with immediate benefit to the construction industry but the hotel and tourism

industries will benefit in the long run, in addition to creating revenue for Hong Kong.

Compounded with our sluggish economy, the fact, that competition has intensified as globalization is taking place in almost all walks of life, makes survival and sustaining profitability to become top priorities (Min & Min, 1997) for business corporations as well as for governments, particularly for the Hong Kong SAR in order to uphold the smooth transition of sovereignty under the principle of '*One Country Two Systems*' (Chow & Fan, 1999, pp.xxvii-xxxix).

The contribution to GDP of the tertiary services sector (comprising wholesale, retail and import/export trades, restaurants and **hotels**; transport, storage and communications; financing, insurance, real estate and business services; community, social and personal services; and ownership of premises) rose distinctly, from 67% in 1980 to 74% in 1990, and further to 84.7% in 1998. The wholesale, retail and import/export trades, restaurants and **hotels** service sector alone, in 1999, accounted for 25.2% of GDP (HKMDS, 2001, p.194) and 31.5% of total employment. (ISD, 2000, pp.45-48)

And **Business Excellence** has an important role to play in the services sector in general, and in the **hotel industry** in particular, to help sustain profitability and prosperity of the Hong Kong economy.

1.1 TOTAL QUALITY MANAGEMENT, CUSTOMER SATISFACTION AND BUSINESS EXCELLENCE

Total Quality Management (TQM) is an enhancement to the tradition way of doing business. It is a proven technique to guarantee survival in world-class competition. Only by changing the actions of management will the culture and actions of an entire organisation be transformed. TQM is

for the most part common sense as Besterfield et al (1999, p.1) put it. Analysing the three words, we have

Total — That made up of the whole.

Quality — Degree of excellence a product or service provides.

Management — Act, art, or manner of planning, organising, leading and controlling. (Stoner & Freeman, 1992, pp.8-9)

Therefore, TQM is the art of managing the whole to achieve excellence, and particularly excellence that leads to profits.

Cartin (1993) and Besterfield et al (1999, p.1) also give definitions of TQM in segregate form and they all carry similar meaning as above. But, Kanji (1990) expresses it in a different way, linking quality as customer's requirements with low cost and employee involvement, including commitment from top management.

Quality is something that is difficult to express or define explicitly and directly (and hence a latent variable). Usually, it is expressed by drawing examples or referring to other's achievements. Some define it at the micro-level while others on a macro-level like the *Little Q* and *Big Q* of Juran's (1992, p.12). And that, quality, like other human activities, is evolving as the earth rotates. The work of gurus and experts of TQM, such as Deming (1986), Juran (1989), Crosby (1979, 1996a, 1996b), Feigenbaum (1986, 1996), Ishikawa (1985) and Kanji (1990, 1994), can be found in most TQM literature and it is briefly described by Liu (1996).

Here, definitions as expressed by various gurus and experts of TQM are refreshed; works on TQM by other people are reviewed, adding to the inventory of Liu (1996); citations related to the Hotel Industry will be given in section 1.2.

Authority	Definition/Meaning of Quality
Collins Cobuild English Language Dictionary (1987)	<ul style="list-style-type: none"> • The standard of something, and how good or bad it is in relation to other things of the same kind; • a high standard; • a characteristic like kindness, honesty, or magnificence that is part of the nature of a person or thing; • a physical characteristic of a substance or object.
Oxford English Dictionary on Compact Disc (2/ed.)	<ul style="list-style-type: none"> • The degree of excellence; • all the attributes of a thing; • peculiar excellence or superiority.
Deming (1986)	Should be aimed at the needs of customer, present and future.
Juran (1992)	Fitness for purpose or use.
Crosby(1979)	Conformance to requirements.
Feigenbaum (1986)	The total composite product and service characteristics of marketing, engineering, manufacturing and maintenance through which the product and service in use will meet the expectation by the customer.
British Standard 4778 (1987); ISO 8402 (1986)	The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.
Broh (1982)	The degree of excellence at an acceptable price and the control of variability at an acceptable cost.
Garvin (1988)	The eight dimensions of quality — performance, feature, reliability, conformance, durability, serviceability, aesthetics, and perceived quality.
Berry et al (1990)	The five principal dimensions of service quality — reliability, responsiveness, assurance, empathy, and tangibles.
Kanji (1990)	To satisfy customer's requirements continually.
Uslac (1993)	An attribute of a product or service that can be improved. It is not only products and services but also includes PROCESS, ENVIRONMENT, and PEOPLE.

Table 1: *Definitions of Quality*

Definition of 'Quality' (see table 1 above) evolves, over the years, from RESULT aspect to PEOPLE aspect and PROCESS aspect (Goetsch & Davis, 2000, p.48; Kanji, 1990). While, on the research front, the focus has moved from *Quality Control* (Shewhart, 1931) and *Total Quality Control* (Feigenbaum, 1951; Ishikawa, 1985) through *Total Quality Management* (Oakland, 1989; Kanji, 1990), and *Customer Satisfaction*

(Hunt, 1977, pp.455-488; Oliver, 1980; LaBarbera and Mazursky, 1983) to *Relationship Quality* (Evans & Crosby, 1989, pp.58-63; Crosby et al, 1990), *Critical Success Factors* and *Business Excellence* (Hofer & Schendel, 1978; Jenster, 1984; Boynton & Zmud, 1984; Carr & Littman, 1990; Zeller & Gillis, 1995; Kanji, 1996).

These evolutions reflect the ever-changing needs of the customers and the corresponding shift of research foci from both academia and practitioners in all fields of management (Hackman & Oldham, 1976; Hauser et al, 1995) including TQM (Kanji et. al., 1993; Black & Porter, 1996; Barnes & Morris, 2000), psychology (House, 1980; Spreitzer, 1995) and, in particular, marketing (Zeithaml, 1988; Rust & Zahorik, 1993; Griffin & Hauser, 1993).

In fact, quality control (QC) techniques have been used extensively in the production line since the Shewhart (Shewhart, 1931) era of the 1930s. Sampling inspection plans are designed to minimise the number of inspections and yet conform to the specification on the size of type I and type II errors (Kanji, 1993, pp.2-3; Li, 1997, pp.120-125). The use of these sampling plans is tantamount to accepting the fact that defects are inevitable however small the probability. Further, the after-the-event nature makes it totally inapplicable in the service sector for, in the customer's mind, a bad experience has been encountered. Once the damage is done, whoever the fault is attributed to becomes immaterial (Peters, 1999). In this respect, QC is no longer adequate for the purpose of quality assurance. It is merely for quality monitoring, and not for quality improvement (McManus, 1994).

The way out is to have a simple (Peters, 1999) and fail-safe (Chase & Stewart, 1994) system with potential mistakes being designed out (Peters, 1999). This is quality by design (Juran, 1992; Peters, 1999; Sethi, 2000)

right at the beginning, other components being fed into gearing up to the same destination — business excellence — and, most importantly, with customer care (Dotchin & Oakland, 1993). Why simplicity? It is because the simpler a service or production process is, and the simpler the surrounding and supporting processes, the more likely they are to be right. Why designing out mistakes? It is because once a mistake is made, it intends to be expensive and difficult to rectify. If there is an inherently complex service process, it is best off trying to design it so mistakes are less likely to occur, rather than trying to catch them when they do. (Peters, 1999).

The equation:

$$\text{Profit} = \text{Revenue} - \text{Cost}$$

is fundamental to both economists and accountants. A lot of attention has been put in the past by accountants, TQM experts and practitioners to control cost through better use of manpower and resources — by employing OR (Taha, 1997) and material requirements planning (MRP) I & II (Russell & Taylor, 2000, pp.653-698) methods — to reduce waste (Crosby, 1979; Juran & Gryna, 1993) on the production line; by improving internal coordination among departments through internal customer is real (Kanji & Asher, 1993; Peters, 1999). The marketer, on the other hand, focuses on ways to increase sales and, thus, revenue by examining the effects of extrinsic product cues on consumers' perceptions of quality, sacrifice, and value (Teas & Agarwal, 2000) and to try to close the gap between consumers' requirement, or expectation, of a particular aspect of a stage in the marketing and provision of a service (Dotchin & Oakland, 1994). And, the economist looks at the national account, the outcome of all business activities, at a macro-level.

Attention has shifted from product quality to service quality and customer satisfaction. Producing product/service that customers want, that is meeting customer expectation (Deming, 1986; Feigenbaum, 1986; Kanji, 1990), becomes the golden tenet of profitability. And developing a long-term relationship with customer will sustain long-term profitability (Fanjoy, 1994). This opens up a new horizon for research in quality relationship (Evans & Crosby, 1989; Crosby et al, 1990; Grönroos, 1994; Mattsson, 1997; Shamdasani & Balakrishnan, 2000), linking dimensions of customer-firm interaction (contact personnel, physical environment and customer environment) to relationship quality (trust and satisfaction) and eventually to relationship outcome (loyalty) (Shamdasani & Balakrishnan, 2000) as given in figure 5. And Fanjoy (1994) suggests a method of annuitization to quantify, in financial terms, the future value of customer retention in an attempt to solve the compensation paradox — sales personnel gets reward for both the primary sale and the expected sale while the service and support personnel, in his simplified example and it is true in most cases, who satisfies customers with quality after-sale-service receives no incremental reward. But, Reinartz and Kumar (2000) warn that long-life customers are not necessarily profitable customers.

The ultimate goal for businesses of all kind is excellence, particularly the excellence that can sustain long-term profitability. Since customer satisfaction, customer loyalty and business excellence are all crucial to sustained profitability, it is difficult to just analysing business excellence without due consideration of the other two components.

Shamdasani and Balakrishnan (2000) studied the determinants of relationship quality and loyalty in personalized services. Their research findings demonstrate that different aspects of the customer-firm interface, namely, contact personnel, physical and customer environments are

important in enhancing relationship quality for high-end and low-end service providers. The results imply the need for a service firm to strategically leverage on the key customer-firm antecedents of relationship quality in its pursuit of customer retention and loyalty.

Kristensen and Martensen (1996) fit Fornell's (1992) model into an economic framework, by relating customer satisfaction to bottom-line profitability. They found that if company resources have been allocated optimally "the degree to which you live up to customer expectations should be a linear function of the contribution to loyalty". This logical conclusion will improve the interpretation of the results of customer satisfaction studies.

Peters (1999) illustrates, with examples, the need of a true TQM perspective to cover the full supply chain, both backward and forward. And TQM must keep its eye on the customer as the final arbiter of whether a quality output is produced. One interesting thing he points out is the asymptotic effect on "delighting" a customer or exceeding expectations. When expectations are regularly exceeded, a new expectation benchmark is set, which fits into what has been described by the prospect theory (Kahneman & Tversky, 1979; Bazerman, 1998, pp.47-65). This poses a knotty problem for the service provider. It is a difference between "creating quality", through at least meeting and sometimes exceeding expectations, and "avoiding non-quality", which is done by avoiding a slip below expectations. This point is an important one, for it marks a crucial difference in philosophies of quality management. And this translates into the message for the provider: "We need to find ways to add value, but also to maintain consistent quality and remember that the prime task is to avoid negative quality while differentiating on positive quality" (Peters, 1999). This is the second characteristic of the decision-making process identified

by the prospect theory that "our response to loss is more extreme than our response to gain" (Kahneman & Tversky, 1979; Bazerman, 1998, p.50).

Kanji and Wong (1999) studied business excellence for supply chain management. They blended supply chain management model (SCM) into the TQM framework to develop the supply chain management excellence (SCME) model that was satisfactorily tested using data from 139 companies. Wong (2000) further develops the business excellence index for these 139 companies on supply chain management activities.

It is difficult to monitor improvements without some sort of measurements on the outcomes, particularly for business excellence. After all, 610 out of 1000 points of the Malcolm Baldrige National Quality Award (MBNQA) are attributed to the organisation's ability to collect, analyse, and act on information about customers, employees, or processes (Hurley & Laitamäki, 1995). Kristensen et al (1992) suggested a method to measure customer satisfaction. Their method involves the use of a weighted mean to describe revenue from customer satisfaction and cost takes the form of a quadratic loss function of Taguchi type. And parameters are found by maximising the profit function. Their system of measuring customer satisfaction works very well with companies they studied.

Fornell (1992) develops a customer satisfaction model to measure customer satisfaction, called the Swedish Customer Satisfaction Barometer (SCSB), using structural equation modelling to determine the relationships among constructs as well as to set up indices for each construct for subsequent monitoring and comparisons. The SCSB is intended to be a performance measure on customer satisfaction that may not be adequate for use by the American who wants it to be an economic indicator. Basing on the SCSB, the American Customer Satisfaction Index (ACSI) (see figure 7)

is developed by incorporating prices into the indices (ASQC, 1995; Fornell et al, 1996). And the business excellence index of Tambi (2000) and Wong (2000) are calculated on the basis of SCSB.

On the local front, Lee and Lam (1997) describe the journey of the Kowloon-Canton Railway Corporation (KCRC), from quality control circle (QCC) to ISO 9001 certified. They conclude that the management of the rolling stock department (RSD) firmly believes that together the QCC and the ISO 9001 quality system are powerful quality tools to provide ever-improving services to its customers, both internal and external. With the mechanism for continuous improvement provided by the quality system, and quality reinforcement under the KCRC's TQM programme, the RSD is striving to achieve the target of zero defects. Since the implementation of the ISO 9001 quality system, the reliability of electric passenger trains has significantly improved, while maintenance costs have decreased. The ultimate beneficiaries of the system will be the passengers, who can enjoy higher quality journeys in safe, clean and reliable trains.

Lee (1998) reports the findings of a survey on ISO 9000 certified firms in Hong Kong. His findings suggest that while in general the number of firms certified to ISO 9000 had been increasing, the proportion of small and medium firms appeared to be quite stable. Most of the small and medium firms in both manufacturing and service sectors and, a large proportion of firms in construction sector were certified in order to satisfy the customers' demand. Certified firms achieved certain benefits in terms of relationship with existing customers, attracting new customers and internal operations management. The findings indicate that the certified firms need to improve their relations with their subcontractors. TQM was widely adopted by the firms after they were certified. A good proportion of firms sought to implement ISO 14000.

Leung et al (1999) studied the costs and benefits of obtaining ISO 9000 for some 500 companies. Among these companies, more than 65 per cent believe that ISO 9001 certification is worthwhile, and more than 76 per cent believe that the cost of certification is inexpensive. The results indicate that companies that seek certification because of their customers' request seem to gain less benefit from ISO 9000 certification. Contrary to many people's expectation, some factors do not have any bearing on whether benefits outweigh costs. These factors include time taken to get certified, number of years since certification, and reason for certification.

Wong and Fung (1999) studied TQM in the construction industry in Hong Kong from a SCM perspective. They found that the quality management tasks of a general contractor are complex, given the totality of quality features demanded by customers, as well as the multitude of actors in the supply chain, each bearing differing objectives, technology, resources, and level of interdependence with other upstream and downstream actors. The case study on Shui On Construction Company shed light on some SCM issues that underpin a TQM system, notably:

- Assessment of relationship with supply chain members, particularly those who provide invaluable materials supply and subcontracting services in meeting customers' needs.
- Maintenance of a portfolio of contractual relationships with supplier/subcontractors, ranging from competitive tendering to long-term contractual agreements.
- Structured relationship with key subcontractors and suppliers will facilitate the achievement of the total quality requirements of the customer, especially in turbulent and competitive market environments.

- A range of quality management, supplier development and involvement techniques is instrumental in maintaining structured relationships with subcontractors in a TQM system.
- Constant review of governance of subcontractors in the light of relational performance and changes in supplier/customer environments.
- An enabling structure and efficient communication system for effective relationship management in project management is required.

Gurnani (1999) studied the process of TQM implementation in the Hong Kong division of a multinational company as a case study. He found that TQM principles are simple but often difficult to implement. TQM implementation in the company was not considered to be very successful as only the manufacturing department had reported improvements. However, encouraging results can be found from the survey: most of the employees are willing and ready to accept the TQM concept. The company may have difficulties in following those recommendations when it has limitations on time and labour supply, and so solving those limitations should be the first task. Only when company management shows the determination to pursue aggressively the long and effort-consuming process of TQM implementation, will it be able to implement fully the concept and enjoy the benefits.

Kanji and Wong (1999) developed and tested the business excellence model for SCM with data of the supply chain activities from 139 companies in Hong Kong. The results support that the structured model provides a good fit for the supply chain activities and, that business excellence index

can be further developed based on this new model that was reported by Wong (2000).

Lee et al (1999) studied the effect of quality and productivity improvement practices on firm quality, operating and financial performance in Hong Kong industry. Their results show that quality performance is strongly related to the improvement approach while operating and financial performances are found to be weakly related.

Ho (1999) elaborates the intricacy of the 5-S practice, using the Government Industry Department and ten other local companies as examples. The 5-S in English are: Structurize, Systematize, Sanitize, Standardize and Self-discipline, meaning organisation, neatness, cleaning (or cleanliness), standardisation and discipline. In his view, these are the baseline for TQM as practised by the Japanese, and concluded that it has been adopted and adapted to the Hong Kong business environment.

Ho et al (2000) explore the common areas between value analysis (VA) and TQM. They concluded that VA has received less attention than it deserves in the TQM literature, and suggest possible ways to apply VA with the TQM process. The basic principles of TQM could be fully addressed by blending VA and various TQM tools and techniques such as quality function deployment and design for manufacturability. VA also serves as a mechanism that glues the TQM principles.

Pun et al (2001) identified the determinants of employee involvement (EI), and discuss the employment of EI practices and its influences on the organisational performance of manufacturing enterprises with particular reference to both electronics and plastics industry sectors in Hong Kong. They found that management commitment, rewards and motivation were the most critical factors; clear corporate mission, continuous improvement and

both extrinsic rewards and intrinsic rewards were the dominating sub-factors of EI adoption. Effective involvement practices could bring along attainable employee satisfaction, quality improvement and productivity enhancement in manufacturing enterprises.

Li et al (2001) studied quality management initiatives in the Hong Kong's banking industry. Their results show that Hong Kong banks have gradually adopted quality initiatives and gained significant success in quality management over the past 3 years. They focused more on meeting service standard and providing prompt services while banking institutions in the UK focused more on understanding and meeting customers' needs.

After more than a decade, it is time to give a semester grade to TQM, as a measure for monitoring and improvement on TQM development itself. Romano (1994) collected report cards on TQM from 14 prominent management consultants, company executives and government officials (see appendix I, where grades are assigned by the author on the basis of the comments). Majority of them gave 'F' grades except the CEO of Hewlett-Packard who gave 'A+' (excellent), CEO of Graniterock, winner of 1992 MBNQA, gave 'G' (good), Comptroller General of the US gave 'P' (pass), and President of TQM Group gave 'P/F' (marginal pass). Deming did not give any grade but commented "The trouble with TQM — failure of TQM, you call it — is that there is no such thing. It is a buzzword. I have never used the term. As it carries no meaning." Some of the reasons for failure are summarised below:

- Lack of upper managers to have personal involvement— there are non-delegable things that senior managers have tried to delegate.
- Mounted as programme, unconnected to business strategy, rigidly and narrowly applied, and expected to bring about miraculous

transformation in the short term without top management lifting much of a finger.

- Lack of will causes failure; not understanding the cause of failure leads to erroneous conclusions.
- Lack of strong leadership.

1.2 TOTAL QUALITY MANAGEMENT IN THE HOTEL INDUSTRY

The Ritz-Carlton Hotel (Eisman, 1992; Watkins, 1992; Schulze, 1993; Parlow, 1993, 1996) is the first hotel to win, together with the other four winners, the coveted MBNQA in 1992. The Ritz-Carlton Hotel Company is a management firm that develops and operates luxury hotels worldwide. It was formed in 1983 when Atlanta-based W.B. Johnson Properties purchased exclusive US rights to Ritz-Carlton trademark along with the Boston Ritz-Carlton Hotel. The hotel operations mainly served the US and Australia, originally, and are now extended to Barcelona, Cancun and Hong Kong, employing more than 11,000 people.

The Ritz-Carlton road to MBNQA began with the strong leadership and determination of the top management, the empowerment given from top management to everyone down the management ladder, and, most importantly, the group of dedicated employees. The quality culture in Ritz-Carlton is guided by the Ritz-Carlton Gold Standards which include a credo, motto, three steps to service and the 20 "Ritz-Carlton Basics". These are called the Ritz-Carlton Gold Standards. The Ritz-Carlton credo, motto and three steps to service are listed below:

Ritz-Carlton credo

The Ritz-Carlton is a place where the genuine care and comfort of our guests is our highest mission. We pledge to provide the best service and facilities for our guests who will always enjoy a warm, relaxed yet refined ambience. The Ritz-Carlton experience enlivens the senses, instills well-being, and fulfills even the unexpressed wishes and needs of our guests.

Ritz-Carlton motto

"We are Ladies and Gentlemen serving Ladies and Gentlemen." Practise teamwork and "lateral service" (i.e., employee-to-employee contact) to create a positive work environment.

Three steps to service

1. A warm and sincere greeting. Use the guest's name, if and when possible.
2. Anticipation and compliance with guest needs.
3. Fond farewell. Give guests a warm good-bye and use their names, if and when possible.

In addition to the Ritz-Carlton Gold Standards, the five tenets of TQM actually help shape its quality culture and they are:

1. **Commit to Quality.** Making quality a number-one priority requires an organisational culture to support it, and only top leadership can foster a TQM culture. Thus, the first step toward TQM must involve active support and direction from top-level managers, especially the CEO.
2. **Focus on Customer Satisfaction.** Customers are concerned about quality and, in fact, define it for the organisation. Successful TQM companies are acutely aware of the market. They know what their

customers really want and invariably meet and exceed their expectations.

3. **Assess Organisational Culture.** A selected group of top managers and employees from different parts of the company should examine the organisation, with a focus on its culture, and assesses the fit between that culture and TQM's principles. This assessment, which may take several months to complete, will help management build on strengths, identify weaknesses, and set priorities.
4. **Empower Employees and Teams.** Although TQM is led from the top, the real work occurs "bottom-up." Empowering employees and teams require training them to use their authority effectively. It may also require redesigning some jobs to facilitate a team approach and modifying policies and practices that support rewards for results and other cultural elements that empower employees.
5. **Measure Quality Efforts.** The ability to gauge your efforts toward superior employee performance, streamlined decision-making, supplier responsiveness, and improved customer satisfaction is endemic to the TQM process. Information gathering and analysis techniques should help identify causes of work-process problems and well-designed, timely, and straightforward. In the end, TQM is based mostly on rational thinking and problem solving, not on sophisticated statistics and other measurement techniques.

The Ritz-Carlton case demonstrates that the hotel industry can apply the MBNQA criteria to develop a successful quality programme just like other firms in the manufacturing and service industries. The chief mechanism for ensuring the steady quality improvement required by the

MBNQA is empowering employees, which means giving them the authority to identify and solve customer problems on the spot and to improve work processes. (Parlow, 1993)

The Avant Hotel, Oldham, the first hotel recipient of the British Standard 5750, was studied by Callan (1992). The benefits of BS5750 to the Avant Hotel, Oldham were a keen focus on staff training; reduced staff turnover; staff pride in operating at BS 5750 standards; waste reduction; detailed job specification aids the recruitment process, and; the widespread publicity, thus providing a valuable marketing bonus, as a result of the successful registration.

Breiter et al (1995) studied the TQM process of the Bergstrom Hotel, a privately owned hotel company in Wisconsin. They concluded that the Bergstrom Hotel's experience is important because it proves that quality can be achieved with standard staffing levels and reasonable investment. One of the most important features of Bergstrom's process is that it is affordable, particularly where there is no quality manager or training manager at the corporate or property level. A shared vision is achieved, largely through communications, relationships, measurement and training. Customer satisfaction is understood through the use of surveys and interviews and continuous improvement of processes is now the job of all Bergstrom employees.

Gundersen et al (1996) studied hotel guest satisfaction among business travelers, using LISREL analysis. They found that the majority of variation in overall satisfaction be explained by the intangible and tangible dimensions of three departments of the hotel: reception, the housekeeping department and the food and beverage department. Further, tangible aspects of the housekeeping department and intangible aspects of reception

were found to have the strongest effect on overall satisfaction. This calls for a more focused approach to service quality management than TQM literature generally recommended. Managers are advised to concentrate attention and resources on the aspects that have the highest importance for obtaining overall satisfaction.

Min and Min (1997) extended the application of competitive benchmarking to hotel service quality from a managerial perspective. They found that the use of analytic hierarchy process (AHP) and gap analysis may help the hotel manager determine where the hotel stands on service performance relative to its competitors and consequently identify specific areas of comparative advantages and disadvantages; thus, the hotel manager can formulate viable service improvement strategies. The hotel employees, in general, believe that service attributes that contributed the most to their customers' impressions of service quality are cleanliness of a guest room and courtesy of employees.

Breiter and Bloomquist (1998) conducted an exploratory study on TQM in American hotels. They found that small and medium-size hotels are less likely than large hotels to implement TQM, which contradicts reports in other industries. On the other hand, hotels frequently encounter the same obstacles that hinder TQM in other businesses. Those obstacles include a variety of leadership issues as well as employee barriers.

Soriano (1999) applied the European Model to Spain's urban hotels, in his study of TQM. Valencia's hoteliers were asked to identify the most important factors a hotel's TQM programme, and those findings were compared to the European Foundation for Quality Management (EFQM) standard. Based on the comparison between the European model and the opinion of hotel managers, he concludes that the EFQM valuation is

applicable to urban hotels, but perhaps with emphasis shifted somewhat to reflect hotels' distinctive nature. And, a lack of concern about human resources and leadership among some hoteliers is apparent.

1.3 THE HONG KONG HOTEL AND TOURISM INDUSTRIES

The Hong Kong hotel industry is intimately tied with the tourism industry, going hand-in-hand. In 1999, of the 10.678 million visitor arrivals, nearly half of the them came for vacation (49%), 30% for business/meeting, 12% for visiting friends/relatives, 7% for en route and the remaining 2% for other purposes (SDSS, 2000, pp.304-305). They spent \$12.668 billion on hotel bills, \$1.536 billion on tours and \$36.814 billion on other spending (SDSS, 2000, p.306).

1.3.1 The Hong Kong Tourist Association

The Hong Kong Tourist Association (HKTA) is a statutory organisation established by the government in 1957 to develop Hong Kong as a visitor destination. It promotes the improvement of visitor facilities, secures overseas publicity for the SAR's attractions and advises the government on tourism-related matters. Over the past years, the HKTA has worked closely with both local and international tour operators and travel agents, providing information, support, advice and a host of other services, enabling them to market Hong Kong effectively to their clients.

The chairman and members of the HKTA Board of Management are appointed by the Chief Executive. The association is mainly funded by an annual subvention from the government. It also derives funds from membership dues, sales of publications and souvenirs, and from its own commercial tours. At the end of 1998, the association

had 1,731 members, comprising international passenger carriers, hotel proprietors, travel agents, tour operators, conference/exhibition organisers, retailers, restaurants and other visitor service establishments. (Howlett, 1999, pp.266-267)

In early 1999, the HKTA launch the second phase of its worldwide marketing campaign, *We Are Hong Kong — City of Life*. The five-pronged promotion, under the *Discover Hong Kong* banner, urged potential visitors to discover new elements in five key areas: heritage, sightseeing, cuisine, shopping and events. An additional wave of tactical marketing for late 1999 and early 2000 brought extensive overseas promotion of Hong Kong's Millennium Celebrations under the theme title of *The Dragon's Spirit*. More than 120 events during the millennium promotion period from November to May 2000 were identified and promoted overseas. To raise awareness of Hong Kong's excellence cruise hub facilities, the HKTA worked with overseas agents to promote fly/cruise packages, offered support to international cruise operators in planning itineraries and attended major cruise trade shows to promote Hong Kong as a cruise hub. (ISD, 2000, pp.284-285)

Throughout 1999, the HKTA organised a series of new events and promoted those already well established, to market Hong Kong as a year-round travel destination with an extensive range of top-quality events justifying the SAR's reputation as the 'Events Capital of Asia'. To help promote its image as the 'Events Capital of Asia', the Government provided the HKTA with a \$100 million loan fund to set the International Events Fund (IEF). This fund provides seed money to support the staging of major international events that could attract

additional visitors and increase tourism receipts. (ISD, 2000, pp.285-286)

The convention, exhibition and incentive travel sector is a key component of the tourism industry. During 1999, Hong Kong hosted more than 279 international events, attracting more than 253,400 overseas delegates and participants. The HKTA also offered assistance to individuals and groups with on-site inspections and educational visits. Among the most important of these was the *Hong Kong — Meeting Your Choice* event in May, which was attended by 52 executives from leading international professional bodies. The success of such gatherings was demonstrated when the American Society of Association Executives voted it first in the *Promotion of One-Time Event* category of its 1999 PRIMA Awards. (ISD, 2000, pp.286-287)

The association intensified its community-wide *Be A Good Host* campaign. Launched in 1998, the campaign encourages Hong Kong people to learn more about their home, and therefore take more pride in it. A complementary aspect of this was its call to extend courteous welcome to visitors and help them also to feel at home.

The Quality Tourism Service Scheme issues certificates and special promotional decals to tourism-related establishments that satisfy prescribed criteria in the delivery of high standards of service.

In addition, for 30 years, the HKTA has tutored teams of 'Student Ambassadors' to speak knowledgeably about Hong Kong's attractions at their overseas colleges. More recently, the HKTA has reached out to national groups of volunteer 'Goodwill Ambassadors', initially from Hong Kong's resident Japanese population. During 1999,

resident Americans and Australians also signed up as honorary ambassadors to promote Hong Kong.

To further raise standards in the industry, the HKTA runs the *Wonder-Host* training programme. Started in 1996, it has trained some 5,700 staff from more than 350 HKTA member establishments.

In its third year of operation, the Government's Hong Kong Awards for Service scheme attracted around 30 per cent additional entries from the tourism industry, many from the target areas of small and medium-size businesses. (ISD, 2000, p.287)

1.3.2 The Hong Kong Hotels Association

The Hong Kong Hotels Association (HKHA) was founded on August 1, 1961 to oversee development of the hotel industry in Hong Kong; to promote and protect the lawful interest of hoteliers; to act as a collective voice for hotel management; and to encourage unity and friendly relationships between members.

There were seven founding members, all of whom were genuinely concerned about the state of the infant hotel industry and the need for an organisation to oversee its progress and welfare. Today, the Association has seventy-nine members (Annual Report 1999-2000, HKHA) and two six-star hotels are expected in 2004 (Tsang, 2001). While it still adheres to the basic objectives set so many years ago, it now plays a much wider and more positive role in promotion and development of the hotel industry and tourism.

There are two types of membership of the Association:

Affiliate Membership

Open to the management of hotels which are under construction at a membership fee of HK\$50,000 (payable with formal application). Once admitted the Affiliate Member Hotel will enjoy the following privileges:

- Accredited representative (general manager designate) may attend the Association's monthly meetings and AGM. Affiliate members do not have voting rights.
- Accredited representative (departmental managers) may attend the Association's departmental meetings such as personnel and training; front office; credit; education; security etc. They do not have voting rights.
- An affiliate member hotel can obtain information and receive assistance from the Association on matters such as labour laws and working systems, staff recruitment sources etc.

Full Membership

Open to the management of hotels which are operational at a membership fee of HK\$200,000 (payable with formal application). In addition to the membership fee, full members will pay:

- **Annual Subscription:** HK\$20 per room, per annum;
- **Development Fee:** 1.25% of the accommodation tax paid to the Hong Kong Government - to be paid quarterly;
- **Reservation Commission:** for booking made by the Association's Hotel Reservation Centre at the Airport: 15% for the first night only, regardless of the length of stay;

- **Parking Permits:** HK\$750 per vehicle, per month for all hotel limousines using the Association's Vehicle Holding Area at the Airport. All vehicle must have a permit;
- **Telephone Access to Hotels Charges:** for the direct push-button telephone connection between the Hotels Reservation Centre at the Airport and Hotel reservation departments are imposed by Hong Kong Telephone through the Association. The connection fee (one time) is \$840 and the monthly rental approximately HK\$400.

Full Members of the Association enjoy the following rights and privileges:

- Accredited representatives (normally general manager) may attend the Association's monthly meetings and AGM, with voting rights.
- Accredited representatives (normally general manager) may attend the Association's various departmental meetings, with voting rights.
- Attendance at all activities organised by the Association, or those organised jointly with other organisations.
- Utilisation of the Association's Vehicle Holding Area at the Hong Kong Airport, subject to payment of the permit fees.
- Permission to enter the 24-hour non-stopping restrictive zone at the Airport to pick up hotel guests, subject to application to the airport authority and police being endorsed by the Association's Executive Committee.
- Inclusion in the Association's hotel directory free of charge.
- Inclusion in the Association's Hotel Reservation Centre booking list.

- Participation in educational and/or training courses conducted by the Association.
- Participation in the Association's annual salaries and room occupancy rates.
- Participation in all social gatherings, sports and recreational activities organised by the Association.
- Inclusion of staff for selection to attend overseas courses, sponsored by the Association
- Participation of staff in workshops and seminars organised by the Association.
- Any other rights and privileges as determined by the Association.

During the year, the Association initiated and participated in the following projects:

1. Environmental Management Systems for Hotels in Hong Kong
2. Hotel Building Environmental Assessment Scheme
3. Tri-party Hotel Executive Education Seminar in Hong Kong in January 2001
4. Certified Hotel Administrator Programme in Hong Kong
5. Electronic Concierge for Improved Guest Service
6. WorldRes Places to Stay Internet based On-Line Reservation System
7. Co-op Advertising Programme with HKTA
8. Causal Labour System and Mandatory Provident Fund Scheme Administration

9. Hotel Classification System with The Federation of Hong Kong Hotel Owners
 10. Hotel Development Information System with HKTA
 11. Customer Satisfaction Index of the Hong Kong Hotel Industry
 12. Price Competitiveness Survey of the Hong Kong Hotel Industry with HKTA
- (Annual Report 1999-2000, HKHA)

1.4 AIMS OF STUDY

The purpose of this research is to understand the state of art of total quality management in Hong Kong Hotel Industry and to develop a model of business excellence to help monitor and guide hoteliers in search of excellence. The research objectives are as follows:

- to study the extent of implementation of TQM in the Hotel Industry;
- to determine the barriers of TQM implementation;
- to determine the critical success factors of organisational performance;
- using critical success factors to develop a Business Excellence Model for the Hotel Industry;
- to validate the Business Excellence Model with relevant data;
- to measure the performance of critical success factors and organisational performance (business excellence);
- to determine the structural relationship among critical success factors and business excellence;
- to measure the strength of causal connections among critical success factors and business excellence;
- to set up Business Excellence Index for the Hotel Industry;
- to develop a Customer Satisfaction Model for the Hotel Industry;
- to measure the strength of causal connections among constituent constructs of the Customer Satisfaction Model;
- to set up indices for each construct of the Customer Satisfaction Model;

- to use these indices as a tool for continuous improvement.

1.5 OUTLINE OF THESIS

There are eight chapters contained in this thesis and they are outlined as follows:

- Chapter 1** provides backgrounds of TQM, TQM in hotel industry, the Hong Kong Hotel and Tourism Industries together with the aims of study.
- Chapter 2** Gives the results of the preliminary study together with critical success factors of organisational performance and barriers to TQM implementation.
- Chapter 3** Develops the Business Excellence Model and the Customer Satisfaction Model for Hong Kong Hotel Industry.
- Chapter 4** Describes the research methodology and techniques pertaining model validation (EQS), determination of structural relationship (PLS), and method for calculating the business excellence and the customer satisfaction indices.
- Chapter 5** Validates the business excellence model, measures the performance of each construct in the model as well as the structural relationships among them, and produces index values for business excellence of the hotel industry.
- Chapter 6** Validates the customer satisfaction model, measures the performance of each construct in the model as well as the structural relationships among them, and produces values for customer satisfaction index for the hotel industry.

Chapter 7 Compares the performance of a group of three international hotels with a group of two Asian hotels on customer satisfaction.

Chapter 8 concludes the present research in terms of important findings with emphasis on the usefulness of both the Business Excellence and the Customer Satisfaction Models for continuous improvement of critical success factors of the hotel industry, and; suggests area for further research.

2. PRELIMINARY STUDY IN HONG KONG HOTEL INDUSTRY

The Hong Kong economy experienced a severe setback which started in October 1998, following the economic turmoil originated in Thailand in July 1997 (HOWLETT, 1998, p.40), that shook the whole of Asia and the world at large, causing volatilities in the local financial market and the asset price slump (HOWLETT, 1999, p.39).

While other Asian countries have started to revive their economies, Hong Kong is still suffering from the aftermath of the turmoil but there are positive signs for economic revival. The stock market and property prices recovered, a slight decline in the unemployment rate and an increase in the number of visitors to Hong Kong are signs of economic recovery.

How to compete with other Asian countries for visitors coming from Europe, the U. S. and other parts of Asia remains a challenge to the Hong Kong Tourist Association and the Hong Kong hotels can have a major role to play in offering them quality services that surpass its competitors.

2.1 AIMS OF STUDY

The aim of this preliminary study is to understand the concepts, management practices, barriers to their implementations and future plan that are pertinent to quality and total quality management in the Hong Kong hotel industry.

2.2 METHODOLOGY

Questionnaire survey by mail is the appropriate method to collect the necessary data for the study from all members of the Hong Kong Hotel

Association. Questions pertaining to quality issues, quality control circle activities and total quality management were asked. Details of questionnaire design and method of analysis are described below.

The questionnaire (see appendix IIa) is in English and is designed so as to collect information on the principle, practice and approach to TQM in the Hong Kong hotel industry with the Six Governing Principles and Eight Core Concepts of Kanji (1994) imbedded.

The usual method of display like frequency tables is used to report the responses in the findings.

2.3 RESULT

The first round of the survey began in July 1998. A total of 75 questionnaires were sent to all members of the Hong Kong Hotels Association on their principles and practices of TQM. Twenty-three hotels responded with one hotel responded that TQM practices have not been used and therefore was unable to answer the questionnaire. Hence the response rate is 29.3%.

Questionnaires were sent to those not responded in the first round of the survey in October 1998. A further seven hotels responded in the second round, a response rate of 13.2%.

The third and final round of the survey began towards the end of January 1999. A further four hotels responded but one of them replied with regret that they were being engrossed in very busy operation and internal activities and were not available for completing the questionnaire, thus giving a response rate of 6.5%. The overall response rate of the survey is 42.7%. A list of hotel respondents is given in appendix IIId.

Profile of the responding hotels is given in table 2 below. It is shown that majority (71.9%) of the respondents is rated at 4-star or above, 21.9% rated at 3-star and 6.3% rated as other such as boutique and 5-star conference and resort hotel.

<u>Category of responding Hotels</u>	<u>Frequency</u>
5-star deluxe	4
5-star	5
4-star deluxe	4
4-star	10
3-star	7
Other	2

Table 2: *Profile of responding Hotels*

It was suspected that the Hong Kong Hotel Industry was hardly hit by the financial crisis of October 1997. In fact, the mean occupancy rate reported dropped by 11%, from 84.79% to 73.74%, but the revenue suffered to a greater extent, a mean drop of 36.65% as compared to the same period last year and a mean drop of 30.56% as compared to the month prior to the crisis (See appendix IIa). These imply that high-tariff hotels were worse hit than the average ones.

Altogether there are 32 hotels responded to the survey, only 13 of them attempted questions 8 to 49 with very few, zero to two, responses to questions 32 to 49. The responses to questions other than 32 to 49 are reported below. For further details, please refer to appendix IIa.

The quality concepts that closely fit the hotels' perception of quality are given in table 3 below:

<u>Quality Concept</u>	<u>Frequency</u>
Fitness for use	5
Fitness for purpose	6
Meeting customer's expectations	27
Conformance to requirements	4
Others	6

Table 3: *Quality Concepts that Closely Fit Hotel's Perception of Quality*

It is found that meeting customer's expectations seems to be the golden tenet in respect of quality concept among Hong Kong hotels.

<u>Use/usefulness of Formal Systems</u>	<u>Frequency</u>
To check the work of an employee	25
To check the work of an individual department	19
Useful in preventing/identifying problems/mistakes	23

Table 4: *Use/usefulness of Formal Systems*

The use/usefulness of formal systems of the responding hotels are summarised in table 4 above. It is found that majority of the responding hotels have implemented formal systems to monitor the work of an individual (78.1%) as well as the work of the department (59.4%) as a whole, and that the systems are effective (71.9%) in prevent/identifying problems/mistakes.

<u>Quality Goals Specified</u>	<u>Task of an Employee or a Group of Employees</u>	<u>Task of an Individual Department</u>
Yes, always specific quality goals	12	12
Yes, always general quality goals	4	5
Yes, sometimes specific sometimes general quality goals	13	12
No, do not specify quality goals	2	2

Table 5: *Quality Goals Specified When Defining Tasks*

The specification of quality goals is very similar when defining the task of an employee or a group of employees to those when defining the task of an individual department. Table 5 above shows that specification of quality goals when defining the task of an employee or a group of employees and those when defining the task of an individual department are widely practised (90.6%) among the responding hotels with some (37.5%) giving it at high profile.

There are 13 hotels responded that they have procedures in place for improving quality of processes (quality management) in their hotels. Among them 12 give the year their quality management were introduced ranging from 1963 to 1998. This shows that half of the respondents introduced their quality management within a time span of 33 years between 1963 and 1996 while the other half of the respondents introduced them in a 3-year span between 1996 and 1998.

The kinds of formalised quality activities implemented by the responding hotels are total quality management (61.5%), certified with ISO9000 (7.7%), quality control circles (7.7%) and others (38.5%) including total customer satisfaction committee, quality index/performance indicators, HKMA (Deming Award) and activities in accordance with parent company's guidelines. This shows that total quality management is the quality activity that most of the responding hotels prefer to implement.

The magnitudes of the quality management implementation in terms of organisational coverage are hotel group worldwide (38.5%), hotel group regional-wide (38.5%), individual hotel (38.5%), human resources (7.7%) and restaurants and bars (7.7%). And the person involved in the introduction and promotion of quality management are general manager (GM) of individual hotel (76.9%), chief executive officer (CEO) of hotel

group (46.2%), quality director of hotel group (15.4%) and others (15.4%) including corporate and regional offices. But the ones who made the decision to adopt quality management are general manager of individual hotel (76.9%), CEO of hotel group (61.5%), quality director of hotel group (7.7%), head of department (7.7%) and others (7.7%) including corporate and regional offices. These indicate that, among the responding hotels, CEOs of hotel groups and GMs of individual hotels are largely the ones who decided to adopt quality management and are responsible for its implementation and promotion.

The main reasons with ranks for implementing quality management are given in appendix IIa. The major ones can be summarised as follows:

- Constant improvement of products and services.
- To satisfy external and internal customer needs.
- Maintain and increase competitiveness.
- Improve business.
- Customer retention.
- Involves associates in creating a shared vision of excellent service.
- To achieve financial success.

The time taken for the respondent hotels to prepare for quality management are more than 6 months (53.8%), between 3 to 6 months (30.8%) and less than 3 months (15.4%). And the quality management practised in the responding hotels is in operation areas (69.2%), in catering areas (61.5%), in administrative areas (53.8%), in human resources areas (53.8%), in marketing areas (30.8%) and others (38.5%) including almost all areas, all areas, in the entire hotel and whole hotel.

The organisational structure for quality of the respondent hotels are committee (69.2%), teams (61.5%), co-coordinators (30.8%), advisors

(23.1%), consultant (7.7%) and others (15.4%) including almost all executive committee members and work with department heads, division and department heads are all responsible.

<u>Critical Success Factor</u>	<u>Mean Rating</u>	<u>Rank</u>
Leadership	7.38	4.5
Continuous improvement	6.84	6
Prevention	5.38	9
Measurement of resources	6.46	7
Process improvement	6.38	8
Internal customer-satisfaction	7.38	4.5
External customer-satisfaction	7.69	2
People management	7.92	1
Teamwork	7.53	3
Others	0.15	10

Table 6: *Critical Success Factors for Hotel Business*

The organisational management factors that are critical for the success of the hotel business are summarised in table 6 above. It is found that the three most critical success factors of the hotel business in Hong Kong are people management (1), external customer-satisfaction (2) and teamwork (3) while the three least critical success factors are measurement (7), process improvement (8) and prevention (9). The rating of these factors are determined by personal preference (46.2%), hotel's policy (30.8%), hotel group's policy (7.7%), hotel's quality committee's policy (7.7%) and others (23.1%) including corporate mission and business strategy. Nearly half (46.2%) of the respondents indicated that these critical factors would change over time

In implementing quality management, the three most frequently encountered barriers that affect the hotel's quality management are staff were pressed with their daily work (76.9%), resistance to change (61.5%),

and the approach is believed to be short-lived gimmicks or fad (38.5%) (see table 7 below). In as much as there are a lot of responses that did not specify the ranks, mean rank is not a reliable reflection of the difficulties of the respective barriers. Here, the difficulty of a barrier is reflected by the number of respondents who indicate it as most difficult (i.e., those with rank 1). The four most difficult barriers encountered are staff was pressed with daily work (4), the approach is believed to be short-lived gimmick or fad (3), disbelief in its effectiveness (2) and uncertainty of the benefits of the process (2) (see table 7 below). These showed that under-staffing is the major barrier to the hotel's implementation of quality management in terms of both frequency and difficulty; perseverance from top management was not felt by employees; measurement was not installed prior to the implementation of the quality management so that effectiveness cannot be measured as it progresses.

<u>Barrier</u>	<u>Freq.</u>	<u>Number Ranked 1</u>
Staff were pressed with daily work	10	4
Resistance to change	8	1
Insufficient knowledge or skill	4	1
Insufficient budget	1	-
The approach is believed to be short-lived gimmick or fad	5	3
Lack of commitment	2	1
Disbelief in its effectiveness	2	2
Disbelief in its applicability in the hotel	2	-
Poor motivation due to long time needed to realise rewards	2	-
The process lacks immediate results	1	1
Complacency	2	-
Uncertainty of the benefits of the process	4	2
Fear of failure	1	-
Fear of losing power	1	-
Resistance for using a business model in calling customers	0	-
The barrier of middle management	4	-
Others	1	-

Table 7: Barriers Faced in Implementing Quality Management

<u>Proportion</u>	<u>Frequency</u>
Less than one quarter	0
About one quarter	1
About half	2
About three quarters	3
More than three quarters	1
Everybody	6

Table 8: Proportion of Employees Understands the Concept of Internal and External Customers

The proportions of employees who understand the concept of internal and external customers are given in table 8 above. It is found that a high proportion (76.9%) of the respondent hotels indicated that about three quarters to everybody working in their hotels do understand these concepts as it is very important in terms of company culture and total quality management.

The people who control the quality of processes in the organisation are the general manager (46.2%) and other manager (61.5%) including department heads, all colleagues, all managers, operation/line manager, senior executives and everybody in the organisation.

<u>Expertise in Managing Quality Improvement</u>	<u>Frequency</u>
The hotel has high level of expertise	3
The hotel has somewhat reasonable expertise	6
The hotel has moderate expertise	3
The hotel has somewhat inadequate expertise	0
The hotel has no expertise at all	1

Table 9: *Expertise in Managing Quality Improvement Processes in Hotels*

The responses to the question on expertise in managing quality improvement processes are summarised in table 9 above. It is found that, apart from one respondent who has no expertise at all, majority (69.2%) of the respondents have high level to somewhat reasonable expertise in managing quality improvement processes. And all of them have given sufficient to moderate quality training to staff to prepare for quality initiatives taken in the hotels (table 10).

<u>Quality Training given to Staff</u>	<u>Frequency</u>
Sufficient	6
Somewhat sufficient	2
Moderate	5
Insufficient	0
No training at all	0

Table 10: *Quality Training Given to Staff to Prepare for Quality Initiatives Taken in Hotels*

The forms of motivation available for people in the organisation for contributing toward a quality cause are given in table 11 below. The three most available motivations indicated by the respondent hotels are recognition (92.3%), award (84.6%) and organisational support (53.8%); while paid vacation and special privilege are not available at all.

<u>Forms of Motivation</u>	<u>Frequency</u>
Job promotion	4
Bonus	3
Paid vacation	0
Award	11
Organisational support	7
Special privilege	0
Job rotation	1
Recognition	12
Quality campaign	1
Others	0

Table 11: *Forms of Motivation Available for People in the Organisation for Contributing Toward a Quality Cause*

Not many respondents seek the service of outside consultants to implement Quality Management. Only 27.1% of the respondents indicated that they “Always” seek the service while the others responded “Occasionally” (27.1%), “Hardly” (27.1%), or “Never” (30.8%).

A vast majority (84.6%) of the respondents thought that their organisations have an absolute culture for quality while the remaining ones (15.4%) thought that their organisations have a fair culture. Furthermore, all the respondents thought that the Quality culture of their organisations have changed positively in recent years but most of them (69.2%) had held programmes to transform their organisational cultures.

When asked whether the respondent hotels do benchmark its Quality activities, 53.8% responded “Yes” they do while the remaining ones (46.2%) responded “No” they do not.

<u>Quality Concept</u>	<u>Frequency</u>	<u>Number Ranked 1</u>
Leadership	5	2
Continuous improvement	10	2
Prevention	4	2
Measurement of resources	5	1
Process improvement	10	5
Internal customer-satisfaction	5	3
External customer-satisfaction	2	1
People management	6	1
Teamwork	3	1
Others	1	1

Table 12: Quality Concepts used by Hotel Organisations to Achieve Quality

The three most commonly used quality concepts for hotel organisations to achieve quality are continuous improvement (76.9%), process improvement (76.9%) and people management (46.2%) (see table 12 above). In as much as there are a lot of responses that did not give ranks to the difficulties for the barriers, it is not a reliable reflection of the difficulties of the respective barriers. Here, the difficulty of a barrier is reflected by the number of respondents who indicate it as most difficult (i.e., those with rank 1). The two most difficult barriers encountered that affect the hotel's quality management are process improvement (5) and internal customer-satisfaction (3) (see table 12 above). These showed that process improvement is the major barrier to the hotel's quality management in terms of both frequency and difficulty, and which may in turn cause internal customer dissatisfaction.

As to the quality control circle (QCC) activities, only two hotels responded that they have organised QCC programmes. This showed that QCC activities are not widely used in the hotel industry. The explanation may be attributed to their current levels of under-staffing. With this small

number of respondents on QCC programmes, information pertinent to QCC activities are not reported here but are available in appendix IIa.

<u>Measurement Used</u>	<u>Frequency</u>
Use of performance indicators	17
Based on financial position of the organisation	18
Based on goal achievement	17
Based on how well processes are moving	11
Others	2

Table 13: *Measurements Used to Evaluate the Progress of Hotel's Quality Management*

Measurements used to evaluate the progress of the hotel's quality management are summarised in table 13 above. It is shown that financial position of the organisation (56.3%) is the most widely measurement over the other two, namely, performance indicators (53.1%) and goal achievement (53.1%). Other measurements (6.3%) such as mystery shopper evaluation and guests' comments are also used. Comparing with the number (13 as previously reported) of hotels who have procedures in place for improving quality processes (quality management), these show that some of the hotels are paying attention on quality management though they do not have the proper procedures in place yet.

<u>Method of Evaluation</u>	<u>Frequency</u>
Financial condition	29
Competitiveness	24
Market share	24
Superiority of product or services	17
Goodwill	12
Others	6

Table 14: *Methods Used to Evaluate Organisational Performance*

The three most frequently used methods for the evaluation of organisational performance by the respondents are financial condition

(90.6%), competitiveness (75%) and market share (75%) (see table 14 above). Other methods (18.8%) such as guest satisfaction survey, labour turnover, colleague satisfaction and customer feedback are also used. This shows that hotels are very conscious of their own performance and the performance of their competitors as well.

When asked to describe the hotel's overall organisational performance, 6.3% responded "Excellent", 15.6% responded "Very good", 68.8% responded "Good" and 9.4% responded "Fair". None of the respondents described their own organisational performance as "Poor". But on the overall quality of the hotels, 9.4% responded "Excellent", 28.1% responded "Very good", 53.1% responded "Good" and 9.4% responded "Fair". Also, none of the respondents described the quality of their own hotel as "Poor". This shows, in general, that hotels are more satisfied with their overall quality than with their overall organisational performance.

<u>Plan</u>	<u>Frequency</u>
Obtain ISO9000 certification	1
Implement TQM	2
Bid for quality award	4
Expand TQM to cover wider aspect of the hotel	9
Others	12

Table 15: *Hotel's Future Plan to Further Improve Its Quality*

Future plans for hotels to improve their quality are described in table 15 above. It is shown that 3.1% of the respondents would obtain ISO9000 certification, 6.3% would implement TQM, 12.5% would bid for quality award, 28.1% would expand TQM to cover wider aspect of the hotel and 37.5% would have plans, other than those described above, such as no future plan; to form quality team and work on quality standards; continuous improvement everyday; consistent monitor of service provided; to energize to hotel's credo and the pledge for service excellence; our priority now is to

refurbish the hotel in terms of carpeting, wall covering; when a hotel room looks old and tired, it will be difficult to attract customer no matter how good is the quality of service; TQM will be considered at a later stage.

2.4 CONCLUSION

Nearly all the respondents have formal systems to monitor the work of individual employee as well as the department as a whole, which are effective in preventing/identifying problems or mistakes. Further, quality goals are specified, whether always or sometimes, when defining the task of an employee or a group of employees or individual department to meet customer's expectations that is the golden quality concept among Hong Kong hotels.

Less than half of the responding hotels said that they have procedures in place for improving quality of processes in their hotels. And total quality management is the quality activity that they mostly preferred to implement. Further, CEOs of the hotel group and GMs of individual hotels are the ones who decided to adopt quality management and they are responsible for its implementation and promotion. And the reasons for implementing quality management are largely for the improvement of the total well-being of the organisation. The scope quality management practised is in operation, catering, administration and human resources areas. And the organisation structures for quality are mainly in the forms of committee and team.

The five organisational factors that are most critical to the success of the hotel businesses in Hong Kong are, in descending order of importance, people management, external customer-satisfaction, teamwork, internal **customer-satisfaction** and **leadership**. In contrast, Kanji (1999) found that leadership was the most important critical success factor in higher education institutions in both the US and Malaysia.

Under-staff is the major barrier to the hotel's implementation of quality management in terms of both frequency and difficulty and the approach believed to be short-lived gimmicks or fads comes next. This indicates that employees did not feel the strong determination of the top management striving for business excellence. And there are no proper measurements on processes installed prior to the implementation of quality management so that effectiveness cannot be monitored as it progresses.

In general, the respondents consider themselves to have done well in respect of quality — a high proportion of employees understands the concept of internal and external customers; majority of them have high level to somewhat reasonable expertise in managing quality improvement processes and; all of them have given sufficient to moderate quality training to their staff. Majority of the respondents uses financial condition, competitiveness and market share as indicators to evaluate the progress of hotel's quality management.

The five critical success factors established above together with other critical success factors given in the Kanji's (1998) Business Excellence Model will be used to develop a business excellence model for Hong Kong Hotel Industry in the next chapter.

3. MODEL BUILDING

There are four coveted awards and prize of quality, namely: the Deming Prize of Japan, the Malcolm Baldrige Quality Award of the US, the Australia Quality Award (AQA) of Australia and the European Quality Award (EQA) of the Western Europe, which were established to increase quality awareness and business competitiveness in their respective countries (Tummala et al, 1995). These quality awards were initiated to promote national models and to set quality standards so that businesses could follow to assess their current status and take the necessary steps to improve the quality of their products or services and internal operations based on the TQM philosophies advocated. Tummala et al (1995) compare the four awards according to their purpose, structure, eligibility, evaluation of contenders and judging criteria used. They conclude that all the awards were instituted for similar reasons with similar evaluation processes, and that, all except the Deming Prize build their assessment criteria on models of how organisations should approach quality management. Incidentally, Kanji and Asher (1993) suggested that the EQA model is embedded in their pyramid model of TQM before Kanji (1996) actually makes that similar, but more critical, comparison of his modified pyramid (Kanji, 1996) (see figure 1 below) with the European Foundation for Quality Management model, on which the EQA is based, and the results are similar to those of Tummala (1995). In fact, it has been shown (Tambi, 2000) that Kanji's (1996) modified pyramid model is superior to those of Saraph et al's (1989) and Black and Porter's (1996).

Hence, by general induction, the AQA, EQA, MBNQA and Kanji's (1996) modified pyramid are all similar models of TQM. And, the five governing principles (leadership being the prime, followed by delight the customer, people-based management, management by fact and continuous improvement) and the eight core concepts (internal customer satisfaction, external customer satisfaction, people make quality, teamwork, all work is process, measurement, continuous improvement cycle and prevention) that associate with Kanji's (1996) modified pyramid will be used as the basis for developing the business excellence model and they are revisited below:

Source: Kanji (1996)

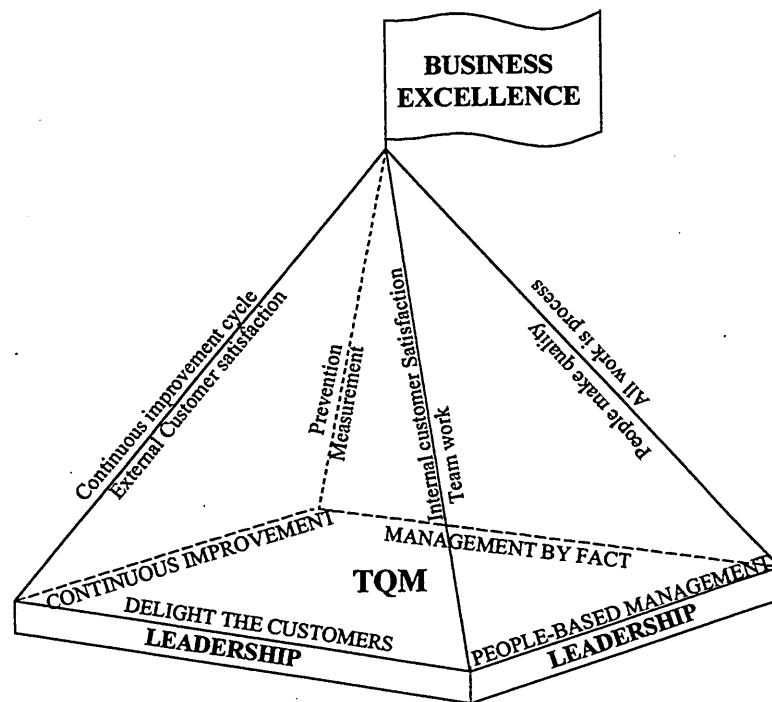


Figure 1: Kanji's Modified Pyramid Model

Leadership: provides the thrusts and direction for everyone in the organisation to follow on their journey to TQM and continually done so will keep the impetus of the followers to overcome barriers and obstacles along their way. Most often, the lack of leadership, will and continual commitments from top

management are the major causes to TQM failures (Romano, 1994).

Delight the Customer: provides the focus for shaping the organisation culture that harmonises the work atmosphere and sustains profitability by providing products or services that meets or exceeds customer expectations — re-educating customers into liking or enjoying what they want to provide (Peters, 1999), escalating their taste to an esoteric level.

Internal Customer Satisfaction: can enhance a cooperative and helping atmosphere as well as to reduce conflict at work. If employees are viewed as an internal supply-chain, Wong et al (1999a) showed that suppliers who manage conflict cooperatively for mutual benefit with their manufacturers appear to earn their trust and foster a long-term orientation. And that co-operative goals and open-minded interaction are founded to be critical conditions under which manufacturers and suppliers are able to develop trusting, long-term relationships on which suppliers contribute to quality (Wong et al, 1999b). After all, you can't make happy customers with unhappy employees (Dotchin & Oakland, 1994). This is particularly true for the service industries.

External Customer Satisfaction: provides the ultimate measure of achievements on all the TQM efforts that have been put by everyone in the organisation. This is translated, by accountant, into profits that delights the shareholders; into job opportunities that delights employees as well as potential employees which

earn them the pride to serve the organisation and sustain job loyalty which, in turn, reduce training costs.

People-based Management: tells people what to do, how to do it and getting feedback on performance that encourage them to take responsibility for quality of their own work. Involvement and commitment from top management are ways to fostering it.

People Make Quality: is the basis to the whole TQM movement. Give trust to your people for no one will want to produce non-quality goods or services. Remove performance measurement (Bowman, 1994) systems that rob the pride of employees and create fear (Shearer, 1996) on the shopfloor, for, more often than not, they measure the wrong things that produce sub-optimal results (Peters, 1999).

Teamwork: provides an opportunity for people to work together, exchange ideas and understand each other's work and quality standards underlined. By bringing people together in terms with a common goal the quality improvement becomes easier to communicate over departmental or functional walls. In this way the slow breaking down of barriers acts as a platform for change.

Management by Fact: provides facts and figures to support management decisions, thus reducing personal biases like "gut feelings"; current performance levels to all employees to measure improvements and to share achievements, and; evidence of profitability to all stakeholders. Having the facts necessary to manage the business at all levels is the principle of TQM.

All Work is Process: considers every piece of work to be a simple system involving inputs, a work process and outputs. To every process, there is inherent variability and one approach to quality improvement is to progressively reduce variation — firstly, by removing variation due to special causes and, secondly, by driving down common cause variation, thus bringing the process into control and then improve the capability. And the seven statistical tools — Pareto diagram, cause and effect diagram, stratification, check sheet, histogram, scatter diagram and, graph and control chart — suggested by Ishikawa (1985, p.198; Dahlgaard et al, 1990) are widely used.

Measurement: is fundamental to all improvements, for, without measurement, it is difficult, if not impossible, to recognise improvements at all. Furthermore, having a measure of how one is doing is the first stage of being able to improve. Measures can focus internally, i.e. on internal customer satisfactions (Kristensen et al, 1993) or externally, i.e. on meeting external customer requirements that can be reflected by the customer satisfaction index (Fornell, 1992).

Continuous Improvement: is the essence of TQM. It is best to be a habit rather than a show to your boss. In Japanese, it is called *Kaizen* — a restless state that looks at constant questioning, re-appraisal and incremental improvements, however tiny. One of the principles used in *Kaizen* is the "1 percent improvement" — the idea of looking for and acting on tiny improvement possibilities, every day (Peters, 1999). Nothing stands still. In fact, the framing effects on summing gains and losses of the prospect

theory also suggests the same thing that individual value a series of small gains more than a single gain of the same summed amount (Kahneman & Tversky, 1979; Bazerman, 1998, pp.58-59, 65).

Continuous Improvement Cycle: of establishing customer requirements, meeting those requirements, measuring success and keeping on improving, can be used both externally and internally to fuel the engine of continuous improvement. By continually checking customers' requirements, a company can keep finding areas in which improvements can be made like the case of Hong Kong Mass Transit Railway Corporation (Tang & Maule, 1995). This continual supply of opportunity can be used to keep quality improvement plans up to date and to reinforce the idea that the total quality journey is never ending.

Prevention: is to avoid problem not to happen. It is central to TQM and one way to move towards continuous improvement. The continual process of driving possible failure out of the system can breed a culture of continuous improvement over time, and the most effective way is by better designed (Juran, 1992) of products or service (Chase & Stewart, 1994), with statistical reasoning back by facts and figures.

3.1 BUSINESS EXCELLENCE MODEL FOR HONG KONG HOTEL INDUSTRY

Many organisations have adopted the balanced scorecard (Kaplan & Norton, 1992) approach to achieve business excellence. Kanji (1998) illustrated the commonalities between the business scorecard and his business excellence model (KBEM) and pointed out that the business

scorecard approach does not prescribe which performance areas should be used and how they should be measured. It is necessary for company achieving business excellence to adopt a TQM process and the critical success factors of his KBEM (Kanji & Tambi, 1999a).

Based on his pyramid model Kanji (1998) develops the business excellence model for measuring organisational performances, with his original four principles (Kanji & Asher, 1993) and eight core concepts being led by leadership to achieve business excellence outcome. All these are critical success factors (Boynton & Zmud, 1984; Jenster, 1984) supported by survey results of Kanji and Hui (1997), Kanji and Tambi (1999a), Kanji (2000) and partially supported the results of the preliminary study in the preceding chapter. While most of the quality models/criteria (e.g. Deming Prize, AQA and EQA) in use are indicative in nature, representing expert opinion that have not been subjected to rigorous empirical tests (Finn & Porter, 1994), the KBEM is for measurement, measurement that reflects improvements, and it is given in figure 2 below.

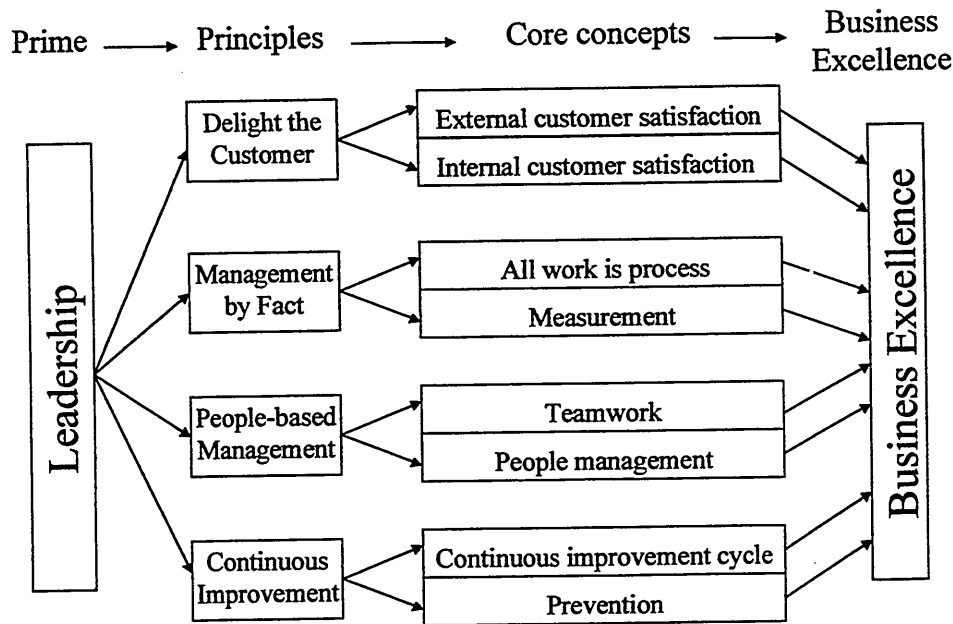


Figure 2: *Kanji's Business Excellence Model*

The principles and core concepts of the KBEM referred to as critical success factors by Kanji and Tambi (1999b), which are the required areas in which results, if they are satisfactory, will assure successful competitive performance for organisation (Rockart, 1982).

The critical success factors and business excellence are treated as constructs that are causally connected in the sequence given. It begins with leadership (prime) that operates on four principles, i.e., delight the customer, management by fact, people-based management and continuous improvement. Each principle, in turn, operates on to two core concepts. Delight the customer operates on external customer satisfaction and internal customer satisfaction; management by fact operates on all work is process and measurement; people-based management operates on teamwork and people make quality, and; continuous improvement operates on continuous improvement cycle and prevention. The combined effect of the variable relationships specified in the model contributes to business excellence.

The TQM model in this form represented a theoretical system that can be empirically tested, examined and analysed. The constructs cannot be observed directly but are inferred indirectly by questionnaire survey method. A measuring instrument (see appendix IIb and table 17) will be developed to obtain scores from respondents on a variety of quality attributes. Method of data analysis together with formula for calculating the business excellence and the customer satisfaction indices will be given in the next chapter. This business excellence index provides a means to measuring customer's, employer's, and shareholder's (stakeholder's) satisfaction simultaneously within an organisation in order to obtain a comprehensive evaluation of the organisational performance.

Owing to the facts that some of the critical success factors are not ranked high in the preliminary study (see table 6) and, given a population size of 79 hotels, a small sample is anticipated, a condensed version of the KBEM (as shown in figure 3 below) is more appropriate for use for the Hong Kong Hotel Industry and it is referred to as the Business Excellence Model for Hong Kong Hotel Industry (BEMHKHI).

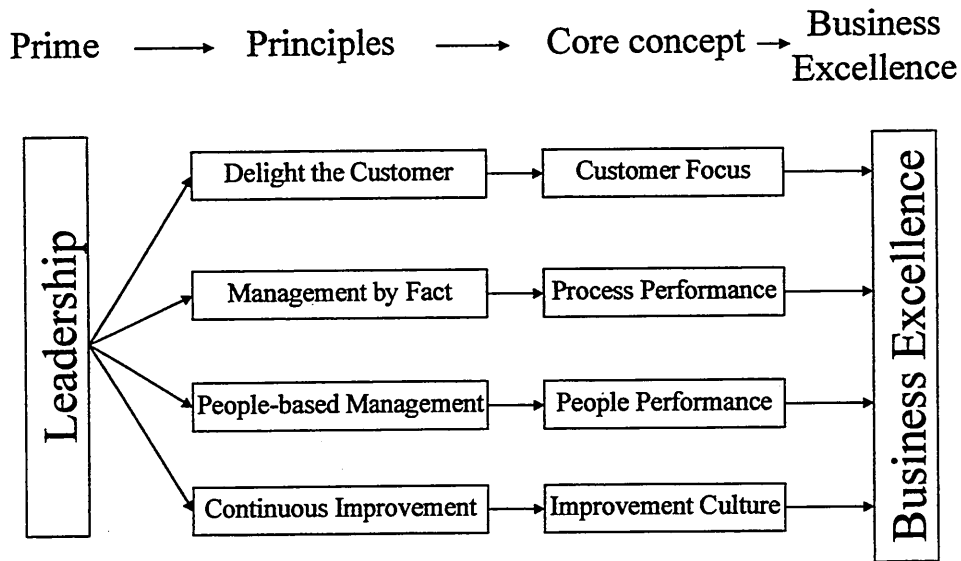


Figure 3: *The Business Excellence Model for Hong Kong Hotel Industry*

In the condensed model, the pairs of core concepts are combined so that each principle operates on only one core concept. The path diagram corresponding to the BEMHKHI, which will be used in subsequent data analysis using EQS and PLS.sas procedures, is shown in figure 4 below.

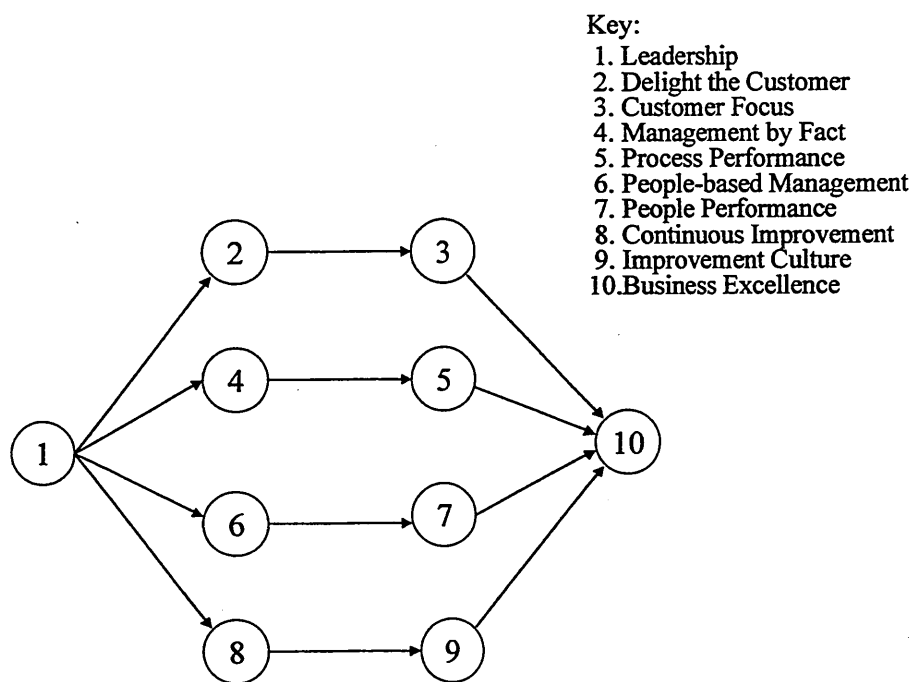


Figure 4: Path Diagram of the Business Excellence Model for Hong Kong Hotel Industry

3.2 CUSTOMER SATISFACTION MODEL FOR HONG KONG HOTEL INDUSTRY

Customer satisfaction is the final target of TQM, and many attempts have been made on its measurement. Prof. Kondo (2001) asked himself "**Customer Satisfaction - How can I measure it?**" at the keynote speech of the 6th World Congress for Total Quality Management, at St. Petersburg, Russia last month. This is exactly the same question the author is attempting to answer in this section and the models considered are presented here.

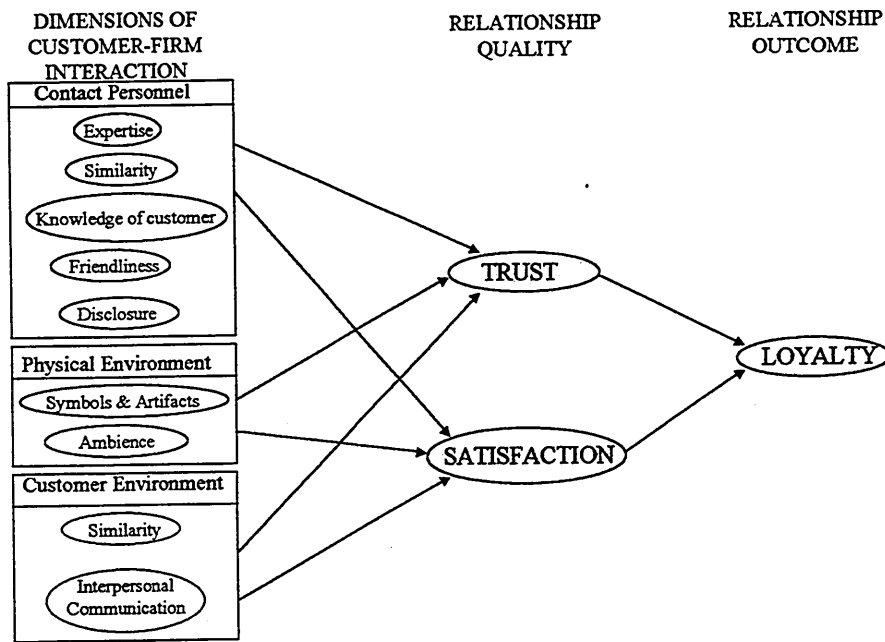


Figure 5: *Relationship Quality and Loyalty in Personalised Services*

Shamdasani and Balakrishnan (2000) propose a model (see figure 5 above) to measure the effects of contact personnel, physical environment and customer environment as determinants on relationship quality and personalised services. This is of direct relevance to the hotel industry for it has all the things in the model and they are all important. The trouble is that all the results are correlation and regression coefficients, R^2 and t-values that can get one to nowhere. Furthermore, the model does not provide recommendations on areas for improvement.

Based on the successful experiences of the Swedish and the American customer satisfaction indices, Kristensen et al (1999) developed a model for the European Customer Satisfaction Index (ECSI), as shown in figure 6 below, under the commission of the European Commission, the European Organisation for Quality (EOQ) and the EFQM.

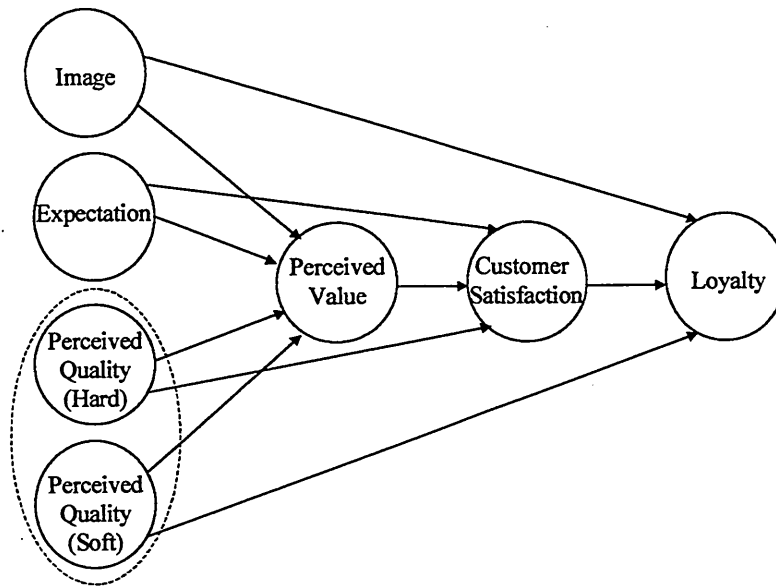


Figure 6: *The European Customer Satisfaction Model*

For guests staying in hotels of Hong Kong, the majority of them are coming for holidays on guided tours, mostly from the Asian countries (68.7% in 1999, 69.6% in 2000) (HKMDS, 2001, p.105). Unlike the domestic market as experienced in the US and Europe, people coming from the Mainland China or other places carries little idea on the **Image** of the hotel that they are staying, particularly when they are visiting Hong Kong for the first time. In this regard, the construct on **Image** is of little relevance to the Hong Kong situation, but it will be reflected, to a certain extent, through other constructs of the model. On the same token, guests are not bordered to differentiate between perceived quality (hard) from perceived quality (soft) and they are combined to give the perceived quality construct as in the basic ACSI model (figure 7) below.

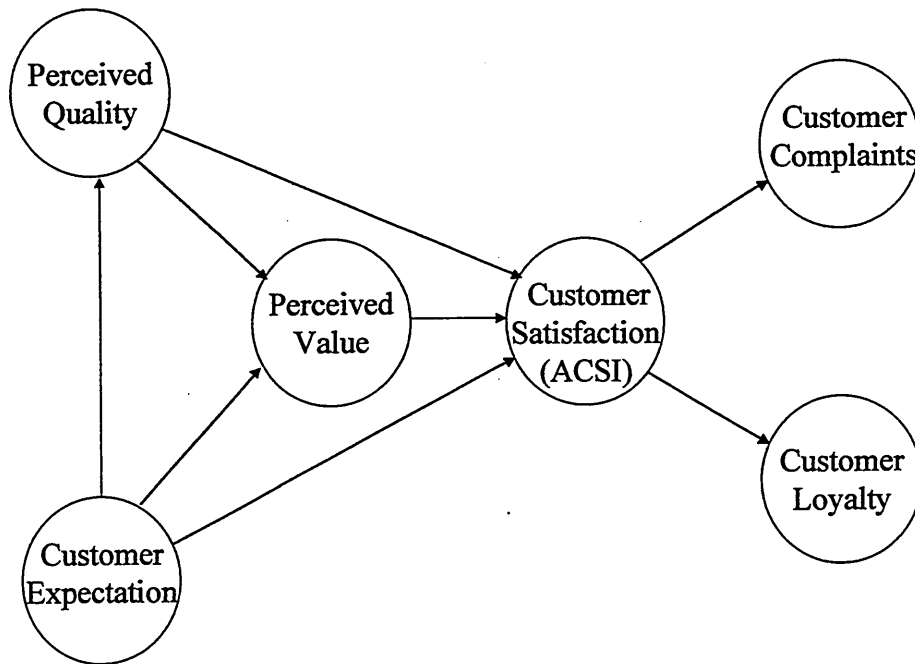


Figure 7: *The American Customer Satisfaction Model*

Due to the widespread influence of Confucianism and Buddhism in Asia, forgiveness and the ability to accept things as it comes are considered virtues. Unlike the Americans, Asian people do not like complaining, and if they do, it must be something very serious. In addition, hotel customers usually come for short stays and would not like to spend the rest of their holidays running around complaining, though their holidays may have already been spoiled. Hence, both from cultural aspects and time constraint, the **complaint** construct seems to have less importance than others, and if it has an effect, the dismay will be reflected by the exceptionally low scores to the items on the questionnaire all along. This reduces the ACSI to the Sheffield Model of Gorst (2000) adopted for use for the Hong Kong Hotel Industry, and it is referred to as the Customer Satisfaction Model for Hong Kong Hotel Industry (CSMHKHI) as shown in figure 8 below.

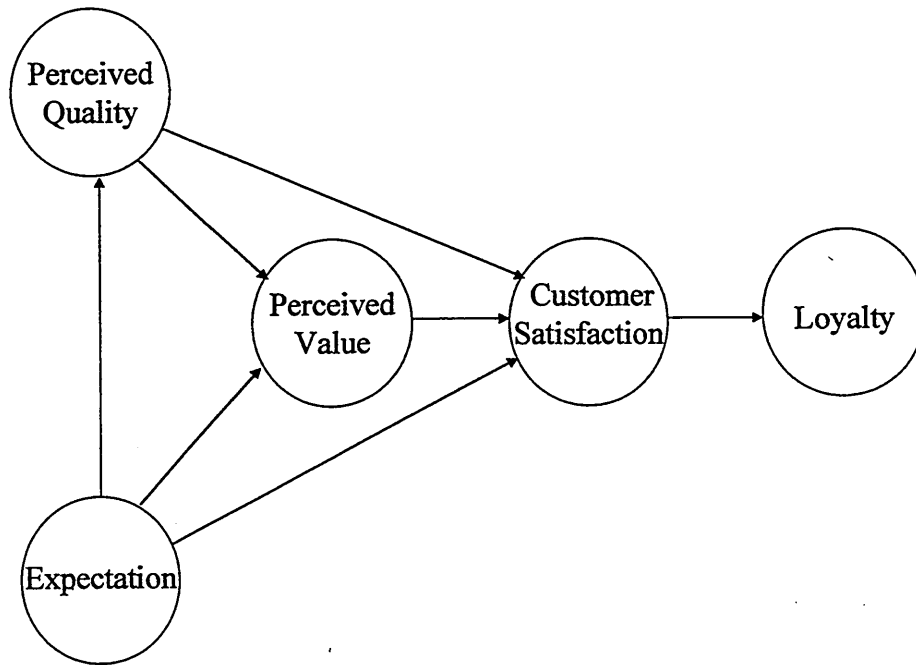


Figure 8: *The Customer Satisfaction Model for Hong Kong Hotel Industry*

A final questionnaire (see appendix IIc) was developed which addresses the requirements of Hotel industries index. The index provides the measurement of customer satisfaction into a number of distinct dimensions described in figure 8 above. While the dimensions are separate, some overlap does exist between them. A short summary of each dimension is presented as follows.

- **Expectation.** There are many different attributes that will influence what a particular individual is expecting from a Hotel service. If the person has used the service before, then the last visit, especially if recent, will go a long way to forming the expectation. However, if the visit is to be the first, then what the person is expecting will have been formed by other methods. Measuring a customer's expectations has been one of the most difficult parts of the measurement.
- **Perceived Quality.** The dimension of quality, or more correctly perceived quality, has not been a major worry in the measurement

process. Respondents have not shown any difficulty in completing the questions relating to this dimension, while at the same time the analysis techniques have not highlighted problems with it. In fact, of all dimensions, the quality dimension has the best fit.

- **Perceived Value.** The dimension of perceived value has created some problems, primarily because many services are not directly charged to the customer.
- **Customer Satisfaction.** The whole of the model comes together to give a rating for customer satisfaction. However, customer satisfaction is also measured on its own right.
- **Loyalty.** Increasing customer loyalty should be one of the main concerns of an organisation. However, in Hotel industry, many people are left with a choice of changing to a competitor and, therefore, loyalty dimension provides some good measurement of customer assets.

The customer satisfaction cycle

Here, customer satisfaction is seen as a cyclical process that can increase or decrease over time. Each customer service interaction starts with what the customer thinks will happen, or expectations. Over time, as the customer uses the service, these dimension changes title and becomes past experience. How the customer has been treated in the past will affect what he/ she expects to happen on a particular encounter. If expectations have been raised, then the service will have to live up to what is being expected in order to maintain a steady level of customer satisfaction and subsequently loyalty.

The major components of service interaction are the 'quality' of the service, how well the customer is treated, and 'value for money'. These two

dimensions should be qualified with the word perceived, because it is the customer's perception of whether it is a quality service or not, and it is the customer's perception of whether or not he/she is receiving value for money, that counts. The organisation's perception is not as important as its customers' perceptions. If the customers' perceptions of quality and value are low, then quality and value are low (Gerson 1993).

One of the reasons for changing the model structure is that a lot of researches (Leboeuf, 1987; Rose, 1995) suggest that customer satisfaction is affected by something more than what happens during the interaction. Customer's own experience last time and what has happened to family and friends in the past are all involved in shaping a customer's expectations.

Feeding into the service interaction through quality are the five dimensions of service quality (SERVQUAL) as identified by Zeithaml et al (1990). The five dimensions are important for forming a customer's perceptions of a service interaction. After all, a customer does take notice of the surroundings, the newness of the equipment and the general cleanliness of the hotel ('tangibles'). The customer wants a 'reliable' service that is dependable and accurately carried out. The service needs to be prompt, with staff showing a willingness to help customers ('responsiveness'). The customer wants to be served by knowledgeable and courteous employees who convey trust and confidence ('assurance'). Finally, one of the most difficult dimensions to measure and train employees in is the 'empathy' that a customer feels for a service, the caring and individual attention that an organisation provides for its customers.

Following the service interaction, the loyalty of the customer is best measured by seeing if he/she returns to use the service again. However, just because a customer continues to use a service does not necessarily mean

that he/she is loyal. There are a number of reasons why customers might return to use a service even though they are not happy with the service that they are receiving. Some possibilities are: convenience, specific market rules or factors (i.e. monopoly), inertial customers, low price, location; no alternative offer, too high cost of change and, excellent loyalty programme.

Details of questionnaire designs and sampling design for data collection together with methods used to analysing the data are described in the next chapter.

4. RESEARCH METHODOLOGY

The Hotel Industry has been chosen because it is distinct from other industries. In order to make a success, it requires excellence in all aspects — the harmonious environment, the hospitality of service, the cleanliness outlook, the comfort offered, delicious food provided and a full range of ancillary services available. Excellence in the Hotel Industry also helps attracting people coming to shop; as a hub for touring in the Mainland China; to visit friends; for conferences, exhibitions and other businesses. All these help to alleviate our unemployment situation and to build up our foreign currency reserve, giving a strong backing to our Hong Kong dollars against any possibility of a financial crisis with similar nature of that occurred in 1997.

Two types of data collection methods were used and they were mail survey, used in the preliminary and the Business Excellence Surveys, and face-to-face inception interviews used in the three Customer Satisfaction Surveys.

The CEOs, Managing Directors (MDs) or GMs of the hotels are very busy people and they are very difficult to get hold of. In this respect, a mail survey is appropriate. Structured questionnaires, all in English, together with covering letters were sent to the CEO/MD/GM of each hotel according to the list of members provided by the HKHA. Details of questionnaire design, sampling design and method of analysis pertaining to the preliminary study are described in section 2.2 and those pertaining to studies in business excellence and customer satisfaction are described below.

4.1 QUESTIONNAIRE DESIGN

Questionnaires (see appendices IIb and IIc) were designed so as to collect information pertaining to the critical success factors for the BEM and for the CSM, established in chapter 3, and a 10-point scale was used to measure these factors. Questions on demographics and related matters were also asked, but not all were used in the analyses. Variable list together with model dimensions for the CSM and the BEM are given respectively in the following tables.

Dimension	Question	Variable
1. Customer expectation	Q2a	Speed answering telephone
	Q2b	Speed answering mail
	Q2c	Service
2. Customer perceived quality	Q5a	Overall staff courtesy
	Q5b	Overall staff helpfulness
	Q5c	Overall staff efficiency
	Q5d	Lobby ambience
	Q5e	Front desk service
	Q5f	Door service
	Q5g	Luggage service
	Q5h	Room comfort
	Q5I	Efficiency of bathroom equipment
	Q5j	Housekeeping / maid service
3. Customer perceived value	Q4	Competitive advantage
	Q5k	Overall value
4. Customer satisfaction	Q1	Current experience
	Q3	Quality of service
	Q20	Absolute advantage
5. Customer loyalty	Q8	Coming next time
	Q13	Worth of recommendation

Table 16: *Variable List for Customer Satisfaction Model for Hong Kong Hotel Industry*

Dimension	Question	Variable
1. Leadership	Q1a	Top management involvement
	Q1b	Manager's involvement
	Q1c	Hotel's quality goal definition
	Q1d	Hotel's quality values
	Q1e	Everyday leadership
	Q1f	People management
2. Delight the customer	Q2a	Customer requirements
	Q2b	Customer loyalty measures
	Q2c	Customer service
3. Customer focus	Q3a	Service obligation
	Q3b	Handling customer complaints
	Q3c	Customer perceived quality
	Q3d	Customer perceived value
	Q3e	Customer satisfaction
	Q3f	Competitor's customer satisfaction
	Q4a	Customer-supplier relationship
	Q4b	Task co-ordination
	Q4c	External customer focus
4. Management by fact	Q4d	Employee job requirements
	Q5a	Performance measurement
	Q5b	Measurement information
5. Process performance	Q5c	Service improvement
	Q6a	'Quality' process design
	Q6b	Process assessment
	Q6c	Technology transfer process
	Q6d	Outcome improvement process
	Q6e	Staff recruitment process
	Q6f	Staff maintenance process
	Q7a	Performance indicators
6. People-based management	Q7b	Quality assessment methodology
	Q8a	Performance feedback
	Q8b	Human resource management
7. People performance	Q8c	Employee quality involvement
	Q9a	Employee interaction
	Q9b	Cross-function teamwork
	Q9c	Individual group teamwork
	Q10a	Managerial training
	Q10b	Employee training
	Q10c	Training resources
	Q10d	Quality improvement barriers
	Q10e	Institutional pride
8. Continuous improvement	Q10f	Empowerment
	Q11a	Customer feedback
	Q11b	Quality improvement methods
9. Improvement culture	Q11c	Service competitiveness
	Q12a	Quality culture
	Q12b	Employee suggestion
	Q13a	Failure removal
10. Business Excellence	Q13b	Problem-free process design
	Q14a	Organisational performance
	Q14b	Competitive advantage
	Q14c	World leader's performance
	Q14d	Financial performance
	Q14e	Goal achievement
	Q14f	Occupancy rate
	Q14g	Customer loyalty
	Q14h	Staff recruitment
	Q14i	Staff maintenance
	Q14j	Supplier assessment criteria

Table 17 *Variable Lists for Business Excellence Model for Hong Kong Hotel Industry*

4.2 SAMPLING DESIGN

All the 78 members, at the time of the survey in 1999, of the HKHA were included in the Business Excellence survey. Except the 12 hostels/guest houses, the survey covered 86.8% in terms of the number of establishments and 97.8% in terms of total revenue (HKTA, 2000), that is, a near complete enumeration of the industry.

For the 1999 Customer Satisfaction Survey, because of the limited time and resources, 62 hotels were chosen. Those not included in the survey are located relatively remote from the city centres or on outlying islands. For each hotel chosen, approximately forty guests were intercepted at random to conduct the face-to-face interview using the customer satisfaction survey questionnaire discussed earlier. The interviews were mainly conducted in the hotel lobby. However, when the hotel management was not cooperative, interviews were conducted just outside of the main entrance of the hotel. In both cases, screening questions were asked to ensure that the guests being interviewed did stay in the target hotel.

Follow-up studies on customer satisfaction were made in 2000 and in 2001. Three international and two Asian hotels were involved and they were the Holiday Inn Golden Mile Hong Kong, the J W Marriott Hotel Hong Kong, the Sheraton Hong Kong Hotel & Towers, the Mandarin Oriental, Hong Kong and the Kowloon Shangri-La. For each hotel chosen, 250 guests were chosen at random and the procedures of 1999 followed.

4.3 METHOD OF ANALYSIS

The usual methods of frequency tables and bar charts are used to report the demography of the respondents. The sum, sample size and mean

to each of the questions can be found in appendices III, IV and V. Computer software like SPSS (Norusis, 1993), EQS (Bentler, 1992) and SAS (SAS, Inc., 1985) were used to analyse the data.

The t - and χ^2 goodness-of-fit tests were used in analysing the data. Procedures for the two tests can be found in most statistical literatures (Kanji, 1993; Li et al, 1997). Other techniques such as the Cronbach's (Cronbach, 1951) α , the structural equation model and the partial least squares method, are described below.

4.3.1 Reliability of Measurement Scale

Reliability is an assessment of the degree of consistency between multiple measurements of a variable or construct. One form of reliability is test-retest, by which consistency is measured between the responses for an individual in two points in time. The objective is to ensure that responses are not too varied across time period so that a measurement taken at any point in time is reliable. A second and more commonly used measure of reliability is **internal consistency**, which applies to the consistency among variable in a summated scale — formed by combining several individual variables into a single composite measure, usually the average of the variables. The rationale for internal consistency is that the individual items or indicators of the scale should all be measuring the same construct and thus be highly intercorrelated (Churchill, 1979; Nunnally, 1979).

Because no single item is a perfect measure of a concept, we must rely on a series of diagnostic measures to assess internal consistency. First, there are several measures relating to each separate item, including the item-to-total correlation (the correlation of the item to the summated scale score) or the inter-item correlation (the

correlation among items). Rules of thumb suggest that the item-to-total correlations exceed .5 and that the inter-item correlations exceed .3 (Robinson et al, 1991). The second type of diagnostic measure is the reliability coefficient that assesses the consistency of the entire scale, with **Cronbach's alpha** (Nunnally, 1979; Peter, 1979) being the most widely used measure. A work example for the Cronbach's alpha is given by Cosenza (1993, pp.185-187) and its computational formula is given below:

$$\alpha = \frac{K}{K-1} \left[1 - \frac{\sum_{i=1}^K \sigma_i^2}{\sum_{i=1}^K \sigma_i^2 + 2 \sum_{i=2}^K \sum_{j=1}^{i-1} \sigma_{ij}} \right]$$

where

K = the number of parts (items) in the scale;

σ_i^2 = variance of item i , and;

σ_{ij} = covariance between item i and item j .

The generally agreed upon lower limit for Cronbach's alpha is .7 (Robinson et al, 1991; Robinson & Shaver, 1973), although it may decrease to .6 in exploratory research (Robinson et al, 1991). And the bias due to measurement error, in multivariate cases, is negligible if reliabilities of measurement scales are high (Kenny, 1979).

4.3.2 Structural Equation Modelling

Structural Equation Modelling (SEM) is a very general, chiefly cross sectional, statistical modelling technique. Factor analysis, path

analysis and regression analysis all represent special cases of SEM (Semnet, 1996). Whereas the factors in factor analysis are calculated after running the procedure, in SEM, the latent variables are defined before, with the model defining the weights of the variables that feed into each latent variable.

The symbolic representation of a SEM

In creating a SEM, different symbols carry different meanings and figure 9 below shows the key to the various symbols used in the SEM diagrams.

Source: Chin (1995)

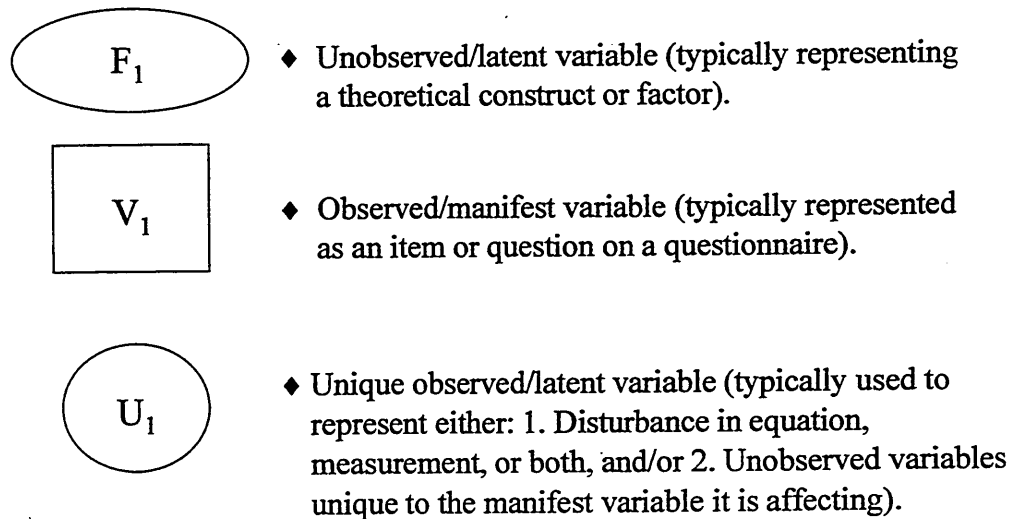


Figure 9: Key to Symbols in SEM Diagram

Arranging the Model

A SEM must be arranged in a particular way if it is to be recognised as such by both humans and computers. Figure 10 shows an example of a basic SEM with one latent variable.

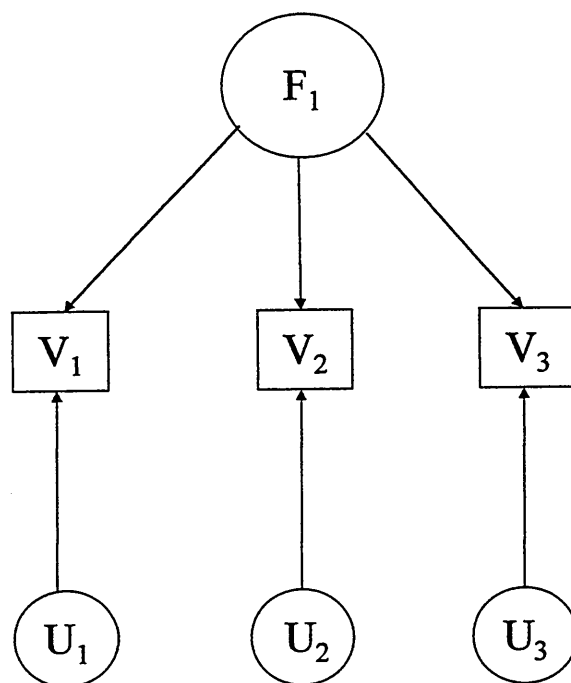


Figure 10: An Example of a Basic SEM

The observed variables (V_1 to V_3) all feed by the latent (unobserved) variable F_1 . In a case like this where there is only one latent variable, the data in the observed variables could be analysed by simply calculating the means and variances etc. for each of the variables. However, the strength of the SEM comes from the fact that instead of calculations been solely based on the data within one particular variable, the SEM also takes into account the responses made to the other variables before a weight for each observed variable is calculated. In simple terms, the SEM takes into account a respondent's responses to all questions rather than isolating a particular question.

Most SEMs will have more than one latent variable. Therefore, arrows are used to link one latent variable to other latent variables to build up the model (see figure 11). The direction of the arrow indicates an influence or cause from one latent to another.

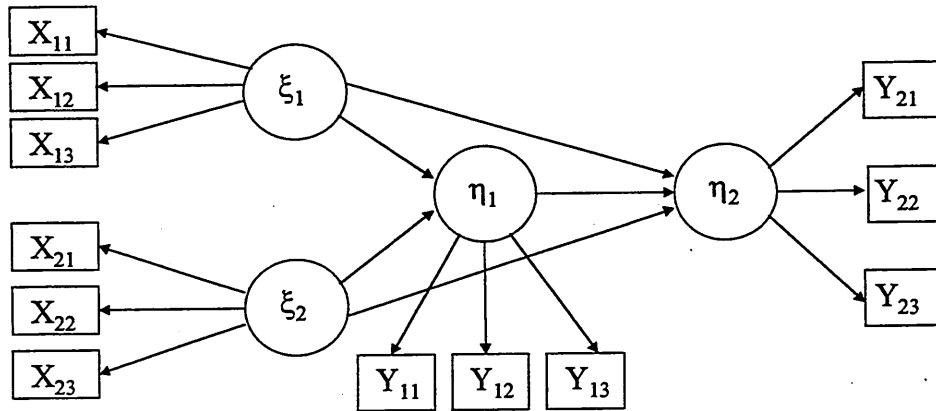


Figure 11: An Example of a Simple Structural Equation Model

The circles identified with a ' ξ ' indicate exogenous latent variables, while circles identified with a ' η ' indicate endogenous latent variables. The boxes containing 'X' are the observed (manifest) variables, which feed the exogenous latent variables, and the boxes containing a 'Y' are the observed variables, which feed the endogenous latent variables. The subscripts indicate a particular variable's location within the matrices, which are used for calculation purposes.

Hair et al (1998, p.580) define endogenous construct as construct or variable that is the dependent or outcome variable in at least one causal relationship. In terms of a path diagram, there are one or more arrows leading into the endogenous construct or variable. And, exogenous construct is construct or variable that acts only as a predictor or "cause" for other constructs or variables in the model. In path diagrams, exogenous constructs have only causal arrows leading

out of them and are not predicted by any other constructs in the model.

An illustration is given in figure 12 below.

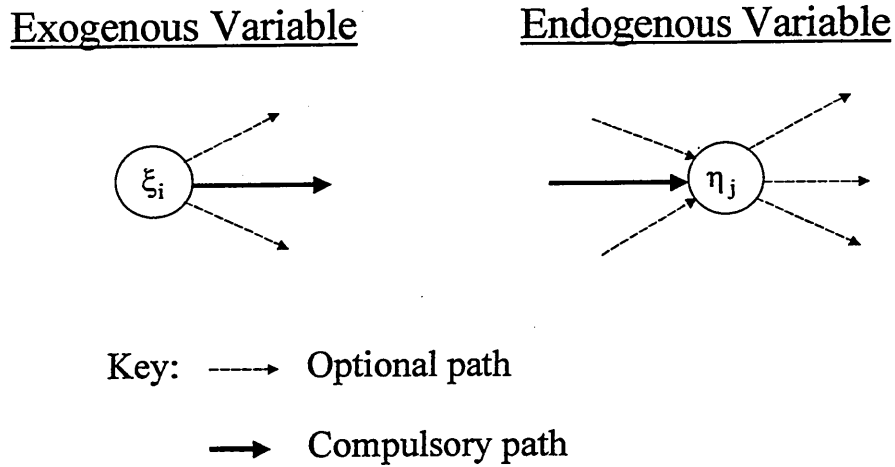


Figure 12: *An Illustration of Endogenous and Exogenous Variables*

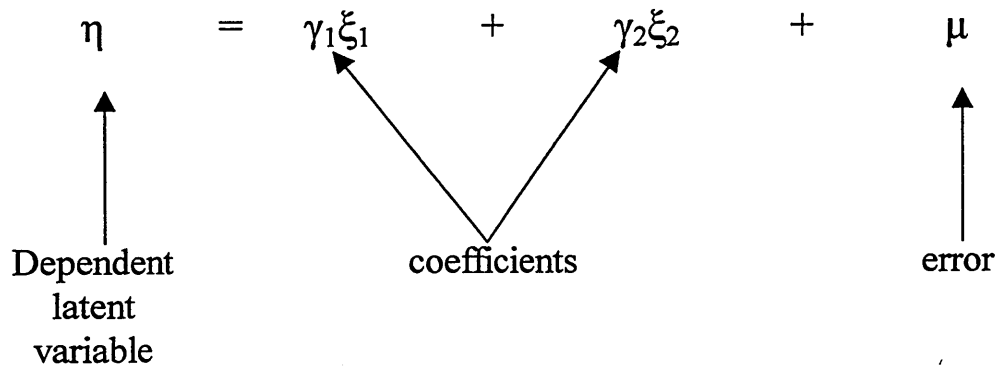
Structural Models with Latent Variables

There are several indicators to measure a latent variable. These produce the following measurement model (Hackl et al, 1999).

$$\begin{array}{ccccccc}
 X_1 & = & \lambda_{x1} & \xi_1 & + & \varepsilon_1 \\
 \uparrow & & \uparrow & \uparrow & & \uparrow \\
 \text{Manifest} & & \text{Coefficient} & \text{Latent} & & \text{Error} \\
 \text{variable} & & & \text{variable} & & \\
 \text{indicator} & & & & &
 \end{array}$$

$$Y_1 = \lambda_{Y1} \eta + \delta$$

The structure among the latent variables then becomes:



(Hackl et al, 1999)

R^2 measures how well η can be predicted by ξ_1 and ξ_2 .

The R^2 value indicates how much of an effect the model before the latent variable is having on that particular latent variable. For example, if the R^2 value is 0.65, this indicates that the model before this latent variable explains 65% of the variation in the latent variable.

These formulae can then be developed for the particular methodology that is required for calculations in the BEM and in the CSM developed in the previous chapter. Path diagrams for the two models are given below:

- Key:
1. Leadership
 2. Delight the Customer
 3. Customer Focus
 4. Management by Fact
 5. Process Performance
 6. People-based Management
 7. People Performance
 8. Continuous Improvement
 9. Improvement Culture
 10. Business Excellence

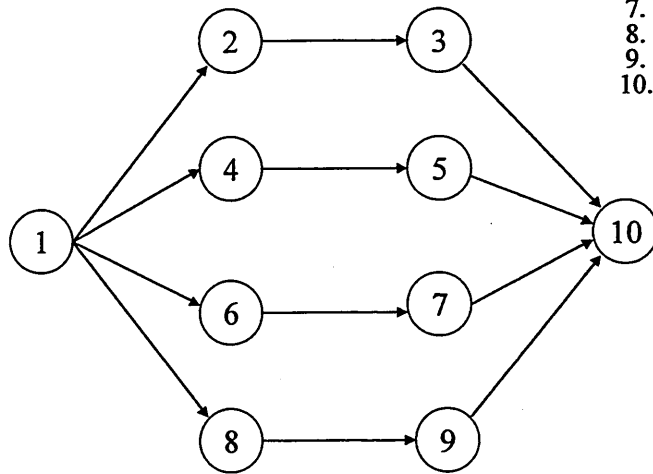


Figure 13: *Path Diagram for the Business Excellence Model for Hong Kong Hotel Industry*

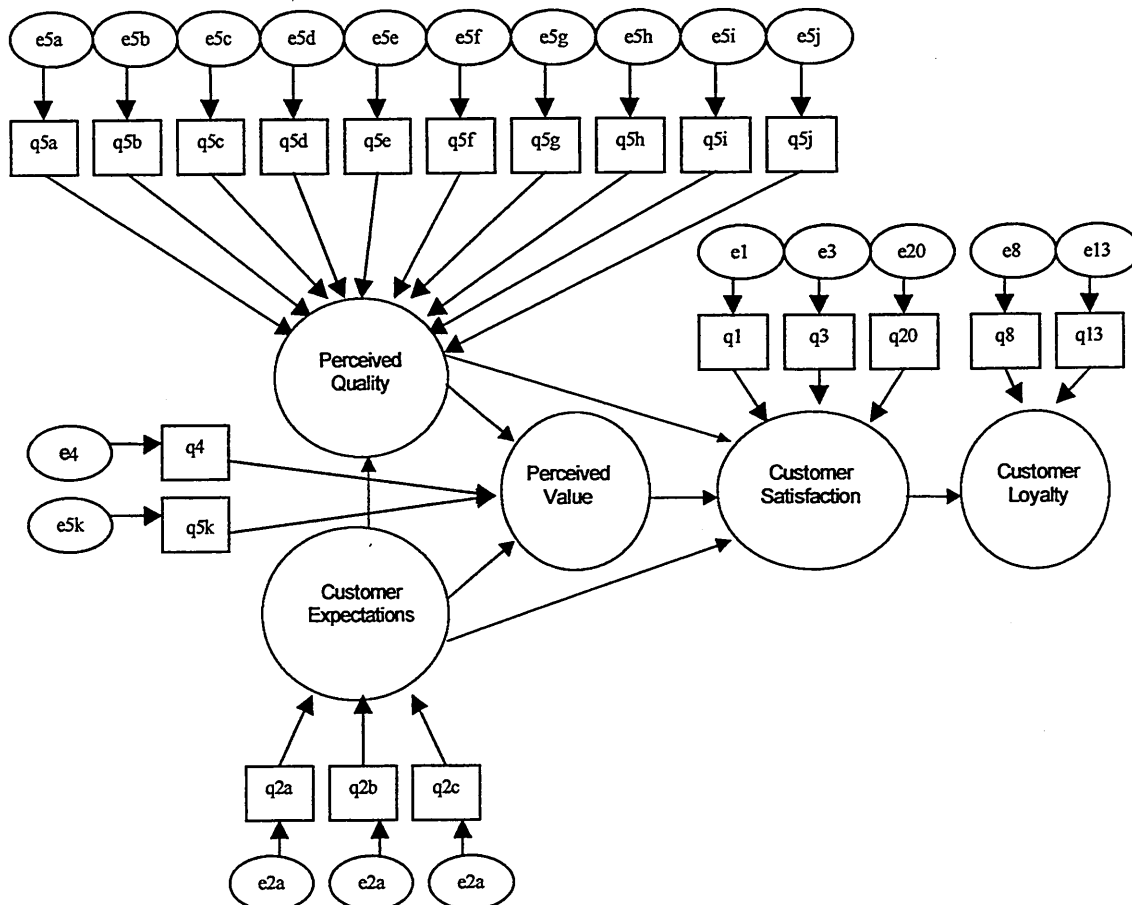


Figure 14: *Manifest Variables for the Customer Satisfaction Model for Hong Kong Hotel Industry*

4.3.3 EQS

Because of its robustness to nonnormal data (Hair et al, 1998, p.601), EQS (Bentler, 1988; Bentler & Wu, 1995) Window Version 5.7b was employed to evaluate the goodness-of-fit of the overall model for the BEM. Two indices are of particular interest and they are the Bentler-Bonnett (Bentler & Bonnett, 1980) Normed Fit Index (NFI) and the Comparative Fit Index (CFI) (Bentler, 1990).

The NFI is a more popular measure. It is a measure ranging from 0 (no fit at all) to 1 (perfect fit). The NFI is a relative comparison of the proposed model to the null model and it is calculated as: (Hair et al, 1998, p.657)

$$NFI = \frac{(\chi^2_{\text{null}} - \chi^2_{\text{proposed}})}{\chi^2_{\text{null}}}$$

Like NFI, the CFI is also a relative comparison of the estimated model to the null or independence model. The value lies between 0 to 1, and the larger values indicate higher levels of goodness-of-fit. The CFI has been found to be more appropriate in a model development strategy or when a smaller sample is available (Rigdon, 1995). In both cases of NFI and CFI, a value of 0.9 or greater is desired (Bentler, 1992).

4.3.4 Partial Least Squares Method

Partial Least Squares (PLS) is a second-generation multivariate analysis technique used to estimate the parameters of causal models. PLS embraces abstract and empirical variables simultaneously, and recognises the interplay of these two dimensions of theory development. The causal modelling technique, often termed SEM, accommodates a priori knowledge derived from theory and/or previous

empirical findings, and because these methods can combine as well as confront theory with empirical data, they offer a potential for scientific explanation that goes far beyond description and empirical association. (Igbaria et al, 1995)

The PLS was originally introduced as an alternative to the LISREL (Linear Structural RELations), a maximum likelihood based technique, as a way to avoid problems of improper solutions and factor indeterminacy as well as the violations of distributional assumptions (Fornell & Bookstein, 1982; Fornell 1982; Fornell & Cha, 1994; Kristensen et al, 1999). In fact, PLS is an iterative procedure for estimating causal models, which does not impose distributional assumptions on the data, and accommodates both continuous as well as categorical variables (Fornell 1996).

The PLS approach was initially developed by Wold (1981), who questioned the general fitness of covariance structure models as implemented by LISREL (Fornell & Cha, 1994). In many studies, the data generated is not normally distributed, a requirement of the maximum likelihood approach.

There are wide discussions (Fornell & Larcker, 1981; Fornell & Bookstein, 1982; Lohmöller, 1982; Green et al, 1995; Igbaria et al, 1995; Hackl et al, 1999; Gorst, 2000, and; Wong, 2000) on the advantages and disadvantages on the use of Fixed Point Estimation type of PLS versus the Maximum Likelihood Estimation type of LISREL and AMOS (Arbuckle, 1994). For our purpose, PLS is employed and used extensively throughout.

4.3.5 Initialisation of the PLS programme

The PLS programme is run using the Statistical Analysis Systems (SAS®) under Microsoft Window environment. It is used to calculate the weights (the outer coefficients) that are then used for the calculation of the index scores for both BEM and CSM developed in chapter 3. There are a number of parameters to be initialised before the programme can be executed and the meaning of the parameters and their initialised values are given respectively in tables 18 and 19 below.

<u>Parameter</u>	<u>BEM</u>	<u>CSM</u>
n	{6 3 10 3 8 3 9 3 4 10}	{3 10 2 3 2}
ir	{2 1 4 1 6 1 8 1 3 2 5 4 7 6 9 8 10 3 5 7 9}	{2 1 3 1 2 4 1 2 3 5 4}
irn	{2 2 2 2 2 2 2 2 5}	{2 3 4 2}
io	{1 0 0 0 0 0 0 0 0 0}	{1 0 0 0 0}
ssize	28	2481
maxnoit	100	100
criterio	0.000001	0.000001
fpopt	0	0
fpcrit	0.000001	0.000001
nfpit	100	100

Table 18: *Parameter Values as used in the PLS.sas Programme*

Parameter	Comment
n	Specifies the number of variables to be fed into each dimension or latent variable of the SEM. For example, 3 variables are fed into dimension 1, 10 variables into dimension 2, etc. for the CSM.
ir	Defines the dependent and independent relationships among variables in the inner relation. For example, {2 1 3 1 2 4 1 2 3 5 4} means that dimension 2 is fed by dimension 1; 3 is fed by both 1 and 2; 4 is fed by 3, 2 and 1; and finally, 5 is fed by 4.
irn	Indicates the number of variables in the inner relation. For example, the 4 in {2 3 4 2} means there are three dimensions feeding into 'dimension 4' together with the dimension itself making 4.
io	Shows whether the outer indicators go in or out for each variable in the inner relation. The value 1 means in (indicating that it is an exogenous variable), while 0 means out (indicating an endogenous variable).
ssize	Is the sample size, specifying the number of records to be read.
maxnoit	Specifies the maximum number of iterations for the PLS procedure. Iteration stops when this number is reached irrespective of whether a solution is found. It is useful in cases of indeterminacy.
criterio	Specifies the convergence criterion. Iteration stops when all estimates converge to within the value of criterio .
fpopt	Specifies the option: fpopt = 0 — the fix point (FP) is not exercised; fpopt = 1 — the first step in the FP iteration is OLS; fpopt = 2 — the first step in the FP iteration is 2SLS.

Table 19: *Parameter Specifications for the PLS.sas Programme*

4.3.8 Performance Indices

The general formula for calculating the index values from the weights, the outer coefficients from the PLS.sas computer output, and the means, from original data, is as follow:

$$\text{BEI or CSI} = \frac{\sum(w_i * x_i) - \sum w_i}{\sum(R_i * w_i)} * 100 = \frac{\sum(w_i * x_i) - \sum w_i}{9\sum w_i} * 100$$

where R_i is the range of the scale for the i^{th} manifest variable, which is 9 since a 10-point scale is used for all manifest variables;

w_i is the weight given by the outer coefficient correspond to the i^{th} manifest variable in the PLS.sas output, and;

x_i is the mean for the i^{th} manifest variable, as calculated from the original data.

Other outputs pertaining to the interpretation of the result are given below:

Output	Meaning
Outer coefficient	is the standardised structural weight of manifest indicator variable; should be nonnegative so as to avoid the possibility of getting a negative index.
Inner coefficient (Structural Parameter)	is a path coefficient linking the latent variables, reflecting the strength of causal relationship between them; shows the amount of change on an effect (endogenous) variable as a result from a unit change in the corresponding cause (exogenous or preceding endogenous) variable; should be positive for all causal relationships in the BEM, signifying the principles and core concepts of Kanji's (1993, 1994 & 1996) all contributing toward Business Excellence.
Correlation Matrix	is a matrix of Pearson product-moment correlation coefficients among all latent variables, showing their linear associations.
Standard Deviation	is the standard error of the parameter estimate; is used to calculate the t-value [$t = (\text{inner } R)/sd$].
Inner R^2	represents the proportion of variation accounted for by the corresponding latent construct or variable, i.e., a coefficient of determination.
Inner R	is just the square root of inner R^2 .
Cronbach's Alpha (α)	indicates the degree of internal consistency of the latent construct as reflected, empirically, by the manifest variables; a value of .7 (Nunnally, 1979) or greater is desirable in order to be considered a reliable measure of the construct.

Table 20: *Meaning of Major Output from PLS.sas*

Results pertaining to the business excellence and customer satisfaction surveys and their indices are reported in the following chapters.

5. BUSINESS EXCELLENCE FOR HONG KONG HOTEL INDUSTRY

In this chapter, profile of the respondents of business excellence survey are described, followed by the validation of BEMHKHI, testing of the model parameters, presentation of the Business Excellence Model for Hong Kong Hotel Industry together with the Business Excellence Index, and finally the significance of results.

The first round of the survey began in mid-April 2000. A total of 79 questionnaires were sent to all members of the Hong Kong Hotels Association on the item questions for the critical success factors of the BEMHKHI. The critical success factor dimensions with corresponding question numbers and variables are described in table 17. Seven hotels responded with a very low response rate of 8.9%.

Questionnaires were sent to those not responded in the first round of the survey, towards the end of August 2000. A further fifteen hotels responded in the second round but one of them replied with regret that they were very busy and could not spare any manpower to complete the questionnaire, thus giving a response rate of 17.7%.

The third and final round of the survey began in the beginning of November 2000. A further seven hotels responded representing a response rate of 8.9%. The overall response rate of the survey is 35.44%. A list of hotel respondents is given in appendix IIe.

Categories of the responding hotels are given in table 21 below. It is shown that majority (82.1%) of the hotel respondents is rated at 4-star or above, and the remainders are rated at 3-star. This would give a good representation of the Hong Kong Hotel Industry.

<u>Category of responding Hotels</u>	<u>Frequency</u>
5-star deluxe	4
5-star	7
4-star deluxe	7
4-star	5
3-star	5

Table 21: Category of Hotel Respondents

Job titles of the persons who actually filled out the questionnaires are given in table 22 below. It is shown that 17.9% of the questionnaires were filled out by Directorates of the hotel, 25% by General Managers, 10.7% by Executive Assistant Managers, 17.9% by Resident Managers, 17.9% by other functional Managers while 10.71% did not state their job titles. These showed that the ratings given in the returned questionnaires are highly representative of the assessment from top management on different dimensions of business excellence of their respective hotels. More importantly, the outcomes from this survey, that is the parameters of the BEMHKHI and the Business Excellence Index (BEI), are representative of those for the Hong Kong Hotel Industry.

<u>Job title of respondents</u>	<u>Frequency</u>
Acting/Assistant/Director	5
Assistant/General Manager	7
Executive Assistant Manager	3
Resident Manager	5
Other Functional Manager	5
Non-Respondent	3

Table 22: Job Titles of the Respondents

5.1 MEAN SCORES AND CORRELATION ANALYSIS

For the purpose of validating the BEMHKHI as a whole, score from different manifest variables of the same construct are pooled together to give a single manifest variable of mean scores of the construct, thus reducing the variability and complexity of the test. The mean of each dimension of business excellence together with their least significant differences and the t-values, corrected for finite population, are given in table 25 below (see appendix IIIa) where the Pearson product-moment correlation matrix is given in table 26 below (see appendix IIIb).

The means (see table 25 below) for the ten dimensions of business excellence are: 8.45 for Leadership, 8.40 for Delight the customer, 8.01 for Customer focus, 7.79 for Management by fact, 7.69 for Process performance, 8.01 for People-base management, 8.09 for People performance, 7.92 for Continuous improvement, 7.81 for Improvement culture and 7.59 for Business Excellence. Leadership has the highest score as management needs to put a lot of efforts to bring profitability, while Business Excellence scores the lowest as it is the resultant outcome of all the other nine dimensions. For an ideal system, whether service or manufacturing, the difference between the highest and the lowest should not be significant. It is because committed top management will make every effort to detect and remove barriers or resistance to keep the influence flow smoothly along its path to business excellence.

The technique of analysis of variance is employed to test for differences among the means of the dimensions of business excellence. The F-statistic of value 0.904 with 9 and 270 degrees of freedom in the analysis of variance table (table 23) below revealed no significant differences among the means of the dimensions of business excellence at .1

level of significance. This apparent result is largely due to the fact that most statistical packages do not take the finite population correction into consideration for the analysis of variance procedures. They usually work on infinite populations, which is true.

Analysis of Variance Table

<u>Source of variation</u>	<u>Sum of Squares</u>	<u>df</u>	<u>Mean Square</u>	<u>F</u>	<u>Sig.</u>
Between Group	20.297	9	2.255	.904	.523
Within Group	673.877	270	2.496		
Total	694.174	279			

Table 23: *Analysis of Variance for Dimensions of Business Excellence for Hong Kong Hotel Industry*

The finite population correction, C_f is given by:

$$C_f = \frac{N - n}{N - 1} = \frac{79 - 28}{79 - 1} = 0.653846$$

where $N = 79$ is the population size and $n = 28$ is the sample size. Then the value of the corrected standard error, SE' , used in the LSD becomes $SE' = 0.4222 \sqrt{C_f}$ or 0.34139. This corrected standard error is used to calculate the new t-values for testing. Formula for calculating the new t-values is given below:

$$t\text{-value} = \frac{C_j - R_i}{SE'} = \frac{C_j - R_i}{0.34139}$$

with 270 degrees of freedom (df). The difference, $C_j - R_i$, is obtained by subtracting the i^{th} row mean from the j^{th} column mean, and the values are given in table 25 below. The critical t-values for the 2-tail tests with ∞ df (Kanji, 1993, p.162) are quoted at the top right corner of table 25.

After adjusting the t-values for the least significant difference (LSD) (see table 25 below) tests, it is revealed that the mean scores for both

Leadership and *Delight the customer* are significantly higher than those for *Management by fact* and *Improvement culture* at .1 level, respectively; *Process performance* at .05 level, and; *Business Excellence* at .02 level of significance. These imply that, though top management claims they are good leaders with focus on delighting the customer, little support has been received from empirical evidence, particularly on *Management by fact* and *Improvement culture*, *Process performance*, and the worst on *Business Excellence* — the most important indicators of all.

These mean scores can be used to represent gross measures of a hotel's performances. These measures can be narrowed down to scores of individual questionnaire items to obtain gross measures of a hotel's activities.

The assumptions, on which the analysis of variance technique is based, are that the experimental errors:

1. have equal variances;
2. are statistically independent, and;
3. are normally distributed.

The first assumption of equal variances is tested using the Levene test for homogeneity as given in table 24 below. It is revealed that the Levene statistic of value 0.149 with 9 and 270 degrees of freedom is not significant at .01 level of significance. And it is concluded that there is no significant difference among the variances of the dimensions of business excellence at .01 level of significance.

Levene Test for Homogeneity of Variances

<u>Statistic</u>	<u>df₁</u>	<u>Df₂</u>	<u>Sig.</u>
.149	9	270	.998

Table 24: Levene Test for Homogeneity of Variances

There is no guarantee about the statistical independence of the sample since it is not randomised in any way, but representative. The normality assumption is already violated with a normalised multivariate kurtosis estimate of -1.3534 (see appendix IIIc). A lot of studies have been made on non-normality (Pearson, 1931; Geary, 1947; Gayen, 1950; David & Johnson, 1951a, 1951b; Kanji, 1976a; Kanji & Liu, 1983) and on statistical independence (Box, 1954; Kanji, 1975, 1976b) of the distribution of error. They found that the test is little affected by non-normality of error, nor seriously affected by serially correlated errors. The fact that the scale employed is from 1 to 10 would certainly help minimising these effects as well.

As expected, all linear correlation coefficients are significant at .01 level (the finite population correction may have small improvements on the level of significance, but these are just good enough with no need for adjustments). This is due to the strong inter-connections underlie the latent structure. The highest recorded value is 0.921 (see table 26 below), the linear relationship between *Process performance* and *People performance* while the lowest value is 0.664, the linear relationship between *Customer focus* and *Continuous improvement*. These show that the management of people and process are particularly effective and efficient with good performances in hotels of Hong Kong. But, the use of *Continuous improvement* on *Customer focus* is a little lag behind, probably due to the

come-and-go nature of the customer and the tight work schedule that hinders continuous improvement processes.

Matrix of Least Significant Differences / t-Values

*, significant at .10 ($t > 1.645$);
 **, significant at .05 ($t > 1.960$);
 ***, significant at .02 ($t > 2.326$).

<u>Dimensions of Business Excellence</u>	<u>Mean</u>	<u>C1</u>	<u>C2</u>	<u>C3</u>	<u>C4</u>	<u>C5</u>	<u>C6</u>	<u>C7</u>	<u>C8</u>	<u>C9</u>
C1: Leadership	8.4524	$C_j - R_i$ <i>t-value</i>								
C2: Delight the customer	8.4048	.0476 0.139								
C3: Customer focus	8.0107	.4417 1.294	.3940 1.154							
C4: Management by fact	7.7857	.6667 1.953*	.6190 1.813*	.2250 0.659						
C5: Process performance	7.6875	.7649 2.241**	.7173 2.101**	.3232 0.947	.0982 0.288					
C6: People-base management	8.0119	.4405 1.290	.3929 1.151	-.0012 -0.004	-.2262 -0.663	-.3244 -0.950				
C7: People performance	8.0873	.3651 1.069	.3175 0.930	-.0766 -0.224	-.3016 -0.883	-.3998 -1.171	-.0754 -0.221			
C8: Continuous improvement	7.9167	.5357 1.569	.4881 1.430	.0941 0.276	-.1310 -0.384	-.2292 -0.671	.0952 0.279	.1706 0.500		
C9: Improvement culture	7.8125	.6399 1.874*	.5923 1.735*	.1982 0.581	-.0268 -0.079	-.1250 -0.366	.1994 0.584	.2748 0.805	.1042 0.305	
C10: Business Excellence	7.5893	.8631 2.528***	.8155 2.390***	.4214 1.234	.1964 0.575	.0982 0.288	.4226 1.238	.4980 1.459	.3274 0.959	.2232 0.654

Table 25: Means and Mean Score Differences among Dimensions of Business Excellence for Hong Kong Hotel Industry

Correlation Matrix of Mean Scores among Dimensions of Business Excellence

**: significant at .01.

<u>Dimensions of Business Excellence</u>	<u>C1</u>	<u>C2</u>	<u>C3</u>	<u>C4</u>	<u>C5</u>	<u>C6</u>	<u>C7</u>	<u>C8</u>	<u>C9</u>	<u>C10</u>
C1: Leadership	1									
C2: Delight the customer	.888**	1								
C3: Customer focus	.845**	.777**	1							
C4: Management by fact	.834**	.796**	.812**	1						
C5: Process performance	.828**	.816**	.845**	.763**	1					
C6: People-base management	.882**	.776**	.857**	.720**	.878**	1				
C7: People performance	.868**	.882**	.829**	.725**	.916**	<u>.921**</u>	1			
C8: Continuous improvement	.732**	.850**	<u>.664**</u>	.768**	.825**	.687**	.771**	1		
C9: Improvement culture	.805**	.783**	.730**	.739**	.841**	.815**	.818**	.848**	1	
C10: Business Excellence	.820**	.796**	.725**	.887**	.701**	.701**	.684**	.807**	.757**	1

Table 26: *Correlation Matrix of Mean Score among Dimensions of Business Excellence for Hong Kong Hotel Industry*

5.2 MODEL VALIDATION USING EQS

The structure of BEMHKHI is analysed using EQS for Windows version 5.7b (see appendix IIIc) and the important statistics are listed in table 27 below:

***: significant at 0.001 level

<u>Statistic</u>	<u>Value</u>	<u>df</u>
χ^2	74.592***	21
NFI	0.911	
CFI	0.932	

Table 27: *Statistics for Model Validation Using EQS*

The model gave a χ^2 value of 74.6 (significant at .001 level) with 21 degrees of freedom, a Normed Fit Index value of 0.911 and a Comparative Fit Index value of 0.932. Since both NFI and CFI are greater than 0.9 (Bentler, 1992), it can be concluded that, as a whole, the Business Excellence Model for Hong Kong Hotel Industry fits the data very well.

5.3 MEASURING BUSINESS EXCELLENCE

Detailed calculations for the BEMHKHI are made using method described in section 4.3.8 and the PLS method running under the SAS environment. The outer and inner coefficients and matrices for the correlation coefficients among the latent variables, for standard errors (SD in the output) and for the t-values together with the Cronbach's alpha and R^2 for each endogeneous variable can be found in appendix IIIId and for indices in appendix IIIf (optimal).

In the original output (appendices IIIe and IIIg), i.e. all questionnaire items are used in the PLS.sas programme, the value of the Cronbach's alpha

for Leadership is 0.5868 and the outer coefficient corresponding to question 1a (Q1a) is negative. The procedure is to delete Q1a and re-run the programme to give the optimal output (appendices III d and III f) and the effects on the index values of all the ten business excellence dimensions are given in table 28 below:

Dimension	Optimal Index	Original Index	Optimal α	Original α
1. Leadership	82.9962	81.9078	0.7775	<u>0.5868</u>
2. Delight the customer	82.2490	82.2846	0.9245	0.9243
3. Customer focus	78.2063	78.2077	0.9557	0.9557
4. Management by fact	75.2025	75.1874	0.9266	0.9264
5. Process performance	74.3068	74.3073	0.9514	0.9513
6. People-base management	77.8992	77.9077	0.9620	0.9620
7. People performance	78.7323	78.7325	0.9668	0.9668
8. Continuous Improvement	77.2729	77.2695	0.8900	0.8886
9. Improvement culture	75.8956	75.8951	0.9292	0.9292
10. Business Excellence	72.9109	72.9133	0.9509	0.9509

Table 28: Comparison of Optimal and Original Performance Indices

The results from table 28 indicate that, by deleting Q1a, the value of Cronbach's alpha improves from 0.5868 to 0.7775, which meets the required lower limit of .7 (Robinson et al, 1991), with little effects on others. Indeed, the index for leadership improves by a value of 1.0884, which is not significant at the industry level (ASQC, 1995). Hence, the results from this output called the output (optimal) will be used throughout this section.

Referring to table 28 above, all values of the optimal Cronbach's alphas are greater than 0.7 and it can be concluded that all constructs are internally consistent. And, if each and every construct is internally

consistent, this indicates that the model is capable of measuring what it is intended to measure, which is another way of validating the model that will be used in the next chapter. Furthermore, since the model will be used to make comparisons of the same hotel across different time periods or among different hotels within the industry, tests of significance concerning path coefficients are for understanding rather than for modification of the basic BEMHKHI. It is because a particular path coefficient may be found significant in one time period but not in another, which will affect the basis of which the comparisons are based. And the same is true for comparisons among different hotels within the industry. The same reasoning also applies to the CSMHKHI.

Path Coefficients

<u>Dimensions</u>	<u>C1</u>	<u>C2</u>	<u>C3</u>	<u>C4</u>	<u>C5</u>	<u>C6</u>	<u>C7</u>	<u>C8</u>	<u>C9</u>	<u>C10</u>
1. Leadership										
2. Delight the customer	.906									
3. Customer focus		.820								
4. Management by fact	.789									
5. Process performance				.763						
6. People-base management	.900									
7. People performance						.841				
8. Continuous Improvement	.802									
9. Improvement culture								.898		
10. Business Excellence			.357		.115		.315		.184	

Table 29: *Path Coefficients for the Business Excellence Model for Hong Kong Hotel Industry*

The path coefficients and the coefficients of determination, R^2 , for the BEMHKHI are extracted from the PLS.sas output (appendix IIId) and are given, respectively, in table 29 above and table 30 below. Figure 15 below shows the path coefficients in relations to the latent structure of the ten dimensions of business excellence.

Corrected t-Values and R² for Path Coefficients

<u>Dimensions</u>	<u>C1</u>	<u>C2</u>	<u>C3</u>	<u>C4</u>	<u>C5</u>	<u>C6</u>	<u>C7</u>	<u>C8</u>	<u>C9</u>	<u>C10</u>
1. Leadership										
2. Delight the customer	13.506									
3. Customer focus		9.034								
4. Management by fact	8.100									
5. Process performance				7.434						
6. People-base management	12.985									
7. People performance						9.816				
8. Continuous Improvement	8.462									
9. Improvement culture								12.896		
10. Business Excellence			2.423		0.599		1.930		1.448	
R ² for Endogeneous variable		.8210	.6226	.8092	.6430	.6724	.5815	.7078	.8070	.7983

Table 30: Corrected t-Values and R² for the Business Excellence Model for Hong Kong Hotel Industry

The t-values corrected for finite population are given in table 30 above. It is shown that, apart from the two path coefficients — that *from Process performance to Business Excellence* and that *from Improvement culture to Business Excellence* — other path coefficients are found to be significant at least at .1 level of significance. These suggest that there are barriers on these two paths, probably of common cause, which may be consequence from the low index scores in constructs along the paths.

From table 29 above and figure 15 below, it is revealed that *Leadership* has strong influence on the four principles — *Delight the customer*, *Management by fact*, *People-base management* and *Continuous* — with *Management by fact* (.789) being a little weaker than the other three. This may be explained from the fact that most employees in the Hong Kong Hotel Industry have little training or are not confident in using statistical methods, the seven tools suggested by Ishikawa (1985), to collect and analyse data, which are fundamental to the dimension *Management by*

fact. Each of the principle, in turn, has strong influence on the core concept on which it is operated, again, with *Management by fact* having the least influence on *Process performance* (.763) than the other ones.

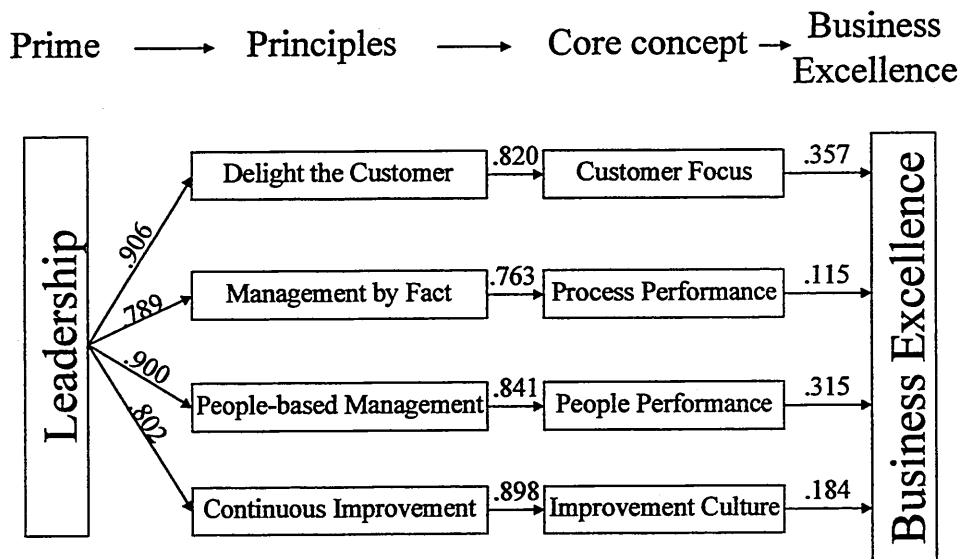


Figure 15: *Latent Structure among Dimensions of Business Excellence for Hong Kong Hotel Industry*

It is also revealed that *Business Excellence* is mostly influenced by *Customer focus* (.357) and *People performance* (.315) — reflecting the very nature of the hotel industry. The least influence to *Business Excellence* is from *Process performance* (.115) which may be explained by the diversity nature of the services demanded by customers that cannot be treated as repeated processes like those in the manufacturing counterpart. Perhaps a path diagram (figure 16 below) together with coefficients of determination of each endogeneous variable can best help explain how *Leadership* leads the way, through influences on the other eight dimensions, to *Business Excellence* in the Hong Kong Hotel Industry.

Key: 1. Leadership 2. Delight the Customer 3. Customer Focus 4. Management by Fact
 5. Process Performance 6. People-based Management 7. People Performance
 8. Continuous Improvement 9. Improvement Culture 10. Business Excellence

Italic: Path coeff.

Bold face: R²

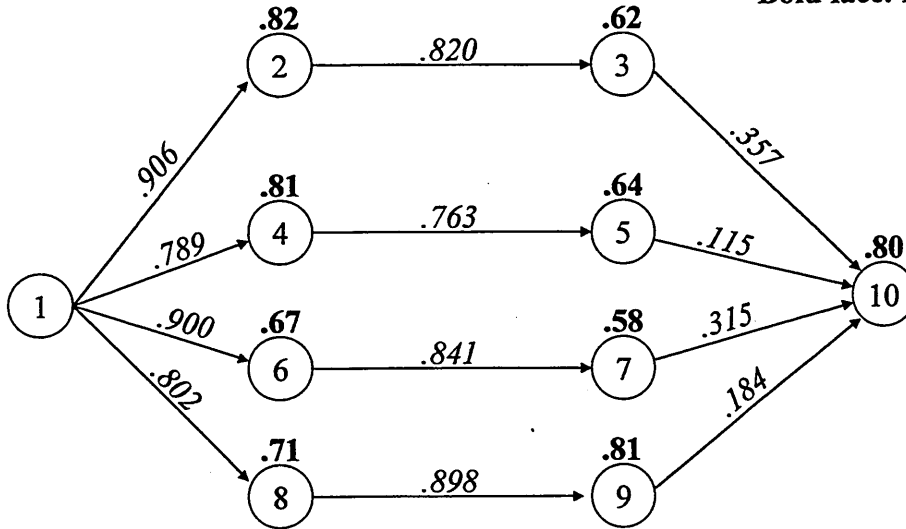


Figure 16: Path Coefficients for the Business Excellence Model for Hong Kong Hotel Industry

In addition, from table 29 and figure 16 above, the business excellence (BE) dimensions *Delight the customer*, *Management by fact*, *Improvement culture* and *Business Excellence* all have explanatory power, R², of at least .8, while *People performance* has the lowest explanatory power (R² = .5815). These indicate that BE dimensions with concrete and measurable outcomes have greater explanatory power over those with vague measurements. This explains why *Management by fact* has great explanatory power even when most people do not understand it.

5.4 BUSINESS EXCELLENCE INDEX AND ITS SIGNIFICANCE

The path coefficients, coefficients of determination and the Cronbach's alpha are all jargons used by the academia. They do not mean anything to the man on the street as well as to the hoteliers. Moreover, these performance measures are not comparable across time or within the same industry. For this purpose, indices are developed (see section 4.3.8)

to measure the performances of the different dimensions of business excellence. Index values of the ten dimensions of business excellence are displayed in figure 17 (below) and are reproduced in table 31.

<u>Dimension</u>	<u>Index</u>
1. Leadership	82.9962
2. Delight the customer	82.2490
3. Customer focus	78.2063
4. Management by fact	75.2025
5. Process performance	74.3068
6. People-base management	77.8992
7. People performance	78.7323
8. Continuous Improvement	77.2729
9. Improvement culture	75.8956
10. Business Excellence	72.9109

Table 31: *Index Values for Dimensions of Business Excellence for Hong Kong Hotel Industry*

The index values (see appendix IIIf for details) for the ten dimensions of business excellence are 83.0 for Leadership, 82.2 for Delight the customer, 78.2 for Customer focus, 75.2 for Management by fact, 74.3 for Process performance, 77.9 for People-base management, 78.7 for People performance, 77.3 for Continuous improvement, 75.9 for Improvement culture and 72.9 for Business Excellence. Like in the analysis of mean scores earlier, Leadership has the highest score while Business Excellence has the lowest score with a difference of 10.1 points. When the variance-covariance structure is taken into account in the performance indices, the spread of the index values is much wider than that for the means, but the rankings are basically the same as evident from table 32 below.

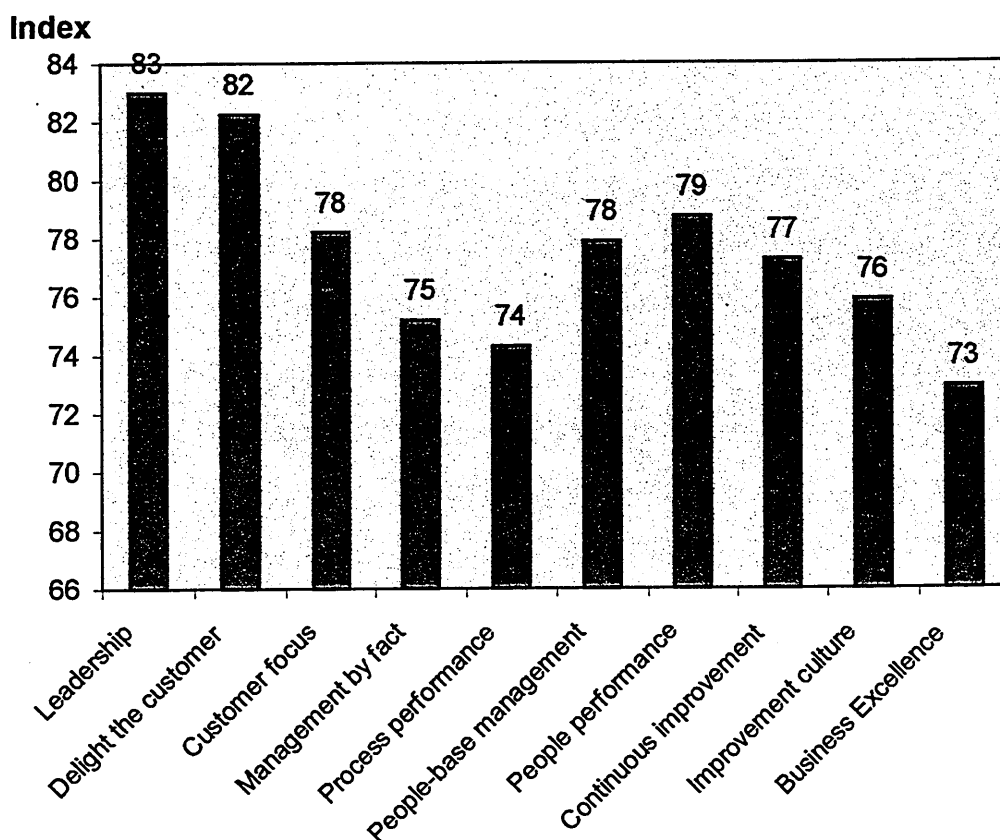


Figure 17: *Performance Indices for Dimensions of Business Excellence for Hong Kong Hotel Industry*

<u>Mean</u>	<u>Rank</u>	<u>Dimension</u>	<u>Rank</u>	<u>Index</u>
8.452	1	1. Leadership	1	82.996
8.405	2	2. Delight the customer	2	82.249
8.011	5	3. Customer focus	4	78.206
7.786	8	4. Management by fact	8	75.203
7.688	9	5. Process performance	9	74.307
8.012	4	6. People-base management	5	77.899
8.087	3	7. People performance	3	78.732
7.917	6	8. Continuous Improvement	6	77.273
7.813	7	9. Improvement culture	7	75.896
7.589	10	10. Business Excellence	10	72.911

Table 32: *Comparison of the Ranking between Mean Scores and Indices*

The index value of the BE dimensions above convey similar information as provided by the path coefficients from the SEM, as it should be, but they are much easier to comprehend. Like other indices, such as the Financial Time Index, higher values indicate better performance. They are the indicators set for the hotel to monitor performance in various aspects that make up the totality of business excellence. Perhaps, the significance of these indices lies in their comparability (Kanji, 2001) across different periods of time of the same hotel and across different hotels within the same time period.

The most important index of all the BE dimensions to watch is the Business Excellence Index. It is a measure of the final outcome of the businesses after all the effort and resources have been put in. The employee look at it for acknowledgement of their effort paid, waiting for pride and pay increases, probably, in return. The shareholders look at it for returns on investment and, perhaps, bonus shares as well. Its importance lies in its ability to monitoring, particularly when the "end does not justify the means" — that is, when the business outcome is not satisfactory compared to the anticipated returns after all the resources and efforts being put in.

For the successful use of these performance measurements, total commitment of top management is a prerequisite and it is also dependent on the level of integration of TQM into strategic and operational management (Sinclair & Zairi, 2001). These will shape the quality culture of the company and this company culture will, in turn, help shape the quality consciousness of the individuals and the culture of the customer. Changing culture require determination, perseverance and role-modelling for the leader (Lo & Tong, 1995). Getting across the quality message is never easy, especially when people think they already know (Moullin, 1995). And there is no quick fix (Kanji & Asher, 1993, p.1; Romano, 1994).

The notion of profitability is founded completely on customer satisfaction, for, without satisfied customers, who will buy the products nor consume the services provided? And more, these satisfied customers will help to sell new customers by speaking positively of the service or product as they themselves experienced (Fanjoy, 1994). In addition, sustained profitability is built on customer loyalty, which, in turn, is built upon customer satisfaction. All in all, customer satisfaction is crucial to survivability, important to profitability and a must to sustained profitability for an organisation. For these reasons, a large proportion of this report is devoted to customer satisfaction.

Results pertaining to customer satisfaction for the Hong Kong Hotel Industry will be discussed in the next chapter and, a comparison on customer satisfaction between international and Asian hotels will be presented as a case study in chapter 7.

6. CUSTOMER SATISFACTION FOR HONG KONG HOTEL INDUSTRY

In order to have a general understanding of customer satisfaction in the Hong Kong Hotel Industry, a large number of hotels were included in the study. After taking out those hotels that are remote from the city centres, 62 hotels were chosen and approximately 40 guests from each selected hotel were interviewed, using the questionnaire contained in appendix IIc, by a team of four BBA graduate student helpers working in pairs between April and June 1999. The interviews were mainly conducted in the hotel lobbies using English. In cases where the hotel management was not cooperative, interviews were conducted just outside of the hotel main entrance. Screening questions were used, prior to the interviews to make certain that the interviewees do stay in the hotels selected for sampling for the day. Data validation was conducted to cross check with the original returned questionnaires on those with values missing or outside of their valid ranges. Results pertaining to the Customer Satisfaction for Hong Kong Hotel Industry are contained in appendices IVa to IVe. Appendix IVf contains performance indices for individual hotels intended for reference only due to their small sample sizes and appendix IVg contains a list of hotel codes used in this report throughout. Demographic profile of respondents on sex, ethnic and age groups are described below and they are the basis for comparing the performance indices in general, and the customer satisfaction in particular, in the hotel industry.

6.1 DEMOGRAPHIC PROFILE

All together there are 2481 successful interviews obtained of which 64.3 % are male and 35.7% are female, a strong bias towards the males as shown in table 33 below. This would not pose any problem, for, if there is any influence of gender on the five constructs (*Customer Expectation*, customer *Perceived Quality*, customer *Perceived Value*, *Customer Satisfaction* and customer *Loyalty*), strategies can be drawn to better cater for this bias towards customer satisfaction, profitability and sustained profitability.

<u>Sex</u>	<u>Frequency</u>	<u>Percent</u>
Male	1595	64.3
Female	886	35.7
Total	2481	100.0

Table 33: *Distribution of Sex of Respondents in the Customer Satisfaction Study on Hong Kong Hotel Industry*

<u>Ethnic Group</u>	<u>Frequency</u>	<u>Percent</u>
Bangladesh	6	0.2
Black-African	21	0.8
Black-Caribbean	31	1.2
Chinese	886	35.7
Indian	8	0.3
Japanese	22	0.9
Pakistan	7	0.3
White	1495	60.3
Other	5	0.2
Total	2481	100.0

Table 34: *Distribution of Ethnic Group of Respondents in the Customer Satisfaction Study on Hong Kong Hotel Industry*

Distribution of the respondents according to their ethnic groups is described in table 34 above. It is shown that the two groups of White (1495) and Chinese (886) account for 96% of the sample, followed by the Black (Bangladesh, African, Caribbean, Indian and Pakistan) (73), the Japanese (22) and other ethnic groups (5). The distribution is very different from that of the visitors visiting Hong Kong where 68.7% (see p.60) were from Asian countries in 1999 (HKMDS, 2001, p.105), the same period of the present study. One explanation is on the definition — ethnic group is used here while country/territory of residence is used in the Hong Kong Monthly Digest of Statistics — where a White residing in Malaysia would be treated differently in the two cases. The other explanation is that people coming from the Mainland China (28.3% alone in 1999) (HKMDS, 2001, p.105) usually stay with their relatives or friends, or in low tariff accommodations in Hong Kong, so as to save money, for shopping probably. They seldom stay in the high to medium tariff hotels, all of which are members of the Hong Kong Hotels Association. Thus, only the White and the Chinese are considered for ethnic groups in subsequent analyses.

Table 35 below shows the distribution of age of the respondents. Of all the respondents, 2.6% aged under 25, 7.1% between 25 and 29, 13.3% between 30 and 34, 21.3% between 35 and 39, 17.5% between 40 and 44, 20.5% between 45 and 49, 12.8% between 50 and 54, and the remaining 4.9% aged 55 and over, with one missing value. The demographical profile described above will be used as the basis for comparing performances of the Hong Kong hotels on the five constructs, based on their respective index values, of the CSMHKHI to be reported in section 6.3 below.

<u>Age Group</u>	<u>Frequency</u>	<u>Percent</u>
Under 25	64	2.6
25 - 29	175	7.1
30 - 34	330	13.3
35 - 39	528	21.3
40 - 44	435	17.5
45 - 49	509	20.5
50 - 54	317	12.8
55 and over	122	4.9
Total	2480	100.0

Table 35: *Distribution of Age of Respondents in the Customer Satisfaction Study on Hong Kong Hotel Industry*

6.2 CUSTOMER SATISFACTION MODEL FOR HONG KONG HOTEL INDUSTRY

Model validation procedures for the Customer Satisfaction Model for Hong Kong Hotel Industry will follow those for the BEMHKHI as described earlier (p.94). The Cronbach's α and R^2 pertaining to the hotel industry (overall) are given in table 36 below:

<u>Dimension</u>	<u>Cronbach's α</u>	<u>R^2</u>
1. Customer expectation	0.8589	
2. Perceived quality	0.9573	0.7678
3. Perceived value	0.7292	0.6826
4. Customer satisfaction	0.7101	0.7677
5. Customer loyalty	0.7614	0.0596

Table 36: *Cronbach's α and R^2 for Customer Satisfaction Model for Hong Kong Hotel Industry*

Referring to table 36 above, all values of the Cronbach's alphas are greater than 0.7 and it can be concluded that all constructs are internally consistent. Hence, the model as a whole is consistent and valid.

The explanatory power, R^2 , for *Perceived Quality*, *Perceived Value* and *Customer Satisfaction* are good with values ranging from 0.68 to 0.77. *Customer Loyalty* has an extremely poor R^2 value of 0.06. The correlation matrix (appendix IVa) also reveals that *Customer Loyalty* has low values, ranging from 0.13 to 0.24, of linear correlation coefficients with the other four dimensions of customer satisfaction. This is probably due to the come-and-go nature of the customers who just come here for a holiday and it will cost them a lot to come again.

	<u>Path Coefficients</u>				
<u>Dimension</u>	<u>C1</u>	<u>C2</u>	<u>C3</u>	<u>C4</u>	<u>C5</u>
C1: Expectation					
C2: Perceived quality	0.8763				
C3: Perceived value	0.1602	0.6822			
C4: Satisfaction	0.4485	0.3801	0.0885		
C5: Loyalty				0.2442	

Table 37: Path Coefficients for Customer Satisfaction Model for Hong Kong Hotel Industry

	<u>T-Values for Path Coefficients</u>				
<u>Dimension</u>	<u>C1</u>	<u>C2</u>	<u>C3</u>	<u>C4</u>	<u>C5</u>
C1: Expectation					
C2: Perceived quality	90.546				
C3: Perceived value	6.823	29.045			
C4: Satisfaction	22.109	16.334	5.151		
C5: Loyalty				12.536	

Table 38: T-Values for Path Coefficients of Customer Satisfaction Model for Hong Kong Hotel Industry

The t-values for testing the significance of the path coefficients of the CSMHKHI are extracted from appendix IVa and are given in table 38 above. It is shown that all path coefficients are highly significant at .01 level ($t > 2.576$) (Kanji, 1993, p.162). This indicates that there are strong influences among dimensions of the CSMHKHI.

The path coefficients of Customer Satisfaction Model for Hong Kong Hotel Industry are given in table 37 above. It is revealed that *Perceived quality* is strongly influenced by *Customer Expectation* (0.876), *Perceived Value* is moderately influenced by *Perceived Quality* (0.682) and weakly by *Customer Expectation* (0.160), *Satisfaction* is moderately influenced by *Customer Expectation* (0.449), weak-to-moderately influenced by *Perceived Quality* (0.380) and very little influenced by *Perceived Value* (0.089). And Loyalty is weak-to-moderately influenced by *Satisfaction* (0.244). In fact, about 83% of the *Customer Satisfaction* is influenced by *Expectation* and by *Perceived Quality*. This could be influenced in turn by word-of-mouth (Fanjoy, 1994) from satisfied customers and the positive framing effects coming from quality awards (Callan, 1989) received as well as from being listed by major travel magazines. And which are some of the quality traits that customer would look for when they make their decisions. Perhaps figure 18 below provides a better understanding of the inter-relationships among customer satisfaction dimensions of the CSMHKHI

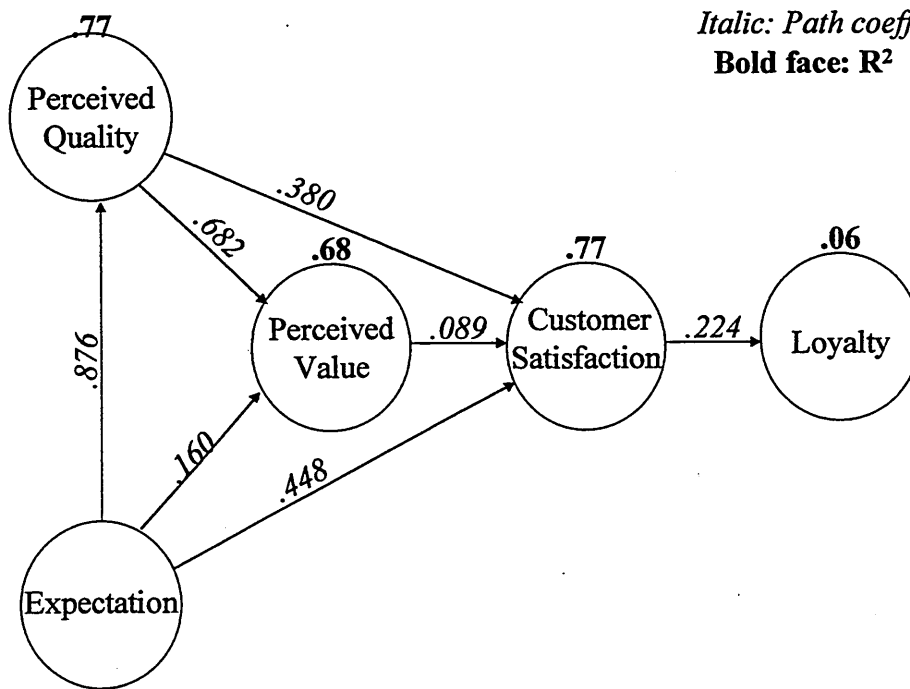


Figure 18: Path Diagram for Customer Satisfaction Model for Hong Kong Hotel Industry

6.3 CUSTOMER SATISFACTION INDEX FOR HONG KONG HOTEL INDUSTRY

Like the Business Excellence index, detailed calculations for the CSMHKHI are made using method described in section 4.3.8 and the PLS method running under the SAS environment. The outer and inner coefficients and matrices for the correlation coefficients among the latent variables, for standard errors (SD in the output) and for the t-values together with the Cronbach's alpha and R² for each endogenous variable can be found in the SAS output contained in appendix IVa. Performance indices as well as the sum, sample size and the mean to each question of the questionnaire (appendix IIc) that are pertaining to the Hong Kong Hotel Industry are contained in appendix IVb to IVe. Here, performance indices 1999, with Customer Satisfaction Index (CSI) in particular, are reported and are broken down by sex, ethnic and age groups.

6.3.1 Customer Satisfaction Index for Hong Kong Hotel Industry

The performance indices 1999 for the hotel industry as a whole are given in appendix IVb and described in figure 19 below. Their values are 56.4 for *Customer Expectation*, 57.1 for *Perceived quality*, 55.9 for *Perceived Value*, 59.0 for *Customer Satisfaction* and 57.9 for *Loyalty*. Customer Satisfaction scored the highest while Perceived Value the lowest by a difference of 3.1 points. This is not surprising as many hotels of Hong Kong have received awards of quality food and service, and are listed in major travel magazines. The high value of the Loyalty index is attributed to the high mean score for question 13 (see appendix IVb) — "How likely is this hotel which you would recommend to personal friends or associates?" — as another way of showing their loyalty of the hotel.

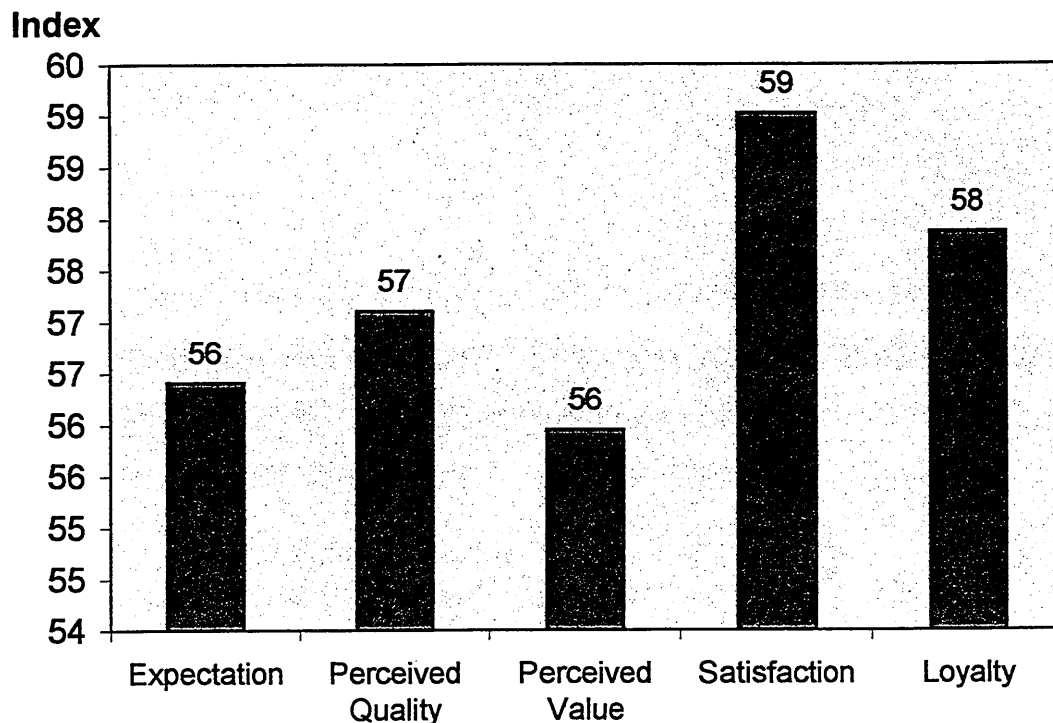


Figure 19: Performance Indices 1999 for Hong Kong Hotel Industry

The American Customer Satisfaction Index (ACSI) industry value for the US hotels was 72 for 1999 (Walsh, 2000), which is much higher than the Hong Kong one. But, one must not jump to the conclusion that hotels of Hong Kong are inferior to those of their US counterparts. The purpose of the ACSI is quite different from the Hong Kong Customer Satisfaction Index (HKCSI). Its objective is to help interpret productivity and price measures by providing the "g-factor" that captures the elusive character of a product (attributes, price, market fit) that tell how "good" the output is from the user perspective (ASQC, 1995), while the HKCSI is simply a performance measure. Like the SCSB of the Swedish, HKCSI can be used to compare (Kanji, 2001) indices for different organisations of similar nature, including its definition and nature of business on which it is measuring, across time and national boundaries.

6.3.2 Customer Satisfaction Index by Sex

The performance indices 1999 for the hotel industry broken down by each of the sexes are given in appendix IVc and described in figures 20 to 22 below.

Figure 20 below shows the performance indices 1999 for the male and the values are 55.4 for *Customer Expectation*, 56.1 for *Perceived Quality*, 55.2 for *Perceived Value*, 58.1 for *Customer Satisfaction* and 57.5 for *Loyalty*. Customer Satisfaction has the highest score while Perceived Value has the lowest score with a difference of 2.9 points.

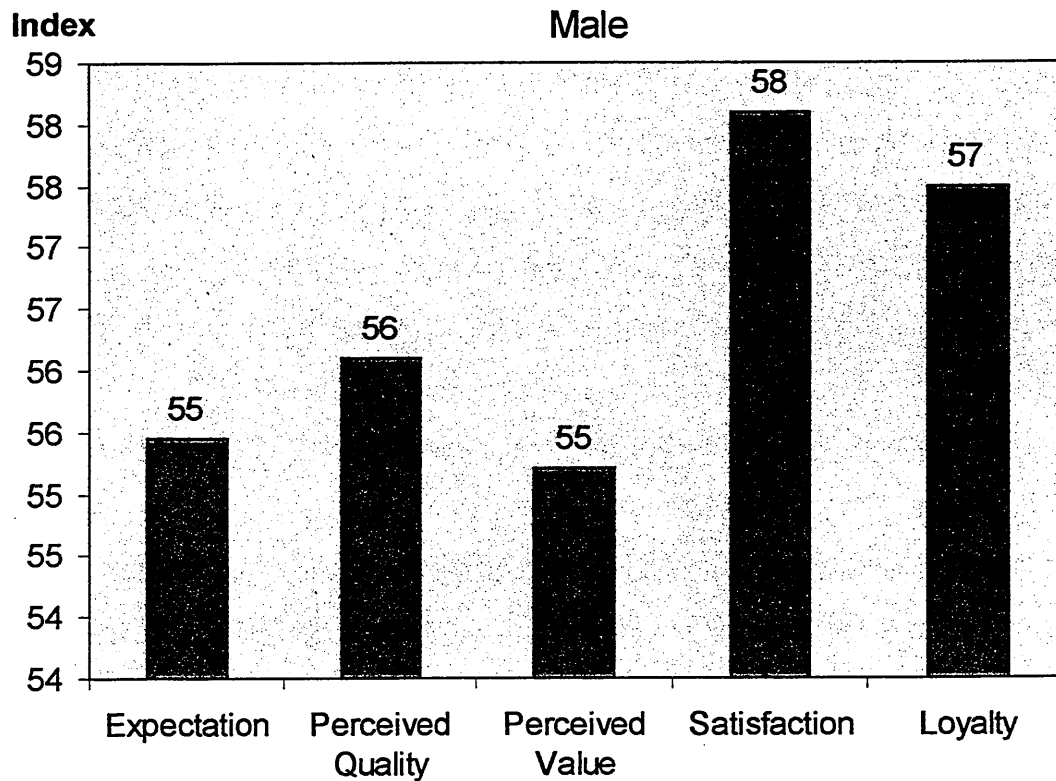


Figure 20: *Performance Indices 1999 for Hong Kong Hotel Industry for Male*

Figure 21 below shows the performance indices 1999 for the female and the values are 58.2 for *Customer Expectation*, 58.9 for *Perceived Quality*, 56.7 for *Perceived Value*, 60.3 for *Customer Satisfaction* and 58.5 for *Loyalty*. Customer Satisfaction has the highest score while Perceived Value has the lowest score with a difference of 3.6 points.

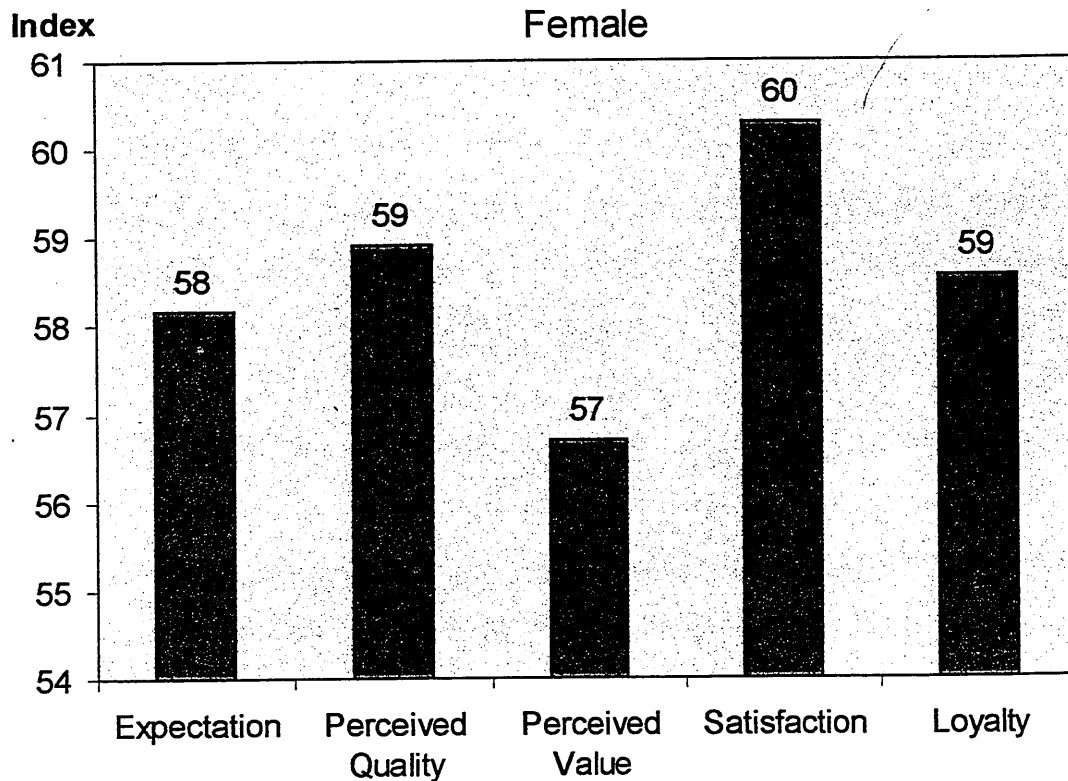


Figure 21: *Performance Indices 1999 for Hong Kong Hotel Industry for Female*

Figure 22 below compares the performance indices 1999 between the two sexes. It is observed that the female gives higher score than the male in all the five dimensions of the CSMHKHI. The largest differences observed are 2.72 and 2.82 points in the Customer Expectation and Perceived Quality Indices, respectively, which are both significant at the .05 level ($\Delta > 2.5$, ASQC, 1995) at the company level. This can be explained by the very nature of the two sexes. Females are more tender, love caring and sentimental while males are more muscular and logical. Thus, the females are more inclined to give higher ratings under the good food, harmonious atmosphere and the caring service of the Hong Kong hotels. These support the findings of Lin et al (2001) in their investigation on the relationship between service providers' personalities and customers' perceptions of service

quality across gender. They concluded that, for the female customers, conscientiousness is an important factor for the service providers since it is a valid predictor of reliability and empathy.

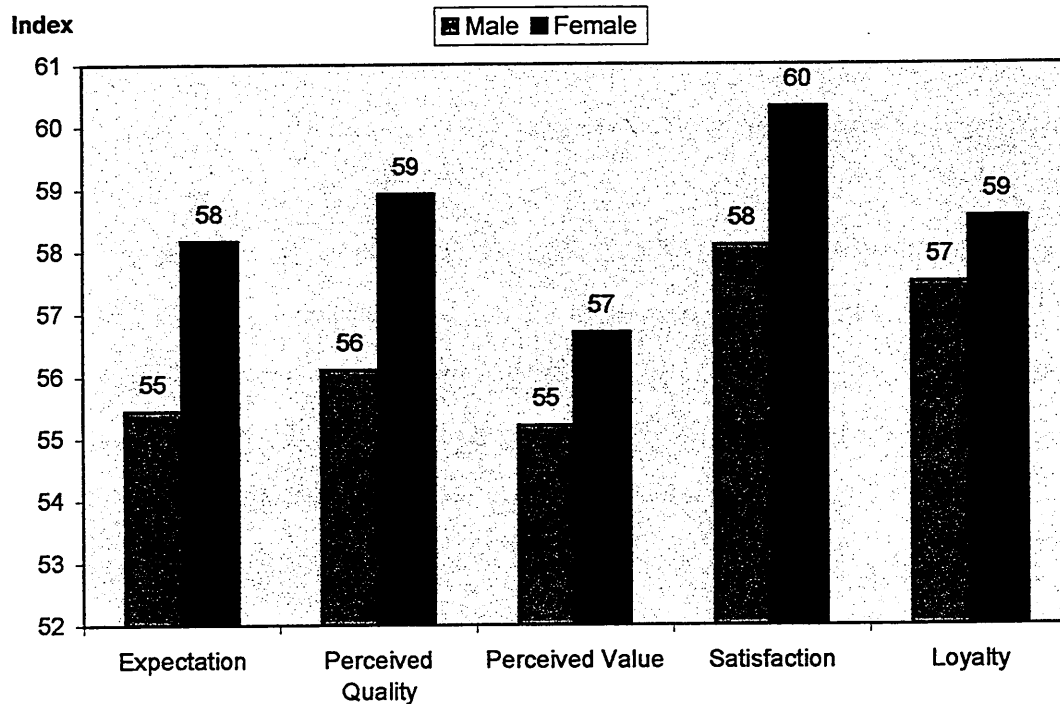


Figure 22: *Performance Indices 1999 for Hong Kong Hotel Industry for by Sex*

6.3.3 Customer Satisfaction Index by Ethnic Groups

The performance indices 1999 for the hotel industry broken down by ethnic groups of White and Chinese are given in appendix IVd and described in figures 23 to 25 below.

Figure 23 below shows the performance indices 1999 for the White and the values are 55.9 for *Customer Expectation*, 56.8 for *Perceived Quality*, 55.9 for *Perceived Value*, 58.3 for *Customer Satisfaction* and 58.0 for *Loyalty*. Customer Satisfaction has the highest score while Perceived Value has the lowest score with a difference of 2.4 points.

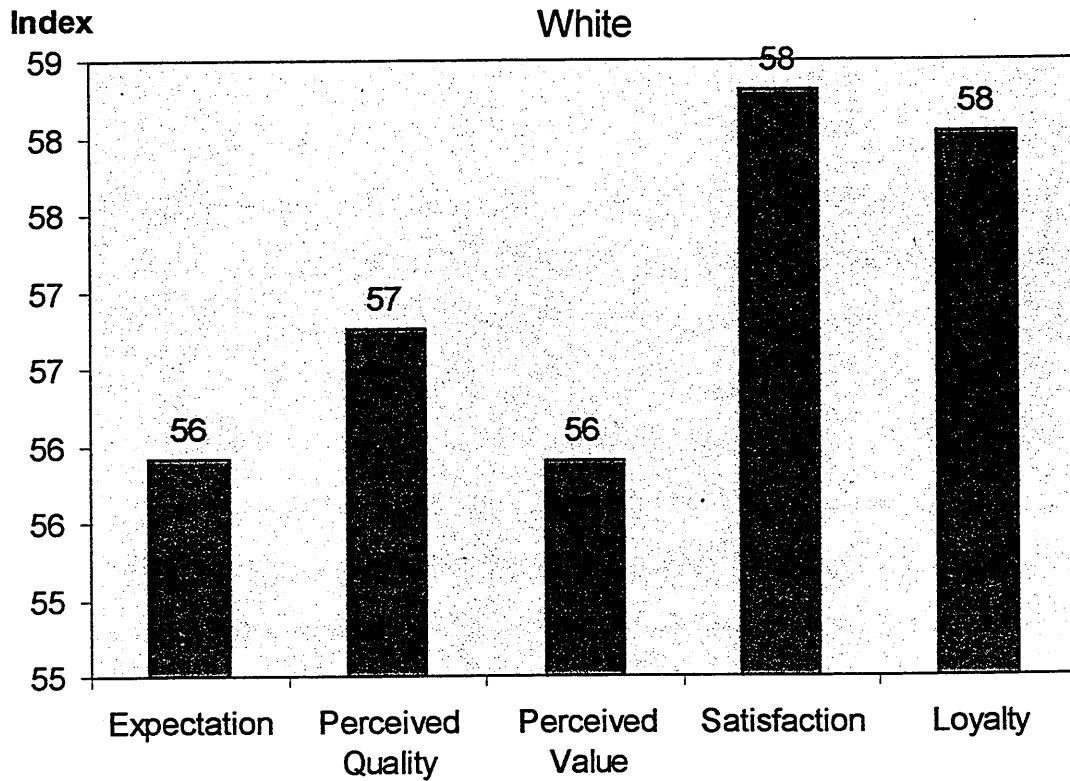


Figure 23: *Performance Indices 1999 for Hong Kong Hotel Industry for White*

Figure 24 below shows the performance indices 1999 for the Chinese and the values are 57.4 for *Customer Expectation*, 57.8 for *Perceived Quality*, 56.2 for *Perceived Value*, 60.0 for *Customer Satisfaction* and 58.1 for *Loyalty*. Customer Satisfaction has the highest score while Perceived Value has the lowest score with a difference of 3.8 points.

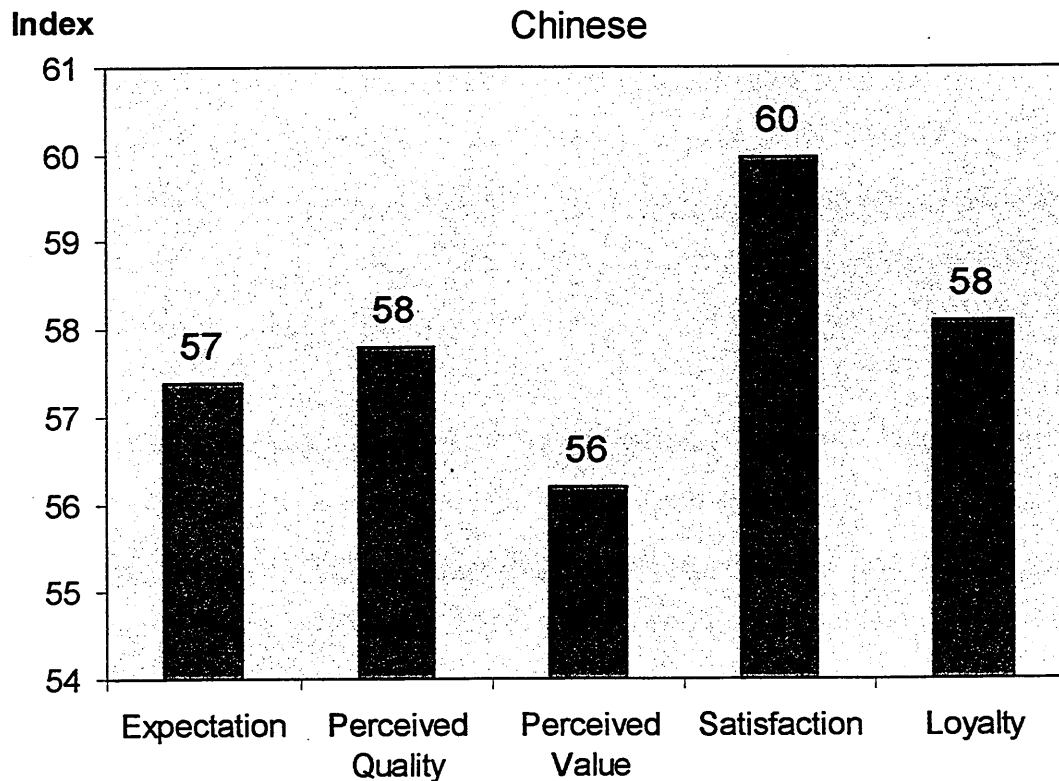


Figure 24: *Performance Indices 1999 for Hong Kong Hotel Industry for Chinese*

Figure 25 below compares the performance indices 1999 between the White and the Chinese. Similar to those for the females in the comparison for the two sexes, the Chinese has higher scores than the White in all the dimensions of the CSMHKHI. The largest difference is 1.66 points in the CSI, but the difference is not significant. This could probably be attributed to the diverse difference between the hotel, from 3-star to 5-star deluxe, and the home settings of the Chinese.

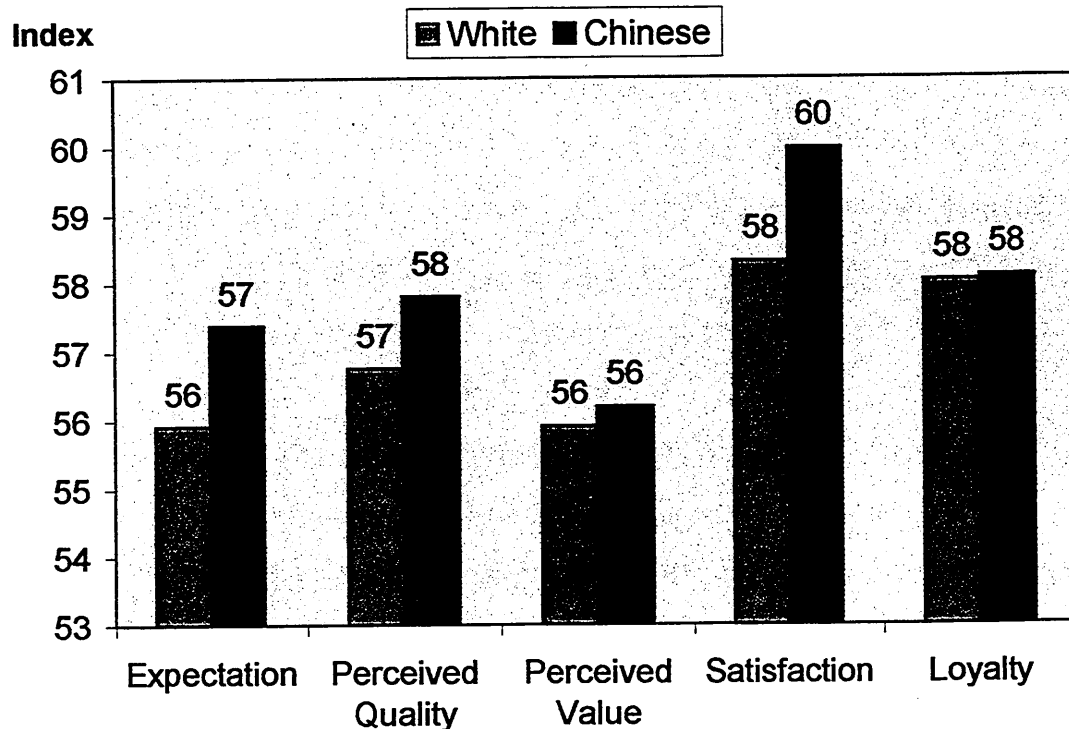


Figure 25: *Performance Indices 1999 for Hong Kong Hotel Industry by Ethnic Group*

6.3.4 Customer Satisfaction Index by Age

The performance indices 1999 for the hotel industry broken down by each of the age groups are given in appendix IVe and described in figures 26 to 34 below. Those pertaining to customer satisfaction are depicted in figure 35 below.

Figure 26 below shows the performance indices 1999 for those below 25 years old and the values are 53.7 for *Customer Expectation*, 54.1 for *Perceived Quality*, 53.2 for *Perceived Value*, 56.2 for *Customer Satisfaction* and 57.4 for *Loyalty*. Loyalty has the highest score while Perceived Value has the lowest score with a difference of 4.2 points.

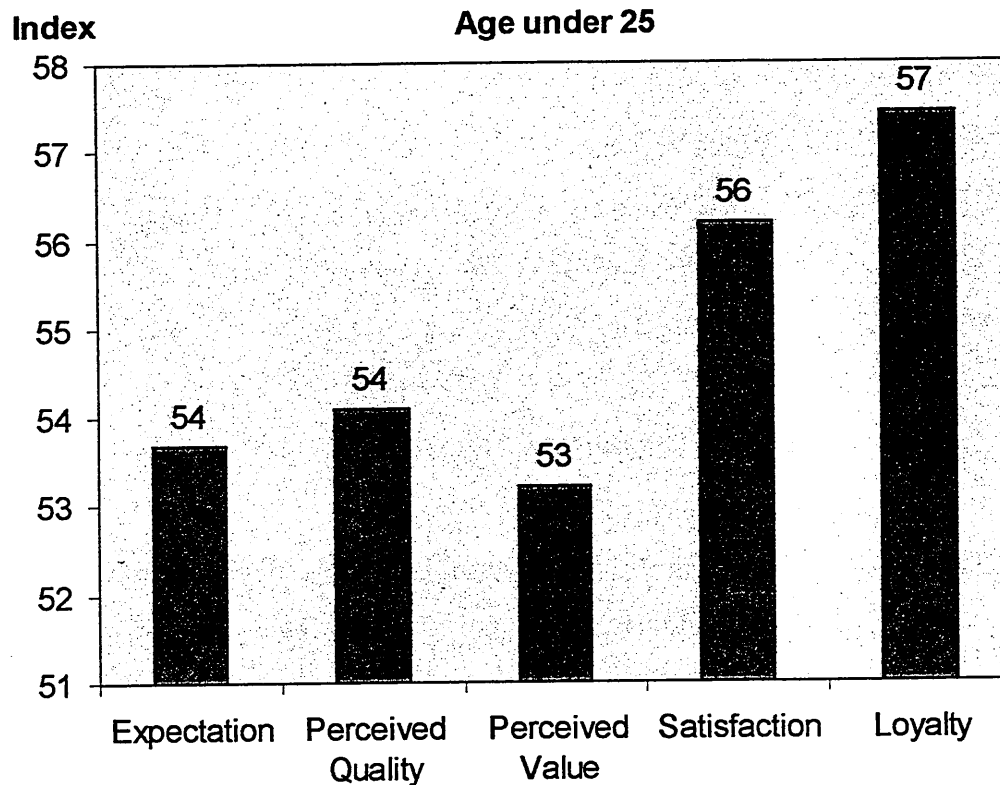


Figure 26: Performance Indices 1999 for Hong Kong Hotel Industry for Age Under 25

Figure 27 below shows the performance indices 1999 for those between 25 and 29 years old and the values are 54.3 for *Customer Expectation*, 55.4 for *Perceived Quality*, 54.8 for *Perceived Value*, 57.7 for *Customer Satisfaction* and 57.6 for *Loyalty*. Customer Satisfaction has the highest score while Customer Expectation has the lowest score with a difference of 3.3 points.

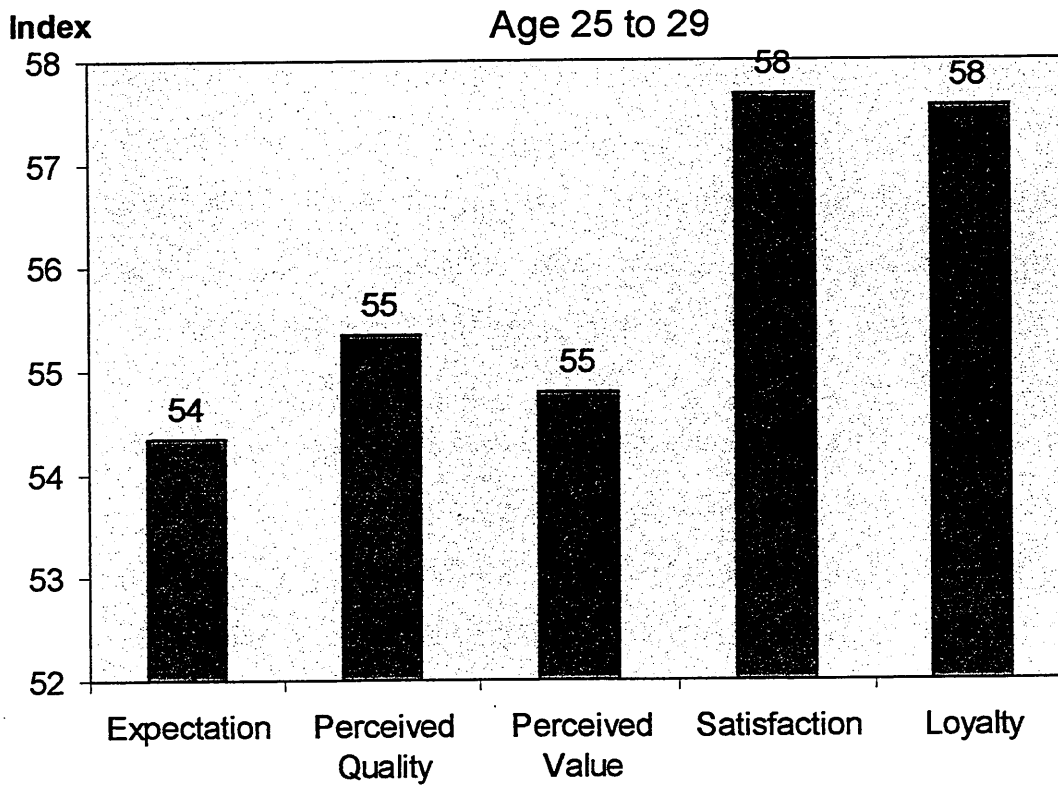


Figure 27: Performance Indices 1999 for Hong Kong Hotel Industry for Age between 25 to 29

Figure 28 below shows the performance indices 1999 for those between 30 and 34 years old and the values are 55.7 for *Customer Expectation*, 56.5 for *Perceived Quality*, 55.4 for *Perceived Value*, 58.7 for *Customer Satisfaction* and 58.7 for *Loyalty*. Customer Satisfaction has the highest score while Perceived Value has the lowest score with a difference of 3.3 points.

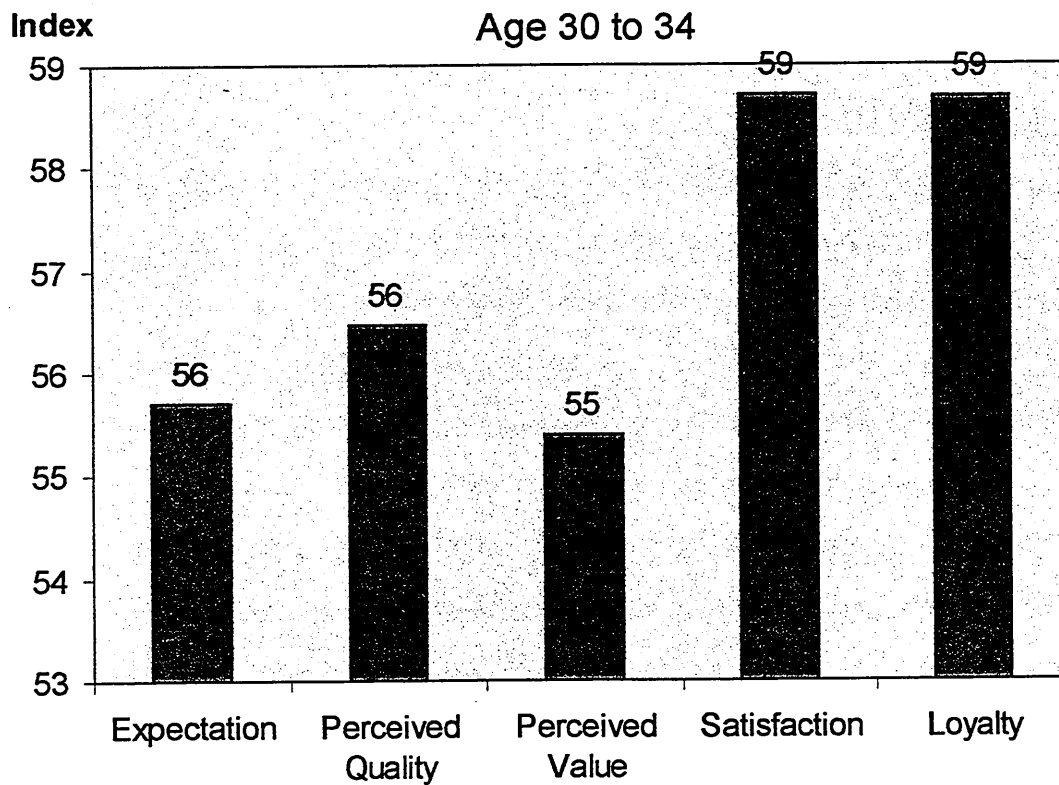


Figure 28: *Performance Indices 1999 for Hong Kong Hotel Industry for Age between 30 to 34*

Figure 29 below shows the performance indices 1999 for those between 35 and 39 years old and the values are 59.3 for *Customer Expectation*, 59.2 for *Perceived Quality*, 56.1 for *Perceived Value*, 61.3 for *Customer Satisfaction* and 57.5 for *Loyalty*. Customer Satisfaction has the highest score while Perceived Value has the lowest score with a difference of 5.1 points.

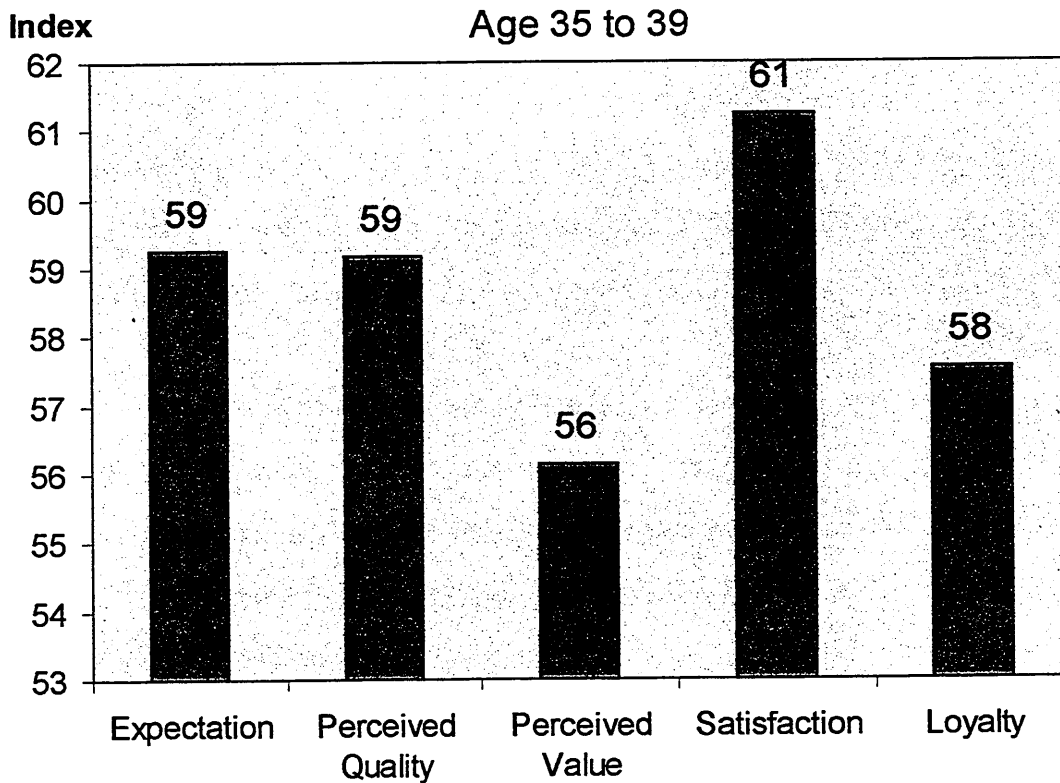


Figure 29: *Performance Indices 1999 for Hong Kong Hotel Industry for Age between 35 to 39*

Figure 30 below shows the performance indices 1999 for those between 40 and 44 years old and the values are 60.4 for *Customer Expectation*, 60.6 for *Perceived Quality*, 57.0 for *Perceived Value*, 61.5 for *Customer Satisfaction* and 58.6 for *Loyalty*. Customer Satisfaction has the highest score while Perceived Value has the lowest score with a difference of 4.5 points.

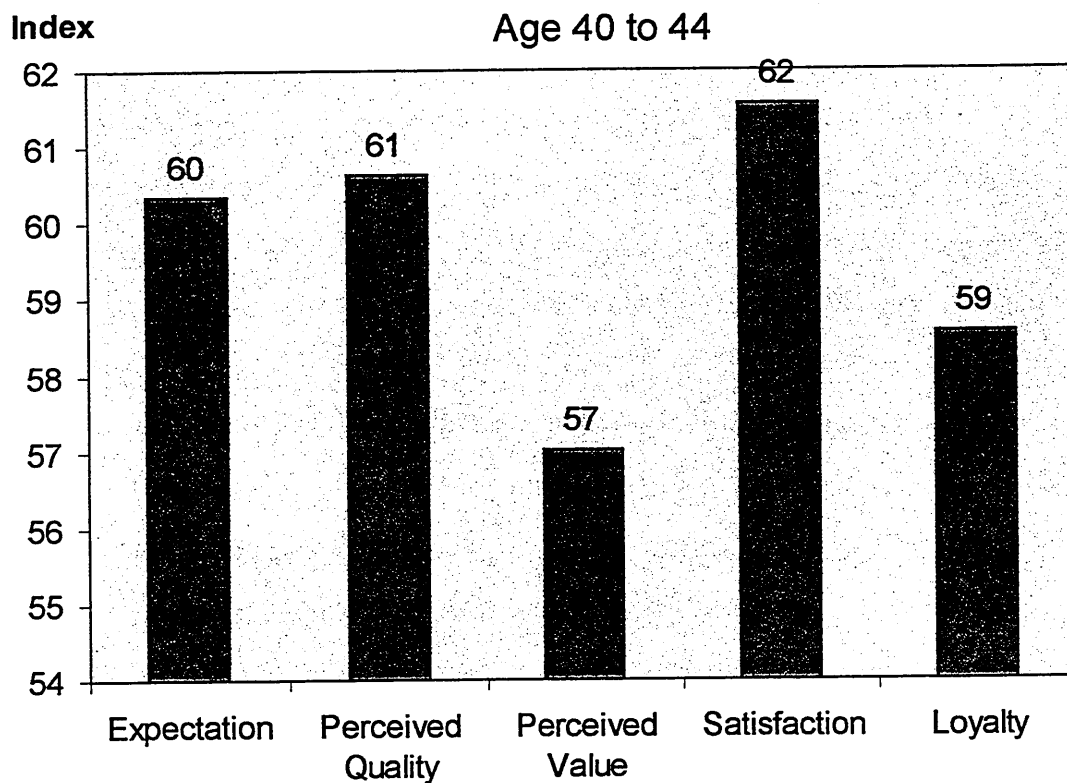


Figure 30: *Performance Indices 1999 for Hong Kong Hotel Industry for Age between 40 to 44*

Figure 31 below shows the performance indices 1999 for those between 45 and 49 years old and the values are 56.2 for *Customer Expectation*, 57.0 for *Perceived Quality*, 56.4 for *Perceived Value*, 57.8 for *Customer Satisfaction* and 57.7 for *Loyalty*. Customer Satisfaction has the highest score while Customer Expectation has the lowest score with a difference of 1.7 points.

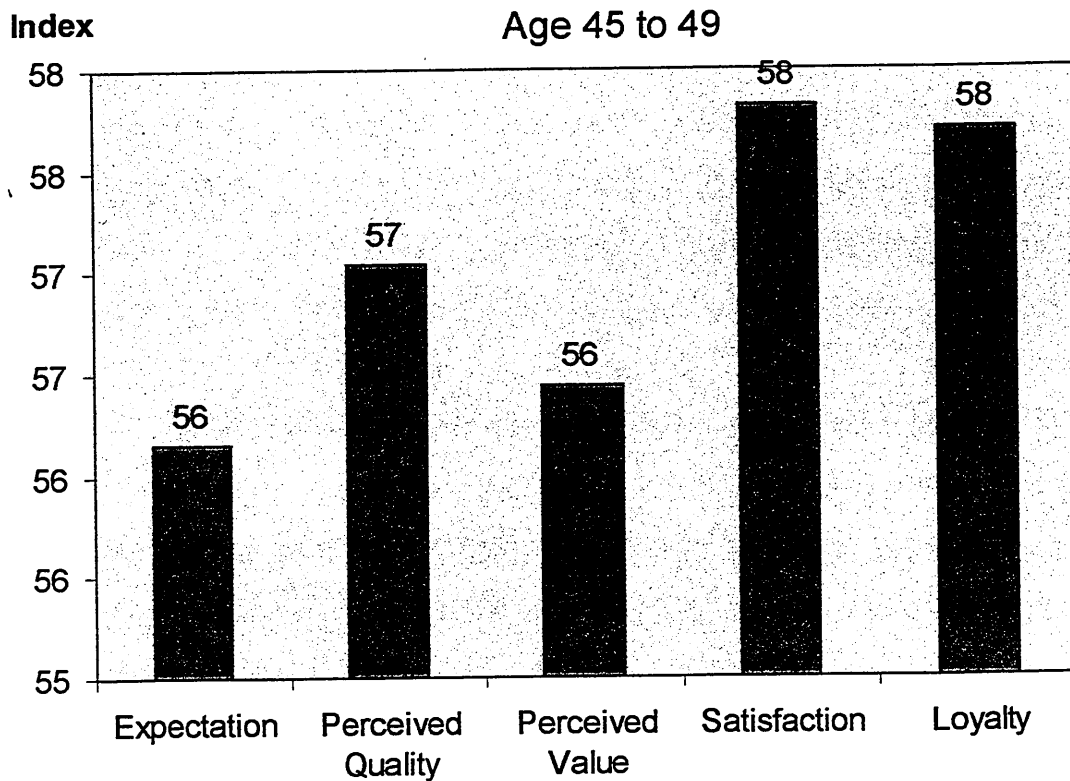


Figure 31: *Performance Indices 1999 for Hong Kong Hotel Industry for Age between 45 to 49*

Figure 32 below shows the performance indices 1999 for those between 50 and 54 years old and the values are 52.7 for *Customer Expectation*, 53.9 for *Perceived quality*, 54.7 for *Perceived Value*, 55.4 for *Customer Satisfaction* and 57.9 for *Loyalty*. Loyalty has the highest score while Customer Expectation has the lowest score with a difference of 5.2 points.

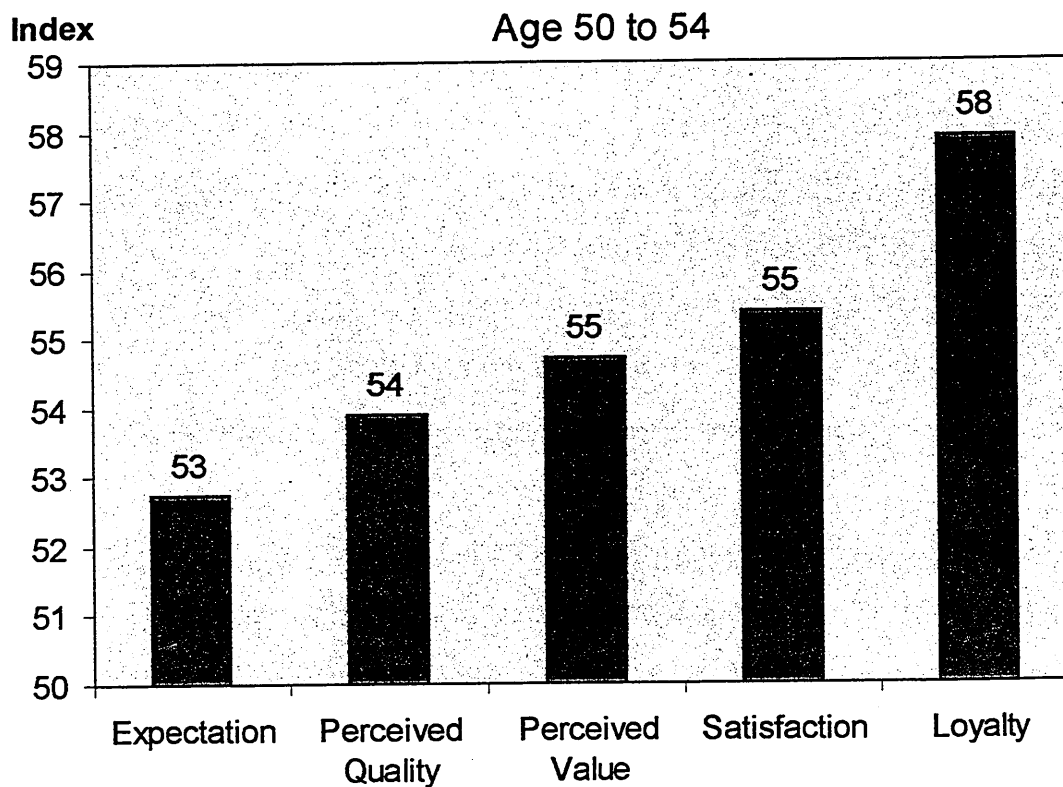


Figure 32: Performance Indices 1999 for Hong Kong Hotel Industry for Age between 50 to 54

Figure 33 below shows the performance indices 1999 for those 55 years and older and the values are 48.7 for *Customer Expectation*, 50.0 for *Perceived Quality*, 51.0 for *Perceived Value*, 53.4 for *Customer Satisfaction* and 54.3 for *Loyalty*. Loyalty has the highest score while Customer Expectation has the lowest score with a difference of 5.7 points.

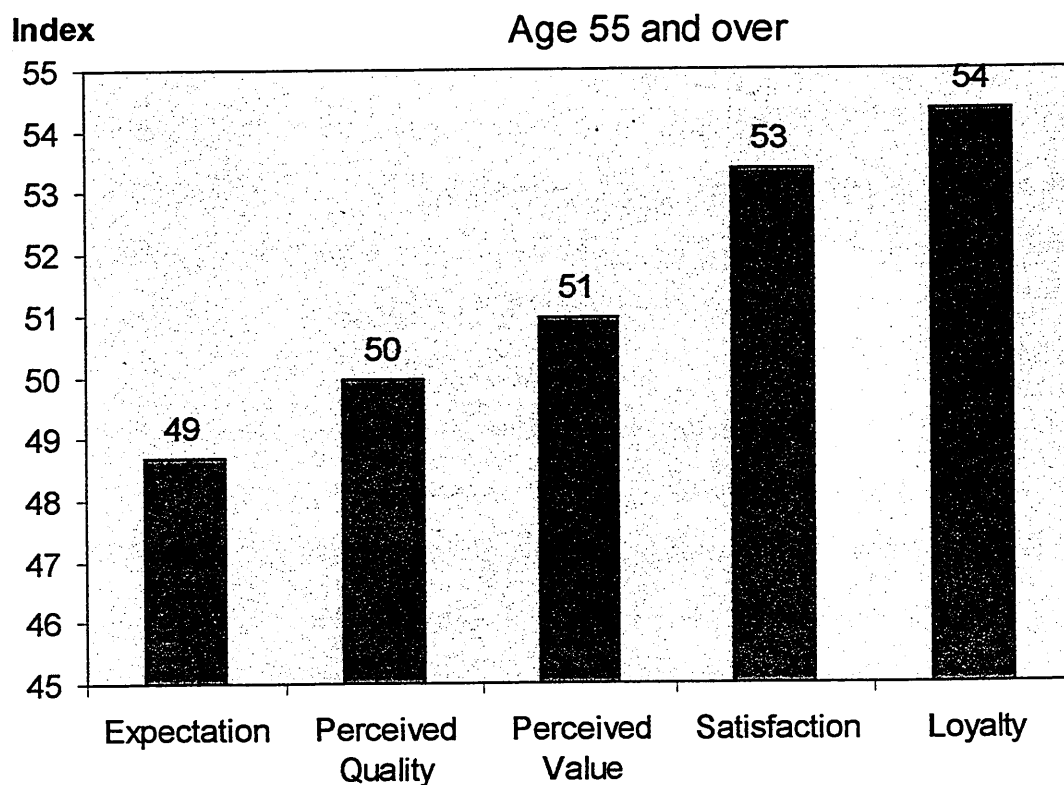


Figure 33: *Performance Indices 1999 for Hong Kong Hotel Industry for Age 55 and Older*

Figure 34 below compares the performance indices 1999 among the eight age groups. It is shown that CSI has higher scores for people aged between 35 and 44 while Loyalty has higher scores at both ends of the age spectrum. This can be explained by the fact that people aged between 35 and 44 do enjoy all the services and facilities (bar, gym and swimming pool) of the hotel while people at both ends of the age spectrum like telling others of their excitements. And they like to recommend friends or associates of the hotel they stayed. Figure 23 below provides a better picture of the CSI by age group. Figure 24 displays the CSI of all individual hotels involved in the Customer Satisfaction Survey 1999 and they are intended for **reference only** due to their small sample sizes.

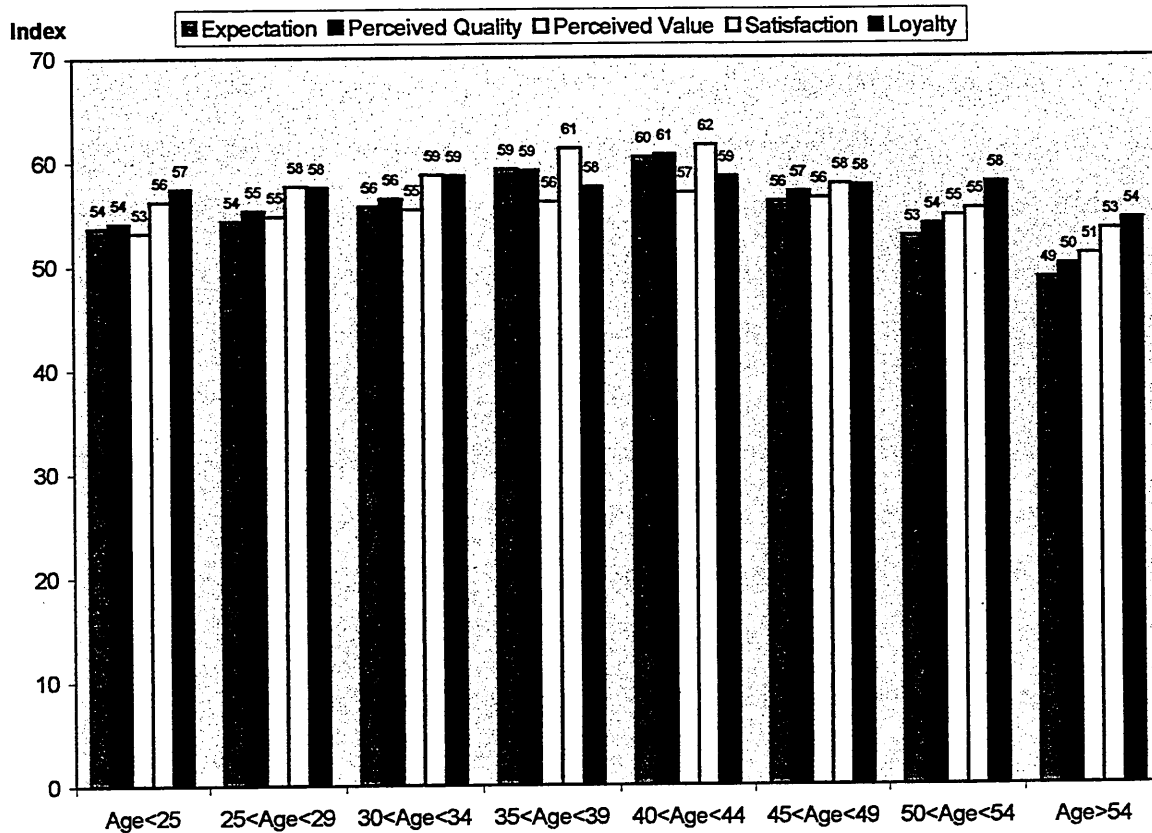


Figure 34: *Performance Indices 1999 for CSMHKHI by Age Group*

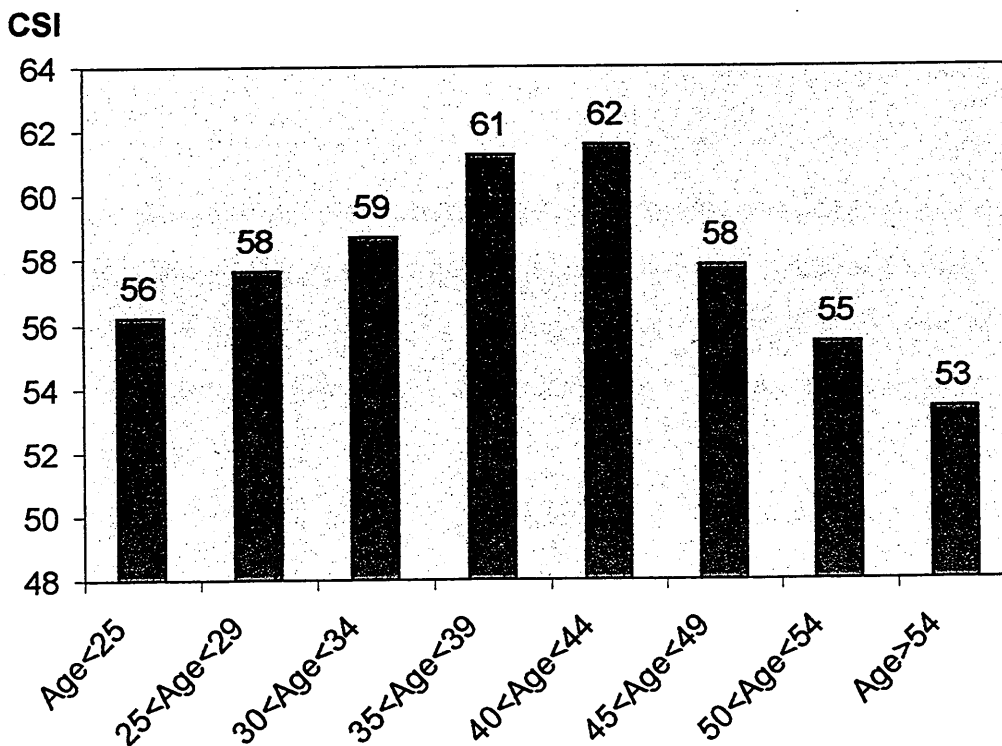


Figure 35: *Customer Satisfaction Index 1999 by Age Group*

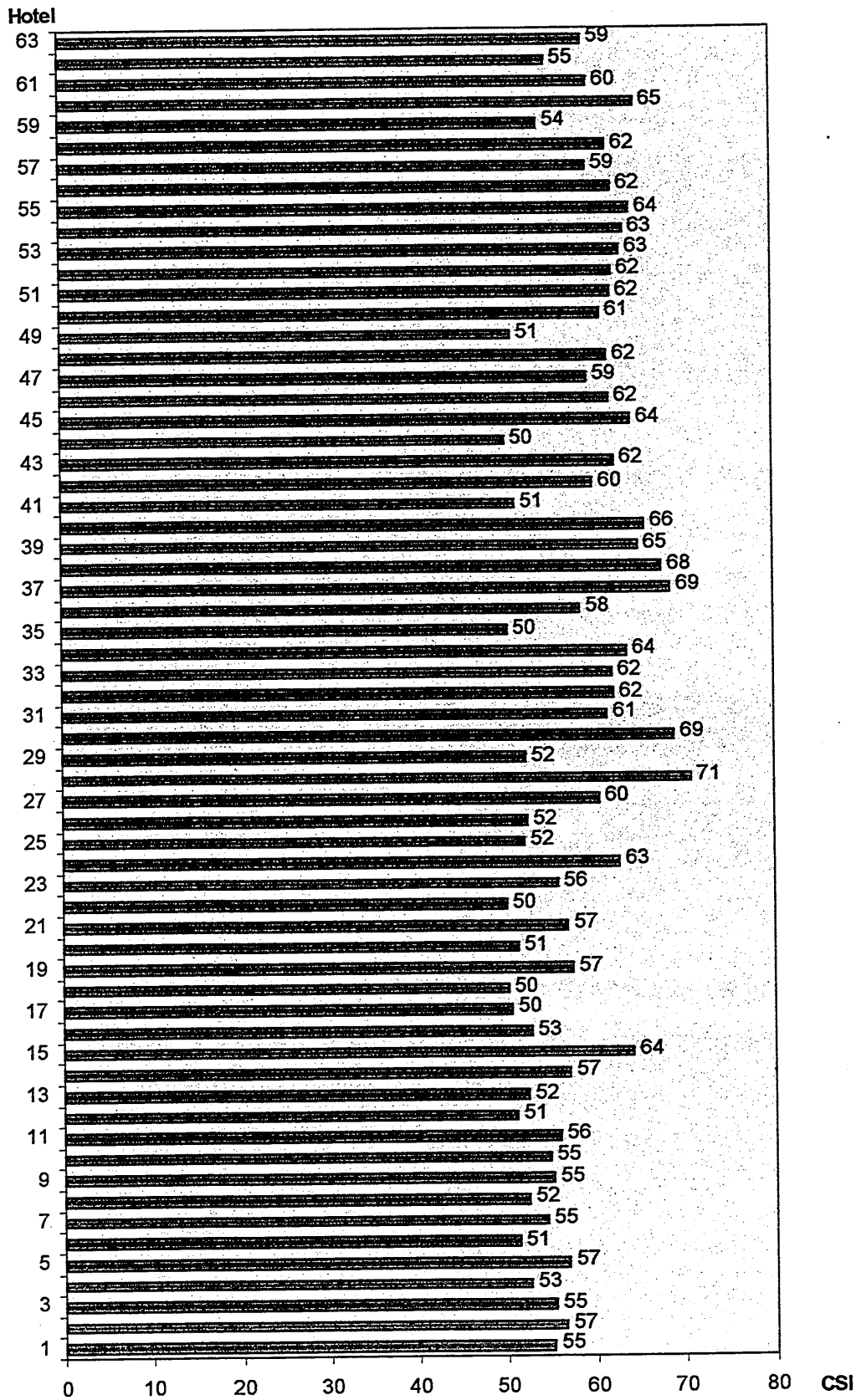


Figure 36: *Customer Satisfaction Index 1999 for Individual Hotel (Reference Only)*

Figure 36 above portrays the CSI scores for individual hotels (Reference Only), with the last one, that is hotel 63, representing the scores of the hotel industry. It is observed that there are large differences in CSI among Hong Kong hotels, with the largest difference of 20.81 recorded between hotel 28, The South China Hotel, and hotel 44, Grand Hyatt Hong Kong. Incidentally, the ACSI for Hyatt Corporation in the US was 73 in 1999, which was just above the hotel industry value of 72 (ASQC, 2001).

The importance of the Customer Satisfaction Index is not quite so on the index value itself but on the changes over the years, particularly when it is looked at along with the strategic planning of the organisation. It is a report card on the performance of the organisation in general, and the top management in particular, from customers with actual business encounters. The results are particularly useful when it is used in conjunction with the performance indices of the Business Excellence Model for Hong Kong Hotel Industry. Performance index of the CSMHKHI measures performance from the customer's perspectives while those of the BEMHKHI measures performances internally. And, together they can provide a holistic view of the organisation on business excellence.

A full-scale study on three International and two Asian hotels is presented as a case study in the next chapter.

7. CASE STUDY ON CUSTOMER SATISFACTION

A full-scale study has been carried out for three international hotels from March to May 2000 and another two Asian hotels from April to May 2001. The three international hotels whose US counterparts participate in the American Customer Satisfaction Index were selected for study and they are: Sheraton Hong Kong Hotel & Towers, Holiday Inn Golden Mile Hong Kong and J W Marriott Hotel Hong Kong. The two Asian hotels selected are representatives of the class and they are Kowloon Shangri-La and Mandarin Oriental, Hong Kong. The questionnaire (appendix IIc) and the sampling procedure (p.109) of the 1999 study are employed. The Excel outputs pertaining to the case study are available in appendices Va to Vg, including the sum, sample size and mean to each question item involved in the calculation.

Because of the time lag of one year, results of the two groups of hotels cannot be pooled together to give an overall picture. Instead, they are reported in the following sections, using the two groups of hotels as contrast. Results pertaining to each group of hotels are given in sections 7.2 and 7.3 while those pertaining to individual hotels are described in section 7.4. The demographic profile of respondents on sex, age and ethnic groups are described below, most of which will be used as basis for comparing performance indices in general, and the customer satisfaction in particular, in the case study.

7.1 DEMOGRAPHICAL PROFILE

The distributions of sex for the two groups of hotels are displayed in table 39 below. There are 750 successful interviews obtained for the three

international hotels, of which 44.1% are male and 55.9% are female. For the two Asian hotels, 500 successful interviews are obtained, of which 20.4% are male and 79.6% are female. Unlike the distribution of sex for the 1999 survey described in section 6.1, the current study has a very strong bias in the Asian hotels and a moderate bias in the international hotels towards the females. And the result of section 6.3.2 suggests that females are more inclined to give higher scores, but hotels of both groups are subjected to the same bias, thus minimising the relative effects due to the two sexes.

<u>Sex</u>	<u>International (%)</u>	<u>Asian (%)</u>
Male	331 (44.1)	102 (20.4)
Female	419 (55.9)	398 (79.6)
Total	750 (100)	500 (100)

Table 39: *Distribution of Sex of Respondents in the Customer Satisfaction Case Study*

<u>Ethnic Group</u>	<u>International (%)</u>	<u>Asian (%)</u>
Bangladesh	20 (2.7)	1 (0.2)
Black-African	21 (2.8)	3 (0.6)
Black-Caribbean	29 (3.9)	10 (2.0)
Chinese	143 (19.1)	136 (27.2)
Indian	83 (11.1)	31 (6.2)
Japanese	-	20 (4.0)
Pakistan	13 (1.7)	3 (0.6)
White	416 (55.5)	289 (57.8)
Other	25 (3.3)	7 (1.4)
Total	750 (100)	500 (100)

Table 40: *Distribution of Ethnic Group of Respondents in the Customer Satisfaction Case Study*

The distribution of the respondents according to their ethnic groups is given in table 40 above. It is shown that the two dominating groups of White and Chinese together account for 74.6% of the sample for the three international hotels and 85% for the two Asian hotels. Though the Black accounts for the remaining 25.4% in the three international hotels but only 9.6% in the two Asian hotels, to be consistent with the groupings of the 1999 survey, only the White and the Chinese are considered for ethnic groups in subsequent analyses.

<u>Age Group</u>	<u>International (%)</u>	<u>Asian (%)</u>
Under 25	35 (4.7)	16 (3.2)
25 - 29	46 (6.1)	38 (7.6)
30 - 34	88 (11.7)	86 (17.2)
35 - 39	106 (14.1)	123 (24.6)
40 - 44	128 (17.1)	72 (14.4)
45 - 49	97 (12.9)	61 (12.2)
50 - 54	166 (22.1)	69 (13.8)
55 and over	84 (11.2)	35 (7.0)
Total	750 (100)	500 (100)

Table 41: *Distribution of Age of Respondents in the Case Study*

Table 41 above shows the distribution of age of the respondents in the case study. Of the respondents in the international group, 4.7% aged under 25, 6.1% between 25 and 29, 11.7% between 30 and 34, 14.1% between 35 and 39, 17.1% between 40 and 44, 12.9% between 45 and 49, 22.1% between 50 and 54, and the remaining 11.2% aged 55 and over. And of the respondents in the Asian group, 3.2% aged under 25, 7.6% between 25 and 29, 17.2% between 30 and 34, 24.6% between 35 and 39, 14.4% between 40 and 44, 12.2% between 45 and 49, 13.8% between 50 and 54, and the remaining 7% aged 55 and over. The age of the Asian

group peaks between 35 to 39 years of age while the international group has a bimodal distribution with the two modes lied between 40 to 44 years of age and between 50 to 54 years of age. The sex and ethnic groups reported above will be used as the basis for comparing performances of the two hotel groups on the five index values, as well as for individual hotels are reported below.

7.2 CUSTOMER SATISFACTION: INTERNATIONAL AND ASIAN HOTELS COMPARED

Figure 37 below shows the performance indices 2000 for the group of international hotels and the values are 59.6 for *Customer Expectation*, 60.5 for *Perceived Quality*, 63.5 for *Perceived Value*, 68.5 for *Customer Satisfaction* and 51.8 for *Loyalty*. Customer Satisfaction has the highest score while Loyalty has the lowest score with a huge difference of 16.7 points.

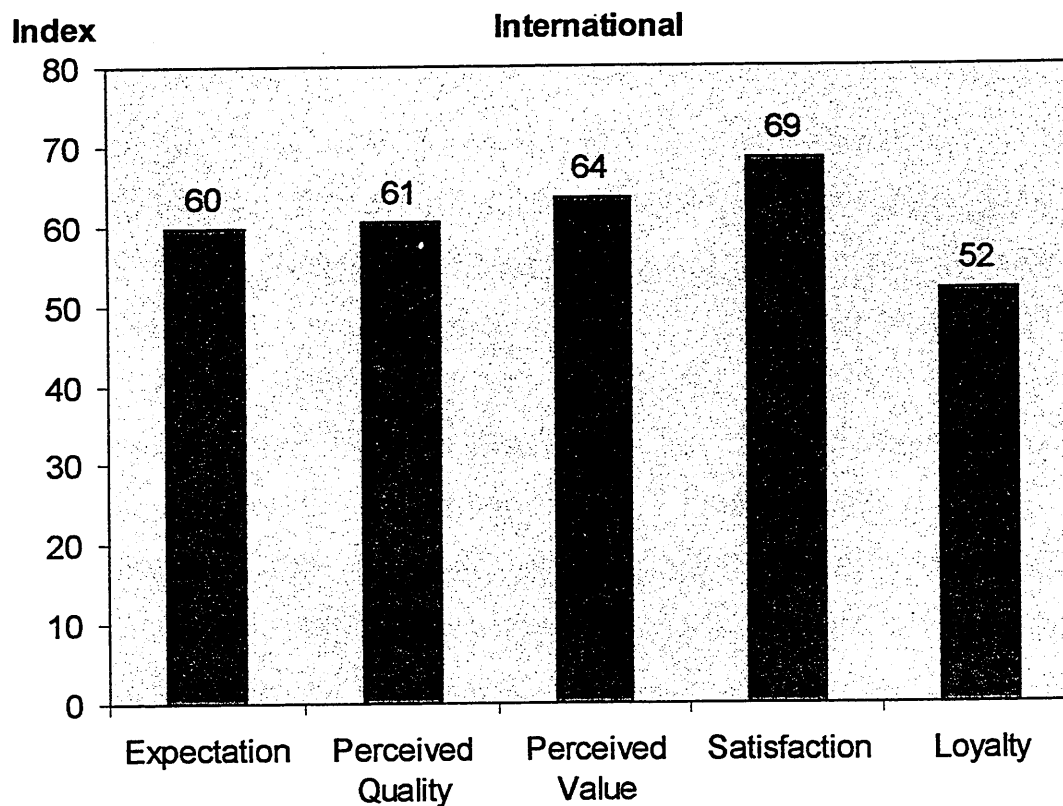


Figure 37: *Performance Indices 2000 for Selected International Hotels*

Figure 38 below shows the performance indices 2001 for the group of Asian hotels and the values are 63.8 for *Customer Expectation*, 63.6 for *Perceived Quality*, 66.7 for *Perceived Value*, 73.8 for *Customer Satisfaction* and 69.1 for *Loyalty*. Customer Satisfaction has the highest score while Perceived Quality has the lowest score with a big difference of 10.2 points.

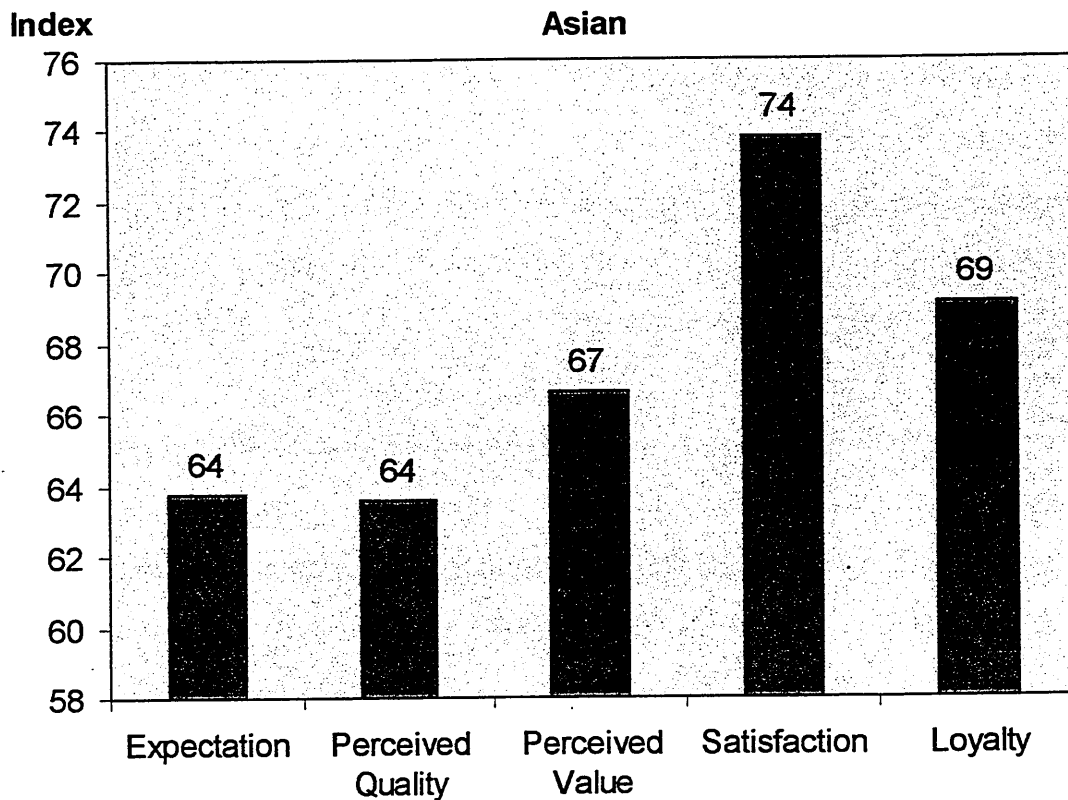


Figure 38: *Performance Indices 2001 for Selected Asian Hotels*

Figure 39 below compares the performance indices between the International and Asian groups of hotels. It is shown that the Asian group outperforms the International group in all the five dimensions of the Customer Satisfaction Model for Hong Kong Hotel Industry. The largest difference between the two groups is in *Loyalty* with a huge difference of 17.3 points, followed by *Satisfaction* with a difference of 5.3 points. This huge difference reflects the fact that the two Asian hotels do offer better quality of service than the three International hotels. This is supported by the findings of both Dahlgaard et al (1998) — top management in Eastern companies perform better than their Western counterparts in formulation of quality policy, education and training in quality for employee, and participation in quality audits — and Lin et al (2001) especially when the proportion of female is high in the current sample.

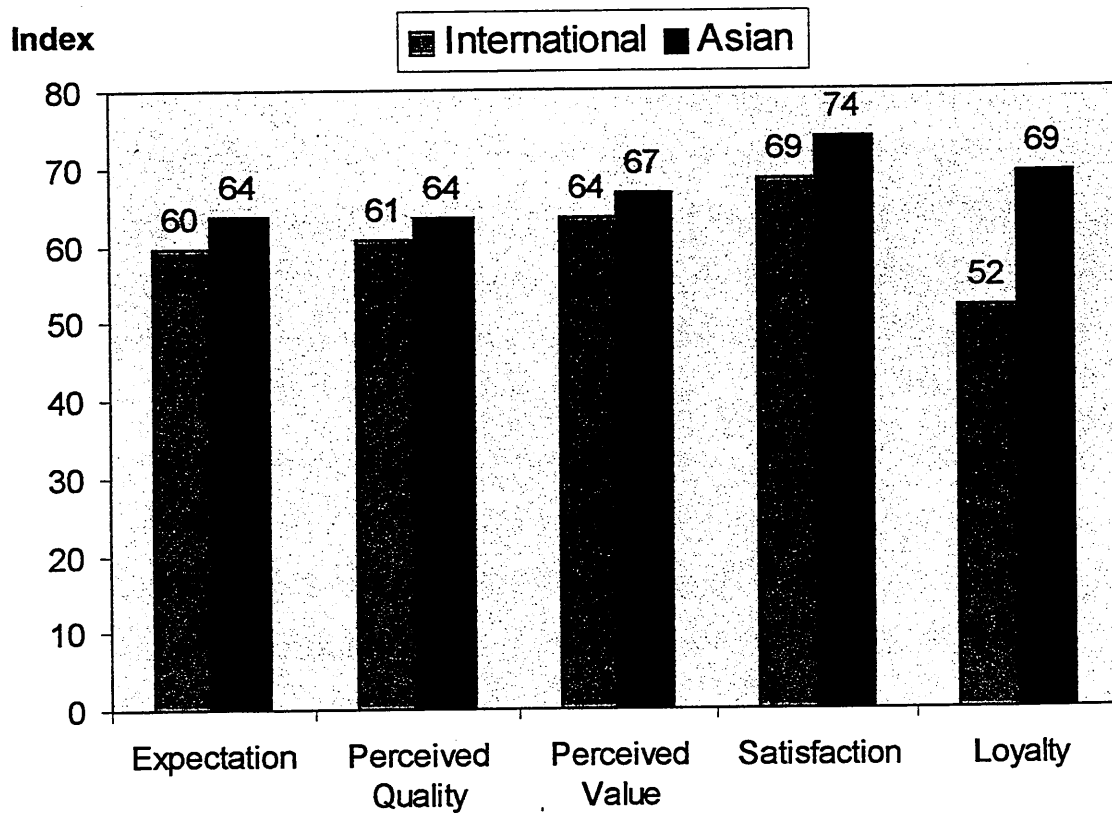


Figure 39: *Performance Indices for International and Asian Hotels*

7.2.1 Customer Satisfaction of Males: International and Asian hotels compared

Figure 40 below compares the performance indices for the male between the International and Asian groups of hotels. Similar result to the overall comparison above is found that the Asian group outperforms the International group in all the five dimensions of the CSMHKHI. The largest difference between the two groups is in *Loyalty* with a difference of 6.9 points, followed by *Expectation* with a difference of 5.8 points. The large difference in *Expectation* could be resulted from the difference in *Loyalty*. In fact, satisfied customers will increase their willingness to come again, and in their second visit, they should have higher expectation than their first. Thus, the chain of influence starts with *Satisfaction*, which increases *Loyalty*, and which,

in turn, changes the *Expectation*. For loyal customers, their frame of reference (Kahneman & Tversky, 1979; Bazerman, 1998) on *Expectation* keep increasing, however minute increases they are, each time they make a business encounter. And it is more important for the hoteliers, service providers and manufacturers alike, not to produce "non-quality" product or service than to looking for further improvements (Peters, 1999).

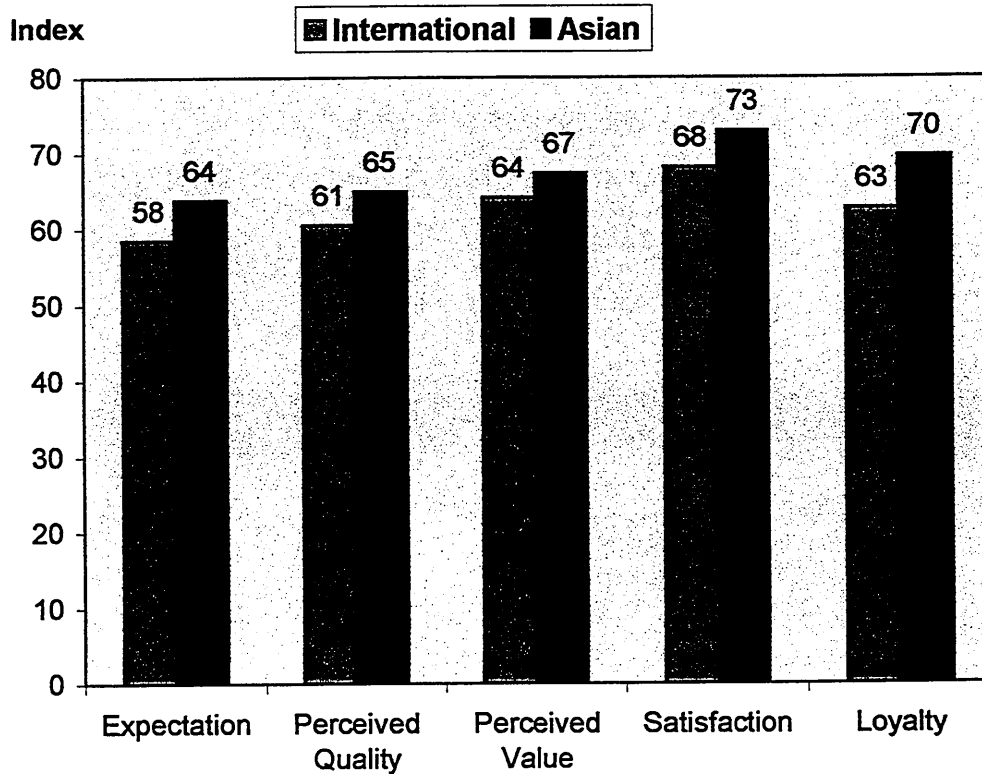


Figure 40: *Performance Indices among Males for International and Asian Hotels*

7.2.2 Customer Satisfaction of Females: International and Asian hotels compared

Figure 41 below compares the performance indices for the female between the International and Asian groups of hotels. It is shown again that the Asian group outperforms the International group in all the five dimensions of the CSMHKHI, but the extents are less

than those for the males. The largest difference recorded between the two groups is in *Loyalty* with a difference of 4.7 points, followed by *Satisfaction* with a difference of 4.1 points. The results are similar to those of section 7.2.1.

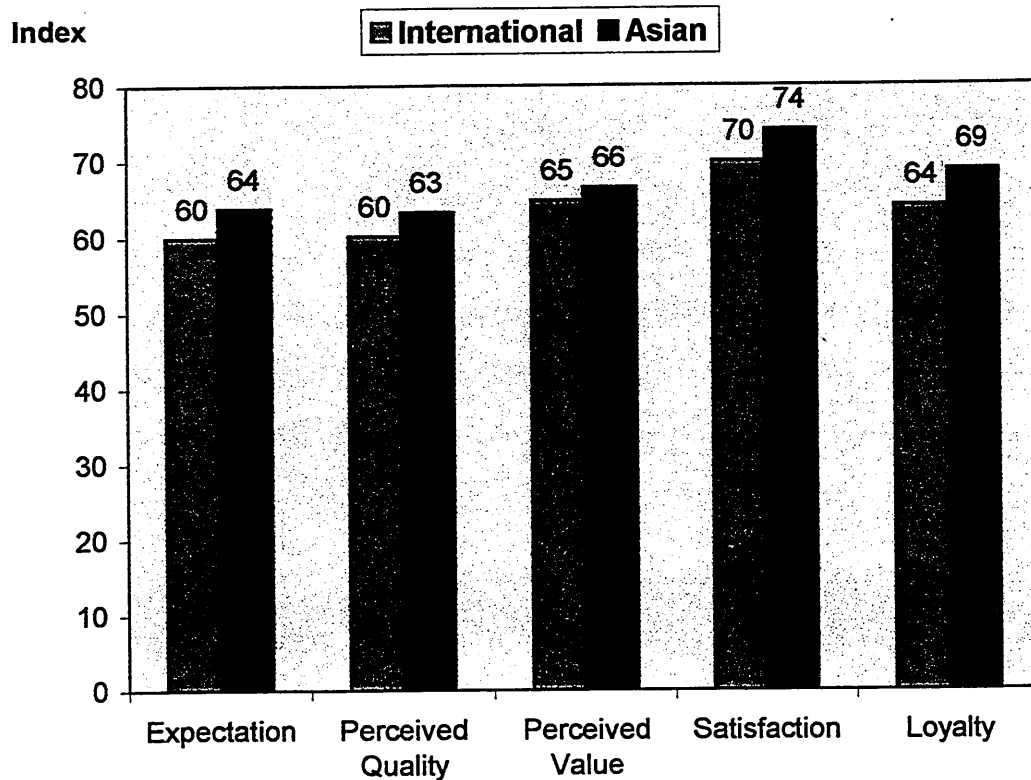


Figure 41: *Performance Indices among Females for International and Asian Hotels*

7.2.3 Customer Satisfaction of the White: International and Asian hotels compared

Figure 42 below compares the performance indices for the White between the International and Asian groups of hotels. Again it is found that the Asian group outperforms the International group in all the five dimensions of the CSMHKHI. The largest difference between the two groups is in *Loyalty* with a difference of 5.4 points, followed by *Satisfaction* with a difference of 5.3 points. The results are similar to those for the female, but with larger differences.

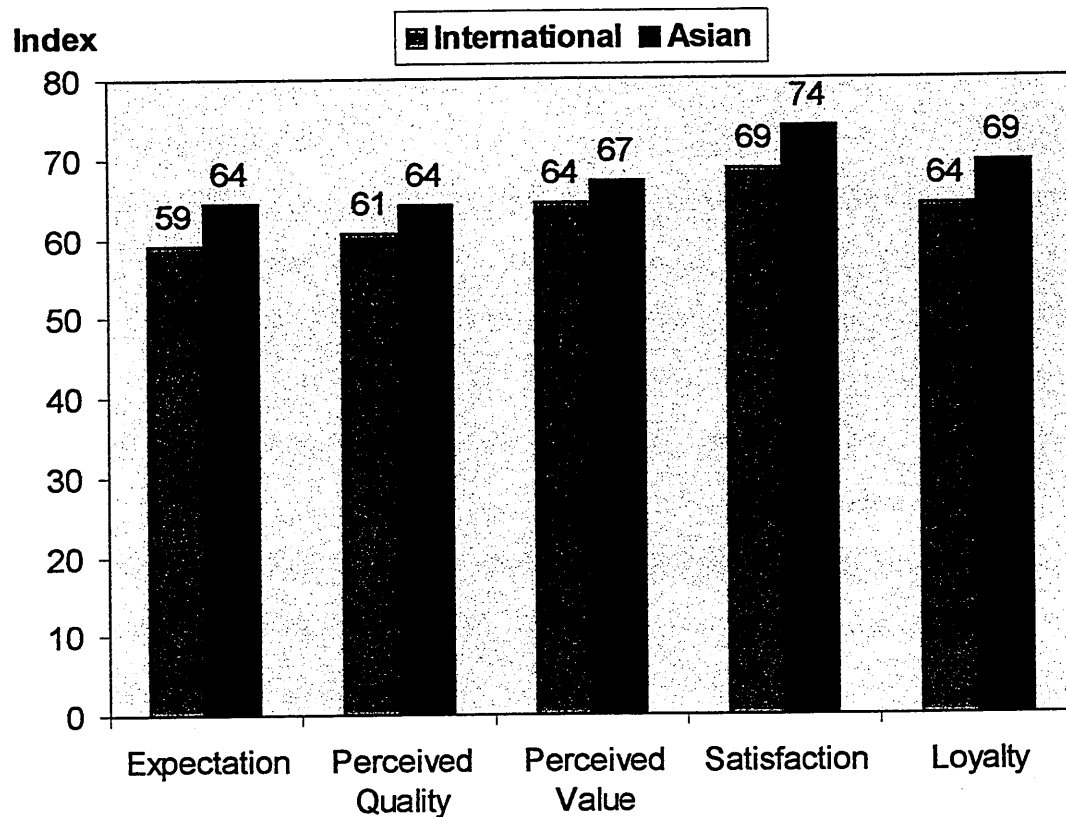


Figure 42: *Performance Indices among the White for International and Asian Hotels*

7.2.4 Customer Satisfaction of the Chinese: International and Asian hotels compared

Figure 43 below compares the performance indices for the Chinese between the International and Asian groups of hotels. Similar to other results in this section, it is found that the Asian group outperforms the International group in all the five dimensions of the CSMHKHI. The largest difference between the two groups is in *Expectation* with a difference of 5.5 points, followed by *Loyalty* with a difference of 4.6 points. The results are similar to those for the male, but in reverse order for the two largest differences.

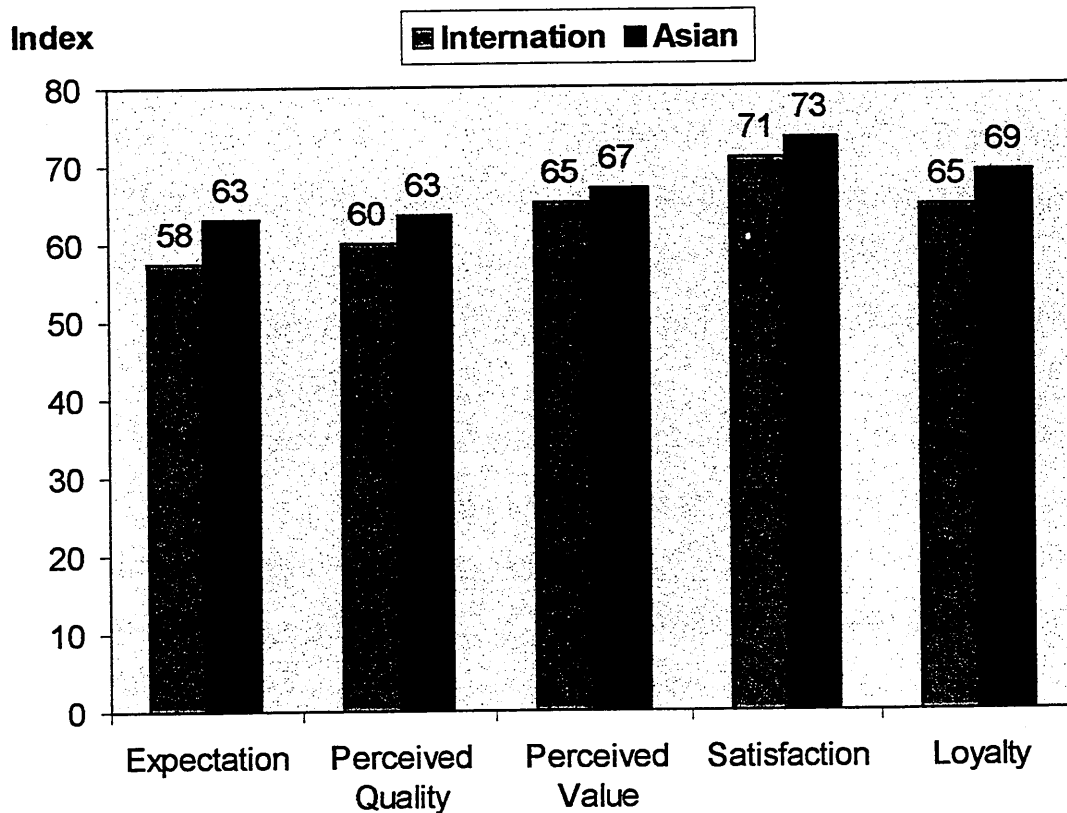


Figure 43: Performance Indices among the Chinese for International and Asian Hotels

7.3 CUSTOMER SATISFACTION IN THREE SELECTED INTERNATIONAL HOTELS

The performance indices 2000 for the three international hotels are given in appendix Va and are described in figure 44 below. Their values are 59.6 for *Customer Expectation*, 60.5 for *Perceived Quality*, 63.5 for *Perceived Value*, 68.5 for *Customer Satisfaction* and 51.8 for *Loyalty*. Customer Satisfaction has the highest score while Loyalty has the lowest score with a huge difference of 16.7 points. This can be explained from the fact that most guests of the international hotels are White tourists visiting Hong Kong for the first time and they are very satisfied with everything here, but are not intended to come back in the near future because of the high costs.

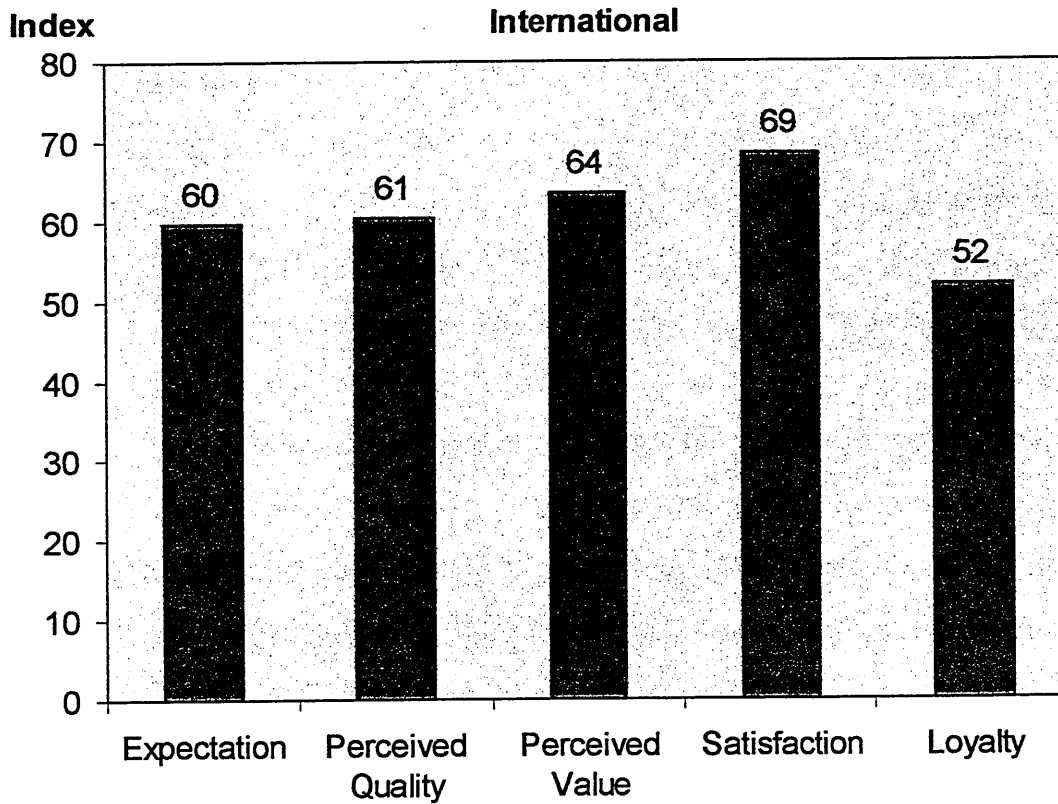


Figure 44: *Performance Indices 2000 for Selected International Hotels*

7.3.1 Customer Satisfaction by Sex in selected International hotels

Figure 45 below shows the performance indices 2000 for the group of international hotels for male and the values are 58.5 for *Customer Expectation*, 60.5 for *Perceived Quality*, 61.2 for *Perceived Value*, 68.1 for *Customer Satisfaction* and 62.7 for *Loyalty*. Customer Satisfaction has the highest score while Customer Expectation has the lowest score with a big difference of 10.2 points.

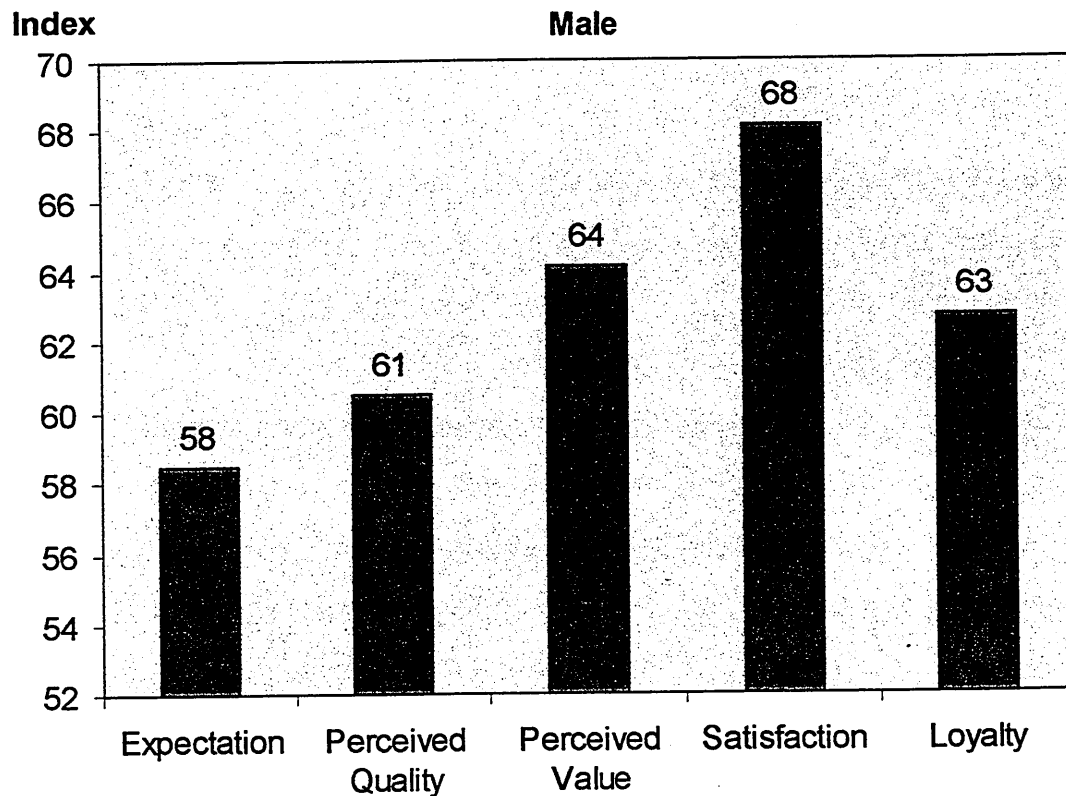


Figure 45: *Performance Indices 2000 for Selected International Hotels for Male*

Figure 46 below shows the performance indices 2000 for the group of international hotels for female and the values are 59.9 for *Customer Expectation*, 60.1 for *Perceived Quality*, 64.7 for *Perceived Value*, 70.0 for *Customer Satisfaction* and 64.0 for *Loyalty*. Customer Satisfaction has the highest score while Customer Expectation has the lowest score with a big difference of 10.1 points.

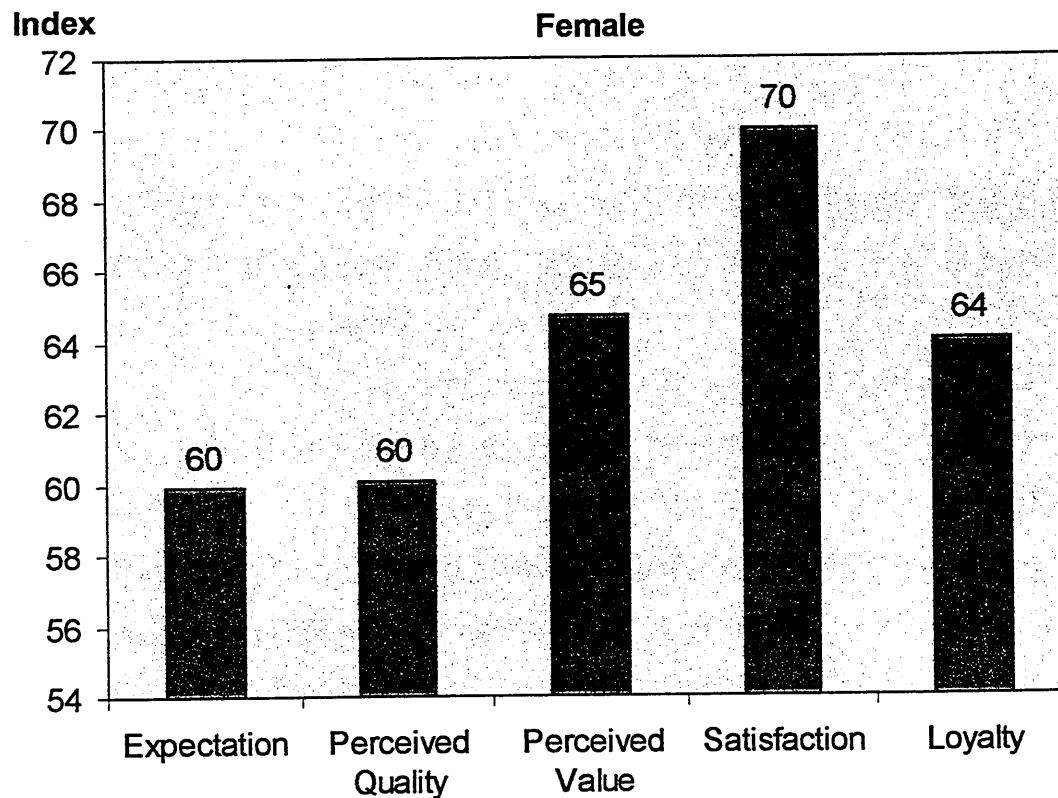


Figure 46: *Performance Indices 2000 for Selected International Hotels for the Female*

Figure 47 below compares the performance indices 2000 between the two sexes for the three selected international hotels. The Customer Satisfaction Index for the two sexes stood high with scores of 68.1 for the male and 70.0 for the female. The female gives slightly higher scores in four dimensions of CSMHKHI, except in the *Perceived quality* where score of the male leads by a narrow margin of 0.4 point. The largest difference between scores of the two sexes is in *Satisfaction* with a difference of 1.8 points, followed by *Expectation* with a difference of 1.4 points.

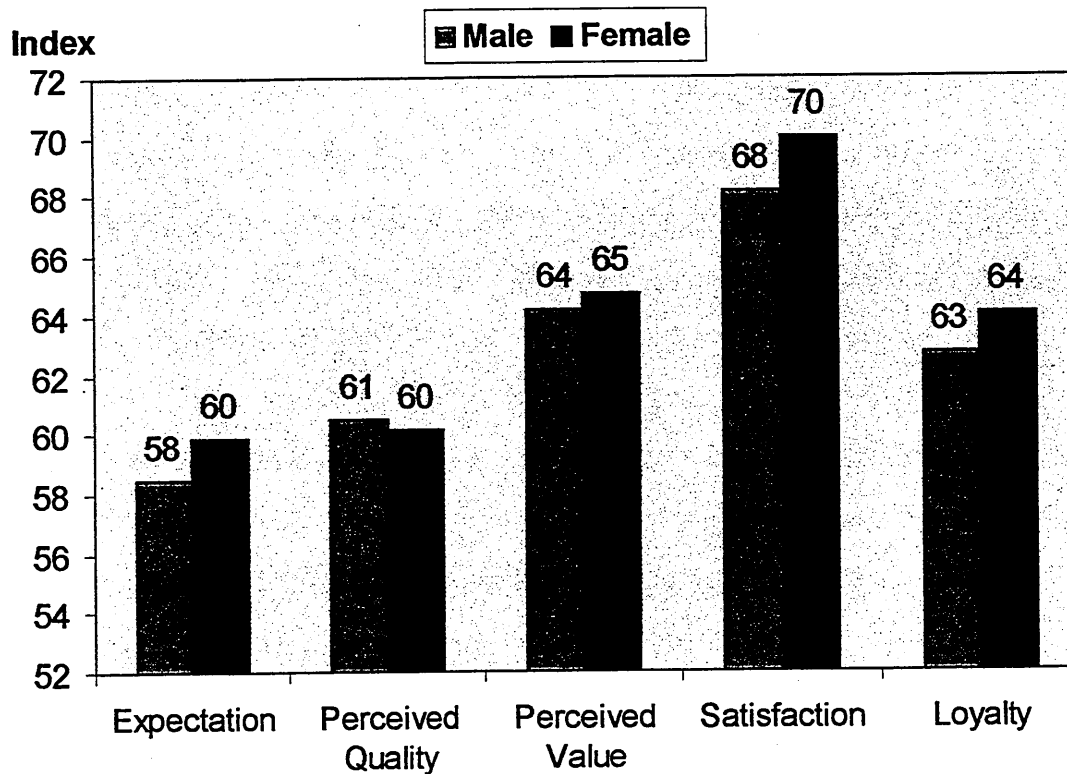


Figure 47: *Performance Indices 2000 for Selected International Hotels by Sex*

7.3.2 Customer Satisfaction by Ethnic Group in selected International hotels

Figure 48 below shows the performance indices 2000 for the group of international hotels for White and the values are 59.2 for *Customer Expectation*, 60.7 for *Perceived Quality*, 64.4 for *Perceived Value*, 68.7 for *Customer Satisfaction* and 64.1 for *Loyalty*. Customer Satisfaction has the highest score while Customer Expectation has the lowest score with a big difference of 9.5 points.

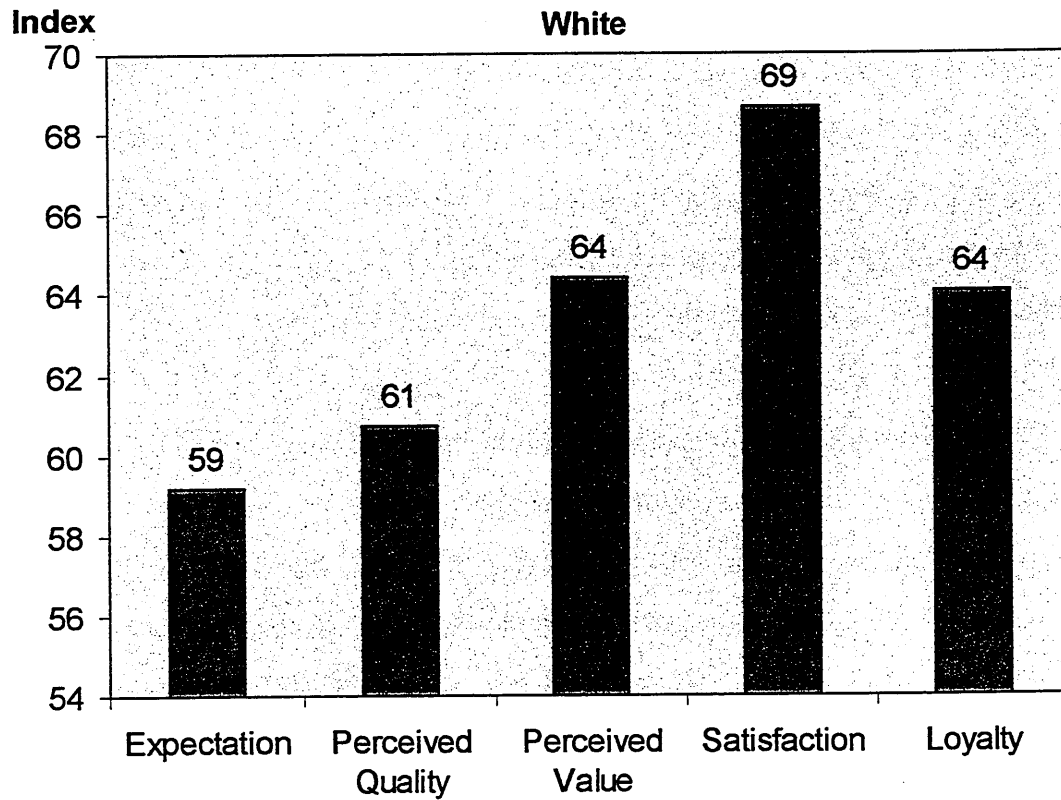


Figure 48: *Performance Indices 2000 for Selected International Hotels for White*

Figure 49 below shows the performance indices 2000 for the group of international hotels for Chinese and the values are 57.5 for *Customer Expectation*, 59.9 for *Perceived Quality*, 65.2 for *Perceived Value*, 70.8 for *Customer Satisfaction* and 64.5 for *Loyalty*. Customer Satisfaction has the highest score while Customer Expectation has the lowest score with a big difference of 13.3 points.

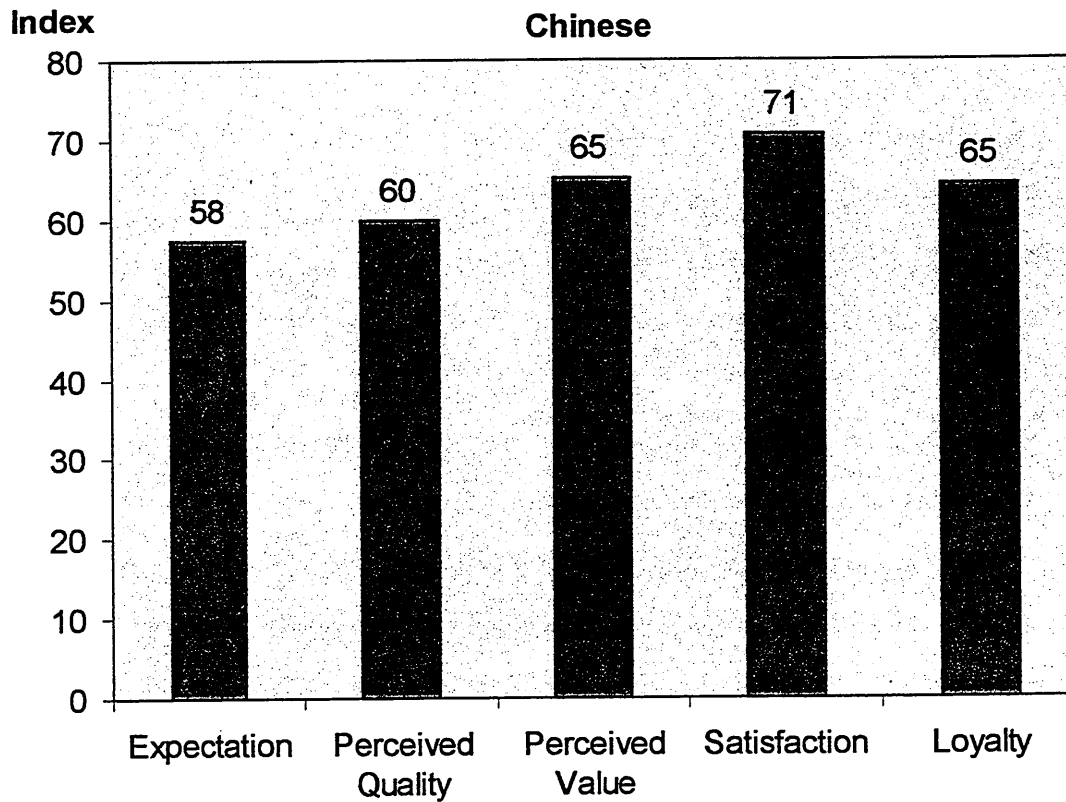


Figure 49: Performance Indices 2000 for Selected International Hotels for Chinese

Figure 50 below compares the performance indices 2000 between the two ethnic groups of White and Chinese for the three international hotels. The Customer Satisfaction Index for White and Chinese stand high with scores of 68.7 and 70.8, respectively. The index scores of the Chinese slightly leads those of the White in *Perceived Value*, *Satisfaction* and *Loyalty* while those of the White slightly leads the Chinese in *Expectation* and *Perceived Quality*. The largest difference between the scores of the White and the Chinese is in *Satisfaction* with a difference of 2.2 points, followed by *Expectation* with a difference of 1.6 points.

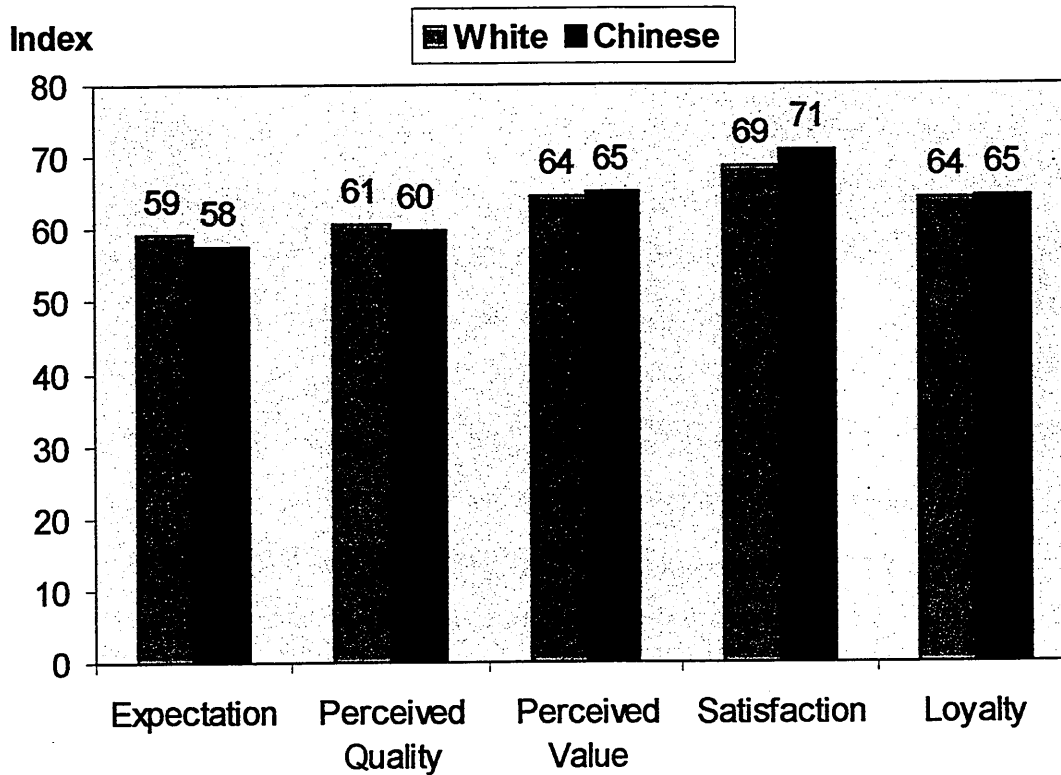


Figure 50: *Performance Indices 2000 for Selected International Hotels by Ethnic Group*

7.4 CUSTOMER SATISFACTION IN TWO SELECTED ASIAN HOTELS

The performance indices 2001 for the two Asian hotels are given in appendix Vb are described in figure 51 below. Their values are 63.8 for *Customer Expectation*, 63.6 for *Perceived Quality*, 66.7 for *Perceived Value*, 73.8 for *Customer Satisfaction* and 69.1 for *Loyalty*. Customer Satisfaction has the highest score while Perceived Quality has the lowest score with a big difference of 10.2 points. This can be explained by the fact that most guests of the Asian hotels are wealthy females just below 40 years old. They like shopping for the latest fashions and other elegant things but do not want to walk too much. The locations of the two selected Asian hotels are just right next to the shopping centres, with a lot of banks in the vicinity. They can take

money out conveniently and spend them at leisure. It is perhaps the location of the hotel and the compactness of the city that distinguishes itself from hotels in other Asian countries. Although Expectation and Perceived quality scored the lowest, their index values, in absolute terms, are not inferior to others at all.

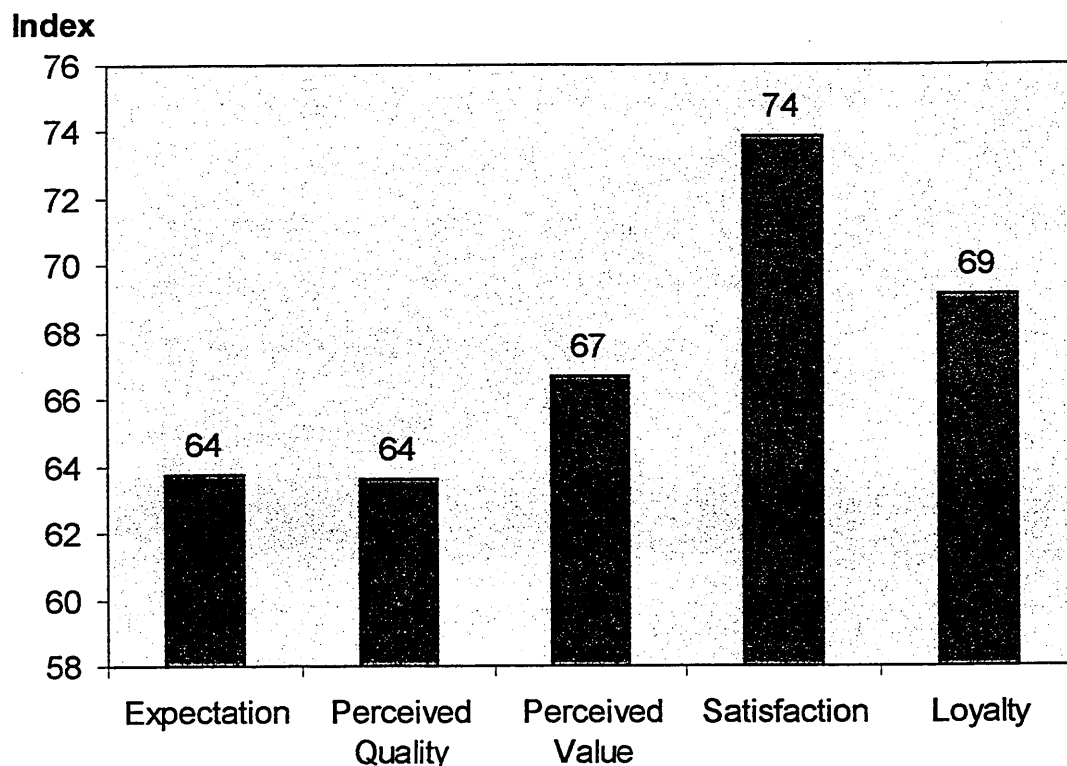


Figure 51: Performance Indices 2001 for Selected Asian Hotels

7.4.1 Customer Satisfaction by Sex in selected Asian hotels

Figure 52 below shows the performance indices 2001 for the group of Asian hotels for male and the values are 63.8 for *Customer Expectation*, 64.9 for *Perceived Quality*, 67.3 for *Perceived Value*, 72.9 for *Customer Satisfaction* and 69.7 for *Loyalty*. Customer Satisfaction has the highest score while Customer Expectation has the lowest score with a big difference of 9.2 points.

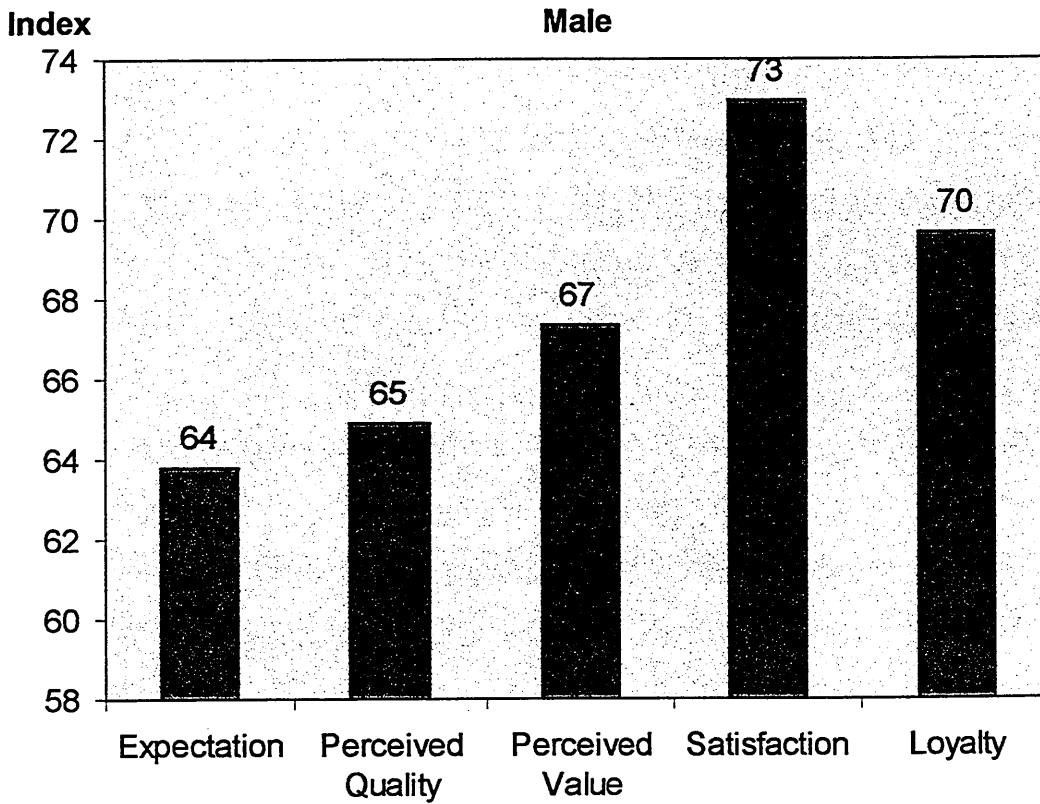


Figure 52: *Performance Indices 2001 for Selected Asian Hotels for Male*

Figure 53 below shows the performance indices 2001 for the group of Asian hotels for female and the values are 63.8 for *Customer Expectation*, 63.3 for *Perceived Quality*, 66.5 for *Perceived Value*, 74.1 for *Customer Satisfaction* and 68.8 for *Loyalty*. Customer Satisfaction has the highest score while Perceived Quality has the lowest score with a big difference of 10.8 points.

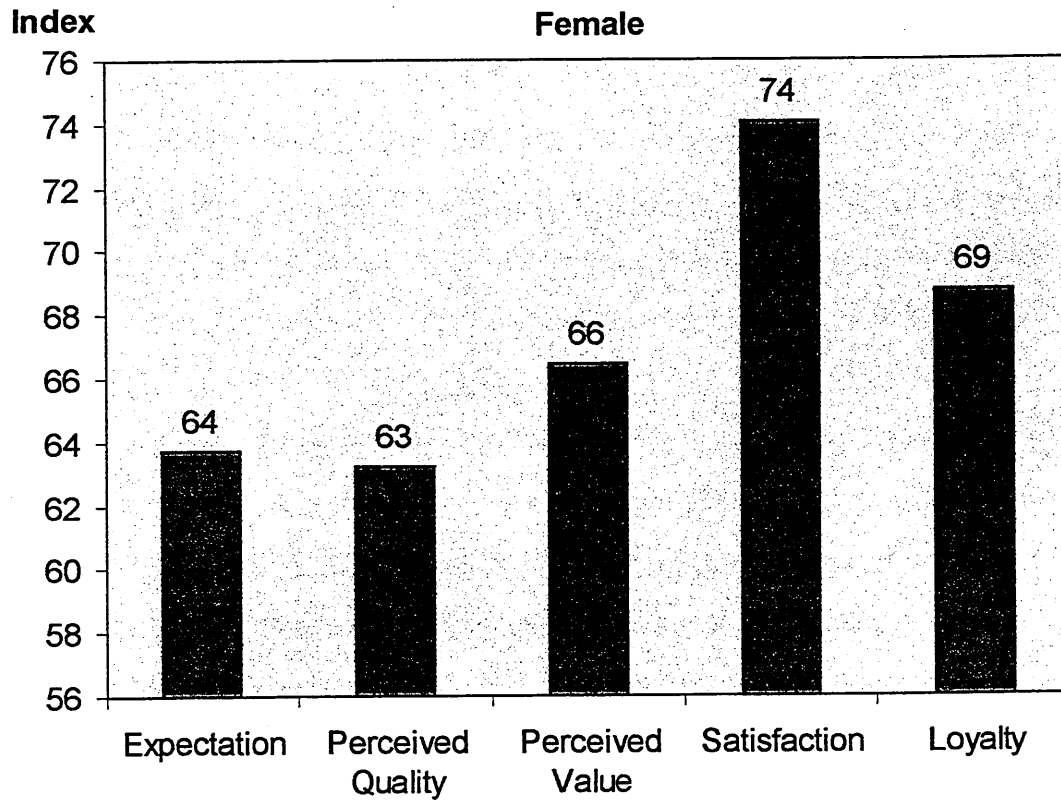


Figure 53: *Performance Indices 2001 for Selected Asian Hotels for Female*

Figure 54 below compares the performance indices 2001 between the two sexes for the group of Asian hotels. The Customer Satisfaction Index for the two sexes stood high with scores of 72.9 for the male and 74.1 for the female. This time, the index score of female leads that of the male in only *Satisfaction* by a narrow margin of 1.1 points. Index scores for the male lead in the remaining four dimensions of CSMHKHI, with the largest margin of 0.9 point in *Loyalty*.

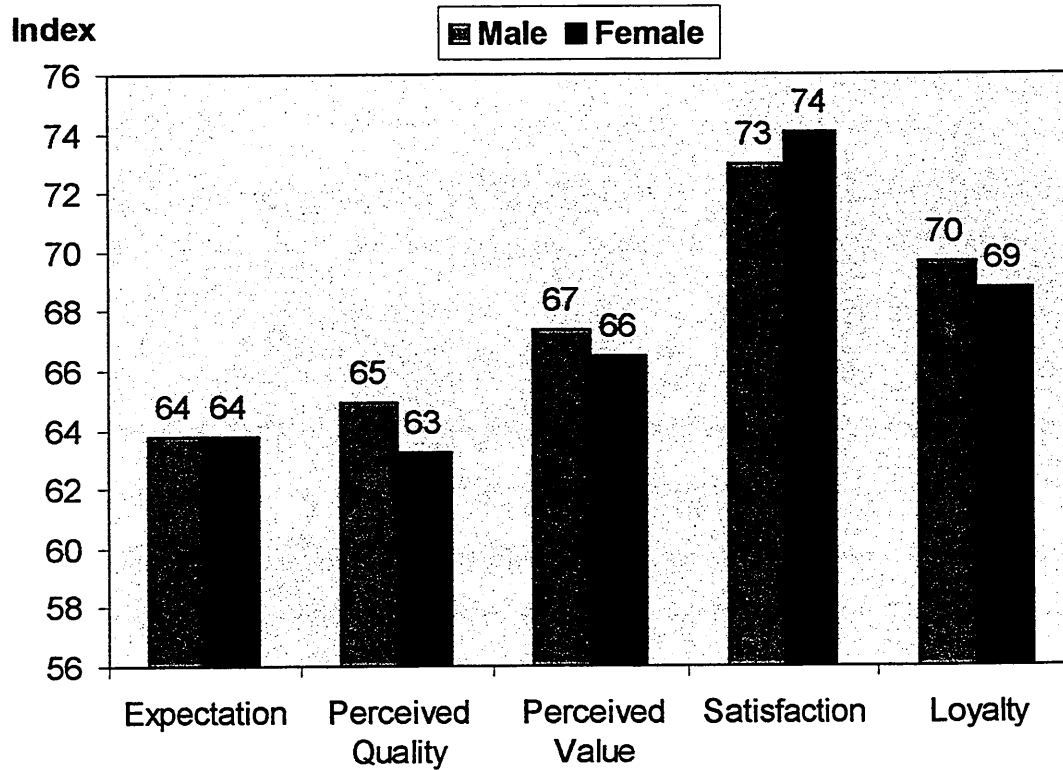


Figure 54: *Performance Indices 2001 for Selected Asian Hotels by Sex*

7.4.2 Customer Satisfaction by Ethnic Group in selected Asian hotels

Figure 55 below shows the performance indices 2001 for the group of Asian hotels for White and the values are 64.4 for *Customer Expectation*, 64.1 for *Perceived Quality*, 67.3 for *Perceived Value*, 74.0 for *Customer Satisfaction* and 69.5 for *Loyalty*. Customer Satisfaction has the highest score while Perceived Quality has the lowest score with a big difference of 9.9 points.

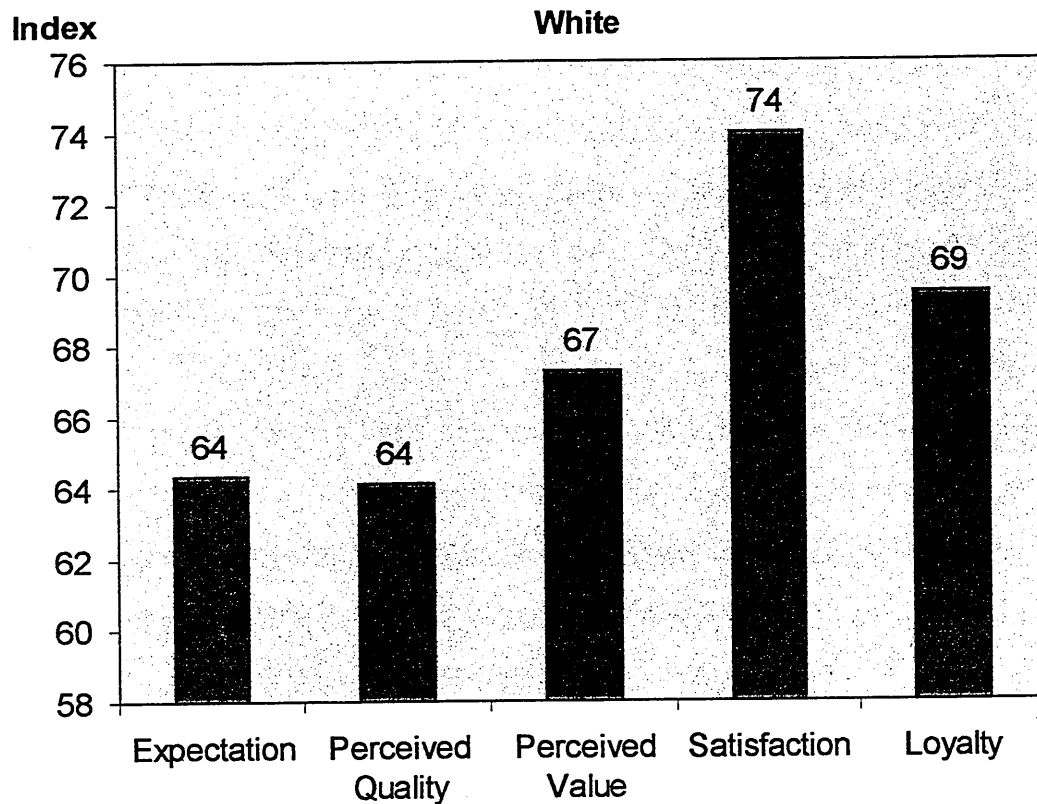


Figure 55: *Performance Indices 2001 for Selected Asian Hotels for White*

Figure 56 below shows the performance indices 2001 for the group of Asian hotels for Chinese and the values are 63.0 for *Customer Expectation*, 63.5 for *Perceived Quality*, 66.8 for *Perceived Value*, 73.3 for *Customer Satisfaction* and 69.1 for *Loyalty*. Customer Satisfaction has the highest score while Customer Expectation has the lowest score with a big difference of 10.3 points.

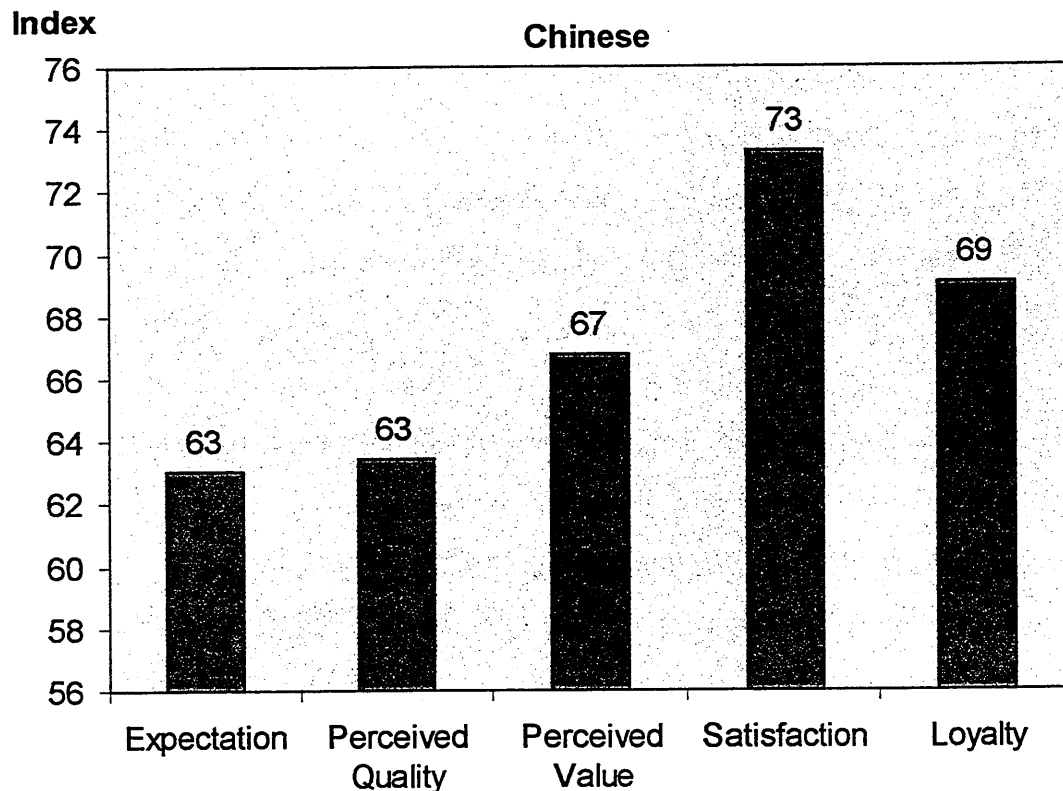


Figure 56: *Performance Indices 2001 for Selected Asian Hotels for Chinese*

Figure 57 below compares the performance indices 2001 between the two ethnic groups of White and Chinese for the two Asian hotels. The Customer Satisfaction Index for the two sexes stood high with scores of 74.0 for the White and 73.3 for the Chinese. This is the first time in this report that the index scores of the White lead those of the Chinese in all five dimensions of CSMHKHI. The largest margin recorded is 1.3 point in *Expectation*. These show that the Whites are very satisfied with everything offered by the two Asian hotels, which beat all their home standards.

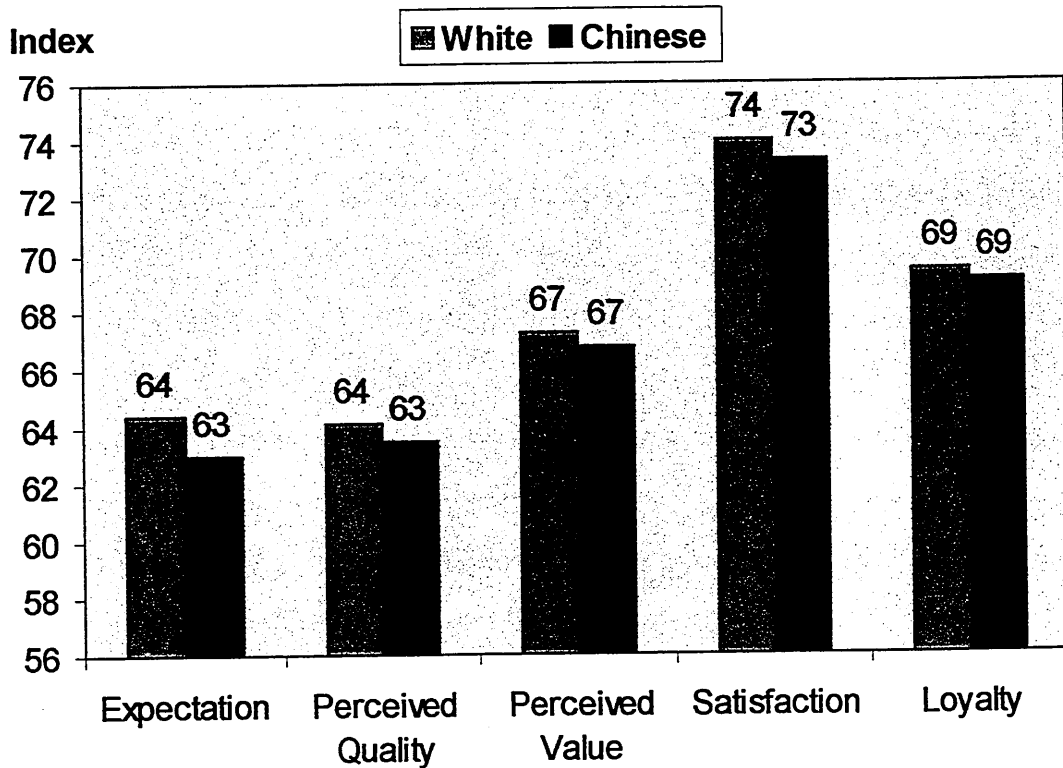


Figure 57: *Performance Indices 2001 for Selected Asian Hotels by Ethnic Group*

7.5 CUSTOMER SATISFACTION: INDIVIDUAL HOTELS COMPARED

Figure 58 below shows the performance indices 2000 for Sheraton Hong Kong Hotel & Towers and the values are 59.9 for *Customer Expectation*, 62.0 for *Perceived Quality*, 63.7 for *Perceived Value*, 64.0 for *Customer Satisfaction* and 46.1 for *Loyalty*. Customer Satisfaction has the highest score while Loyalty has the lowest score with a huge difference of 17.9 points.

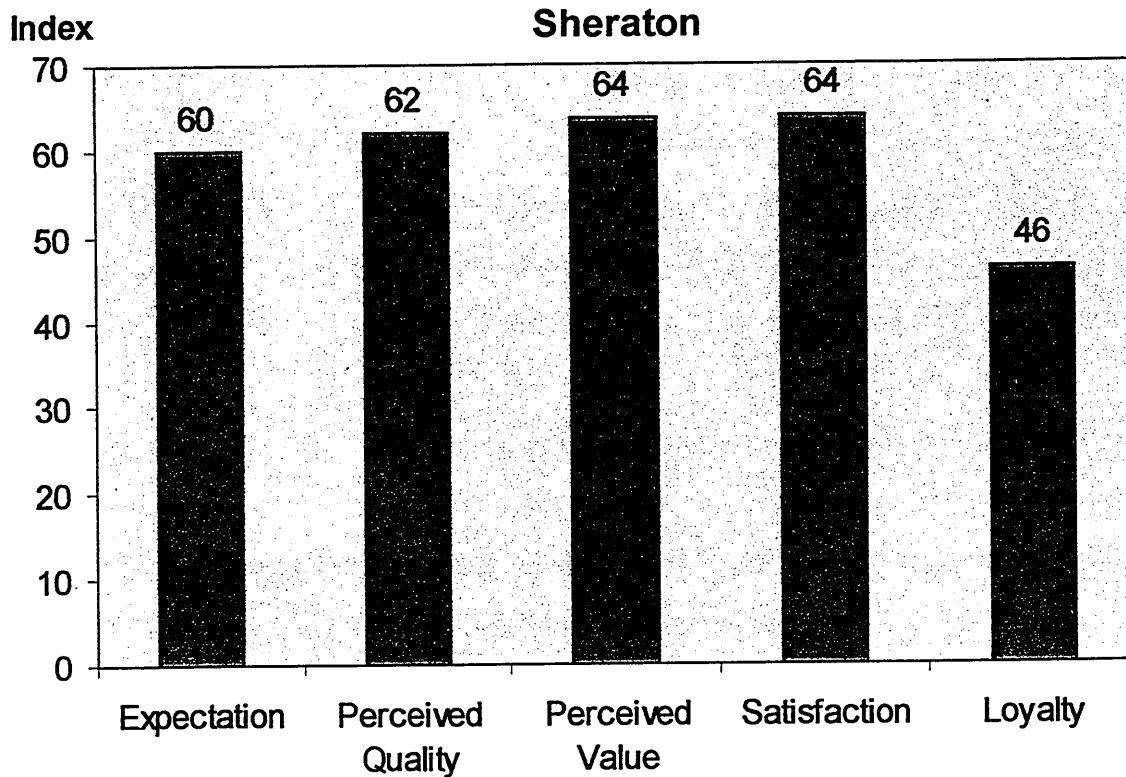


Figure 58: *Performance Indices 2000 for Sheraton Hong Kong Hotel & Towers*

Figure 59 below shows the performance indices 2000 for Holiday Inn Golden Mile Hong Kong and the values are 59.7 for *Customer Expectation*, 58.7 for *Perceived Quality*, 63.9 for *Perceived Value*, 70.2 for *Customer Satisfaction* and 66.3 for *Loyalty*. Customer Satisfaction has the highest score while Perceived Quality has the lowest score with a big difference of 11.5 points.

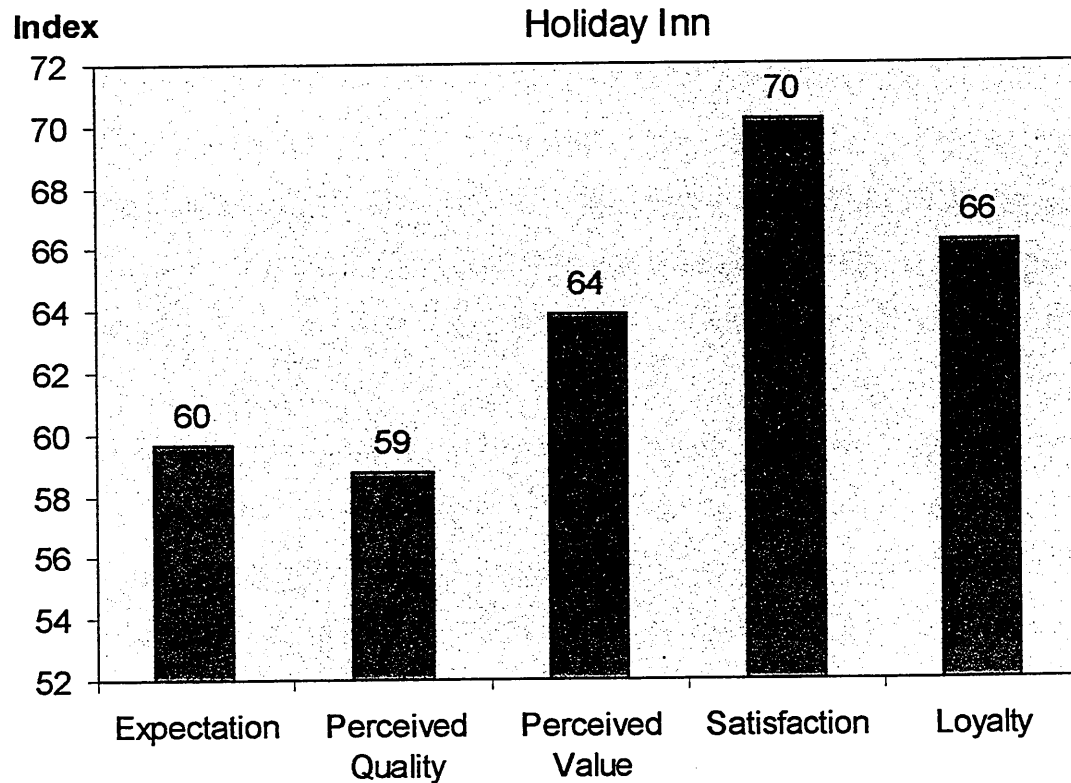


Figure 59: *Performance Indices 2000 for Holiday Inn Golden Mile Hong Kong*

Figure 60 below shows the performance indices 2000 for J W Marriott Hotel Hong Kong and the values are 57.6 for *Customer Expectation*, 60.6 for *Perceived Quality*, 62.6 for *Perceived Value*, 70.1 for *Customer Satisfaction* and 62.9 for *Loyalty*. Customer Satisfaction has the highest score while Customer Expectation has the lowest score with a big difference of 12.5 points.

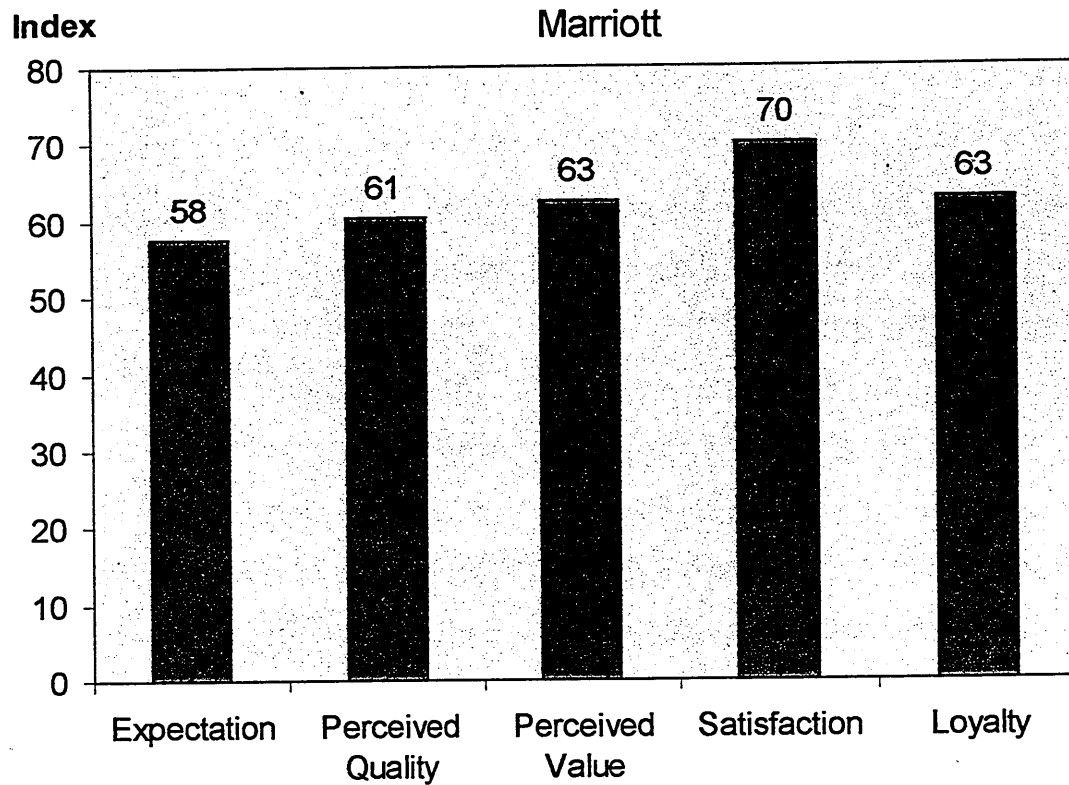


Figure 60: Performance Indices 2000 for J W Marriott Hotel Hong Kong

Figure 61 below shows the performance indices 2001 for Kowloon Shangri-La and the values are 63.9 for *Customer Expectation*, 65.4 for *Perceived Quality*, 67.0 for *Perceived Value*, 72.0 for *Customer Satisfaction* and 69.9 for *Loyalty*. Customer Satisfaction has the highest score while Customer Expectation has the lowest score with a big difference of 8.1 points.

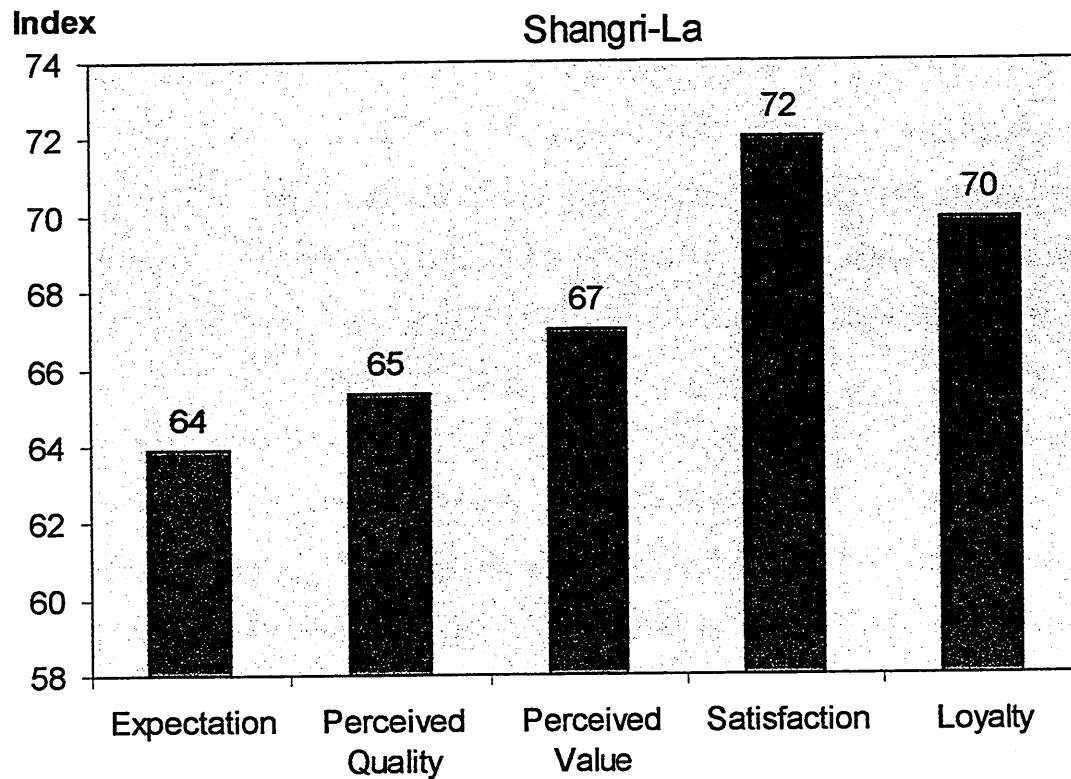


Figure 61: *Performance Indices 2001 for Kowloon Shangri-La*

Figure 62 below shows the performance indices 2000 for Mandarin Oriental, Hong Kong and the values are 63.4 for *Customer Expectation*, 61.8 for *Perceived Quality*, 65.8 for *Perceived Value*, 74.6 for *Customer Satisfaction* and 68.9 for *Loyalty*. Customer Satisfaction has the highest score while Perceived Quality has the lowest score with a big difference of 12.8 points.

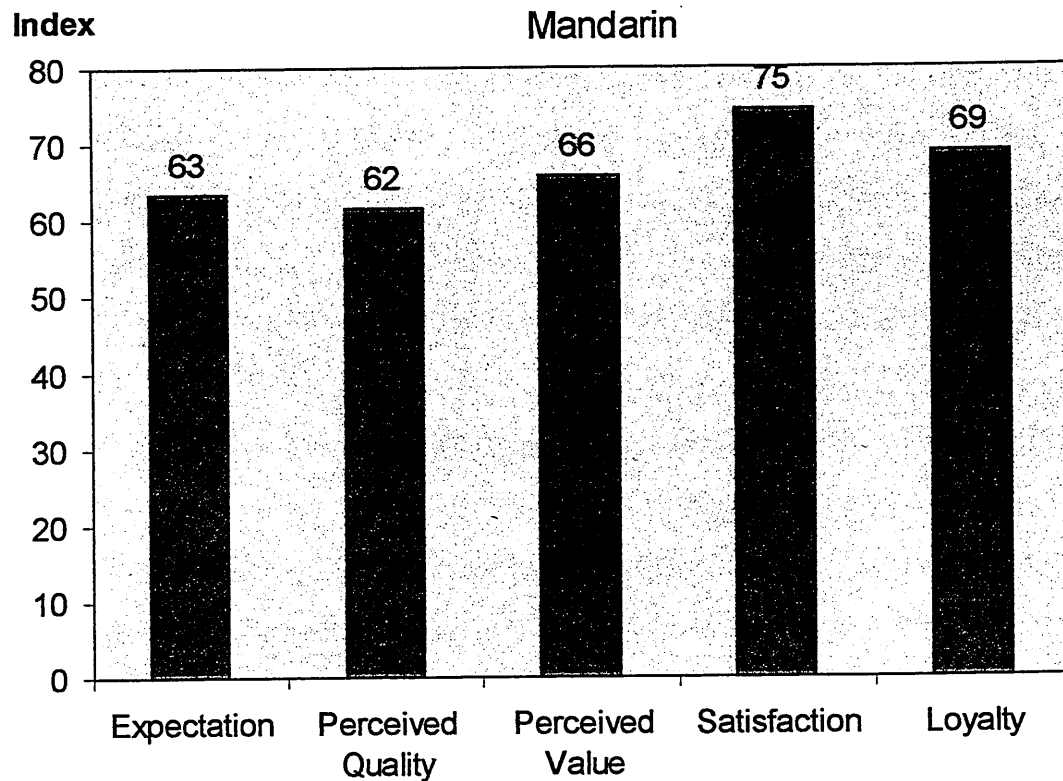


Figure 62: *Performance Indices 2001 for Mandarin Oriental, Hong Kong*

Performance indices of the five selected hotels are given in appendices Vc to Vg and are portrayed in figure 63 below with those pertaining to customer satisfaction being depicted in figure 64 below. Results are reported in accordance with the five dimensions of the CSMHKHI.

Customer Expectation

The Expectation Index scores for the five hotels are 59.9 for Sheraton, 59.7 for Holiday Inn, 57.6 for Marriott, 63.9 for Shangri-La and 63.4 for the Mandarin. The largest gap observed is between Shangri-La and Marriott, with a difference of 6.3 points that is significant at .05 level of significance at the company level (ASQC, 1995).

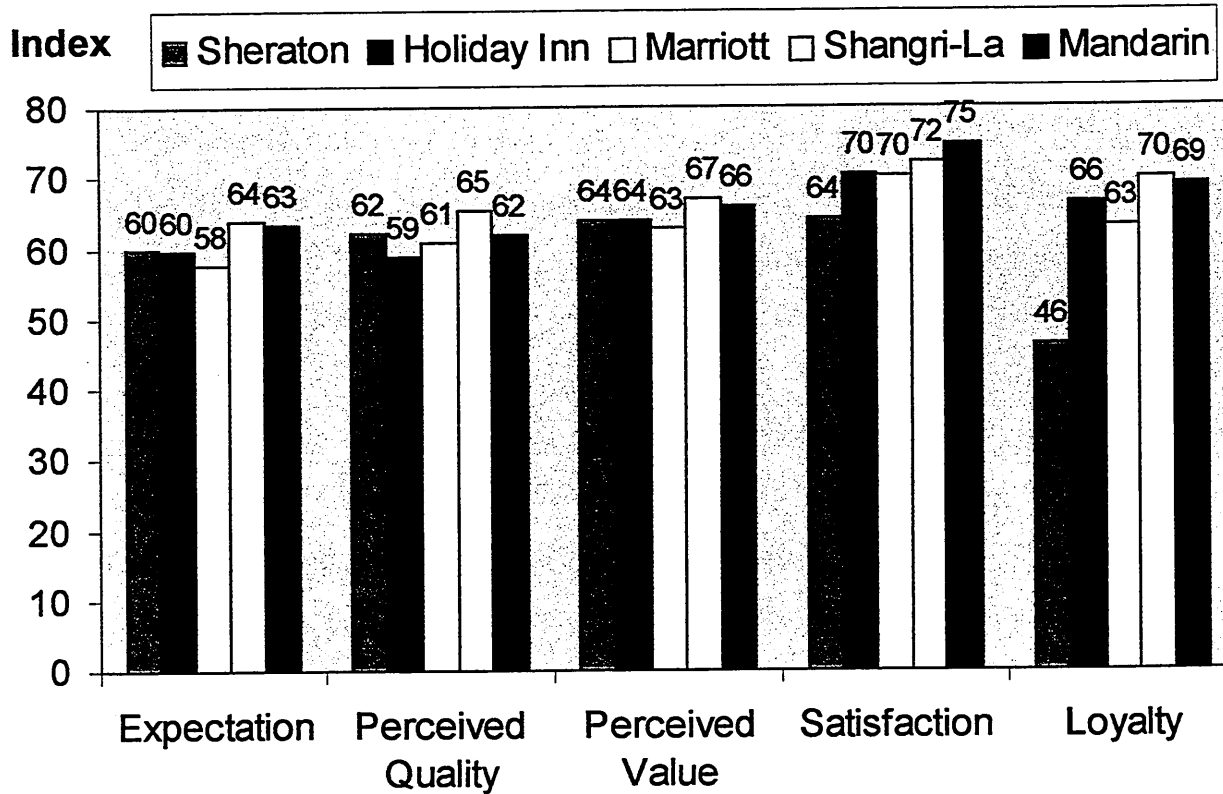


Figure 63: *Performance Indices for Selected Hotels*

Perceived Quality

The Perceived Quality Index scores for the five hotels are 62.0 for Sheraton, 58.7 for Holiday Inn, 60.6 for Marriott, 65.4 for Shangri-La and 61.8 for the Mandarin. The largest gap observed is between Shangri-La and Holiday Inn, with a difference of 6.6 points that is significant at .05 level of significance at the company level (ASQC, 1995).

Perceived Value

The Perceived Value Index scores for the five hotels are 63.7 for Sheraton, 63.9 for Holiday Inn, 62.6 for Marriott, 67.0 for Shangri-La and 65.8 for the Mandarin. The largest gap observed is between Shangri-La and Marriott, with a difference of 4.4 points that is significant at .05 level of significance at the company level (ASQC, 1995).

Customer Satisfaction

The Customer Satisfaction Index scores for the five hotels are 64.0 for Sheraton, 70.2 for Holiday Inn, 70.1 for Marriott, 72.0 for Shangri-La and 74.6 for the Mandarin. The largest gap observed is between Mandarin and Sheraton, with a big difference of 10.6 points that is highly significant at .05 level of significance at the company level (ASQC, 1995). Figure 37 below provides a better look of the CSI among the five selected hotels.

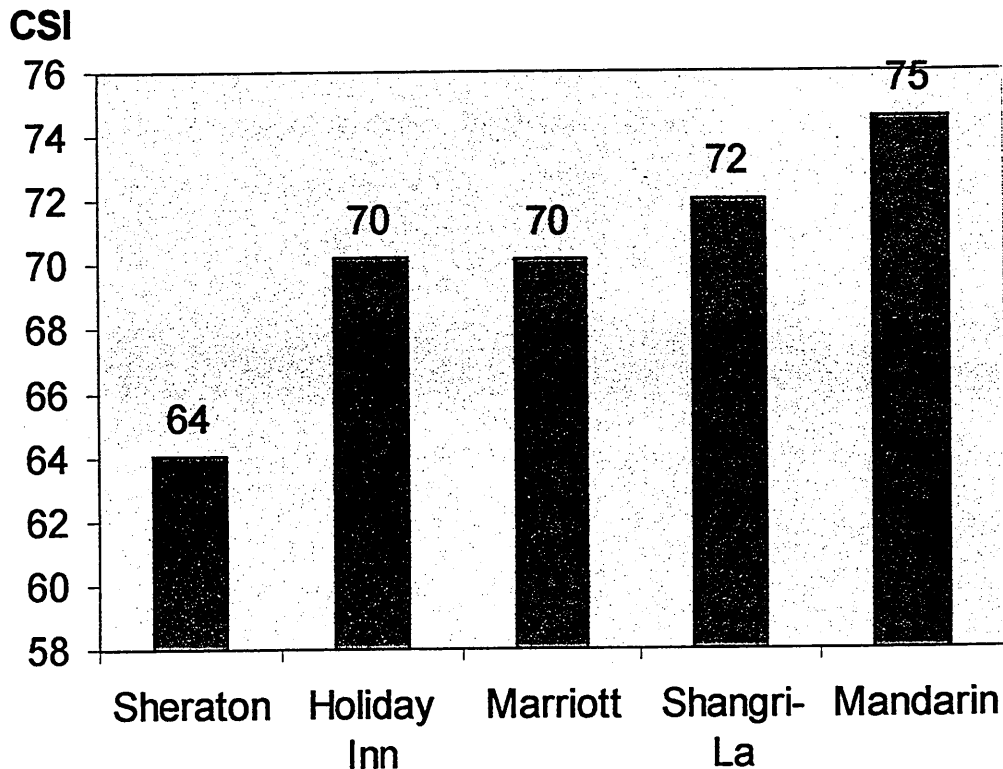


Figure 64: *Customer Satisfaction Index for Selected Hotels*

Loyalty

The Loyalty Index scores for the five hotels are 46.1 for Sheraton, 66.3 for Holiday Inn, 62.9 for Marriott, 69.9 for Shangri-La and 68.9 for the Mandarin. The largest gap observed is between Shangri-La and Sheraton, with a striking difference of 23.8 points that is highly significant at .05 level of significance at the company level (ASQC, 1995). This astonishing

difference could partly be attributed to the lack of cooperation of the management such that all the interviews had to be conducted just outside of the main entrance of the hotel.

The above comparisons based on indices that are one year apart rest heavily on the assumptions that the selected hotels do keep up to their own standards and the change in standards, if any, between 2000 and 2001 is negligible; and that the year-to-year effect on customer ratings are negligible.

The case study shows that, as groups, the Asian hotels outperform the international hotels in all the five dimensions of the CSMHKHI for both sexes and for the White as well as the Chinese. This indicates that the difference is something fundamental, perhaps in their quality cultures, quality initiatives and, most importantly, leaderships.

For the three selected international hotels, female has higher index scores in Expectation, Perceived Value, Satisfaction and Loyalty whereas the index scores for the White and the Chinese are very much the same. As for the two selected Asian hotels, female gives higher index scores in only Satisfaction while the male has higher scores in Perceived Quality, Perceived Value and Loyalty; whereas the White has higher index scores in all the five dimensions of the CSMHKHI. All differences are not significant.

At individual hotel level, Shangri-La outperforms its rivals in Expectation, Perceived Quality, Perceived Value and Loyalty and is beaten by Mandarin in the most crucial dimension, Customer Satisfaction.

8. CONCLUSION AND FUTURE WORK

The preliminary study of chapter 2 serves as an exploratory study to throw lights on the principle, practice and barriers to TQM as well as to identify the critical success factors in the Hong Kong Hotel Industry. These, and others, are then used to build the Business Excellence Model and the Customer Satisfaction Model for the Hong Kong Hotel Industry. The two models are applied using data collected from the two main surveys as well as being applied in the case study.

8.1 CONCLUSION

It is concluded that, from the preliminary study findings, nearly all the hotel respondents in the study have formal systems to monitor the work, for individuals as well as for the department as a whole, which are effective in preventing and/or identifying problems or mistakes. And quality goals are specified when defining tasks — at individual, group and department levels — to meet customer's expectations. Less than half of them have procedures in place for improving quality of processes. TQM is mostly preferred to implement and, CEOs and GMs are responsible for its adoption, implementation and promotion, with major reason for the improvement of the total well-being of the organisation. These show the initiatives of the top management.

Under staffing is the major barrier to the hotel's implementation of TQM in terms of both frequency and degrees of difficulty, and the approach believed to be short-lived gimmicks or fads comes second. This indicates that hotel employees did not feel the strong determination of the top

management striving for business excellence despite the evidence shown by the management in the preceding paragraph. Perhaps the commitment from top management is not strong enough to be felt by the employees or the lack of personal involvement as pointed out by Juran (Romano, 1994). Or, perhaps the message is not getting across effectively (Moullin, 1995). And leadership visible commitment to TQM is vital during launch and establishment phases of an improvement process, otherwise the whole process will crumble (Dale, 1996).

In general, respondents consider themselves to have done well in respect of quality — a high proportion of employees understands the concept of internal and external customers; majority of them have high level to somewhat reasonable expertise in managing quality improvement processes, and; all of them have given sufficient to moderate quality training to their staff. Majority of the respondents uses financial condition, competitiveness and market share as indicators to evaluate the progress of hotel's quality management. These are indications of looking for short-term profits (see Woolpert in Romano, 1994, in appendix I) that may hinder the implementation and the healthy state of TQM.

Five organisational factors, that are most critical to the success of the hotel business, are identified and they are, in descending order of importance, *People Management*, *External Customer-Satisfaction*, *Teamwork*, *Internal Customer-Satisfaction* and *Leadership*, in contrast to Kanji (1999) who finds leadership to be the most important critical success factor. All of which are constituent constructs in the Kanji's (1998) Business Excellence Model.

The Business Excellence Model for Hong Kong Hotel Industry has been adopted from the condensed version of the KBEM. It and has been

validated using EQS software (Bentler & Wu, 1995) with data from the business excellence survey conducted in 2000, and the goodness-of-fit with the data has been shown — p-value for the χ^2 statistic is less than .001, and both NFI (0.911) and CFI (0.932) exceed 0.9 (Bentler, 1992). The parameters of the BEMHKHI, that is the path coefficients are given in figures 15 and 16 (pp.95-96). And the path coefficients are 0.906 from Leadership to Delight the Customer, 0.789 from Leadership to Management by Fact, 0.900 from Leadership to People-base Management, 0.802 from Leadership to Continuous Improvement, 0.820 from Delight the Customer to Customer Focus, 0.763 from Management by Fact to Process Performance, 0.841 from People-base Management to People Performance, 0.898 from Continuous Improvement to Improvement Culture, 0.357 from Customer Focus to Business Excellence, 0.115 from Process Performance to Business Excellence, 0.315 from People Performance to Business Excellence and 0.184 from Improvement to Business Excellence. Each path coefficient represents the amount of influence from its antecedent for a unit change on the construct. From the analysis of the path coefficients and the coefficients of determination, R^2 , it is revealed that BE dimensions with concrete and measurable outcomes have greater explanatory power over those with vague measurements. This gives strong support for *Management by Fact* and for the use of the seven statistical tools of TQM suggested by Ishikawa (1985).

Values of the ten performance indices for the Hong Kong Hotel Industry are 83.0 for Leadership, 82.2 for Delight the customer, 78.2 for Customer focus, 75.2 for Management by fact, 74.3 for Process performance, 77.9 for People-base management, 78.7 for People performance, 77.3 for Continuous improvement, 75.9 for Improvement culture and 72.9 for Business Excellence. Among these performance

indices, the Business Excellence Index is the most important one to watch, for it is a measure of the final outcome of the businesses after all the effort and resources have been put in. For the successful use of these performance measurements, total commitment of top management is a prerequisite and it is also dependent on the level of integration of TQM into strategic and operational management (Sinclair & Zairi, 2001).

The Customer Satisfaction Model for the Hong Kong Hotel Industry has been adopted from the Sheffield model of Gorst's (2000), which was developed on the basis of the American Customer Satisfaction Model of Fornell's (1996). The model is validated using the internal consistency as measured by the Cronbach's α from the PLS.sas output with data from the customer satisfaction survey conducted in 1999. It is shown that the Cronbach's α for the five latent variables all are greater than 0.7 (Nunnally, 1979) and the model as a whole is consistent, valid and fits the survey data of 1999.

The path coefficients for the CSMHKHI are 0.876 from *Expectation* to *Perceived Quality*, 0.160 from *Expectation* to *Perceived Value*, 0.448 from *Expectation* to *Customer Satisfaction*, 0.682 from *Perceived Quality* to *Perceived Value*, 0.380 from *Perceived Quality* to *Customer Satisfaction*, 0.089 from *Perceived Value* to *Customer Satisfaction* and 0.224 from *Customer Satisfaction* to *Loyalty*. It is revealed that *Customer Satisfaction* is mainly influenced by both *Expectation* and *Perceived Quality*. This, perhaps, gives the hoteliers the starting points for improving their customer satisfactions. And they must keep this a continuous process, for positive word-of-mouth (Fanjoy, 1994) from satisfied customer is the most power propaganda that one can have, and it is free (Crosby, 1979).

Based on the CSMHKHI, performance indices 1999 are set up for the Hong Kong Hotel Industry and the values are 56.4 for *Customer Expectation*, 57.1 for *Perceived quality*, 55.9 for *Perceived Value*, 59.0 for *Customer Satisfaction* and 57.9 for *Loyalty*. Among these, the Customer Satisfaction Index has been received a lot of attention, for it is a report card on the performance of the organisation in general, and the top management in particular, from customers with actual business encounters.

Analysis on the performance indices 1999 for the CSMHKHI revealed that female and the Chinese have higher scores in all the five dimensions over their counterparts. The results for the female are significant, at .05 level, in the *Customer Expectation* and *Perceived Quality* Indices. These support the findings of Lin et al (2001) in their investigation on the relationship between service providers' personalities and customers' perceptions of service quality across gender. Analysis based on age groups revealed that CSI has higher scores for people aged between 35 and 44 while Loyalty has higher scores at both ends of the age spectrum. These can, perhaps, help hoteliers to better formulate their business strategies, with a focus on customer satisfaction to achieve their own business excellence.

A full-scale study has been carried out for three international and two Asian hotels. Contrasts between the two groups of hotels revealed that the Asian group outperforms the International group of hotels in all the five dimensions of the CSMHKHI for both sexes and for both ethnic groups of White and Chinese. This indicates that the difference is something fundamental, perhaps in their quality cultures, quality initiatives and, most importantly, leaderships.

Within the each group of international and Asian hotels, no significant differences are observed between the two sexes and between the White and the Chinese, among the five dimensions of the CSMHKHI.

At individual hotel level, Shangri-La outperforms its rivals in *Expectation*, *Perceived Quality*, *Perceived Value* and *Loyalty* (all significant at .05 level), and is beaten only by Mandarin in the most crucial dimension, *Customer Satisfaction*.

These give a portray of the Hong Kong Hotel Industry in respect of Business Excellence and Customer Satisfaction and the results are particularly useful when the two sets of performance indices are used in conjunction with one another. The performance indices of the CSMHKHI measure performances from the customer's perspectives while those of the BEMHKHI measure performances internally. And, together they can provide a holistic view of the organisation on business excellence.

All the research objectives set out in section 1.4 (pp.28-29) are accomplished. Chapter 2 studied the extent of implementation of TQM in the Hotel Industry, determined the barriers of TQM implementation as well as the critical success factors of organizational performance. Chapters 3 and 4 developed the Business Excellence Model and the Customer Satisfaction model for the Hotel Industry. Chapter 5 validated the Business Excellence Model, measured the performance of critical success factors and organizational performance, determined the structural relationship among critical success factors and business excellence, measured the strength of causal connections among critical success factors and business excellence, set up and used the Business Excellence Index for the Hotel Industry as a tool for continuous improvement. Chapter 6 measured the strength of causal connections among constituent constructs of the Customer

Satisfaction Model, set up indices for each construct of the Customer Satisfaction Model and used these indices as a tool for continuous improvement.

There are limitations to the current studies and they are given below:

1. The data collection on individual hotels was not randomized. Weekend/ Monday or other effects that are not considered in the model may affect the findings.
2. The lack of fund to conduct concurrently the Customer Satisfaction surveys for the two groups of hotel in the case study may have some effects on the comparisons made.
3. Findings for the case study are confined to the two groups of hotel studied and they cannot be extended to infer other individual hotels or the hotel industry as a whole.

8.2 AREA FOR FUTURE WORK

So far the work described in this report focuses on measuring excellence from the owner's and operator's, as well as from the customers' perspectives, at the industry and at the individual hotel levels. It is suggested to extend the scope to include the measuring of excellence from the investors', or stakeholders', perspectives like those of Kanji's Business Scorecard (Kanji and Sá, 2001).

Like those commented by Woolpert (in Romano, 1994), "revolutionary change should be brought to one area of the company at a time," measuring business excellence should best be started in one area of the organisation, setting antecedence for others to follow. In this way, both employees and management have the time to think, learn and feel along their course to achieving business excellence. And the versatilities of the

Kanji's Business Excellence Model allow it to be applied at various levels: an entire industry, an entire organisation, divisions, departments and other formal groups at different levels of the same organisation. This is a suggestion to extend the present research in depth.

The third area for future work is to maintain and extend the Customer Satisfaction Index to cover every member of the Hong Kong Hotels Association.

Both Customer Satisfaction and Customer Loyalty would have impacts on subsequent encounters of the customers and they are worth looking into in greater depth, particularly for the Customer Loyalty that can be quantified in financial terms (Fanjoy, 1994).

A summary outlining further research possibilities is given below:

- To measuring business excellence from an investor's perspective;
- To extend the BEI to individual hotel level and departmental level;
- To maintain and extend the CSI to cover every member of the Hong Kong Hotels Association;
- To investigate the feedback of Customer Satisfaction on both Expectation and Perceived Value, and;
- To investigate the feedback of Customer Loyalty on both Expectation and Perceived Value.

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APPENDICES

APPENDIX I: REPORT CARD ON TQM

Report Card On TQM

Source: Romano (1994)

Authority (grade)	The Good, the Bad and the Future of TQM
W. Edwards DEMING Consultant and author of <i>The New Economics For Management</i> and <i>Out of the Crisis</i> (-)	The trouble with Total Quality Management—failure of TQM, you call it—is that there is no such thing. It is a buzzword. I have never used the term, as it carries no meaning.
Robert GALVIN Chairman of the Executive Committee of the Board and former CEO of Motorola (P)	I don't think TQM programmes are a failure. All those that have been well-managed are a great success and I see an ever-expanding number of companies and universities embracing their version of TQM. It could be even better if the President of the United States declare that it should be this country's policy that all businesses should prepare to be worthy to compete for Malcolm Baldrige National Quality Award. Companies that are currently lagging in their enthusiasm will have to get on the bandwagon as they see their competitors achieving.
Joseph M. JURAN, J.D. A leading proponent of quality and Chairman Emeritus of the Juran Institute Inc. (F)	<p>The most frequent reason for failure [of quality program] is the failure of upper managers to have personal involvement, as the Robert Galvin [of Motorola] and the Roger Milliken [CEO of Milliken & Co.] did. The question is, what did you do personally in your company's efforts toward quality? There are non-delegable things that senior managers have tried to delegate.</p> <p>If there is a quality council in the company, the CEO should also personally sit on it and usually chair it. The CEO should also get into establishing quality goals. Run those goals past managers and create means of measurement so that they can fulfill the quality programme. Upper managers must personally get themselves trained—they can't just train subordinates and not train themselves. They have to take the company into a revolutionary rate of improvement—get those subordinates trained throughout the hierarchy.</p> <p>And, the CEO must personally follow and review progress and give recognition—be there when the plaques are handed out. Change the reward system. There should be new criterion to be met: performance on quality.</p>
Lewis E. PLATT Chairman of the Board, President and CEO of Hewlett-Packard Company (A+)	<p>We've always been big believers in quality at Hewlett-Packard Company. TQM has helped save H-P \$800 million in warranty costs during the decade, not including the tens of millions of dollars that we save through process improvements in manufacturing, marketing and field support. Sometimes people talk about quality as if it is some kind of abstraction, something different from normal job. But quality is very, very real. The result of quality is profit—a wonderful measure of the kind of job we are doing for our customers.</p> <p>TQM is vital to the future success of H-P and the industry. For H-P, TQM is a company-wide approach to develop and improve the products, solutions and relationships we provide customers. As we carefully measure what we are doing and put in place the total quality environment that thrives on continual improvement, we will have delighted customers and good profits.</p>
Tom PETERS President of the Tom Peters Group and author of <i>Thriving in Chaos</i> and <i>Liberation Management</i> (F)	<p>TQM has failed for three reasons. First, TQM done right is a way of life, not a programme. It becomes the religion, organising logic and culture of the firm. Second, as Dr. Deming has said, and most have ignored, the essence is a belief in the capability of the front-line employees. For instance, any employee at the Ritz Carlton Hotels, even a bellhop, can spend up to \$2,000 without approval to fix a customer problem. Third, many quality programmes are not customer-focused. They are internal programmes run by technocrats.</p> <p>People got the Deming technique but they didn't get the Deming philosophy. Deming said most of the problems are with managers, but managers are not going to voluntarily reject hierarchical steps of the past. The nation, overall, is more concerned with quality than it was in the 1970s, and giant companies will fall by the wayside if they don't get with the programme in as revolutionary and as progressive a way as they need.</p>

<p>Rosabeth Moss KANTER Professor, the Harvard Business School and author of 11 books including <i>The Challenges of Organizational Change</i> (F)</p>	<p>When TQM programmes fail, it is because they are mounted as programmes, unconnected to business strategy, rigidly and narrowly applied, and expected to bring about miraculous transformations in the short term without top management lifting much of a finger.</p> <p>Once companies in an industry jump on the bandwagon and adopt new practices, and once customers begin to see product or service perfection as a God-given right, rather than something some companies thoughtfully provide, then TQM-type practices become a baseline business necessity to stay in the game at all. "Quality" by itself stops being a distinguishing feature.</p> <p>TQM is here to stay in many ways. ISO-9000 in Europe (setting de facto world standards) and the Baldrige Award in the United States make quality processes and outcomes an essential feature of business, but not the be-all and end-all primary feature of business success.</p> <p>If TQM consultants find that their market is withering as disenchantment sets it, they can always ply their trade in the government. The Gore Reinventing Government blue-print features TQM in a big way, and there will be lots of change efforts and lots of consulting on government contracts for years to come.</p>
<p>Charles BOWSHER Comptroller General of the United States (P)</p>	<p>I don't see TQM as a failure at all but I do know that it is not a quick fix for problems that exist in organisations. It requires time to identify current conditions and patience to achieve success. Success is also dependent on the willingness of the leadership and the staff of the organisation to be trained in the tools of TQM, as well as the principles underlying it.</p> <p>One of the keys to the future success of TQM in the public sector is the need for the political leadership to work very closely with the career leaders of an organisation to ensure continuity as the leadership changes. Thus, over time, the success of TQM in public organisations will depend to a certain extent on career leaders' ability to demonstrate the usefulness of TQM and the benefits being realised in improving the way organisations relate to their customers and carry out their missions.</p>
<p>Jack WEST President of American Society of Quality Control (F)</p>	<p>The people advocating [quality programs] look at them as ways to reduce defects, and increase training, motivation and involvement but they don't look at whether those things are important to the business. In addition, there's not a strong consistent top management push that keeps [quality] on track, reviews progress, makes corrections and allocates resources.</p> <p>People tend to pick a canned programme, but TQM must be unique to the culture and customers of the organisation, and it must respect the company's history and where it wants to go. The improvement process must be refocused on things that add value to the customer. As a result, people will begin to use quality improvement as a personal ethic and as a way to improve interaction with family or coworkers.</p>
<p>Christopher W. HART President of the TQM Group, author of <i>Extraordinary Guarantees</i> and former Baldrige Award screener (P/F)</p>	<p>TQM is not simply a set of tools applied by teams but a radically different system of management based on a philosophy of prevention, management by fact, employee satisfaction and growth. Without a powerful set of company values throughout all levels of the organisation, and a deep understanding of the TQM concept, training-based efforts generally start with a burst of enthusiasm and then wither.</p> <p>The constraint is simple: Different organisations require different approaches. Is "appropriate quality practice" in an electronics circuit board manufacturing the same as the appropriate quality practice for an advertising agency? The Baldrige framework will be the guide for companies to take stock of where they are and where they need to go. The result will be continuous progress made in developing new approaches that fall under the total quality umbrella because of Baldrige guidelines.</p>
<p>Bruce W. WOOLPERT President and CEO of Grantlertrock, winner of 1992 Malcolm Baldrige National Quality Award (G)</p>	<p>TQM must be led by the existing management team and must involve current employees from the very beginning. They have the knowledge that will make a difference, once they become empowered. When an outsider is hired, people tend to wait until the "messiah" does something. TQM approaches conflict terribly with traditional management approaches and can't be implemented as an "add-on" to the company's current operation. Instead, a revolutionary change is needed—not a failed attempt to mix oil with water.</p> <p>Companies need to set a window of five years to seven years before they should expect to view themselves as total quality companies. Revolutionary change should be brought to one area of the company at a time—such as compensation—and then let time elapse before another change is implemented. Because the change is revolutionary, it requires more time for people to buy in.</p> <p>TQM companies will continue to out-perform their competitors into the future. Unfortunately, many American companies take a very short-term view of</p>

<p>Michele HUNT Director of the Federal Quality Institute (F)</p>	<p>the world and don't implement a five to seven year transition of company approaches and culture.</p> <p>TQM is not a destination, it is a journey. It is a cycle of constantly changing yourself to respond to internal conditions and these are natural cycle we're not paying attention to. The goal is to not always be the highest performer at a particular time; the goal is to constantly have the capacity, mindset, freedom and the tools to continuously re-create, improve and change.</p> <p>We need to understand that it's a continuous journey. We have to tackle the short-term American mentality of black and white and of either winning or losing.</p> <p>People are beginning to discover quality beyond a programme level. They're taking a look at deeper assumptions about how we work together as well as our structures, hierarchies and belief systems. It says something if the largest, most powerful, complex organisation—one that hasn't been transformed before—decides to take on this journey.</p>
<p>John P. Clancey President and CEO of Sea-Land Service Inc. (F)</p>	<p>Too often the TQM focus shifts from meeting customer requirements and expectations to less productive internal processes. The customer linkage, that "eye on the ball" must be maintained. In addition, in some quarters, TQM can be viewed as threatening by employees. In this period of cost cutting, TQM can be construed as a methodology resulting in headcount reductions. This is not a TQM objective.</p> <p>Reward and recognition are essential. These must be tied directly to business performance, goals and objectives. The organisation must realise that TQM adds value and produces results. Performance-based compensation programmes can be clearly aligned with TQM to heighten this awareness.</p> <p>TQM will regain momentum when companies clinically evaluate the failures and act decisively to correct them. Many successful companies are adapting the Quality process more directly to our performance goals. Many companies are integrating TQM with more sophisticated, evolutionary, process improvement and benchmarking programmes. This is a logical extension that leverages TQM and directly ties the process to our core business performance.</p>
<p>Ron HEIDKE Vice President and Director of Corporate Quality at Eastman Kodak (F)</p>	<p>Successful programmes require three components: skill, knowledge and will. Often the lack of will to carry out a programme causes a failure. Not understanding the cause of failure also leads to erroneous conclusions about the value of the knowledge and skill to those who have the will.</p> <p>There is a definite need for strong leadership but not everybody can step into the leader's role and give a world-class performance. Managers need to learn the kind of leadership that is required and they must perfect it over many long, hard years.</p> <p>The future of TQM is to become ingrained in the very fabric of the way we live and operate such that people won't talk about it anymore. They will just be doing it. It will no longer be perceived as the "programme of the month" or a passing fancy, it will just be the way we do our work.</p>
<p>David GREGGERSON Vice President for Quality, Carrier Corp. (F)</p>	<p>If TQM is an equilateral triangle, companies must factor in all three angles: management leadership, employee involvement and technical systems. The problem is, companies don't do all three, they only do one or two. They must link total quality programmes to business strategies of the company and make sure management believes in them. If the business strategy is for down market, then companies should change their programmes to reflect downsizing, outsourcing etc. The acronym TQM will disappear and transition into total quality, maybe even customer satisfaction. The acronym TQM is a fad.</p>

APPENDIX II

Appendix IIa: Questionnaire and Responses to the Preliminary Survey



<title><name><surname>

<hotel>

<address1>

<address2>

<address3>

July 2, 1998

Dear<title><surname>,

Re: A Survey of the Hong Kong Hotel Industry on Total Quality Management

I am conducting a survey on the Total Quality Management (TQM) in the hotel industry of Hong Kong, which constitutes a central part to my Ph.D. study, and a brief introduction of which is attached for your perusal.

The aims of this survey are to collect information on TQM principles and practices used in the Hong Kong hotel industry and to identify their critical success factors.

Mr. James LU, Executive Director of the Hong Kong Hotels Association, is very supportive of this research work. I would be very grateful if you could give your support by completing the questionnaire enclosed as far as you possibly can and return it back to me, if possible, before end of July, 1998.

The questionnaire contains 64 questions in two sections. All information will be treated in the strictest of confidence. Summary of survey findings will be available on request. If you have any queries, please feel free to contact me at 26168304.

Thank you for your support and co-operation.

Yours sincerely,

Chun Kit LIU
Assistant Professor
Department of Management

Encl.

HONG KONG HOTELS ASSOCIATION

(Incorporated with Limited Liability)

To Whom It May Concern

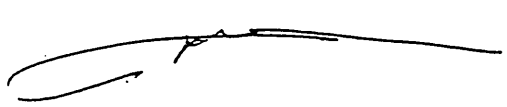
This is to advise that our Association is supportive of the work to be conducted by Mr. Chun Kit LIU, Assistant Professor of Department of Management, Lingnan College on the subject of a survey of the Hong Kong Hotel Industry on Total Quality Management.

Total Quality Management is very important to our industry, especially at a time when there is a tourism downturn and business has suffered significantly with no immediate signs of recovery. Through Total Quality Management, we will be able to re-engineer our management and operational processes to better place ourselves in terms of competitiveness, efficiency and customer service.

We sincerely believe that a more structured survey of what is available today and a recommended structure in the future for hotels to implement will go towards guiding our industry for maintaining higher standards of performance through which guest satisfaction levels can be further improved and appreciated.

At a time when upgrading our services and management policies and procedures are critical to our future, we give our full support to the project and will provide whatever assistance required to ensure that the project is carried out with the maximum impact and benefit and the Association will be responsible for the support of member hotels in the process of the survey and during the final execution and conclusion stage.

Yours sincerely,



JAMES LU
Executive Director

JL/jw

Survey of the Hong Kong Hotel Industry on Total Quality Management

All data collected on this questionnaire will be treated with strictest confidence

DIRECTIONS:

The questionnaire contains 64 questions in 2 sections: A and B. Wherever appropriate:

- Cross, i.e., mark 'X' clearly in the relevant boxes.
- Write your responses on the lines.
- Fill in the boxes with relevant information.

Section A: Quality in Progress

The questions below pertain to the state of quality initiatives carried out in your hotel and the situations encountered.

- 1. Choose from the following definitions the Quality concepts that closely fit your hotel's perception of quality. (Fill in any that apply)**

- 5 ☐ Fitness for use 27 ☐ Meeting customer's expectations
6 ☐ Fitness for purpose 4 ☐ Conformance to requirements
6 ☐ Other, please specify: Exceeding customer's expectations. Anticipating their needs. Attention to details.

- 2. Does the hotel have formal systems to check the work of an employee?**

- Yes ☐ 25
No ☐ 6

- 3. Does the hotel have formal systems to check the work of an individual department?**

- Yes ☐ 19
No ☐ 12

- 4. Does the hotel find the systems useful in preventing/identifying problems/mistakes?**

- Yes ☐ 24
No ☐ 4

- 5. When defining the TASKS of an employee, or a group of employees, are quality goals specified?**

- 12 ☐ Yes, always specific quality goals
 4 ☐ Yes, always general quality goals
 13 ☐ Yes, sometimes specific sometimes general quality goals
 2 ☐ No, do not specify quality goals

- 6. When defining the TASKS of an individual department, are quality goals specified?**

- 12 ☐ Yes, always specific quality goals
5 ☐ Yes, always general quality goals
12 ☐ Yes, sometimes specific sometimes general quality goals
2 ☐ No, do not specify quality goals

- 7. Do there exist procedures in place for improving the quality of processes (Quality Management) in the hotel?**

- 13 ☐ Yes. Go to next question.
19 ☐ No. Skip to question 50.

8. When was Quality Management introduced? (Year) mean=1992.83

9. What kinds of formalised quality activities has the hotel implemented? (Fill in any that apply)

- 1 ☐ Certified with ISO9000 8 ☐ Total Quality Management
 1 ☐ Quality Control Circles 0 ☐ None
 5 ☐ Other, please specify: Set up Total Customer Satisfaction Committee. Quality index/performance indicators. HKMA (Deming Award). In accordance to parent company's guidelines.

10. What is the magnitude of Quality Management implementation in your hotel in terms of organisational coverage? (Fill in any that apply)

- 5 ☐ Hotel group world-wide 1 ☐ Human resources
 5 ☐ Hotel group regional-wide 1 ☐ Restaurants and bars
 5 ☐ Individual hotel 0 ☐ Other, please specify:.....

11. Who is the key person or organisation involved in the introduction and promotion of Quality Management? (Fill in any that apply)

- 0 ☐ The Hong Kong Hotel Association 10 ☐ General Manager of individual hotel
 6 ☐ CEO of hotel group 0 ☐ Quality Manager of individual hotel
 2 ☐ Quality Director of hotel group 2 ☐ Other, please specify: Corporate & Regional offices.

12. Who made the decision to adopt Quality Management? (Fill in any that apply)

- 8 ☐ CEO of hotel group 0 ☐ Quality Manager of individual hotel
 1 ☐ Quality Director of hotel group 1 ☐ Head of department
 0 ☐ Regional Director of hotel group 0 ☐ Head of work unit
 10 ☐ General Manager of individual hotel 1 ☐ Other, please specify: Corporate & Regional offices

13. State not more than five main reasons for implementing Quality Management. (Rank the reasons in terms of strength. Assign 1 to the strongest reason, 2 to the next strongest reason, etc.)

Rank	Reasons
1	<ul style="list-style-type: none"> • Constant improvement of products and services • To satisfy external and internal customer needs • Maintain and increase competitiveness • Improve business • Meet and exceed guest expectation • Customer satisfaction level • Customer retention • Involves associates in creating a shared vision of excellent service • To achieve financial success
2	<ul style="list-style-type: none"> • Structured approach to defect analysis • To reinforce service-driven culture and cultivate team spirit • Improve service standard • Increase competitiveness • Constant improvement on quality • To achieve the internationally recognized standard • Customer acquisition • Seeks ways to improve customer service quality and quality of life for associates • To increase competitive edge of the hotel
3	<ul style="list-style-type: none"> • Structured approach to defect resolution • To improve staff's performance and maintain consistency • Create harmonious working environment • Driving guest preferences • Staff improvement • Total efficiency as systems are controlled from start to finish • Employee satisfaction • Readily identifies and initiates interactions with internal and external customers • The hotel's reputation
4	<ul style="list-style-type: none"> • Monitor defect levels by department and by defect

	<ul style="list-style-type: none"> • To set goals and build up ownership • Staff development (obligation of employed) • Standardize training technique • Economy in time spent on planning or on modifying designs • Qm. Warrants balanced and good profitability • Focuses on process improvement as opposed to arbitrary goal setting • Total guest satisfaction
5	<ul style="list-style-type: none"> • Create culture of improvement for all associates • To streamline work procedures • Follow the trend • Complete documentation is valuation for process improvement • Company overall vision • Continuous improvement
All equal	<ul style="list-style-type: none"> • Keeping us the best • Getting better everyday • To delight our customer • Reputation • To codify our process • Increase customer retention and ability to attract new customers • Increased associate (employee) satisfaction • Reduced costs through less waste and rework • Improved productivity and profitability

14. How long did it take to prepare for Quality Management?

2 ☐ Less than 3 months 4 ☐ Between 3 to 6 months 7 ☐ More than 6 months

15. How is Quality Management practised in your hotel? (Fill in any that apply)

7 ☐ In administrative areas 8 ☐ In catering areas
9 ☐ In operation areas 7 ☐ In human resources areas
4 ☐ In marketing areas 5 ☐ Other, please specify: Almost all areas. All areas.
In the entire hotel. Whole hotel.

16. What is the hotel's organisational structure for Quality? (Fill in any that apply)

0 ☐ Councils 8 ☐ Teams
1 ☐ Consultant 4 ☐ Co-ordinators
9 ☐ Committee 3 ☐ Advisors
2 ☐ Other, please specify: Almost all Executive Committee members and work with department heads.
Division and department heads are all responsible.

17. Some organisational management factors are critical for the success of the hotel business.

Please rate each of the factors independently in terms of their criticality in your hotel.

Assign 10 to the most critical, 1 to the least critical and 0 to the irrelevant. (Note: different from rankings, 7.80, 6.45 and 2.32 are valid ratings)

(mean)Rating

7.38 Leadership

6.84 Continuous improvement

5.38 Prevention

6.46 Measurement of resources

6.38 Process improvement

(mean)Rating

7.38 Internal customer-satisfaction

7.69 External customer-satisfaction

7.92 People management

7.53 Teamwork

0.15 Other, please specify: People development Profitability
generated due to customer satisfaction.

18. Do these order of critical factors change over time?

6 ☐ Yes 7 ☐ No

19. How did you determine the rating of the factors given in question 17? (Fill in any that apply)

- 1 ☐ Hotel group's policy
 4 ☐ Hotel's policy
 3 ☐ Other, please specify: Corporate mission, Business strategy.
 1 ☐ Hotel's Quality committee's policy
 6 ☐ Personal preference

20. a) What barriers are faced in implementing Quality Management? (Fill in any that apply)

b) Rank not more than five main barriers that affect the hotel's Quality Management in terms of their difficulty. (Assign 1 to the most difficult barrier, 2 to the next most difficult barrier, etc.)

(a)	(Overall) (b)Rank
<input type="checkbox"/> Staff were pressed with daily work.....	<input type="checkbox"/> 2
<input type="checkbox"/> Resistance to change.....	<input type="checkbox"/> 1
<input type="checkbox"/> Insufficient knowledge or skill.....	<input type="checkbox"/> 3
<input type="checkbox"/> Insufficient budget.....	<input type="checkbox"/> 12
<input type="checkbox"/> The approach is believed to be short-lived gimmick or fad.....	<input type="checkbox"/> 4
<input type="checkbox"/> Lack of commitment.....	<input type="checkbox"/> 10
<input type="checkbox"/> Disbelief in its effectiveness.....	<input type="checkbox"/> 14
<input type="checkbox"/> Disbelief in its applicability in the hotel.....	<input type="checkbox"/> 8
<input type="checkbox"/> Poor motivation due to the long time needed to realise rewards.....	<input type="checkbox"/> 8
<input type="checkbox"/> The process lacks immediate results.....	<input type="checkbox"/> 16
<input type="checkbox"/> Complacency.....	<input type="checkbox"/> 8
<input type="checkbox"/> Uncertainty of the benefits of the process.....	<input type="checkbox"/> 5.5
<input type="checkbox"/> Fear of failure.....	<input type="checkbox"/> 11
<input type="checkbox"/> Fear of losing power.....	<input type="checkbox"/> 14
<input type="checkbox"/> Resistance for using a business model in calling customers.....	<input type="checkbox"/> 17
<input type="checkbox"/> The barrier of middle management.....	<input type="checkbox"/> 5.5
<input type="checkbox"/> Other, please specify: <u>More pressure one to limited time and resources due to continued economic downturn eg. manpower</u>	<input type="checkbox"/> 14

21. What proportion of employees understands the concept of internal and external customers?

- 0 ☐ Less than one quarter
 1 ☐ About one quarter
 2 ☐ About half
 3 ☐ About three quarters
 1 ☐ More than three quarters
 6 ☐ Everybody

22. Which of the following people, in your opinion, control the quality of processes in the organisation? (Please fill in *only one* response)

- 6 ☐ The General Manager
 0 ☐ Quality manager
 8 ☐ Other manager, please specify: Department heads. All colleagues. All managers. Operation/line manager. Senior executives and department heads. In fact, everyone in the organisation.

23. Does the hotel have the expertise in managing quality improvement processes?

- 3 ☐ The hotel has high level of expertise
 3 ☐ The hotel has moderate expertise
 1 ☐ The hotel has no expertise at all
 6 ☐ The hotel has somewhat reasonable expertise
 0 ☐ The hotel has somewhat inadequate expertise

24. Is there sufficient Quality training given to staff to prepare for quality initiatives taken in the hotel?

- 6 ☐ Sufficient
 2 ☐ Somewhat sufficient
 5 ☐ Moderate
 0 ☐ Insufficient
 0 ☐ No training at all

25. What forms of motivation are available for people in the organisation for contributing toward a quality cause? (Fill in any that apply)

- | | | |
|--|---|---|
| <input type="checkbox"/> Job promotion | <input type="checkbox"/> Award | <input type="checkbox"/> Job rotation |
| <input type="checkbox"/> Bonus | <input type="checkbox"/> Organisational support | <input type="checkbox"/> Recognition |
| <input type="checkbox"/> Paid vacation | <input type="checkbox"/> Special privilege | <input type="checkbox"/> Quality campaign |
| <input type="checkbox"/> Other, please specify:..... | | |

26. Does the hotel seek the service of outside consultants to implement Quality Management?

- | | | |
|---------------------------------|---------------------------------------|--------------------------------|
| <input type="checkbox"/> Always | <input type="checkbox"/> Occasionally | <input type="checkbox"/> Never |
| <input type="checkbox"/> Often | <input type="checkbox"/> Hardly | |

27. Do you think the organisation has a culture for quality?

- | | | |
|--|---------------------------------|--------------------------------|
| <input type="checkbox"/> Absolutely | <input type="checkbox"/> Fair | <input type="checkbox"/> Never |
| <input type="checkbox"/> Somewhat positive | <input type="checkbox"/> Hardly | |

28. Do you think the Quality culture of your organisation has changed positively in recent years?

- | | |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

29. Was there any programme held to transform the organisational culture?

- | | |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

30. Does the hotel benchmark its Quality activities (that is it compares its own processes with that of other hotels efficient processes and adopts those 'best practices')?

- | | |
|------------------------------|-----------------------------|
| <input type="checkbox"/> Yes | <input type="checkbox"/> No |
|------------------------------|-----------------------------|

31. a) Which of the following Quality concepts are your organisation using to achieve Quality? (fill in any that apply)

b) Rank not more than five main barriers that affect the hotel's Quality Management in terms of their difficulty. (Assign 1 to the most difficult barrier, 2 to the next most difficult barrier, etc.)

(a)	(b)Rank	(a)	(b)Rank
<input type="checkbox"/> Leadership	<input type="checkbox"/> 2.6	<input type="checkbox"/> Internal customer-satisfaction	<input type="checkbox"/> 1.6
<input type="checkbox"/> Continuous improvement	<input type="checkbox"/> 3	<input type="checkbox"/> External customer-satisfaction	<input type="checkbox"/> 2.5
<input type="checkbox"/> Prevention	<input type="checkbox"/> 2	<input type="checkbox"/> People management	<input type="checkbox"/> 2.8
<input type="checkbox"/> Measurement of resources	<input type="checkbox"/> 2.8	<input type="checkbox"/> Teamwork	<input type="checkbox"/> 2.3
<input type="checkbox"/> Process improvement	<input type="checkbox"/> 2	<input type="checkbox"/> Other, please specify:.....	<input type="checkbox"/> 1

32. Have your hotel organised quality control circles (QCC) programme? (Note: A QCC is a group of employees/volunteers that meets regularly for the purpose of identifying, recommending, and making workplace improvements; e.g. department improvement team.)

- ☐ Yes. Go to next question.
- ☐ No. Skip to question 50.

33. When was QCC introduced? (Year) 1990, 1995.

34. Give the total number of Quality Circles. And the number is: _____ 1, 10 _____.

35. Give the number of successful Quality Circles.

And the number is: _____ 0, 10 _____. If you entered '0', please skip to question 38.

36. State not more than five reasons for the success of individual Quality Circles. (Rank the reasons in terms of strength. Assign 1 to the strongest reason, 2 to the next strongest reason, etc.)

(Only one response)

Rank

- Reason 1: Pride. ☐ 1
- Reason 2: Commitment to Quality. ☐ 2
- Reason 3: It's part of our job. ☐ 3
- Reason 4: Team. ☐ 4
- Reason 5: Recognition of the Q. C. ☐ 5

37. Are the success of Quality Circles occurring at a rate that will lead to the entire success of Quality Management?

- 0 ☐ Yes 0 ☐ Possibly no 0 ☐ Don't know
- 1 ☐ Possibly yes 0 ☐ No

38. Give the number of Quality Circles that has failed.

And the number is: 0. If you entered '0', please skip to question 42.

39. What is the length of time Quality Circles operated before failing, where such failures caused or contributed to QCC programme suspension?

- ☐ Less than 3 months ☐ 18 months but less than 2 years
- ☐ 3 months but less than 6 months ☐ 2 years but less than 3 years
- ☐ 6 months but less than 1 year ☐ More than 3 years
- ☐ 1 year but less than 18 months (No Response)

40. State not more than five reasons for individual Quality Circle failures, where such failures caused or contributed to QCC programme suspension. Rank the reasons using the scale of 1 (strongest reason) to 5 (weakest reason).

Rank

- Reason 1: (No Responses) ☐
- Reason 2: ☐
- Reason 3: ☐
- Reason 4: ☐
- Reason 5: ☐

41. Are the failure of individual Quality Circles occurring at a rate that will lead to the entire failure of QCC programme?

- ☐ Yes ☐ Possibly no ☐ Don't know
- ☐ Possibly yes ☐ No (No Responses)

42. Is QCC programme currently operating?

- 2 ☐ Yes. Go to next question.
- 0 ☐ No. Skip to question 44.

43. How many Quality Circles are currently operating? The number is: 1.8.

44. What was the stage at which QCC programme was suspended?

- ☐ At initial discussion stage ☐ On completion of the pilot Programme
- ☐ During pilot Programme ☐ After full-scale launch (No Responses)

45. What is the length of time the QCC programme operated before suspension?

- | | |
|--|--|
| <input type="checkbox"/> Less than 3 months | <input type="checkbox"/> 18 months but less than 2 years |
| <input type="checkbox"/> 3 months but less than 6 months | <input type="checkbox"/> 2 years but less than 3 years |
| <input type="checkbox"/> 6 months but less than 1 year | <input type="checkbox"/> More than 3 years |
| <input type="checkbox"/> 1 year but less than 18 months | |

46. State not more than five main reasons why your hotel suspended its QCC programme.

(Rank the reasons in terms of strength. Assign 1 to the strongest reason, 2 to the next strongest reason, etc.)

- | | Rank |
|--------------------------------|--------------------------|
| Reason 1: _____ (No Responses) | <input type="checkbox"/> |
| Reason 2: _____ | <input type="checkbox"/> |
| Reason 3: _____ | <input type="checkbox"/> |
| Reason 4: _____ | <input type="checkbox"/> |
| Reason 5: _____ | <input type="checkbox"/> |

47. How would you describe the overall outcome of the QCC programme by way of achieving the QCC goals as designed in individual projects?

- ☐ Improved performance
- ☐ Has the potential of improving performance in future
- ☐ No difference in performance
- ☐ Other, please specify:.....

48. What do you think are the major factors that influenced the QCC results? (Fill in any that apply)

- | | |
|--|---|
| <input type="checkbox"/> Teamwork | <input type="checkbox"/> Motivation derived from working in group |
| <input type="checkbox"/> Problem-solving techniques used | <input type="checkbox"/> Intrinsic reward realised |
| <input type="checkbox"/> Delegation of authority | <input type="checkbox"/> Support by the management |
| <input type="checkbox"/> Advice given by consultant | <input type="checkbox"/> Other, please specify:..... |

49. Do you think the performance could be increased if the QCC factors are improved?

- ☐ Yes ☐ No

50. What measurement is used to evaluate the progress of the hotel's Quality Management? (Fill in any that apply)

- | | |
|---|--|
| <input type="checkbox"/> Use of performance indicators | <input type="checkbox"/> Based on financial position of the organisation |
| <input type="checkbox"/> Based on goal achievement | <input type="checkbox"/> Based on how well processes are moving |
| <input type="checkbox"/> Other, please specify: <u>Mystery shopper evaluation. Based on guests' comments.</u> | |

51. How does the hotel evaluate organisational performance? (Fill in any that apply)

- | | |
|--|---|
| <input type="checkbox"/> Financial condition | <input type="checkbox"/> Superiority of product or service |
| <input type="checkbox"/> Competitiveness | <input type="checkbox"/> Goodwill |
| <input type="checkbox"/> Market share | <input type="checkbox"/> Other, please specify: <u>Guest satisfaction survey.</u>
<u>Labour turnover, colleague satisfaction. Customer feedback.</u> |

52. How would you describe the hotel's overall organisational performance?

- | | | |
|------------------------------------|-------------------------------|-------------------------------|
| <input type="checkbox"/> Excellent | <input type="checkbox"/> Good | <input type="checkbox"/> Poor |
| <input type="checkbox"/> Very good | <input type="checkbox"/> Fair | |

53. How would you describe the overall quality of your hotel?

3 ☐ Excellent

17 ☐ Good

0 ☐ Poor

9 ☐ Very good

3 ☐ Fair

54. What is the hotel's future plan to further improve its quality? (Fill in any that apply)

Note: If you tick a box, it means the hotel has not implement the associated activity.

1 ☐ Obtain ISO9000 certification

2 ☐ Implement TQM

4 ☐ Bid for quality award

9 ☐ Expand TQM to cover wider aspect of the hotel

12 ☐ Other, please specify: No future plan yet. To form quality team and work on quality standards. Continuous improvement everyday. Consistent monitor of service provided. To energize to hotel's credo and the pledge for service excellence. Our priority now is to refurbish the hotel in terms of carpeting, wall covering. When a hotel room looks old and tired, it will be difficult to attract customer no matter how good is the quality of service. TQM will be considered at a later stage.

Section B: Please fill in the particulars.

55. Name of hotel: _____.

56. Name of General Manager: _____.

57. Name of contact person (if different from above): _____.

58. Position of contact person (if not G.M.): _____.

59. What is the year of establishment of your hotel in Hong Kong? (Year) ☐☐☐☐

60. How many employees does your hotel have?

The total number of employees in this hotel is: mean = 425.78.

61. What category does your hotel belong to?

4 ☐ 5 star deluxe hotel

10 ☐ 4 star hotel

5 ☐ 5 star hotel

7 ☐ 3 star hotel

4 ☐ 4 star deluxe hotel

2 ☐ Other, please specify: Boutique. 5 star conference & resort hotel.

62. Please give details on the number of hotel rooms available by category:

(mean no. of rooms)

President suites 0.81.

Deluxe rooms 155.56.

Suites 22.25.

Standard rooms 185.06.

Executive rooms 48.47.

Other, please specify: 0.31 (Deluxe balcony).

63. What is the occupancy rate before and after the financial crisis in October 1997?

The occupancy rate before the crisis was: mean = 84.79%.

The occupancy rate after the crisis is: mean = 73.74%.

64. What is the percentage of revenue dropped which is attributable to the financial crisis?

Revenue dropped: mean = 36.65 % as compared to the same period last year.

Revenue dropped: mean = 30.56 % as compared to the month prior to the crisis. (One respondent reported a slight increase of 1.49%, excluding this observation the mean becomes 32.24%.)

If you would like to make any further comments or suggestions, please use the space below:

We believe many hotels (if not all) are exercising cost saving which ultimately will affect quality of service or product,
eg. cutting staff or buying less expensive guest supplies. Hotel owners are most concerned with G.O.P. or L. and not
T.Q.M.

☐ Please cross here if you would like to receive a summary of findings.

Thank you very much for your co-operation and participation.

— END —



<title><name><surname>
<hotel>
<address1>
<address2>
<address3>

1st August, 2000

Dear <title><surname>,

Re: A Survey on Business Excellence in the Hong Kong Hotel Industry

I am conducting a survey on Business Excellence in the Hong Kong Hotel industry, and the aims of this survey are to collect information pertaining to Business Excellence in the Hong Kong hotel industry and to identify their critical success factors.

Mr. James LU, Executive Director of the Hong Kong Hotels Association, is very supportive of this research work. I would be very grateful if you could give your support by completing the questionnaire enclosed as far as you possibly can and return it back to me, if possible, before end of August, 2000.

The questionnaire contains 59 questions in 14 headings in addition to questions pertaining to the background of the respondent. All information will be treated in the strictest of confidence. Summary of survey findings will be available on request. If you have any queries, please feel free to contact me at 26168304.

Please disregard this if you have responded to the questionnaire either delivered to you at the talk "Customer Satisfaction of Hong Kong Hotels" given by Prof. G. K. Kanji on 26th April 2000, or sent to you by the Hong Kong Hotels Association immediately after the talk.

Thank you for your support and co-operation.

Yours sincerely,

Chun Kit LIU
Assistant Professor
Department of Management
Encl.

A SURVEY ON TOTAL QUALITY MANAGEMENT CRITICAL SUCCESS FACTORS FOR BUSINESS EXCELLENCE IN THE HONG KONG HOTEL INDUSTRY

The purpose of this survey is to determine your perceptions of the extent to which your hotel practices total quality management (TQM) critical success factors and their effect on organisation excellence. The measurement items in this survey are by no means an attempt to assess individual hotels but to model and measure relationship between critical success factors and business excellence. It is hoped that the outcomes of this research will benefit TQM practitioners in the Hong Kong hotel industry.

Thank you for your time and interest.

Directions: In all the following, please cross the appropriate box to indicate how you would rate the extent to which your hotel practices TQM critical success factors and evaluate business excellence.

A glossary of terms used is provided at the back for your reference.

SECTION A: CRITICAL SUCCESS FACTORS AND BUSINESS EXCELLENCE

1. LEADERSHIP

The extent to which the hotel's:	very little									very much	
		1	2	3	4	5	6	7	8	9	10
Top management assumes responsibility for quality performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Major department heads participate in quality improvement process.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality goals are clearly defined.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Values are adopted and reinforced throughout the organisation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality values are integrated into day-to-day leadership.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees are feeling well-managed and motivated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		very low							very high		
The extent to which the hotel:											
		1	2	3	4	5	6	7	8	9	10
Determines current and future customer requirements and expectations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provides effective management in order to achieve customer loyalty.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uses information gained from customers to improve customer services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. CUSTOMER SATISFACTION (EXTERNAL)

		hardly							always		
The extent to which the hotel:											
		1	2	3	4	5	6	7	8	9	10
Is committed to its explicit and implicit promise underlying its services to customers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Handles complaints, resolves them, and uses complaint information for quality improvement and for prevention of recurrence of problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uses methods for determining external customer's perceived quality.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uses methods for determining external customer's perceived value.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uses methods for determining external customer's satisfaction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compares its customer satisfaction results with those of competitors'.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. INTERNAL CUSTOMERS ARE REAL

		very low							very high		
The extent to which the hotel:											
		1	2	3	4	5	6	7	8	9	10
Provides strong employee interaction with customers and suppliers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uses methods to improve co-ordination of interdependent tasks.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Focuses on external customers when tasks are being performed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Provides what is needed by employees for them to perform their jobs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	very low									very high
	1	2	3	4	5	6	7	8	9	10
The extent to which the hotel:										
Has performance measurement system that evaluates its quality improvement processes. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Disseminates performance measurements to those that require them. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uses the performance measurements to improve its services. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. ALL WORK IS PROCESS

	very low									very high
	1	2	3	4	5	6	7	8	9	10
The extent to which the hotel:										
Has processes that are designed to meet all the service quality requirements. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Assesses the quality of its processes. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has effective policy for improving its technologies that are important for business. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has procedures to improve its products and services. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has effective policy for recruitment of highly outstanding staff. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has effective policy for maintaining highly outstanding staff. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. MEASUREMENT

	very low									very high
	1	2	3	4	5	6	7	8	9	10
The extent to which the hotel:										
Collects a wide range of complete and accurate performance indicators. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has appropriate methodology for comparing or assessing quality. <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The extent to which the hotel:

Provides feedback to employees on their performance.

Pays an overall human resources management effort to support its quality objectives.

Provides means for all employees to contribute effectively to meeting the hotel's quality objectives.

very low very high

1 2 3 4 5 6 7 8 9 10

..... ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

..... ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

..... ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

9. TEAMWORK

The extent to which the hotel:

Encourages teamwork for employees to communicate to others about their jobs.

Uses teams to solve cross-functional problems.

Uses action-teams to solve local problems.

very low very high

1 2 3 4 5 6 7 8 9 10

..... ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

..... ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

..... ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

10. PEOPLE MAKE QUALITY

The extent to which the hotel:

Provides quality related training to manager.

Provides quality related training to employee.

Provides resources available for employee training.

Managers remove barriers that prevent people from improving quality, e.g. lack of training, poorly defined jobs, etc.

Gives pride to people who work there.

Promotes innovation by empowering individuals within the organisation.

very low very high

1 2 3 4 5 6 7 8 9 10

..... ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

..... ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

..... ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

..... ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

..... ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

..... ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

		Very Low							very high		
		1	2	3	4	5	6	7	8	9	10
The extent to which the hotel:											
Reacts to trends in its customer satisfaction and indicators of adverse customer response.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uses quality improvement methods to improve all services.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compares current quality levels of service features with those of competitors'.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. CONTINUOUS IMPROVEMENT CYCLE

		Very Low							very high		
		1	2	3	4	5	6	7	8	9	10
The extent to which the hotel:											
Has quality culture of continuous improvement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Uses an active employee suggestion scheme.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. PREVENTION

		Very Low							very high		
		1	2	3	4	5	6	7	8	9	10
The extent to which the hotel:											
Introduces improved customer services to uplift customer satisfaction.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Incorporates processes that are designed to prevent potential problems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		<div style="display: flex; justify-content: space-between; align-items: center;"> Very Low → → → very high </div>									
		1	2	3	4	5	6	7	8	9	10
The extent to which the hotel:											
Describes its current overall performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compares its current performance with those of competitors'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compares its current performance with those of world market leaders'.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has strong financial performance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Achieves its goals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has improved its occupancy rate effectively.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has achieved the desired level of customer loyalty.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has performed recruitment of highly outstanding staff.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has been able to maintain outstanding staff.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has applied assessment criteria to its external suppliers, e.g. cutlery, crockery, food and beverages, etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION B: The following items are for statistical information only.

15. What is your hotel's name?

(You are reassured of anonymity)

16. What is the date of establishment of the hotel? (Year)

--	--	--	--

17. What category does your hotel belong to?

- | | | |
|--|--|--|
| <input type="checkbox"/> 5 star deluxe hotel | <input type="checkbox"/> 4 star deluxe hotel | <input type="checkbox"/> 3 star hotel |
| <input type="checkbox"/> 5 star hotel | <input type="checkbox"/> 4 star hotel | <input type="checkbox"/> Other, please specify:..... |

18. How many full-time and part-time employees does the hotel have? (Write number in boxes)

Part-time

Full time

- a. What is your name?
- b. What is your job title?
- c. What is your telephone number?
- d. What is your Fax number?
- e. What is your E-mail address?

If you would like to make any further comments or suggestions please use the space below:

- ☐ Please cross here if you would like to receive a summary of findings.
Thank you very much for your co-operation.

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Conformance to requirements	A production process will exhibit quality if the product or service resulting from that process conforms to customer requirements.
External customers	Those outside the organisation to whom the hotel provides its services, e.g. tourist, guests, suppliers, companies, etc.
Fitness for purpose	A predictable degree of uniformity and dependability (of products) at low cost and suited to the market.
Fitness for use	Quality lies with the actual use of product or service. Products that best satisfy customers' preferences are the ones they regard as having the highest perceived quality.
Goals	Organisation's purpose, mission and objectives.
Internal customers	Employees that require inputs such as information and materials from other employees in order to complete part of the whole job.
Products	Include goods and services.
Quality	The totality features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.
Quality circles	Is a group of between 6 and 12 employees who volunteer to meet regularly to solve work-related problems.
Quality management	A whole range of managerial activities of establishing and achieving the desired quality of outputs.
Total Quality Management (TQM)	A process of continuously satisfying customer requirements at lowest costs, by harnessing the commitment of everyone in the organisation.



Dear HOTEL Guest,

The goal of HOTEL is to provide our guest with the ultimate in comfort and service. We randomly select a number of guests and invite them to let us know their feelings about this current HOTEL stay. As one of them we would very much appreciate your co-operation in completing this questionnaire.

The majority of questions require you to tick one box per line.

1) Thinking of your overall staying experience with HOTEL, all things considered, how would you describe your staying experience ON THIS OCCASION? Please tick a box from the scale below which best describe how you feel.										
1 Very disappointing	2	3	4	5	6	7	8	9	10 Outstanding	
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2) From your past experience of HOTEL, how reliable would you say HOTEL are in terms of:										
	1 Very un-Reliable	2	3	4	5	6	7	8	9	10 Very Reliable
	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
Speed in answering the telephone..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Speed answering mail.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Service.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) In relation to the services that you receive from HOTEL, to what extent have they fallen short of, or, exceeded your expectations?										
1 Fall short of expectations	2	3	4	5	6	7	8	9	10 Exceeds expectations	
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4) If you were to compare HOTEL against other hotels, how would you rate the price you, or your company has paid, in relation to the level of service that you have received?										
1 Very high price given quality	2	3	4	5	6	7	8	9	10 Very low price given quality	
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

5) Please describe your feelings about each of the items listed below with which you have had experience this trip. Please tick a box under the number out of ten that you rate each service as providing.

	1 Very Disappointing	2	3	4	5	6	7	8	9	10 Outstanding
Overall Staff Courtesy.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Staff Helpfulness.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Staff Efficiency.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lobby Ambience.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Front Desk Service.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Room Service.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Luggage Service.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Room Comfort.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Efficiency of Bathroom Equipment...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Housekeeping / Maid Service.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Value of Overall Staying.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Experience relative to price paid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6) Below are some other services that you may or may not have used. Please tick the box under the number out of ten that you rate each service as providing.

	Did not experience	1 Very Disappointing	2	3	4	5	6	7	8	9	10 Outstanding
Hotel Food and Drink.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Room Service (Order, Delivery)....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restaurant Service.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lounge / Bar Service.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7) Think of your most recent previous visit in the last 12 months, please tick the box which best describe your overall staying experience.

Not visited previously	Not visited in past 12 months	1 Very Disappointing	2	3	4	5	6	7	8	9	10 Outstanding
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8) The next time you are in Hong Kong, how likely is it that you will stay at HOTEL?

1 Very unlikely	2	3	4	5	6	7	8	9	10 Very likely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9) During your stay, have you ever been less than satisfied with HOTEL's services?

☐ Yes Please continue with question 10

☐ No Please go to Q13

10) Broadly, what were these issues about?

11) Did you report the problem to HOTEL staff?

☐ Yes Please continue with question 12

☐ No Please go to Q13

12) How would you rate the way in which the complaint was handled?

1	2	3	4	5	6	7	8	9	10
Very unlikely									Very likely
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13) How likely is this hotel which you would recommend to personal friends or associates?

0	1	2	3	4	5	6	7	8	9	10
Absolutely No	Very unlikely									Absolutely Yes
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14) In the last year, have you received service from HOTEL with which you have been pleased?

☐ Yes

☐ No

15) When you have had an experience that has pleased you, have you discussed it with friends and family?

☐ Yes

☐ No

16) In the last year, have you received service from HOTEL that has upset you?

☐ Yes

☐ No

17) When you have had an experience that has upset you, have you discussed it with friends and family?

☐ Yes

☐ No

18) Does HOTEL project an image that you would wish yourself to be associated with?

☐ Yes

☐ No

9) During your stay, have you ever been less than satisfied with HOTEL'S services?

- | | |
|--|---|
| <input type="checkbox"/> Prestigious image | <input type="checkbox"/> Recreation facilities |
| <input type="checkbox"/> Quality of service | <input type="checkbox"/> Lobby ambience |
| <input type="checkbox"/> Comfort of guest room | <input type="checkbox"/> Location |
| <input type="checkbox"/> Quality of food and drink | <input type="checkbox"/> Standard of maintenance |
| <input type="checkbox"/> Business facilities | <input type="checkbox"/> Price relative to overall experience |

0) If you can imagine an ideal hotel, how well do you think HOTEL compares with this ideal?

1	2	3	4	5	6	7	8	9	10
Unfavourable									Favourable
↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1) Are there any other areas or issues connected with HOTEL that you would like to make further comments about?

Personal Details

2) Are you male or female?

- ☐ Male
- ☐ Female

23) What age group are you in?

- | | |
|---|--|
| <input type="checkbox"/> Under 25 years | <input type="checkbox"/> 45 - 49 years |
| <input type="checkbox"/> 25 - 29 years | <input type="checkbox"/> 50 - 54 years |
| <input type="checkbox"/> 30 - 34 years | <input type="checkbox"/> 55 - 59 years |
| <input type="checkbox"/> 35 - 39 years | <input type="checkbox"/> 60 - 64 years |
| <input type="checkbox"/> 40 - 44 years | <input type="checkbox"/> 65 years and over |

4) Which ethnic group do you consider yourself to be part of?

- | | |
|--|-------------------------------------|
| <input type="checkbox"/> White | <input type="checkbox"/> Pakistan |
| <input type="checkbox"/> Indian | <input type="checkbox"/> Bangladesh |
| <input type="checkbox"/> Black - Caribbean | <input type="checkbox"/> Chinese |
| <input type="checkbox"/> Black - African | <input type="checkbox"/> Japanese |
| <input type="checkbox"/> Black (other) | <input type="checkbox"/> Other |
| Please specify _____ | Please specify _____ |

Thank you for providing details about HOTEL.

All information will be treated in the strictest confidence.

Appendix II d: List of hotel respondents of the preliminary study

1. Century Hong Kong Hotel
2. City Garden Hotel
3. Hotel Concourse
4. Conrad International Hong Kong
5. The Emperor Byron Hotel
6. Furama Hotel Hong Kong
7. Gold Coast Hotel
8. Grand Hyatt Hong Kong
9. Grand Stanford Harbour View
10. Holiday Inn Golden Mile Hong Kong
11. The Hongkong Hotel
12. The Kowloon Hotel
13. Kowloon Shangri-La
14. Mandarin Oriental, Hong Kong
15. The Marco Polo, Hong Kong
16. J W Marriott Hotel Hong Kong
17. The Metropole Hotel
18. Hotel Miramar
19. New World Renaissance Hotel
20. Newton Hotel Kowloon
21. Hongkong Nikko
22. Panda Hotel
23. Pearl Garden Hotel
24. Pearl Seaview Hotel
25. The Prince, Hong Kong
26. Regal Hong Kong Hotel
27. Regal Kaitak Hotel
28. Renaissance Harbour View Hotel
29. The Ritz-Carlton, Hong Kong
30. The Royal Garden
31. The Royal Pacific Hotel & Towers
32. South Pacific Hotel
33. The Wharney Hotel Hong Kong
34. Windsor Hotel

Appendix IIe: List of hotel respondents in the Business Excellence Survey

1. Century Harbour Hotel
2. Hotel Concourse
3. Gold Coast Hotel
4. Grand Hyatt Hong Kong
5. Harbour Plaza Hong Kong
6. Harbour Plaza North Point
7. Harbour Plaza Resort City Hong Kong
8. Holiday Inn Golden Mile Hong Kong
9. The Hongkong Hotel
10. Kowloon Shangri-La
11. Mandarin Oriental, Hong Kong
12. The Marco Polo, Hong Kong
13. The Metropole Hotel
14. Hongkong Nikko
15. Panda Hotel
16. Park Hotel
17. The Parklane Hong Kong
18. The Peninsula Hong Kong
19. Regal Airport Hotel
20. Regal Kaitak Hotel
21. Regal Riverside Hotel
22. Renaissance Harbour View Hotel
23. The Royal Garden
24. The Royal Pacific Hotel & Towers
25. Royal Park Hotel
26. Royal Plaza Hotel
27. Sheraton Hong Kong Hotel & Towers
28. The South China Hotel
29. South Pacific Hotel
30. The Wharney Hotel Hong Kong

APPENDIX III: BUSINESS EXCELLENCE OUTPUTS

Appendix IIIa: SPSS Output for Analysis of Variance on Dimensions of Business Excellence

Descriptives

MEANCSF

	N	Mean	Std. Deviation	Std. Error
Leadership	28	8.4524	1.5843	.2994
Delight the customer	28	8.4048	1.5982	.3020
Customer focus	28	8.0107	1.6194	.3060
Management by fact	28	7.7857	1.6361	.3092
Process performance	28	7.6875	1.4963	.2828
People-base management	28	8.0119	1.7556	.3318
People performance	28	8.0873	1.6131	.3048
Continuous improvement	28	7.9167	1.5252	.2882
Improvement culture	28	7.8125	1.5056	.2845
Business Excellence	28	7.5893	1.4418	.2725
Total	280	7.9759	1.5774	9.427E-02

Descriptives

MEANCSF

	95% Confidence Interval for Mean		Minimum	Maximum
	Lower Bound	Upper Bound		
Leadership	7.8381	9.0667	4.33	10.00
Delight the customer	7.7850	9.0245	4.00	10.00
Customer focus	7.3828	8.6387	2.90	10.00
Management by fact	7.1513	8.4201	4.00	10.00
Process performance	7.1073	8.2677	4.00	10.00
People-base management	7.3312	8.6927	2.33	10.00
People performance	7.4618	8.7128	3.56	10.00
Continuous improvement	7.3253	8.5081	4.33	10.00
Improvement culture	7.2287	8.3963	4.50	10.00
Business Excellence	7.0302	8.1484	4.10	10.00
Total	7.7903	8.1614	2.33	10.00

Test of Homogeneity of Variances

MEANCSF

Levene Statistic	df1	df2	Sig.
.149	9	270	.998

ANOVA

MEANCSF

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	20.297	9	2.255	.904	.523
Within Groups	673.877	270	2.496		
Total	694.174	279			

Multiple Comparisons

Dependent Variable: MEANCSF

LSD

(I) CSF	(J) CSF	Mean Difference (I-J)	Std. Error	Sig.
Leadership	Delight the customer	4.762E-02	.4222	.910
	Customer focus	.4417	.4222	.296
	Management by fact	.6667	.4222	.116
	Process performance	.7649	.4222	.071
	People-base management	.4405	.4222	.298
	People performance	.3651	.4222	.388
	Continuous improvement	.5357	.4222	.206
	Improvement culture	.6399	.4222	.131
	Business Excellence	.8631*	.4222	.042
Delight the customer	Leadership	-4.7619E-02	.4222	.910
	Customer focus	.3940	.4222	.352
	Management by fact	.6190	.4222	.144
	Process performance	.7173	.4222	.091
	People-base management	.3929	.4222	.353
	People performance	.3175	.4222	.453
	Continuous improvement	.4881	.4222	.249
	Improvement culture	.5923	.4222	.162
	Business Excellence	.8155	.4222	.054
Customer focus	Leadership	-.4417	.4222	.296
	Delight the customer	-.3940	.4222	.352
	Management by fact	.2250	.4222	.595
	Process performance	.3232	.4222	.445
	People-base management	-1.1905E-03	.4222	.998
	People performance	-7.6587E-02	.4222	.856
	Continuous improvement	9.405E-02	.4222	.824
	Improvement culture	.1982	.4222	.639
	Business Excellence	.4214	.4222	.319
Management by fact	Leadership	-.6667	.4222	.116
	Delight the customer	-.6190	.4222	.144
	Customer focus	-.2250	.4222	.595
	Process performance	9.821E-02	.4222	.816
	People-base management	-.2262	.4222	.593
	People performance	-.3016	.4222	.476
	Continuous improvement	-.1310	.4222	.757
	Improvement culture	-2.6786E-02	.4222	.949
	Business Excellence	.1964	.4222	.642

Dependent Variable: MEANCSF
LSD

(I) CSF	(J) CSF	Mean Difference (I-J)	Std. Error	Sig.
Process performance	Leadership	-.7649	.4222	.071
	Delight the customer	-.7173	.4222	.091
	Customer focus	-.3232	.4222	.445
	Management by fact	-9.8214E-02	.4222	.816
	People-base management	-.3244	.4222	.443
	People performance	-.3998	.4222	.345
	Continuous improvement	-.2292	.4222	.588
	Improvement culture	-.1250	.4222	.767
	Business Excellence	9.821E-02	.4222	.816
People-base management	Leadership	-.4405	.4222	.298
	Delight the customer	-.3929	.4222	.353
	Customer focus	1.190E-03	.4222	.998
	Management by fact	.2262	.4222	.593
	Process performance	.3244	.4222	.443
	People performance	-7.5397E-02	.4222	.858
	Continuous improvement	9.524E-02	.4222	.822
	Improvement culture	.1994	.4222	.637
	Business Excellence	.4226	.4222	.318
People performance	Leadership	-.3651	.4222	.388
	Delight the customer	-.3175	.4222	.453
	Customer focus	7.659E-02	.4222	.856
	Management by fact	.3016	.4222	.476
	Process performance	.3998	.4222	.345
	People-base management	7.540E-02	.4222	.858
	Continuous improvement	.1706	.4222	.686
	Improvement culture	.2748	.4222	.516
	Business Excellence	.4980	.4222	.239
Continuous improvement	Leadership	-.5357	.4222	.206
	Delight the customer	-.4881	.4222	.249
	Customer focus	-9.4048E-02	.4222	.824
	Management by fact	.1310	.4222	.757
	Process performance	.2292	.4222	.588
	People-base management	-9.5238E-02	.4222	.822
	People performance	-.1706	.4222	.686
	Improvement culture	.1042	.4222	.805
	Business Excellence	.3274	.4222	.439

Dependent Variable: MEANCSF

LSD

(I) CSF	(J) CSF	Mean Difference (I-J)	Std. Error	Sig.
Improvement culture	Leadership	-.6399	.4222	.131
	Delight the customer	-.5923	.4222	.162
	Customer focus	-.1982	.4222	.639
	Management by fact	2.679E-02	.4222	.949
	Process performance	.1250	.4222	.767
	People-base management	-.1994	.4222	.637
	People performance	-.2748	.4222	.516
	Continuous improvement	-.1042	.4222	.805
	Business Excellence	.2232	.4222	.597
Business Excellence	Leadership	-.8631*	.4222	.042
	Delight the customer	-.8155	.4222	.054
	Customer focus	-.4214	.4222	.319
	Management by fact	-.1964	.4222	.642
	Process performance	-9.8214E-02	.4222	.816
	People-base management	-.4226	.4222	.318
	People performance	-.4980	.4222	.239
	Continuous improvement	-.3274	.4222	.439
	Improvement culture	-.2232	.4222	.597

**Appendix IIIb: SPSS Output for Correlation Matrix among Business
Excellence Dimensions Business Excellence**

Correlations

Correlations

		COMPUT E c1 = SUM(q1.1, q1.2,q1.3, q1.4,q1.5, q1.6) / 6 (COMPUT E)	COMPUT E c2 = SUM(q2.1, q2.2,q2.3) / 3 (COMPUT E)	COMPUT E c3 = SUM(q3.1,q 3.2,q3.3,q3. 4,q3.5,q3.6, q4.1,q4.2,q 4.3,q4.4) / 10 (COMPUT E)
COMPUTE c1 = SUM(q1.1,q1.2,q1.3,q1.4, q1.5,q1.6) / 6 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	1.000 . 28	.888** .000 28	.845** .000 28
COMPUTE c2 = SUM(q2.1,q2.2,q2.3) / 3 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.888** .000 28	1.000 . 28	.777** .000 28
COMPUTE c3 = SUM(q3.1,q3.2,q3.3,q3.4, q3.5,q3.6,q4.1,q4.2,q4.3,q 4.4) / 10 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.845** .000 28	.777** .000 28	1.000 . 28
COMPUTE c4 = SUM(q5.1,q5.2,q5.3) / 3 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.834** .000 28	.796** .000 28	.812** .000 28
COMPUTE c5 = SUM(q6.1,q6.2,q6.3,q6.4, q6.5,q6.6,q7.1,q7.2) / 8 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.828** .000 28	.816** .000 28	.845** .000 28
COMPUTE c6 = SUM(q8.1,q8.2,q8.3) / 3 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.882** .000 28	.776** .000 28	.857** .000 28
COMPUTE c7 = SUM(q9.1,q9.2,q9.3,q10. 1,q10.2,q10.3,q10.4,q10. 5,q10.6) / 9 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.868** .000 28	.882** .000 28	.829** .000 28
COMPUTE c8 = SUM(q11.1,q11.2,q11.3) / 3 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.732** .000 28	.850** .000 28	.664** .000 28
COMPUTE c9 = SUM(q12.1,q12.2,q13.1,q 13.2) / 4 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.805** .000 28	.783** .000 28	.730** .000 28
COMPUTE c10 = SUM(q14.1,q14.2,q14.3,q 14.4,q14.5,q14.6,q14.7,q1 4.8,q14.9,q14.10) / 10	Pearson Correlation Sig. (2-tailed) N	.820** .000 28	.796** .000 28	.725** .000 28

Correlations

		COMPUT E c4 = SUM(q5.1, q5.2,q5.3) / 3 (COMPUT E)	COMPUT E c5 = SUM(q6.1, q6.2,q6.3, q6.4,q6.5, q6.6,q7.1, q7.2) / 8 (COMPUT E)	COMPUT E c6 = SUM(q8.1, q8.2,q8.3) / 3 (COMPUT E)
COMPUTE c1 = SUM(q1.1,q1.2,q1.3,q1.4, q1.5,q1.6) / 6 (COMPUTE)	Pearson Correlation	.834**	.828**	.882**
	Sig. (2-tailed)	.000	.000	.000
	N	28	28	28
COMPUTE c2 = SUM(q2.1,q2.2,q2.3) / 3 (COMPUTE)	Pearson Correlation	.796**	.816**	.776**
	Sig. (2-tailed)	.000	.000	.000
	N	28	28	28
COMPUTE c3 = SUM(q3.1,q3.2,q3.3,q3.4, q3.5,q3.6,q4.1,q4.2,q4.3,q 4.4) / 10 (COMPUTE)	Pearson Correlation	.812**	.845**	.857**
	Sig. (2-tailed)	.000	.000	.000
	N	28	28	28
COMPUTE c4 = SUM(q5.1,q5.2,q5.3) / 3 (COMPUTE)	Pearson Correlation	1.000	.763**	.720**
	Sig. (2-tailed)	.	.000	.000
	N	28	28	28
COMPUTE c5 = SUM(q6.1,q6.2,q6.3,q6.4, q6.5,q6.6,q7.1,q7.2) / 8 (COMPUTE)	Pearson Correlation	.763**	1.000	.878**
	Sig. (2-tailed)	.000	.	.000
	N	28	28	28
COMPUTE c6 = SUM(q8.1,q8.2,q8.3) / 3 (COMPUTE)	Pearson Correlation	.720**	.878**	1.000
	Sig. (2-tailed)	.000	.000	.
	N	28	28	28
COMPUTE c7 = SUM(q9.1,q9.2,q9.3,q10. 1,q10.2,q10.3,q10.4,q10. 5,q10.6) / 9 (COMPUTE)	Pearson Correlation	.725**	.916**	.921**
	Sig. (2-tailed)	.000	.000	.000
	N	28	28	28
COMPUTE c8 = SUM(q11.1,q11.2,q11.3) / 3 (COMPUTE)	Pearson Correlation	.768**	.825**	.687**
	Sig. (2-tailed)	.000	.000	.000
	N	28	28	28
COMPUTE c9 = SUM(q12.1,q12.2,q13.1,q 13.2) / 4 (COMPUTE)	Pearson Correlation	.739**	.841**	.815**
	Sig. (2-tailed)	.000	.000	.000
	N	28	28	28
COMPUTE c10 = SUM(q14.1,q14.2,q14.3,q 14.4,q14.5,q14.6,q14.7,q1 4.8,q14.9,q14.10) / 10	Pearson Correlation	.887**	.701**	.701**
	Sig. (2-tailed)	.000	.000	.000
	N	28	28	28

Correlations

		COMPUTE c7 = SUM(q9.1,q 9.2,q9.3,q1 0.1,q10.2,q 10.3,q10.4, q10.5,q10. 6) / 9 (COMPUT E)	COMPUT E c8 = SUM(q11. 1,q11.2,q1 1.3) / 3 (COMPUT E)
COMPUTE c1 = SUM(q1.1,q1.2,q1.3,q1.4, q1.5,q1.6) / 6 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.868** .000 28	.732** .000 28
COMPUTE c2 = SUM(q2.1,q2.2,q2.3) / 3 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.882** .000 28	.850** .000 28
COMPUTE c3 = SUM(q3.1,q3.2,q3.3,q3.4, q3.5,q3.6,q4.1,q4.2,q4.3,q 4.4) / 10 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.829** .000 28	.664** .000 28
COMPUTE c4 = SUM(q5.1,q5.2,q5.3) / 3 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.725** .000 28	.768** .000 28
COMPUTE c5 = SUM(q6.1,q6.2,q6.3,q6.4, q6.5,q6.6,q7.1,q7.2) / 8 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.916** .000 28	.825** .000 28
COMPUTE c6 = SUM(q8.1,q8.2,q8.3) / 3 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.921** .000 28	.687** .000 28
COMPUTE c7 = SUM(q9.1,q9.2,q9.3,q10. 1,q10.2,q10.3,q10.4,q10. 5,q10.6) / 9 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	1.000 .000 28	.771** .000 28
COMPUTE c8 = SUM(q11.1,q11.2,q11.3) / 3 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.771** .000 28	1.000 .000 28
COMPUTE c9 = SUM(q12.1,q12.2,q13.1,q 13.2) / 4 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.818** .000 28	.848** .000 28
COMPUTE c10 = SUM(q14.1,q14.2,q14.3,q 14.4,q14.5,q14.6,q14.7,q1 4.8,q14.9,q14.10) / 10	Pearson Correlation Sig. (2-tailed) N	.684** .000 28	.807** .000 28

Correlations

		COMPUT E c9 = SUM(q12. 1,q12.2,q1 3.1,q13.2) / 4 (COMPUT E)	COMPUTE c10 = SUM(q14.1, q14.2,q14. 3,q14.4,q1 4.5,q14.6,q 14.7,q14.8, q14.9,q14.1 0) / 10 (COMPUT E)
COMPUTE c1 = SUM(q1.1,q1.2,q1.3,q1.4, q1.5,q1.6) / 6 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.805** .000 28	.820** .000 28
COMPUTE c2 = SUM(q2.1,q2.2,q2.3) / 3 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.783** .000 28	.796** .000 28
COMPUTE c3 = SUM(q3.1,q3.2,q3.3,q3.4, q3.5,q3.6,q4.1,q4.2,q4.3,q 4.4) / 10 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.730** .000 28	.725** .000 28
COMPUTE c4 = SUM(q5.1,q5.2,q5.3) / 3 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.739** .000 28	.887** .000 28
COMPUTE c5 = SUM(q6.1,q6.2,q6.3,q6.4, q6.5,q6.6,q7.1,q7.2) / 8 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.841** .000 28	.701** .000 28
COMPUTE c6 = SUM(q8.1,q8.2,q8.3) / 3 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.815** .000 28	.701** .000 28
COMPUTE c7 = SUM(q9.1,q9.2,q9.3,q10. 1,q10.2,q10.3,q10.4,q10. 5,q10.6) / 9 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.818** .000 28	.684** .000 28
COMPUTE c8 = SUM(q11.1,q11.2,q11.3) / 3 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	.848** .000 28	.807** .000 28
COMPUTE c9 = SUM(q12.1,q12.2,q13.1,q 13.2) / 4 (COMPUTE)	Pearson Correlation Sig. (2-tailed) N	1.000 .000 28	.757** .000 28
COMPUTE c10 = SUM(q14.1,q14.2,q14.3,q 14.4,q14.5,q14.6,q14.7,q1 4.8,q14.9,q14.10) / 10	Pearson Correlation Sig. (2-tailed) N	.757** .000 28	1.000 .000 28

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

**Appendix IIIc: EQS Output for Overall Model Test for
Business Excellence**

PROGRAM CONTROL INFORMATION

```
1  /TITLE
2  HBEIO1
3  /SPECIFICATIONS
4  DATA='D:\CSIDEX\HBEIO1~1.ESS';
5  VARIABLES= 10; CASES= 28;
6  METHODS=ML;
7  MATRIX=RAW;
8  /LABELS
9  V1=C1; V2=C2; V3=C3; V4=C4; V5=C5;
10 V6=C6; V7=C7; V8=C8; V9=C9; V10=C10;
11 V6=C6; V7=C7; V8=C8; V9=C9; V10=C10;
12 /EQUATIONS
13 V2 = + *V1 + E2;
14 V3 = + *V2 + E3;
15 V4 = + *V1 + E4;
16 V5 = + *V4 + E5;
17 V6 = + *V1 + E6;
18 V7 = + *V6 + E7;
19 V8 = + *V1 + E8;
20 V9 = + *V8 + E9;
21 V10 = + *V3 + *V5 + *V7 + *V9 + E10;
22 /VARIANCES
23 V1 = *;
24 E2 = *;
25 E3 = *;
26 E4 = *;
27 E5 = *;
28 E6 = *;
29 E7 = *;
30 E8 = *;
31 E9 = *;
32 E10 = *;
33 /COVARIANCES
34 E4 , E2 = *;
35 E5 , E3 = *;
36 E6 , E2 = *;
37 E6 , E4 = *;
38 E7 , E3 = *;
39 E7 , E5 = *;
40 E8 , E2 = *;
41 E8 , E4 = *;
42 E8 , E6 = *;
43 E9 , E3 = *;
44 E9 , E5 = *;
45 E9 , E7 = *;
46 /END
```

46 RECORDS OF INPUT MODEL FILE WERE READ

DATA IS READ FROM D:\CSIDEX\HBEIO1~1.ESS
THERE ARE 10 VARIABLES AND 28 CASES
IT IS A RAW DATA ESS FILE

SAMPLE STATISTICS BASED ON COMPLETE CASES

UNIVARIATE STATISTICS

VARIABLE	C1	C2	C3	C4	C5
MEAN	8.1528	8.2063	8.0270	8.0337	7.9446
SKEWNESS (G1)	-0.9088	-0.9145	-1.0044	-0.8948	-0.7699
KURTOSIS (G2)	-0.0200	0.1252	0.3804	0.0400	-0.2637
STANDARD DEV.	1.4405	1.4681	1.3925	1.4264	1.4127

VARIABLE	C6	C7	C8	C9	C10
MEAN	7.9484	8.0357	8.0516	7.9911	8.1304
SKEWNESS (G1)	-0.7127	-1.0502	-0.8791	-0.7241	-0.9351
KURTOSIS (G2)	-0.1229	0.4774	0.0996	0.0573	0.1660
STANDARD DEV.	1.4140	1.3450	1.4467	1.3819	1.3417

MULTIVARIATE KURTOSIS

MARDIA'S COEFFICIENT (G2,P) = -7.9247
NORMALIZED ESTIMATE = -1.3534

ELLIPTICAL THEORY KURTOSIS ESTIMATES

MARDIA-BASED KAPPA = -0.0660 MEAN SCALED UNIVARIATE KURTOSIS = 0.0313
MARDIA-BASED KAPPA IS USED IN COMPUTATION. KAPPA= -0.0660

CASE NUMBERS WITH LARGEST CONTRIBUTION TO NORMALIZED MULTIVARIATE KURTOSIS:

CASE NUMBER	2	4	6	22	25
ESTIMATE	15.0112	11.9780	18.9136	16.8352	11.1677

TITLE: HBE101

EQS/EM386 Licensee: LIU

COVARIANCE MATRIX TO BE ANALYZED: 10 VARIABLES (SELECTED FROM 10 VARIABLES)
BASED ON 28 CASES.

		C1	C2	C3	C4	C5
		V 1	V 2	V 3	V 4	V 5
C1	V 1	2.075				
C2	V 2	2.042	2.155			
C3	V 3	1.945	2.008	1.939		
C4	V 4	1.994	1.988	1.926	2.035	
C5	V 5	1.985	2.018	1.928	1.965	1.996
C6	V 6	1.930	1.989	1.906	1.915	1.936
C7	V 7	1.832	1.887	1.827	1.828	1.827
C8	V 8	1.985	2.048	1.979	1.988	1.990
C9	V 9	1.885	1.934	1.880	1.880	1.890
C10	V 10	1.866	1.899	1.845	1.857	1.862

		C6	C7	C8	C9	C10
		V 6	V 7	V 8	V 9	V 10
C6	V 6	2.000				
C7	V 7	1.825	1.809			
C8	V 8	1.976	1.865	2.093		
C9	V 9	1.885	1.795	1.960	1.910	
C10	V 10	1.828	1.760	1.893	1.826	1.800

BENTLER-WEEKS STRUCTURAL REPRESENTATION:

NUMBER OF DEPENDENT VARIABLES = 9

DEPENDENT V'S : 2 3 4 5 6 7 8 9 10

NUMBER OF INDEPENDENT VARIABLES = 10

INDEPENDENT V'S : 1

INDEPENDENT E'S : 2 3 4 5 6 7 8 9 10

NUMBER OF FREE PARAMETERS = 34

NUMBER OF FIXED NONZERO PARAMETERS = 9

3RD STAGE OF COMPUTATION REQUIRED 5639 WORDS OF MEMORY.
PROGRAM ALLOCATED 100000 WORDS

DETERMINANT OF INPUT MATRIX IS 0.29722E-10

TITLE: HBE101
EQS/EM386 Licensee: LIU
MAXIMUM LIKELIHOOD SOLUTION (NORMAL DISTRIBUTION THEORY)

PARAMETER ESTIMATES APPEAR IN ORDER,
NO SPECIAL PROBLEMS WERE ENCOUNTERED DURING OPTIMIZATION.

RESIDUAL COVARIANCE MATRIX (S-SIGMA) :

			C1	C2	C3	C4	C5
			V 1	V 2	V 3	V 4	V 5
C1	V 1		0.000				
C2	V 2		0.000	0.000			
C3	V 3		0.042	-0.001	-0.002		
C4	V 4		0.000	0.000	0.073	0.000	
C5	V 5		0.034	0.073	0.139	-0.026	-0.051
C6	V 6		0.000	0.000	0.052	0.000	0.062
C7	V 7		0.086	0.086	0.128	0.094	0.148
C8	V 8		0.000	0.000	0.070	0.000	0.045
C9	V 9		0.055	0.045	0.107	0.048	0.088
C10	V 10		0.053	0.030	0.082	0.051	0.081

			C6	C7	C8	C9	C10
			V 6	V 7	V 8	V 9	V 10
C6	V 6		0.000				
C7	V 7		0.015	0.028			
C8	V 8		0.000	0.077	0.000		
C9	V 9		0.063	0.128	0.031	0.057	
C10	V 10		0.040	0.113	0.042	0.087	0.086

AVERAGE ABSOLUTE COVARIANCE RESIDUALS	=	0.0476
AVERAGE OFF-DIAGONAL ABSOLUTE COVARIANCE RESIDUALS	=	0.0532

STANDARDIZED RESIDUAL MATRIX:

			C1	C2	C3	C4	C5
			V 1	V 2	V 3	V 4	V 5
C1	V 1		0.000				
C2	V 2		0.000	0.000			
C3	V 3		0.021	-0.001	-0.001		
C4	V 4		0.000	0.000	0.037	0.000	
C5	V 5		0.017	0.035	0.071	-0.013	-0.026
C6	V 6		0.000	0.000	0.027	0.000	0.031
C7	V 7		0.044	0.044	0.068	0.049	0.078
C8	V 8		0.000	0.000	0.035	0.000	0.022
C9	V 9		0.028	0.022	0.055	0.024	0.045
C10	V 10		0.028	0.015	0.044	0.027	0.043

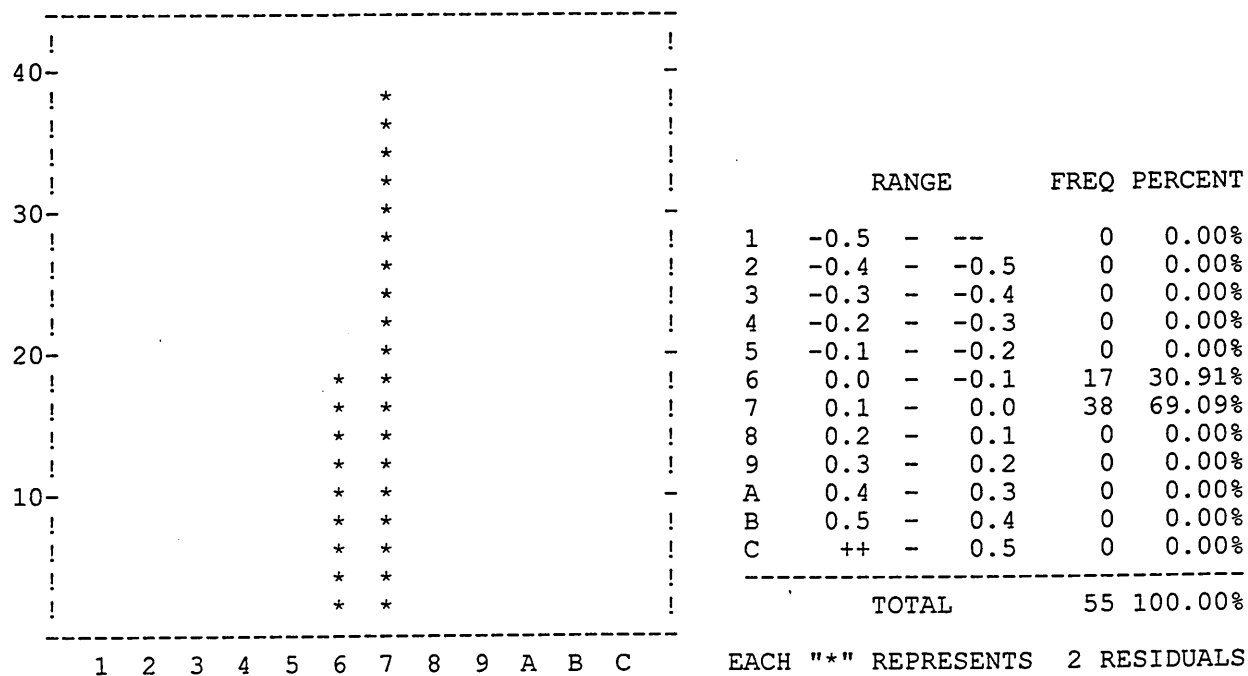
			C6	C7	C8	C9	C10
			V 6	V 7	V 8	V 9	V 10
C6	V 6		0.000				
C7	V 7		0.008	0.015			
C8	V 8		0.000	0.039	0.000		
C9	V 9		0.032	0.069	0.015	0.030	
C10	V 10		0.021	0.063	0.021	0.047	0.048

AVERAGE ABSOLUTE STANDARDIZED RESIDUALS	=	0.0247
AVERAGE OFF-DIAGONAL ABSOLUTE STANDARDIZED RESIDUALS	=	0.0275

LARGEST STANDARDIZED RESIDUALS:

V 7,V 5 0.078	V 5,V 3 0.071	V 9,V 7 0.069	V 7,V 3 0.068	V 10,V 7 0.063
V 9,V 3 0.055	V 7,V 4 0.049	V 10,V 10 0.048	V 10,V 9 0.047	V 9,V 5 0.045
V 7,V 1 0.044	V 10,V 3 0.044	V 7,V 2 0.044	V 10,V 5 0.043	V 8,V 7 0.039
V 4,V 3 0.037	V 5,V 2 0.035	V 8,V 3 0.035	V 9,V 6 0.032	V 6,V 5 0.031

DISTRIBUTION OF STANDARDIZED RESIDUALS



GOODNESS OF FIT SUMMARY

INDEPENDENCE MODEL CHI-SQUARE = 838.609 ON 45 DEGREES OF FREEDOM

INDEPENDENCE AIC = 748.60895 INDEPENDENCE CAIC = 643.65975
MODEL AIC = 32.59187 MODEL CAIC = -16.38443

CHI-SQUARE = 74.592 BASED ON 21 DEGREES OF FREEDOM
PROBABILITY VALUE FOR THE CHI-SQUARE STATISTIC IS LESS THAN 0.001
THE NORMAL THEORY RLS CHI-SQUARE FOR THIS ML SOLUTION IS 50.547.

BENTLER-BONETT NORMED FIT INDEX= 0.911
BENTLER-BONETT NONNORMED FIT INDEX= 0.855
COMPARATIVE FIT INDEX (CFI) = 0.932

ITERATIVE SUMMARY

ITERATION	PARAMETER ABS CHANGE	ALPHA	FUNCTION
1	0.969238	1.00000	8.65363
2	0.468296	1.00000	6.53460
3	0.087381	1.00000	2.95496
4	0.006131	1.00000	2.83060
5	0.003240	1.00000	2.78895
6	0.001803	1.00000	2.77279
7	0.001015	1.00000	2.76585
8	0.000629	1.00000	2.76266

MEASUREMENT EQUATIONS WITH STANDARD ERRORS AND TEST STATISTICS

```
C2      =V2      =      .984*V1      + 1.000 E2
                        .051
                        19.236
```

```
C3      =V3      =      .932*V2      + 1.000 E3
                        .034
                        27.341
```

```
C4      =V4      =      .961*V1      + 1.000 E4
                        .046
                        20.822
```

C5 =V5 = .978*V4 + 1.000 E5
 .042
 23.227

```
C6      =V6      =      .930*V1      + 1.000 E6
                        .061
                        15.358
```

C7 =V7 = .905*V6 + 1.000 E7
 .051
 17.684

```
C8      =V8      =      .957*V1      + 1.000 E8
                        .059
                        16.252
```

C9 =V9 = .922*V8 + 1.000 E9
 .036
 25.587

```

C10    =V10 =      .286*V3      +  .216*V5      +  .144*V7      +  .325*V9
              .065              .056              .060              .076
              4.383              3.896              2.398              4.256
              + 1.000 E10

```

TITLE: HBE101
 EQS/EM386 Licensee: LIU
 MAXIMUM LIKELIHOOD SOLUTION (NORMAL DISTRIBUTION THEORY)

VARIANCES OF INDEPENDENT VARIABLES

	V	F	
	---	---	
V1 - C1	2.075*I		I
	.565 I		I
	3.674 I		I
	I		I

VARIANCES OF INDEPENDENT VARIABLES

		E	D
		---	---
E2 - C2		.147*I	I
		.040 I	I
		3.674 I	I
		I	I
E3 - C3		.069*I	I
		.019 I	I
		3.674 I	I
		I	I
E4 - C4		.119*I	I
		.032 I	I
		3.674 I	I
		I	I
E5 - C5		.099*I	I
		.027 I	I
		3.674 I	I
		I	I
E6 - C6		.205*I	I
		.056 I	I
		3.674 I	I
		I	I
E7 - C7		.143*I	I
		.039 I	I
		3.674 I	I
		I	I
E8 - C8		.194*I	I
		.053 I	I
		3.674 I	I
		I	I
E9 - C9		.074*I	I
		.020 I	I
		3.674 I	I
		I	I
E10 - C10		.023*I	I
		.006 I	I
		3.674 I	I
		I	I

COVARIANCES AMONG INDEPENDENT VARIABLES

		E	D	
		---	---	
E4	- C4	.027*I		I
E2	- C2	.026 I		I
		1.023 I		I
		I		I
E6	- C6	.091*I		I
E2	- C2	.038 I		I
		2.408 I		I
		I		I
E8	- C8	.096*I		I
E2	- C2	.037 I		I
		2.560 I		I
		I		I
E5	- C5	-.024*I		I
E3	- C3	.017 I		I
		-1.476 I		I
		I		I
E7	- C7	.021*I		I
E3	- C3	.019 I		I
		1.081 I		I
		I		I
E9	- C9	.013*I		I
E3	- C3	.014 I		I
		.966 I		I
		I		I
E6	- C6	.062*I		I
E4	- C4	.032 I		I
		1.904 I		I
		I		I
E8	- C8	.081*I		I
E4	- C4	.033 I		I
		2.440 I		I
		I		I
E7	- C7	-.018*I		I
E5	- C5	.023 I		I
		-.779 I		I
		I		I
E9	- C9	.008*I		I
E5	- C5	.017 I		I
		.512 I		I
		I		I
E8	- C8	.131*I		I
E6	- C6	.046 I		I
		2.844 I		I
		I		I
E9	- C9	.017*I		I
E7	- C7	.020 I		I
		.866 I		I
		I		I

STANDARDIZED SOLUTION:

R-SQUARED

C2	=V2	=	.965*V1	+	.261 E2					.932
C3	=V3	=	.982*V2	+	.188 E3					.965
C4	=V4	=	.970*V1	+	.242 E4					.941
C5	=V5	=	.976*V4	+	.220 E5					.952
C6	=V6	=	.947*V1	+	.320 E6					.897
C7	=V7	=	.959*V6	+	.283 E7					.920
C8	=V8	=	.953*V1	+	.305 E8					.907
C9	=V9	=	.980*V8	+	.200 E9					.960
C10	=V10	=	.304*V3	+	.236*V5	+	.147*V7	+	.338*V9	
			+ .115 E10							.987

CORRELATIONS AMONG INDEPENDENT VARIABLES

	E		D
	---		---
E4 - C4	.201*I		I
E2 - C2	I		I
	I		I
E6 - C6	.523*I		I
E2 - C2	I		I
	I		I
E8 - C8	.566*I		I
E2 - C2	I		I
	I		I
E5 - C5	-.296*I		I
E3 - C3	I		I
	I		I
E7 - C7	.213*I		I
E3 - C3	I		I
	I		I
E9 - C9	.189*I		I
E3 - C3	I		I
	I		I
E6 - C6	.394*I		I
E4 - C4	I		I
	I		I
E8 - C8	.532*I		I
E4 - C4	I		I
	I		I
E7 - C7	-.152*I		I
E5 - C5	I		I
	I		I
E9 - C9	.099*I		I
E5 - C5	I		I
	I		I
E8 - C8	.654*I		I
E6 - C6	I		I
	I		I
E9 - C9	.169*I		I
E7 - C7	I		I
	I		I

END OF METHOD

1

Execution begins at 14:04:46.67
 Execution ends at 14:04:46.78
 Elapsed time = 0.11 seconds

Appendix IIIId: SAS Output for Business Excellence Model and Index (Optimal)

The SAS System

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Business Excellence Index 2000 for Hong Kong Hotel Industry

outer coefficients:

	COL1 COL8	COL2 COL9	COL3 COL10	COL4	COL5	COL6	COL7
ROW1	0.2669802	0	0	0	0	0	0
:	0	0	0				
ROW2	0.1351582	0	0	0	0	0	0
:	0	0	0				
ROW3	0.5236843	0	0	0	0	0	0
:	0	0	0				
ROW4	0.1129855	0	0	0	0	0	0
:	0	0	0				
ROW5	0.0381522	0	0	0	0	0	0
:	0	0	0				
ROW6	0 0.3492603	0	0	0	0	0	0
:	0	0	0				
ROW7	0 0.37463	0	0	0	0	0	0
:	0	0	0				
ROW8	0 0.3483673	0	0	0	0	0	0
:	0	0	0				
ROW9	0 0.1396507	0	0	0	0	0	0
:	0	0	0				
ROW10	0 0.1206614	0	0	0	0	0	0
:	0	0	0				
ROW11	0 0.1099587	0	0	0	0	0	0
:	0	0	0				
ROW12	0 0.1153504	0	0	0	0	0	0
:	0	0	0				
ROW13	0 0.1104249	0	0	0	0	0	0
:	0	0	0				
ROW14	0 0.100171	0	0	0	0	0	0
:	0	0	0				
ROW15	0 0.1300152	0	0	0	0	0	0
:	0	0	0				

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ROW16	0	0	0.1224296	0	0	0	0
:	0	0	0				
ROW17	0	0	0.1273058	0	0	0	0
:	0	0	0				
ROW18	0	0	0.1006441	0	0	0	0
:	0	0	0				
ROW19	0	0	0 0.3809509	0	0	0	0
:	0	0	0				
ROW20	0	0	0 0.3480061	0	0	0	0
:	0	0	0				
ROW21	0	0	0 0.3406678	0	0	0	0
:	0	0	0				
ROW22	0	0	0 0.1399861	0	0	0	0
:	0	0	0				
ROW23	0	0	0 0.1419153	0	0	0	0
:	0	0	0				
ROW24	0	0	0 0.1516043	0	0	0	0
:	0	0	0				
ROW25	0	0	0 0.1364011	0	0	0	0
:	0	0	0				
ROW26	0	0	0 0.1480123	0	0	0	0
:	0	0	0				
ROW27	0	0	0 0.1643517	0	0	0	0
:	0	0	0				
ROW28	0	0	0 0.1343242	0	0	0	0
:	0	0	0				
ROW29	0	0	0 0.1388113	0	0	0	0
:	0	0	0				
ROW30	0	0	0 0.3412585	0	0	0	0
:	0	0	0				
ROW31	0	0	0 0.3387146	0	0	0	0
:	0	0	0				
ROW32	0	0	0 0.3570219	0	0	0	0
:	0	0	0				
ROW33	0	0	0 0.1427664	0	0	0	0
:	0	0	0				

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ROW34	0	0	0	0	0	0	0.1374684
:	0	0	0				
ROW35	0	0	0	0	0	0	0.1299364
:	0	0	0				
ROW36	0	0	0	0	0	0	0.1360187
:	0	0	0				
ROW37	0	0	0	0	0	0	0.097354
:	0	0	0				
ROW38	0	0	0	0	0	0	0.1124851
:	0	0	0				
ROW39	0	0	0	0	0	0	0.1174938
:	0	0	0				
ROW40	0	0	0	0	0	0	0.1275748
:	0	0	0				
ROW41	0	0	0	0	0	0	0.1172112
:	0	0	0				
ROW42	0	0	0	0	0	0	0
:	0.4040548	0	0				
ROW43	0	0	0	0	0	0	0
:	0.4151985	0	0				
ROW44	0	0	0	0	0	0	0
:	0.2664348	0	0				
ROW45	0	0	0	0	0	0	0
:	0.2446684	0	0				
ROW46	0	0	0	0	0	0	0
:	0.248879	0	0				
ROW47	0	0	0	0	0	0	0
:	0.3037136	0	0				
ROW48	0	0	0	0	0	0	0
:	0.2984283	0	0				
ROW49	0	0	0	0	0	0	0
:	0.1421968	0	0				

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ROW51	0	0	0	0	0	0	0
:	0	0	0.1266018				
ROW52	0	0	0	0	0	0	0
:	0	0	0.1044195				
ROW53	0	0	0	0	0	0	0
:	0	0	0.1342999				
ROW54	0	0	0	0	0	0	0
:	0	0	0.0786297				
ROW55	0	0	0	0	0	0	0
:	0	0	0.1226095				
ROW56	0	0	0	0	0	0	0
:	0	0	0.1298337				
ROW57	0	0	0	0	0	0	0
:	0	0	0.1124942				
ROW58	0	0	0	0	0	0	0
:	0	0	0.1270131				

inner coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6	COL7
:	COL8	COL9	COL10				
ROW1	0	0	0	0	0	0	0
:	0	0	0				
ROW2	0.9061001	0	0	0	0	0	0
:	0	0	0				
ROW3	0 0.8199899	0	0	0	0	0	0
:	0	0	0				
ROW4	0.7890755	0	0	0	0	0	0
:	0	0	0				
ROW5	0	0	0 0.7625882		0	0	0
:	0	0	0				
ROW6	0.8995398	0	0	0	0	0	0
:	0	0	0				
ROW7	0	0	0	0	0 0.8413362		0
:	0	0	0				
ROW8	0.8018535	0	0	0	0	0	0
:	0	0	0				

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```

ROW9      0      0      0      0      0      0      0
: 0.8983457      0      0
ROW10     0      0 0.3571612      0 0.1146896      0 0.3150873
: 0 0.1835203      0

```

Correlation matrix R[xi,xj]:

	COL1	COL2	COL3	COL4	COL5	COL6	COL7
:	COL8	COL9	COL10				
ROW1	1	0.9061001	0.862768	0.7890755	0.8023981	0.8995398	0.8371109
:	0.8018535	0.8149636	0.8061482				
ROW2	0.9061001	1	0.8199899	0.7858618	0.7737642	0.8064305	0.8505232
:	0.8687277	0.8062553	0.82342				
ROW3	0.862768	0.8199899	1	0.8164781	0.8478773	0.8284661	0.7783923
:	0.7715297	0.7349841	0.8345499				
ROW4	0.7890755	0.7858618	0.8164781	1	0.7625882	0.7038576	0.6975447
:	0.7842348	0.7276516	0.805494				
ROW5	0.8023981	0.7737642	0.8478773	0.7625882	1	0.80979	0.8758992
:	0.8050231	0.7742727	0.8355979				
ROW6	0.8995398	0.8064305	0.8284661	0.7038576	0.80979	1	0.8413362
:	0.7749194	0.8140645	0.7380411				
ROW7	0.8371109	0.8505232	0.7783923	0.6975447	0.8758992	0.8413362	1
:	0.8102394	0.7583791	0.8327332				
ROW8	0.8018535	0.8687277	0.7715297	0.7842348	0.8050231	0.7749194	0.8102394
:	1	0.8983457	0.7669694				
ROW9	0.8149636	0.8062553	0.7349841	0.7276516	0.7742727	0.8140645	0.7583791
:	0.8983457	1	0.7737847				
ROW10	0.8061482	0.82342	0.8345499	0.805494	0.8355979	0.7380411	0.8327332
:	0.7669694	0.7737847	1				

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	COL1	COL2	COL3	COL4	COL5	COL6	COL7
:	COL8	COL9	COL10				
ROW1	0	0	0	0	0	0	0
:	0	0	0				
ROW2	0.0829696	0	0	0	0	0	0
:	0	0	0				
ROW3	0	0.1122526	0	0	0	0	0
:	0	0	0				
ROW4	0.1204734	0	0	0	0	0	0
:	0	0	0				
ROW5	0	0	0	0.1268644	0	0	0
:	0	0	0				
ROW6	0.0856712	0	0	0	0	0	0
:	0	0	0				
ROW7	0	0	0	0	0	0.1060032	0
:	0	0	0				
ROW8	0.1171834	0	0	0	0	0	0
:	0	0	0				
ROW9	0	0	0	0	0	0	0
:	0.0861517	0	0				
ROW10	0	0	0.1823066	0	0.2368445	0	0.2018559
:	0	0.1567377	0				

	COL1	COL2	COL3	COL4	COL5	COL6	COL7
:	COL8	COL9	COL10				
ROW1	0	0	0	0	0	0	0
:	0	0	0				
ROW2	10.920874	0	0	0	0	0	0
:	0	0	0				
ROW3	0	7.3048667	0	0	0	0	0
:	0	0	0				
ROW4	6.5497911	0	0	0	0	0	0
:	0	0	0				
ROW5	0	0	0	6.0110479	0	0	0
:	0	0	0				
ROW6	10.499914	0	0	0	0	0	0

: 0 0 0

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ROW7	0	0	0	0	0	7.936897	0
:	0	0	0				
ROW8	6.8427206	0	0	0	0	0	0
:	0	0	0				
ROW9	0	0	0	0	0	0	0
:	10.427487	0	0				
ROW10	0	0	1.9591235	0	0.4842401	0	1.5609511
:	0	1.1708748	0				

inner R squares:

	COL1	COL2	COL3	COL4	COL5	COL6	COL7
:	COL8	COL9					
ROW1	0.8210174	0.6226402	0.8091718	0.6429691	0.6723835	0.5815408	0.7078466
:	0.807025	0.798292					

inner R

	COL1	COL2	COL3	COL4	COL5	COL6	COL7
:	COL8	COL9					
ROW1	0.9061001	0.7890755	0.8995398	0.8018535	0.8199899	0.7625882	0.8413362
:	0.8983457	0.8934719					

number of iterations:

5

coefficients alpha

	0.7774842	0.9244647	0.9556501	0.9265703	0.9513648	0.9620257	0.9668096
:	0.8900436	0.9291936	0.9509137				

Appendix IIIe: SAS Output for Business Excellence Model and Index (Original)

The SAS System

1

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Business Excellence Index 2000 for Hong Kong Hotel Industry

outer coefficients:

	COL1 COL8	COL2 COL9	COL3 COL10	COL4	COL5	COL6	COL7
:							
ROW1	-0.161288	0	0	0	0	0	0
:	0	0	0				
ROW2	0.3362698	0	0	0	0	0	0
:	0	0	0				
ROW3	0.167954	0	0	0	0	0	0
:	0	0	0				
ROW4	0.5753333	0	0	0	0	0	0
:	0	0	0				
ROW5	0.1034369	0	0	0	0	0	0
:	0	0	0				
ROW6	0.0443999	0	0	0	0	0	0
:	0	0	0				
ROW7	0 0.3436673	0	0	0	0	0	0
:	0	0	0				
ROW8	0 0.376736	0	0	0	0	0	0
:	0	0	0				
ROW9	0 0.351774	0	0	0	0	0	0
:	0	0	0				
ROW10	0 0.139672	0	0	0	0	0	0
:	0	0	0				
ROW11	0 0.1207095	0	0	0	0	0	0
:	0	0	0				
ROW12	0 0.1099638	0	0	0	0	0	0
:	0	0	0				
ROW13	0 0.1153563	0	0	0	0	0	0
:	0	0	0				
ROW14	0 0.1104438	0	0	0	0	0	0
:	0	0	0				
ROW15	0 0.1001058	0	0	0	0	0	0
:	0	0	0				
ROW16	0 0.1300202	0	0	0	0	0	0

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ROW17	0	0	0.1223968	0	0	0	0
:	0	0	0				
ROW18	0	0	0.1272923	0	0	0	0
:	0	0	0				
ROW19	0	0	0.1006395	0	0	0	0
:	0	0	0				
ROW20	0	0	0 0.3829089	0	0	0	0
:	0	0	0				
ROW21	0	0	0 0.3471633	0	0	0	0
:	0	0	0				
ROW22	0	0	0 0.3394929	0	0	0	0
:	0	0	0				
ROW23	0	0	0 0.1400134	0	0	0	0
:	0	0	0				
ROW24	0	0	0 0.1419528	0	0	0	0
:	0	0	0				
ROW25	0	0	0 0.1516243	0	0	0	0
:	0	0	0				
ROW26	0	0	0 0.1364393	0	0	0	0
:	0	0	0				
ROW27	0	0	0 0.1479709	0	0	0	0
:	0	0	0				
ROW28	0	0	0 0.1643575	0	0	0	0
:	0	0	0				
ROW29	0	0	0 0.1343013	0	0	0	0
:	0	0	0				
ROW30	0	0	0 0.1387509	0	0	0	0
:	0	0	0				
ROW31	0	0	0 0.3436314	0	0	0	0
:	0	0	0				
ROW32	0	0	0 0.3356863	0	0	0	0
:	0	0	0				
ROW33	0	0	0 0.357632	0	0	0	0
:	0	0	0				
ROW34	0	0	0 0.1427625	0	0	0	0
:	0	0	0				

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ROW35	0	0	0	0	0	0 0.1374503
:	0	0	0			
ROW36	0	0	0	0	0	0 0.1298906
:	0	0	0			
ROW37	0	0	0	0	0	0 0.1360347
:	0	0	0			
ROW38	0	0	0	0	0	0 0.0973958
:	0	0	0			
ROW39	0	0	0	0	0	0 0.1124824
:	0	0	0			
ROW40	0	0	0	0	0	0 0.1174986
:	0	0	0			
ROW41	0	0	0	0	0	0 0.1276012
:	0	0	0			
ROW42	0	0	0	0	0	0 0.1171955
:	0	0	0			
ROW43	0	0	0	0	0	0 0
:	0.4018398	0	0			
ROW44	0	0	0	0	0	0 0
:	0.421473	0	0			
ROW45	0	0	0	0	0	0 0
:	0.261751	0	0			
ROW46	0	0	0	0	0	0 0
:	0 0.2447643		0			
ROW47	0	0	0	0	0	0 0
:	0 0.2489725		0			
ROW48	0	0	0	0	0	0 0
:	0 0.3036859		0			
ROW49	0	0	0	0	0	0 0
:	0 0.2982855		0			
ROW50	0	0	0	0	0	0 0
:	0 0.1421721					
ROW51	0	0	0	0	0	0 0
:	0 0.1102568					

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ROW52	0	0	0	0	0	0	0
:	0	0	0.1265453				
ROW53	0	0	0	0	0	0	0
:	0	0	0.104534				
ROW54	0	0	0	0	0	0	0
:	0	0	0.1342217				
ROW55	0	0	0	0	0	0	0
:	0	0	0.0788006				
ROW56	0	0	0	0	0	0	0
:	0	0	0.1226196				
ROW57	0	0	0	0	0	0	0
:	0	0	0.129755				
ROW58	0	0	0	0	0	0	0
:	0	0	0.1124565				
ROW59	0	0	0	0	0	0	0
:	0	0	0.1269248				

inner coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6	COL7
:	COL8	COL9	COL10				
ROW1	0	0	0	0	0	0	0
:	0	0	0				
ROW2	0.9029851	0	0	0	0	0	0
:	0	0	0				
ROW3	0 0.8199188	0	0	0	0	0	0
:	0	0	0				
ROW4	0.77084	0	0	0	0	0	0
:	0	0	0				
ROW5	0	0	0 0.7628498	0	0	0	0
:	0	0	0				
ROW6	0.8978052	0	0	0	0	0	0
:	0	0	0				
ROW7	0	0	0	0	0 0.8414081		0
:	0	0	0				
ROW8	0.7868931	0	0	0	0	0	0
:	0	0	0				

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```

ROW9      0      0      0      0      0      0      0
:    0.899115      0      0
ROW10     0      0 0.3571745      0 0.1147589      0 0.3149724
:    0 0.1835045      0

```

Correlation matrix R[xi,xj]:

	COL1	COL2	COL3	COL4	COL5	COL6	COL7
:	COL8	COL9	COL10				
ROW1	1	0.9029851	0.8615821	0.77084	0.8072521	0.8978052	0.8444214
:	0.7868931	0.8088916	0.8054184				
ROW2	0.9029851	1	0.8199188	0.7864739	0.77335	0.806314	0.8498947
:	0.8692373	0.8060668	0.8235674				
ROW3	0.8615821	0.8199188	1	0.8166572	0.8478649	0.8284549	0.7783856
:	0.772427	0.73497	0.8345148				
ROW4	0.77084	0.7864739	0.8166572	1	0.7628498	0.7037773	0.697734
:	0.7841248	0.7279342	0.8057778				
ROW5	0.8072521	0.77335	0.8478649	0.7628498	1	0.8096244	0.8758946
:	0.8053059	0.7742841	0.8355618				
ROW6	0.8978052	0.806314	0.8284549	0.7037773	0.8096244	1	0.8414081
:	0.7754593	0.8138677	0.7377794				
ROW7	0.8444214	0.8498947	0.7783856	0.697734	0.8758946	0.8414081	1
:	0.8108176	0.7583806	0.8326748				
ROW8	0.7868931	0.8692373	0.772427	0.7841248	0.8053059	0.7754593	0.8108176
:	1	0.899115	0.7673732				
ROW9	0.8088916	0.8060668	0.73497	0.7279342	0.7742841	0.8138677	0.7583806
:	0.899115	1	0.7737419				
ROW10	0.8054184	0.8235674	0.8345148	0.8057778	0.8355618	0.7377794	0.8326748
:	0.7673732	0.7737419	1				

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	COL1 COL8	COL2 COL9	COL3 COL10	SD= COL4	COL5	COL6	COL7
ROW1	0	0	0	0	0	0	0
:	0	0	0				
ROW2	0.0842656	0	0	0	0	0	0
:	0	0	0				
ROW3	0 0.1122725	0	0	0	0	0	0
:	0	0	0				
ROW4	0.1249316	0	0	0	0	0	0
:	0	0	0				
ROW5	0	0	0 0.1268039		0	0	0
:	0	0	0				
ROW6	0.0863681	0	0	0	0	0	0
:	0	0	0				
ROW7	0	0	0	0	0 0.1059812		0
:	0	0	0				
ROW8	0.1210212	0	0	0	0	0	0
:	0	0	0				
ROW9	0	0	0	0	0	0	0
:	0.0858425	0	0				
ROW10	0	0 0.1823353		0 0.2368871		0 0.2018932	
:	0 0.1567705		0				

	COL1 COL8	COL2 COL9	COL3 COL10	T= COL4	COL5	COL6	COL7
ROW1	0	0	0	0	0	0	0
:	0	0	0				
ROW2	10.715945	0	0	0	0	0	0
:	0	0	0				
ROW3	0 7.3029341	0	0	0	0	0	0
:	0	0	0				
ROW4	6.1700958	0	0	0	0	0	0
:	0	0	0				

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ROW5	0	0	0	6.0159784	0	0	0
:	0	0	0				
ROW6	10.3951	0	0	0	0	0	0
:	0	0	0				
ROW7	0	0	0	0	0	7.9392208	0
:	0	0	0				
ROW8	6.5021099	0	0	0	0	0	0
:	0	0	0				
ROW9	0	0	0	0	0	0	0
:	10.474011	0	0				
ROW10	0	0	1.9588887	0	0.4844453	0	1.5600942
:	0	1.1705293	0				

inner R squares:

	COL1	COL2	COL3	COL4	COL5	COL6	COL7
:	COL8	COL9					
ROW1	0.8153822	0.5941944	0.8060543	0.6192007	0.6722669	0.5819398	0.7079676
:	0.8084078	0.7982103					

inner R

	COL1	COL2	COL3	COL4	COL5	COL6	COL7
:	COL8	COL9					
ROW1	0.9029851	0.77084	0.8978052	0.7868931	0.8199188	0.7628498	0.8414081
:	0.899115	0.8934261					

number of iterations:

5

coefficients alpha

	0.5868258	0.9243267	0.95565	0.9264044	0.9513629	0.9619973	0.9668118
:	0.8885575	0.9292051	0.9509291				

Appendix IIIf: Output for Business Excellence Index (Optimal)

Business Excellence Index 2000 for Hong Kong Hotel Industry

Question deleted: Q1a.

	Outer Coefficients									
	COL1	COL2	COL3	COL4	COL5	COL6	COL7	COL8	COL9	COL10
Q1b	0.2669802									
Q1c	0.1351582									
Q1d	0.5236843									
Q1e	0.1129855									
Q1f	0.0381522									
Q2a		0.3492603								
Q2b		0.3746300								
Q2c		0.3483673								
Q3a			0.1396507							
Q3b			0.1206614							
Q3c			0.1099587							
Q3d			0.1153504							
Q3e			0.1104249							
Q3f			0.1001710							
Q4a			0.1300152							
Q4b			0.1224296							
Q4c			0.1273058							
Q4d			0.1006441							
Q5a				0.3809509						
Q5b				0.3480061						
Q5c				0.3406678						
Q6a					0.1399861					
Q6b					0.1419153					
Q6c					0.1516043					
Q6d					0.1364011					
Q6e					0.1480123					
Q6f					0.1643517					
Q7a					0.1343242					
Q7b					0.1388113					
Q8a						0.3412585				
Q8b						0.3387146				
Q8c						0.3570219				
Q9a							0.1427664			
Q9b							0.1374684			
Q9c							0.1299364			
Q10a							0.1360187			
Q10b							0.0973540			
Q10c							0.1124851			
Q10d							0.1174938			
Q10e							0.1275748			
Q10f							0.1172112			
Q11a								0.4040548		
Q11b								0.4151985		
Q11c								0.2664348		
Q12a									0.2446684	
Q12b									0.2488790	
Q13a									0.3037136	
Q13b									0.2984283	
Q14a										0.1421968
Q12b										0.1101365
Q14c										0.1266018
Q14d										0.1044195
Q14e										0.1342999
Q14f										0.0786297
Q14g										0.1226095
Q14h										0.1298337
Q14i										0.1124942
Q14j										0.1270131
S(ci*mi)	8.044528	7.937294	8.281662	7.239465	7.726910	7.270299	7.924233	7.550480	7.484222	7.797168
S(ci*Ri)	9.692644	9.650318	10.589506	9.626623	10.398657	9.332955	10.064779	9.771193	9.861204	10.694112
Index	82.996224	82.249039	78.206313	75.202543	74.306805	77.899223	78.732309	77.272859	75.895620	72.910851
Alpha	0.7774842	0.9244647	0.9556501	0.9265703	0.9513648	0.9620257	0.9668096	0.8900436	0.9291936	0.9509137

Appendix IIIg: Excel Output for Business Excellence Index (Original)

Business Excellence Index 2000 for Hong Kong Hotel Industry

	Outer Coefficients									
	COL1	COL2	COL3	COL4	COL5	COL6	COL7	COL8	COL9	COL10
Q1a	-0.161288									
Q1b	0.3362698									
Q1c	0.1679540									
Q1d	0.5753333									
Q1e	0.1034369									
Q1f	0.0443999									
Q2a		0.3436673								
Q2b		0.3767360								
Q2c		0.3517740								
Q3a			0.1396720							
Q3b			0.1207095							
Q3c			0.1099638							
Q3d			0.1153563							
Q3e			0.1104438							
Q3f			0.1001058							
Q4a			0.1300202							
Q4b			0.1223968							
Q4c			0.1272923							
Q4d			0.1006395							
Q5a				0.3829089						
Q5b				0.3471633						
Q5c				0.3394929						
Q6a					0.1400134					
Q6b					0.1419528					
Q6c					0.1516243					
Q6d					0.1364393					
Q6e					0.1479709					
Q6f					0.1643575					
Q7a					0.1343013					
Q7b					0.1387509					
Q8a						0.3436314				
Q8b						0.3356863				
Q8c						0.3576320				
Q9a							0.1427625			
Q9b							0.1374503			
Q9c							0.1298906			
Q10a							0.1360347			
Q10b							0.0973958			
Q10c							0.1124824			
Q10d							0.1174986			
Q10e							0.1276012			
Q10f							0.1171955			
Q11a								0.4018398		
Q11b								0.4214730		
Q11c								0.2617510		
Q12a									0.2447643	
Q12b									0.2489725	
Q13a									0.3036859	
Q13b									0.2982855	
Q14a										0.1421721
Q12b										0.1102568
Q14c										0.1265453
Q14d										0.1045340
Q14e										0.1342217
Q14f										0.0788006
Q14g										0.1226196
Q14h										0.1297550
Q14i										0.1124565
Q14j										0.1269248
S(ci*mi)	7.859015	7.940129	8.281721	7.237606	7.726992	7.270772	7.924276	7.545814	7.484300	7.797771
S(ci*Ri)	9.594953	9.649596	10.589400	9.626086	10.398694	9.332547	10.064804	9.765574	9.861374	10.694578
Index	81.907800	82.284579	78.207652	75.187421	74.307332	77.907686	78.732536	77.269542	75.895106	72.913318
Alpha	0.5868258	0.9243267	0.9556500	0.9264044	0.9513629	0.9619973	0.9668118	0.8885575	0.9292051	0.9509291

**APPENDIX IV: CUSTOMER SATISFACTION OUTPUTS FOR
THE HONG KONG HOTEL INDUSTRY**

Appendix IVa: SAS Output for CS Model and Index

The SAS System

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Customer Satisfaction Index 1999 for Hong Kong Hotel Industry (Overall)

```

                                outer coefficients:
                                COL1      COL2      COL3      COL4      COL5
ROW1      0.4507542      0      0      0      0
ROW2      0.2798783      0      0      0      0
ROW3      0.3819368      0      0      0      0
ROW4      0 0.1269121      0      0      0
ROW5      0 0.1175153      0      0      0
ROW6      0 0.1170552      0      0      0
ROW7      0 0.1123762      0      0      0
ROW8      0 0.1084428      0      0      0
ROW9      0 0.1133913      0      0      0
ROW10     0 0.1146486      0      0      0
ROW11     0 0.1206976      0      0      0
ROW12     0 0.1241193      0      0      0
ROW13     0 0.1202755      0      0      0
ROW14     0      0 0.4641163      0      0
ROW15     0      0 0.6480898      0      0
ROW16     0      0      0 0.519638      0
ROW17     0      0      0 0.4713522      0
ROW18     0      0      0 0.1855131      0
ROW19     0      0      0      0 0.5010835
ROW20     0      0      0      0 0.6067895

```

```

                                inner coefficients:
                                COL1      COL2      COL3      COL4      COL5
ROW1      0      0      0      0      0
ROW2      0.87626      0      0      0      0
ROW3      0.1602439 0.6821856      0      0      0
ROW4      0.4484851 0.3800671 0.0885478      0      0
ROW5      0      0      0 0.2441611      0

```

```

Correlation matrix R[xi,xj]:
COL1      COL2      COL3      COL4      COL5
ROW1      1      0.87626 0.7580159 0.8486433 0.1303366
ROW2      0.87626      1 0.8226009 0.8458961 0.1434873
ROW3      0.7580159 0.8226009      1 0.7411501 0.2418948
ROW4      0.8486433 0.8458961 0.7411501      1 0.2441611
ROW5      0.1303366 0.1434873 0.2418948 0.2441611      1

```

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SD=

	COL1	COL2	COL3	COL4	COL5
ROW1	0	0	0	0	0
ROW2	0.0096775	0	0	0	0
ROW3	0.023487	0.023487	0	0	0
ROW4	0.020285	0.023268	0.0171892	0	0
ROW5	0	0	0	0.0194767	0

T=

	COL1	COL2	COL3	COL4	COL5
ROW1	0	0	0	0	0
ROW2	90.546101	0	0	0	0
ROW3	6.8226546	29.045207	0	0	0
ROW4	22.109205	16.334357	5.15137	0	0
ROW5	0	0	0	12.536083	0

inner R squares:

	COL1	COL2	COL3	COL4
ROW1	0.7678316	0.6826339	0.7677283	0.0596147

inner R

	COL1	COL2	COL3	COL4
ROW1	0.87626	0.8262166	0.8762011	0.2441611

number of iterations:

4

coefficients alpha

0.8589196 0.9572797 0.7291514 0.7100826 0.7614436

Appendix IVb: Excel Output for Hotel Industry Overall

Customer Satisfaction Index 1999 for Hong Kong Hotel Industry (Overall)

Outer Coefficients						SUM	N	MEAN
Item	COL1	COL2	COL3	COL4	COL5			
Q2a	0.4507542					14916	2481	6.012092
Q2b	0.2798783					14822	2480	5.976613
Q2c	0.3819368					15434	2479	6.225898
Q5a		0.1269121				15340	2481	6.182991
Q5b		0.1175153				14973	2481	6.035067
Q5c		0.1170552				15137	2481	6.101169
Q5d		0.1123762				15247	2481	6.145506
Q5e		0.1084428				15335	2481	6.180975
Q5f		0.1133913				15175	2476	6.128837
Q5g		0.1146486				15177	2481	6.117291
Q5h		0.1206976				15283	2481	6.160016
Q5i		0.1241193				15311	2481	6.171302
Q5j		0.1202755				15295	2481	6.164853
Q4			0.4641163			14315	2481	5.769851
Q5k			0.6480898			15445	2481	6.225312
Q1				0.5196380		15869	2481	6.396211
Q3				0.4713522		15981	2481	6.441354
Q20				0.1855131		14258	2481	5.746876
Q8					0.5010835	14614	2481	5.890367
Q13					0.6067895	16055	2481	6.471181
S(ci*mi)	5.648030	6.040793	5.600237	6.249478	5.770337			
S(ci*ri)	10.013124	10.578905	10.009855	10.588530	9.970857			
Index	56.406274	57.102249	55.947236	59.021211	57.872029			

Inner Coefficients					
	COL1	COL2	COL3	COL4	COL5
ROW1					
ROW2	0.8762600				
ROW3	0.1602439	0.6821856			
ROW4	0.4484851	0.3800671	0.0885478		
ROW5				0.2441611	
Alpha	0.8589196	0.9572797	0.7291514	0.7100826	0.7614436

Appendix IVc: Excel Output for Hotel Industry by Sex

Customer Satisfaction Index 1999 for Hong Kong Hotel Industry

(Male)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.4474971					9444	1595	5.921003
Q2b	0.2705979					9364	1594	5.874529
Q2c	0.4064626					9784	1593	6.141871
Q5a		0.1279737				9704	1595	6.084013
Q5b		0.1199042				9495	1595	5.952978
Q5c		0.1186194				9578	1595	6.005016
Q5d		0.1126014				9658	1595	6.055172
Q5e		0.1080748				9722	1595	6.095298
Q5f		0.1151946				9612	1591	6.041483
Q5g		0.1148480				9607	1595	6.023197
Q5h		0.1221755				9684	1595	6.071473
Q5i		0.1260709				9681	1595	6.069592
Q5j		0.1222666				9707	1595	6.085893
Q4			0.4718897			9186	1595	5.759248
Q5k			0.6328520			9768	1595	6.124138
Q1				0.5178778		10066	1595	6.310972
Q3				0.4646370		10151	1595	6.364263
Q20				0.1996422		9088	1595	5.697806
Q8					0.4754644	9359	1595	5.867712
Q13					0.6267494	10220	1595	6.407524
S(ci*mi)	5.611150	5.996316	5.488661	6.180750	5.703586			
S(ci*Ri)	10.121018	10.689562	9.942675	10.639413	9.919924			
Index	55.440569	56.095060	55.203059	58.092959	57.496263			

(Female)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.4599258					5472	886	6.176072
Q2b	0.2950693					5458	886	6.160271
Q2c	0.3421185					5650	886	6.376975
Q5a		0.1260534				5636	886	6.361174
Q5b		0.1143785				5478	886	6.182844
Q5c		0.115126				5559	886	6.274266
Q5d		0.1128064				5589	886	6.308126
Q5e		0.1091034				5613	886	6.335214
Q5f		0.1109921				5563	885	6.285876
Q5g		0.1145632				5570	886	6.286682
Q5h		0.1189815				5599	886	6.319413
Q5i		0.1218635				5630	886	6.354402
Q5j		0.1182022				5588	886	6.306998
Q4			0.5157772			5129	886	5.788939
Q5k			0.5309657			5677	886	6.407449
Q1				0.4777572		5803	886	6.549661
Q3				0.4537108		5830	886	6.580135
Q20				0.2148781		5170	886	5.835214
Q8					0.5440464	5255	886	5.931151
Q13					0.5725411	5839	886	6.590293
S(ci*mi)	5.7428094	6.1617523	5.3411956	6.2221401	5.8834478			
S(ci*Ri)	9.8740224	10.458632	9.4206861	10.317115	10.049288			
Index	58.160789	58.915472	56.696461	60.308915	58.54592			

Appendix IVd: Excel Output for Hotel Industry by Ethnic Group

Customer Satisfaction Index 1999 for Hong Kong Hotel Industry

(White)

Item	Outer Coefficients					SUM	N	MEAN
	COL1	COL2	COL3	COL4	COL5			
Q2a	0.4660426					8920	1495	5.966555
Q2b	0.2851271					8850	1494	5.923695
Q2c	0.3761985					9249	1493	6.19491
Q5a		0.1314801				9184	1495	6.143144
Q5b		0.1210214				9005	1495	6.023411
Q5c		0.1197883				9057	1495	6.058194
Q5d		0.1132248				9129	1495	6.106355
Q5e		0.1097666				9221	1495	6.167893
Q5f		0.1145973				9106	1492	6.103217
Q5g		0.1161112				9096	1495	6.084281
Q5h		0.1240202				9168	1495	6.132441
Q5i		0.1280046				9167	1495	6.131773
Q5j		0.1231171				9159	1495	6.126421
Q4			0.4691044			8696	1495	5.816722
Q5k			0.6456744			9251	1495	6.18796
Q1				0.4751226		9496	1495	6.351839
Q3				0.4454956		9590	1495	6.414716
Q20				0.2296317		8536	1495	5.709699
Q8					0.4589522	8797	1495	5.884281
Q13					0.6428396	9664	1495	6.464214
S(ci*mi)	5.672822	6.135226	5.609279	6.036508	5.754265			
S(ci*Ri)	10.146314	10.810184	10.033009	10.352249	9.916126			
Index	55.910180	56.754126	55.908237	58.311078	58.029361			

(Chinese)

Item	Outer Coefficients					SUM	N	MEAN
	COL1	COL2	COL3	COL4	COL5			
Q2a	0.4190900					5404	886	6.099323
Q2b	0.2873502					5390	886	6.083521
Q2c	0.3852850					5578	886	6.295711
Q5a		0.1219047				5546	886	6.259594
Q5b		0.1133167				5379	886	6.071106
Q5c		0.1135647				5482	886	6.187359
Q5d		0.110556				5515	886	6.224605
Q5e		0.1068898				5510	886	6.218962
Q5f		0.11109				5469	885	6.179661
Q5g		0.1126695				5472	886	6.176072
Q5h		0.1173422				5508	886	6.216704
Q5i		0.1197483				5528	886	6.239278
Q5j		0.116383				5532	886	6.243792
Q4			0.4619482			5054	886	5.704289
Q5k			0.6480805			5589	886	6.308126
Q1				0.5144491		5752	886	6.492099
Q3				0.4770025		5763	886	6.504515
Q20				0.1739824		5160	886	5.823928
Q8					0.5515809	5250	886	5.925508
Q13					0.5689799	5779	886	6.522573
S(ci*mi)	5.6381841	5.9487927	5.613231	6.2903513	5.8590493			
S(ci*Ri)	9.8255268	10.291184	9.9902583	10.488906	10.085047			
Index	57.383021	57.804745	56.187046	59.971472	58.0964			

Appendix IVe: Excel Output for Hotel Industry by Age Group

Customer Satisfaction Index 1999 for Hong Kong Hotel Industry (Age < 25)

Outer Coefficients						SUM	N	MEAN
Item	COL1	COL2	COL3	COL4	COL5			
Q2a	0.4505982					373	64	5.828125
Q2b	0.3468544					371	64	5.796875
Q2c	0.3379145					376	64	5.875
Q5a		0.1371036				372	64	5.8125
Q5b		0.1083637				366	64	5.71875
Q5c		0.1220582				372	64	5.8125
Q5d		0.1117623				375	64	5.859375
Q5e		0.1253910				380	64	5.9375
Q5f		0.1106806				368	64	5.75
Q5g		0.1192921				374	64	5.84375
Q5h		0.1195845				386	64	6.03125
Q5i		0.1237552				386	64	6.03125
Q5j		0.1260538				375	64	5.859375
Q4			0.5059079			364	64	5.6875
Q5k			0.5992504			376	64	5.875
Q1				0.3749797		397	64	6.203125
Q3				0.3926778		401	64	6.265625
Q20				0.3519604		363	64	5.671875
Q8					0.6225362	378	64	5.90625
Q13					0.4519714	418	64	6.53125
S(ci*mi)	5.486695	5.861170	5.292789	5.663075	5.554285			
S(ci*Ri)	10.218304	10.836405	9.946425	10.076561	9.6705684			
Index	53.694770	54.087771	53.212980	56.200476	57.434939			

Customer Satisfaction Index 1999 for Hong Kong Hotel Industry (Age 25 to 29)

Outer Coefficients						SUM	N	MEAN
Item	COL1	COL2	COL3	COL4	COL5			
Q2a	0.5141626					1020	175	5.828571
Q2b	0.3005918					1029	175	5.88
Q2c	0.3056227					1051	175	6.005714
Q5a		0.1278511				1055	175	6.028571
Q5b		0.1243817				1038	175	5.931429
Q5c		0.1184296				1039	175	5.937143
Q5d		0.1192787				1049	175	5.994286
Q5e		0.1118178				1047	175	5.982857
Q5f		0.1040302				1011	172	5.877907
Q5g		0.1089197				1046	175	5.977143
Q5h		0.1252014				1059	175	6.051429
Q5i		0.1274688				1058	175	6.045714
Q5j		0.1175444				1045	175	5.971429
Q4			0.5104941			1018	175	5.817143
Q5k			0.5667414			1056	175	6.034286
Q1				0.4656789		1099	175	6.28
Q3				0.4015871		1115	175	6.371429
Q20				0.2986494		1016	175	5.805714
Q8					0.621025	1056	175	6.034286
Q13					0.485337	1114	175	6.365714
S(ci*mi)	5.4794187	5.903415	5.3122611	6.0511047	5.730598			
S(ci*Ri)	10.083394	10.664311	9.6951195	10.493239	9.957259			
Index	54.341016	55.356742	54.793148	57.666703	57.551959			

Customer Satisfaction Index 1999 for Hong Kong Hotel Industry (Age 30 to 34)

Item	Outer Coefficients					SUM	N	MEAN
	COL1	COL2	COL3	COL4	COL5			
Q2a	0.5295595					1977	330	5.990909
Q2b	0.2917925					1967	330	5.960606
Q2c	0.2672328					2019	330	6.118182
Q5a		0.1219426				2032	330	6.157576
Q5b		0.1152100				1977	330	5.990909
Q5c		0.1139642				1989	330	6.027273
Q5d		0.1162185				2011	330	6.093939
Q5e		0.1055777				1997	330	6.051515
Q5f		0.1140158				2000	330	6.060606
Q5g		0.1167447				2000	330	6.060606
Q5h		0.1185954				2017	330	6.112121
Q5i		0.1225511				2024	330	6.133333
Q5j		0.1219430				2020	330	6.121212
Q4			0.4805842			1885	330	5.712121
Q5k			0.6265902			2044	330	6.193939
Q1				0.4940642		2102	330	6.369697
Q3				0.4595376		2125	330	6.439394
Q20				0.2120588		1895	330	5.742424
Q8					0.4164061	1937	330	5.869697
Q13					0.6750792	2157	330	6.536364
S(ci*mi)	5.458197	5.929851	5.519043	6.158254	5.765255			
S(ci*Ri)	9.797263	10.500867	9.964570	10.490945	9.823368			
Index	55.711446	56.470108	55.386662	58.700657	58.689195			

Customer Satisfaction Index 1999 for Hong Kong Hotel Industry (Age 35 to 39)

Item	Outer Coefficients					SUM	N	MEAN
	COL1	COL2	COL3	COL4	COL5			
Q2a	0.3948565					3305	528	6.25947
Q2b	0.2591917					3286	528	6.223485
Q2c	0.4354981					3408	527	6.466793
Q5a		0.1217738				3372	528	6.386364
Q5b		0.1119952				3270	528	6.193182
Q5c		0.113977				3328	528	6.30303
Q5d		0.1134601				3323	528	6.293561
Q5e		0.1089248				3347	528	6.339015
Q5f		0.1115268				3342	528	6.329545
Q5g		0.1133391				3326	528	6.299242
Q5h		0.1160834				3359	528	6.361742
Q5i		0.1179231				3367	528	6.376894
Q5j		0.116264				3358	528	6.359848
Q4			0.5074734			2972	528	5.628788
Q5k			0.5371049			3407	528	6.452652
Q1				0.4845647		3508	528	6.643939
Q3				0.4819645		3512	528	6.651515
Q20				0.1573056		3001	528	5.683712
Q8					0.5612663	3034	528	5.746212
Q13					0.5488697	3495	528	6.619318
S(ci*mi)	5.8113978	6.0987372	5.2776326	6.1954576	5.7481624			
S(ci*Ri)	9.8059167	10.307406	9.4012047	10.114513	9.991224			
Index	59.264197	59.168499	56.137833	61.253147	57.532114			

Customer Satisfaction Index 1999 for Hong Kong Hotel Industry (Age 40 to 44)

Item	Outer Coefficients					SUM	N	MEAN
	COL1	COL2	COL3	COL4	COL5			
Q2a	0.4747511					2778	435	6.386207
Q2b	0.2762283					2747	434	6.329493
Q2c	0.3450654					2855	434	6.578341
Q5a		0.1226721				2831	435	6.508046
Q5b		0.1155670				2755	435	6.333333
Q5c		0.1147713				2787	435	6.406897
Q5d		0.1130059				2819	435	6.48046
Q5e		0.1067755				2827	435	6.498851
Q5f		0.1103958				2817	434	6.490783
Q5g		0.1109170				2795	435	6.425287
Q5h		0.1134181				2807	435	6.452874
Q5i		0.1191311				2822	435	6.487356
Q5j		0.1165232				2820	435	6.482759
Q4			0.5202796			2466	435	5.668966
Q5k			0.5236545			2868	435	6.593103
Q1				0.5095068		2915	435	6.701149
Q3				0.4632714		2922	435	6.717241
Q20				0.2022149		2490	435	5.724138
Q8					0.4303565	2503	435	5.754023
Q13					0.6721244	2871	435	6.6
S(ci*mi)	5.954157	6.238018	5.358021	6.508700	5.809821			
S(ci*Ri)	9.864403	10.288593	9.395407	10.574938	9.922328			
Index	60.360032	60.630430	57.028092	61.548351	58.553006			

Customer Satisfaction Index 1999 for Hong Kong Hotel Industry (Age 45 to 49)

Item	Outer Coefficients					SUM	N	MEAN
	COL1	COL2	COL3	COL4	COL5			
Q2a	0.4043789					3021	509	5.935167
Q2b	0.1943608					2987	509	5.868369
Q2c	0.5533813					3159	509	6.206287
Q5a		0.1330738				3142	509	6.172888
Q5b		0.1231216				3068	509	6.027505
Q5c		0.1229087				3108	509	6.10609
Q5d		0.1043846				3105	509	6.100196
Q5e		0.1088241				3157	509	6.202358
Q5f		0.1197973				3114	509	6.117878
Q5g		0.1173364				3120	509	6.129666
Q5h		0.1255324				3130	509	6.149312
Q5i		0.1320334				3134	509	6.157171
Q5j		0.1280834				3139	509	6.166994
Q4			0.491897			3028	509	5.948919
Q5k			0.610611			3148	509	6.184676
Q1				0.4445936		3216	509	6.318271
Q3				0.3993327		3245	509	6.375246
Q20				0.3104781		2963	509	5.821218
Q8					0.5605277	3050	509	5.992141
Q13					0.5336985	3260	509	6.404715
S(ci*mi)	5.8229593	6.2376121	5.6001787	6.0078633	5.6827219			
S(ci*Ri)	10.369089	10.935861	9.922572	10.38964	9.8480358			
Index	56.156904	57.038142	56.438781	57.825521	57.704115			

Customer Satisfaction Index 1999 for Hong Kong Hotel Industry (Age 50 to 54)

Item	Outer Coefficients					SUM	N	MEAN
	COL1	COL2	COL3	COL4	COL5			
Q2a	0.4524251					1793	317	5.656151
Q2b	0.3346910					1783	317	5.624606
Q2c	0.4117565					1885	317	5.946372
Q5a		0.1436220				1852	317	5.842271
Q5b		0.1350865				1822	317	5.747634
Q5c		0.1268684				1833	317	5.782334
Q5d		0.1177487				1887	317	5.952681
Q5e		0.1102773				1909	317	6.022082
Q5f		0.1239831				1858	316	5.879747
Q5g		0.1215558				1849	317	5.832808
Q5h		0.1459984				1846	317	5.823344
Q5i		0.1373939				1849	317	5.832808
Q5j		0.1314753				1856	317	5.85489
Q4			0.5347607			1888	317	5.955836
Q5k			0.5528755			1868	317	5.892744
Q1				0.4820816		1913	317	6.0347
Q3				0.3942268		1926	317	6.07571
Q20				0.3461239		1842	317	5.810726
Q8					0.6131161	1934	317	6.100946
Q13					0.4647818	2015	317	6.356467
S(ci*mi)	5.691075	6.279477	5.355265	6.093224	5.617061			
S(ci*ri)	10.789853	11.646085	9.788726	11.001891	9.701081			
Index	52.744689	53.919214	54.708498	55.383429	57.901389			

Customer Satisfaction Index 1999 for Hong Kong Hotel Industry (Age > 54)

Item	Outer Coefficients					SUM	N	MEAN
	COL1	COL2	COL3	COL4	COL5			
Q2a	0.3707132					643	122	5.270492
Q2b	0.3757609					646	122	5.295082
Q2c	0.4814839					675	122	5.532787
Q5a		0.1582401				679	122	5.565574
Q5b		0.1446691				672	122	5.508197
Q5c		0.1454128				675	122	5.532787
Q5d		0.1088175				673	122	5.516393
Q5e		0.1211851				666	122	5.459016
Q5f		0.1098518				660	122	5.409836
Q5g		0.1407341				662	122	5.42623
Q5h		0.1744827				673	122	5.516393
Q5i		0.1693864				666	122	5.459016
Q5j		0.1319682				677	122	5.54918
Q4			0.5531272			690	122	5.655738
Q5k			0.5476305			673	122	5.516393
Q1				0.420955		714	122	5.852459
Q3				0.363448		729	122	5.97541
Q20				0.3880041		682	122	5.590164
Q8					0.6112963	716	122	5.868852
Q13					0.482678	722	122	5.918033
S(ci*mi)	5.3795155	6.3166341	5.04853	5.6319721	5.3501377			
S(ci*ri)	11.051622	12.64273	9.9068193	10.551664	9.8457687			
Index	48.676253	49.962579	50.96015	53.375203	54.339462			

**Appendix IVf: Customer Satisfaction Index for Individual Hotels
(for Reference Only)**

<u>Hotel</u>	<u>Size</u>	<u>Expectation</u>	<u>Perceived Quality</u>	<u>Perceived Value</u>	<u>Satisfaction</u>	<u>Loyalty</u>
1	40	53.01	54.66	54.96	55.17	57.05
2	40	52.70	56.71	57.31	56.60	59.36
3	41	50.74	53.17	53.49	55.44	54.44
4	40	46.54	45.67	47.92	52.57	55.02
5	40	54.16	58.48	60.55	56.89	60.29
6	40	45.61	47.61	48.10	51.30	53.27
7	40	46.72	45.85	47.85	54.54	54.59
8	40	47.66	45.33	47.76	52.33	52.91
9	40	54.67	56.01	59.91	55.16	59.57
10	40	52.05	55.34	55.55	54.76	56.29
11	40	50.53	56.40	58.11	56.04	61.22
12	40	44.83	45.52	46.71	51.00	54.36
13	40	44.48	44.49	47.20	52.30	56.70
14	41	55.27	56.81	57.59	57.00	56.08
15	40	66.04	65.43	63.22	64.19	51.68
16	40	49.04	50.91	54.96	52.78	51.47
17	40	45.60	44.61	45.24	50.50	56.86
18	40	44.15	45.56	47.70	50.19	53.94
19	40	54.01	57.03	58.85	57.42	60.33
20	40	45.28	44.55	46.75	51.27	55.56
21	40	53.89	55.80	56.89	56.91	59.61
22	40	44.02	44.56	48.78	50.04	58.08
23	40	52.31	55.64	55.70	55.83	55.98
24	40	61.04	61.54	59.41	62.77	59.22
25	40	47.75	46.22	49.01	52.09	55.68
26	40	48.29	45.37	48.00	52.30	55.68
27	40	59.99	60.97	58.50	60.40	59.31
28	40	72.69	72.91	63.93	70.81	57.35
29	39	50.42	51.16	49.52	52.13	55.68
30	40	71.56	70.93	65.21	68.91	58.90
31	40	61.02	61.55	59.49	61.34	61.73
32	40	57.81	61.69	59.02	62.23	62.59
33	40	62.03	61.61	62.36	61.94	54.90
34	40	63.55	61.59	60.81	63.62	62.00
35	40	45.91	45.04	44.85	50.08	56.69
36	40	57.28	59.53	55.40	58.40	59.42
37	40	72.79	73.00	62.07	68.63	57.34
38	40	72.12	72.06	64.60	67.61	54.13
39	40	69.52	69.04	62.68	65.00	59.48
40	40	71.62	70.89	63.09	65.72	57.02
41	40	44.56	45.34	46.39	51.08	53.17
42	40	55.59	57.70	56.38	59.83	60.08
43	40	63.29	65.42	59.06	62.26	57.76
44	40	44.93	45.92	46.23	50.00	53.50
45	40	63.44	61.46	60.69	64.17	62.01
46	41	66.90	66.47	58.09	61.87	55.14
47	40	63.89	65.05	58.23	59.31	52.72
48	41	61.04	60.01	58.98	61.66	61.54
49	40	44.05	44.77	48.33	50.70	54.62
50	40	60.21	60.98	57.66	60.94	61.86
51	40	60.10	62.00	59.70	61.92	61.30
52	40	61.11	62.06	59.34	62.13	62.32
53	40	60.67	61.69	61.13	63.13	63.59
54	40	59.57	61.12	61.98	63.45	63.12
55	40	67.19	66.43	67.21	64.21	57.92
56	38	61.87	63.19	60.94	62.25	61.83
57	40	57.53	59.35	58.24	59.35	61.20
58	40	61.05	62.48	60.76	61.62	62.87
59	40	50.54	50.88	52.10	53.85	54.72
60	40	68.95	69.82	60.46	64.76	55.43
61	40	63.53	64.59	56.14	59.61	55.47
62	40	52.82	53.80	54.75	54.84	55.39
Overall	2481	56.41	57.10	55.95	59.02	57.88

Appendix IVg: Hotel Codes Used in This Report

<u>Hotel Code</u>	<u>Hotel Name</u>	<u>Hotel Code</u>	<u>Hotel Name</u>
1	New Astor Hotel	38	Hotel Concourse
2	New Cathay Hotel	39	Conrad International HK
3	Hotel New Harbour	40	Eaton Hotel Hong Kong
4	New Kings Hotel	41	The Empire Hotel Hong Kong
5	New World Renaissance Hotel	42	The Excelsior HK
6	Renaissance Harbour View HotelHong Kong	43	Furama Hotel HK
7	Newton Hotel Hong Kong	44	Grand Hyatt Hong Kong
8	Newton Hotel Kowloon	45	Grand Stanford Harbour View
9	Hotel Nikko Hong Kong	46	Grand Tower Hotel
10	Park Hotel	47	Grandfield Pacific Hotel
11	The Park Lane Hong Kong	48	Guangdong Hotel HK
12	Pearl Garden Hotel	49	Harbour View International House
13	Pearl Seaview Hotel	50	Holiday Inn Golden Mile HK
14	The Peninsula Hong Kong	51	The HongKong Hotel
15	The Prince, Hong Kong	52	Great Eagle Hotel
16	Pruton Prudential Hotel	53	Hyatt Regency HK
17	Ramada Hotel Kowloon	54	Imperial Hotel
18	Regal Kai Tak Hotel	55	Island Shangri-La HK
19	Regal Hong Kong Hotel	56	The Kimbereley Hotel
20	Regal Kowloon Hotel	57	The Kowloon Hotel
21	The Regent Hong Kong	58	Kowloon Shangri-La
22	The Ritz-Carlton Hong Kong	59	Luk Kwok Hotel
23	The Royal Garden	60	Majestic Hotel
24	The Royal Pacific Hotel & Towers	61	Mandarin Oriental, HK
25	Royal Plaza Hotel	62	The Marco Polo, HK
26	Shamrock Hotel	63	Century Harbour Hotel
27	Sheraton Hong Kong Hotel & Towers	64	Gold Coast Hotel
28	The South China Hotel	65	Harbour Plaza HK
29	South Pacific Hotel	66	Harbour Plaza North Point
30	Standford Hotel	67	Harbour Plaza Resort City HK
31	Standford Hillview Hotel	68	The Metropole Hotel
32	The Wesley Hong Kong	69	Panda Hotel
33	The Wharney Hotel	70	Regal Airport Hotel
34	Windsor Hotel	71	Regal Riverside Hotel
35	Century Hong Kong Hotel	72	Royal Park Hotel
36	The Charterhouse	73	J W Marriott Hotel HK
37	City Garden Hotel		

**APPENDIX V: CUSTOMER SATISFACTION OUTPUTS
FOR THE CASE STUDY**

Appendix Va: Customer Satisfaction Index for 3 Selected International Hotels

Customer Satisfaction Index 2000 for 3 Selected International Hotels

(Overall)									
Outer Coefficients									
Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN	
Q2a	0.3362117					4815	750	6.42	
Q2b	0.3731791					4561	750	6.08133	
Q2c	0.4966199					4898	750	6.53067	
Q5a		0.1352600				5003	750	6.67067	
Q5b		0.1327254				4866	750	6.488	
Q5c		0.1273472				4718	750	6.29067	
Q5d		0.1134470				4684	750	6.24533	
Q5e		0.1178285				4773	750	6.364	
Q5f		0.1142880				4805	749	6.41522	
Q5g		0.1301458				4832	750	6.44267	
Q5h		0.1671605				4857	748	6.49332	
Q5i		0.1743710				4871	750	6.49467	
Q5j		0.1560093				4852	749	6.47797	
Q4			0.5642119			5272	750	7.02933	
Q5k			0.6562840			4824	748	6.4492	
Q1				0.4976861		5476	750	7.30133	
Q3				0.5184667		5500	750	7.33333	
Q20				0.2989690		4988	750	6.65067	
Q8					0.6081836	5299	750	7.06533	
Q13					0.7104380	3350	750	4.46667	
S(ci*mi)	6.465154	7.454488	6.978043	8.109083	6.151688				
S(ci*Ri)	10.854096	12.317244	10.984463	11.836096	11.867594				
Index	59.564184	60.520741	63.526482	68.511462	51.836015				

Customer Satisfaction Index 2000 for 3 Selected International Hotels

(Male)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.2383354					2078	331	6.27795
Q2b	0.4504083					1972	331	5.9577
Q2c	0.4957965					2163	331	6.53474
Q5a		0.1444349				2187	331	6.60725
Q5b		0.1353375				2143	331	6.47432
Q5c		0.1285105				2074	331	6.26586
Q5d		0.1147750				2049	331	6.19033
Q5e		0.1221516				2100	331	6.34441
Q5f		0.1133912				2126	331	6.42296
Q5g		0.1248514				2125	331	6.41994
Q5h		0.1574046				2154	330	6.52727
Q5i		0.1697929				2175	331	6.571
Q5j		0.1426125				2153	331	6.50453
Q4			0.5678446			2195	331	6.63142
Q5k			0.6380800			2271	329	6.90274
Q1				0.4951329		2378	331	7.18429
Q3				0.4529741		2479	331	7.48943
Q20				0.3200798		2167	331	6.54683
Q8					0.8292194	2263	331	6.83686
Q13					0.3391799	2044	331	6.17523
S(ci*mi)	6.235019	7.368583	6.964189	7.777015	6.595369			
S(ci*Ri)	10.660862	12.179359	10.853321	11.413681	10.515594			
Index	58.485127	60.500579	64.166430	68.137656	62.719889			

(Female)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.4527082					2668	419	6.36754
Q2b	0.2830511					2520	419	6.01432
Q2c	0.4860193					2780	419	6.63484
Q5a		0.1234409				2809	419	6.70406
Q5b		0.1277094				2744	419	6.54893
Q5c		0.1248197				2609	419	6.22673
Q5d		0.1117562				2537	419	6.05489
Q5e		0.1143742				2608	419	6.22434
Q5f		0.1159104				2646	418	6.33014
Q5g		0.134598				2673	419	6.37947
Q5h		0.1770089				2719	418	6.50478
Q5i		0.1802186				2738	419	6.53461
Q5j		0.1674926				2692	418	6.44019
Q4			0.5581007			2786	419	6.64916
Q5k			0.6742879			2922	419	6.97375
Q1				0.4803068		3053	419	7.2864
Q3				0.5824087		3217	419	7.6778
Q20				0.2824138		2738	419	6.53461
Q8					0.5021219	2957	419	7.05728
Q13					0.8073707	2758	419	6.58234
S(ci*mi)	6.587882	7.452519	7.180828	8.471659	7.548509			
S(ci*Ri)	10.996007	12.395957	11.091497	12.106164	11.785433			
Index	59.911585	60.120562	64.741737	69.978067	64.049485			

Customer Satisfaction Index 2000 for 3 Selected International Hotels

(White)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.2296544					2639	416	6.34375
Q2b	0.4188682					2494	416	5.99519
Q2c	0.5511111					2732	416	6.56731
Q5a		0.1431885				2769	416	6.65625
Q5b		0.1360094				2706	416	6.50481
Q5c		0.1285509				2612	416	6.27885
Q5d		0.1123313				2567	416	6.17067
Q5e		0.1174568				2635	416	6.33413
Q5f		0.1144426				2685	416	6.45433
Q5g		0.1293052				2687	416	6.45913
Q5h		0.1526513				2732	415	6.58313
Q5i		0.1776918				2731	416	6.5649
Q5j		0.1519188				2712	416	6.51923
Q4			0.5623471			2780	416	6.68269
Q5k			0.6605415			2862	415	6.89639
Q1				0.4890792		2998	416	7.20673
Q3				0.5357703		3122	416	7.50481
Q20				0.2829906		2710	416	6.51442
Q8					0.8427756	2881	416	6.92548
Q13					0.3237984	2645	416	6.35817
S(ci*mi)	6.387748	7.454262	7.090453	8.081196	6.728818			
S(ci*ri)	10.796703	12.271919	11.005997	11.770561	10.499166			
Index	59.163874	60.742428	64.423538	68.655994	64.089076			

Q2a deleted

(Chinese)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2b	0.8231458					858	143	6
Q2c	0.3066043					951	143	6.65035
Q5a		0.1646140				960	143	6.71329
Q5b		0.1503871				933	143	6.52448
Q5c		0.1449412				885	143	6.18881
Q5d		0.1116936				872	143	6.0979
Q5e		0.1123483				897	143	6.27273
Q5f		0.1239437				904	143	6.32168
Q5g		0.1221097				905	143	6.32867
Q5h		0.1389437				911	143	6.37063
Q5i		0.1537616				935	143	6.53846
Q5j		0.1786859				909	142	6.40141
Q4			0.5403597			947	143	6.62238
Q5k			0.6361013			1004	142	7.07042
Q1				0.5690129		1049	143	7.33566
Q3				0.5027232		1115	143	7.7972
Q20				0.2195001		931	143	6.51049
Q8					0.5557004	1005	143	7.02797
Q13					0.6208620	945	143	6.60839
S(ci*mi)	5.848150	7.558399	6.899510	8.231739	6.831784			
S(ci*ri)	10.167751	12.612859	10.588149	11.621126	10.589062			
Index	57.516658	59.926132	65.162570	70.834267	64.517367			

Appendix Vb: Customer Satisfaction Index for 2 Selected Asian Hotels

Customer Satisfaction Index 2001 for 2 Selected Asian Hotels

(Overall)								
Outer Coefficients								
Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.2196213					3501	500	7.002
Q2b	0.6883466					3271	500	6.542
Q2c	0.3047922					3496	500	6.992
Q5a		0.1542038				3574	500	7.148
Q5b		0.1507713				3398	500	6.796
Q5c		0.1239170				3097	500	6.194
Q5d		0.1265904				3384	500	6.768
Q5e		0.1246607				3368	500	6.736
Q5f		0.1176281				3305	500	6.61
Q5g		0.1261208				3338	498	6.70281
Q5h		0.1838114				3344	500	6.688
Q5i		0.1807366				3374	500	6.748
Q5j		0.1652662				3366	500	6.732
Q4			0.4806434			3692	500	7.384
Q5k			0.7108374			3369	500	6.738
Q1				0.5350722		3875	500	7.75
Q3				0.6125695		3918	500	7.836
Q20				0.1776736		3330	500	6.66
Q8					0.5819573	3670	500	7.34
Q13					0.6846553	3560	500	7.12
S(ci*mi)	6.959299	8.321603	7.147212	8.804895	7.879700			
S(ci*Ri)	10.914841	13.083357	10.723327	11.927838	11.399513			
Index	63.759965	63.604498	66.651071	73.818032	69.123123			

Customer Satisfaction Index 2001 for 2 Selected Asian Hotels

(Male)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.2694771					704	102	6.90196
Q2b	0.6279499					663	102	6.5
Q2c	0.3324314					721	102	7.06863
Q5a		0.1715069				732	102	7.17647
Q5b		0.1823480				702	102	6.88235
Q5c		0.1354268				633	102	6.20588
Q5d		0.1474020				707	102	6.93137
Q5e		0.0953872				716	102	7.01961
Q5f		0.1233782				696	102	6.82353
Q5g		0.1507073				700	102	6.86275
Q5h		0.1908143				690	102	6.76471
Q5i		0.1726868				707	102	6.93137
Q5j		0.1521698				691	102	6.77451
Q4			0.4029998			760	102	7.45098
Q5k			0.7573898			699	102	6.85294
Q1				0.5137585		783	102	7.67647
Q3				0.5168229		804	102	7.88235
Q20				0.2216979		670	102	6.56863
Q8					0.8271086	738	102	7.23529
Q13					0.3959540	749	102	7.34314
S(ci*mi)	7.061570	8.890467	7.032702	8.221604	7.668856			
S(ci*ri)	11.068726	13.696446	10.443506	11.270514	11.007563			
Index	63.797498	64.910763	67.340427	72.947909	69.668969			

(Female)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.2160029					2797	398	7.02764
Q2b	0.7003928					2608	398	6.55276
Q2c	0.2899035					2775	398	6.97236
Q5a		0.1513283				2842	398	7.1407
Q5b		0.1455461				2696	398	6.77387
Q5c		0.1219476				2464	398	6.19095
Q5d		0.1231777				2677	398	6.72613
Q5e		0.1300947				2652	398	6.66332
Q5f		0.1164157				2609	398	6.55528
Q5g		0.1218875				2638	396	6.66162
Q5h		0.1825178				2654	398	6.66834
Q5i		0.1817907				2667	398	6.70101
Q5j		0.1661669				2675	398	6.72111
Q4			0.4964052			2932	398	7.36683
Q5k			0.7014409			2670	398	6.70854
Q1				0.5411915		3092	398	7.76884
Q3				0.6399464		3114	398	7.82412
Q20				0.1591624		2660	398	6.68342
Q8					0.5174573	2932	398	7.36683
Q13					0.7364235	2811	398	7.06281
S(ci*mi)	6.922512	8.203173	7.164735	8.934899	7.759364			
S(ci*ri)	10.856693	12.967857	10.780615	12.062703	11.284927			
Index	63.762619	63.257737	66.459427	74.070454	68.758650			

Customer Satisfaction Index 2001 for 2 Selected Asian Hotels

(White)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.2566221					2041	289	7.06228
Q2b	0.6923302					1910	289	6.609
Q2c	0.2919676					2020	289	6.98962
Q5a		0.1473620				2069	289	7.15917
Q5b		0.1459793				1974	289	6.83045
Q5c		0.1204028				1811	289	6.26644
Q5d		0.1234937				1986	289	6.87197
Q5e		0.1373988				1954	289	6.76125
Q5f		0.1244322				1915	289	6.6263
Q5g		0.1336326				1943	288	6.74653
Q5h		0.1959374				1956	289	6.76817
Q5i		0.1887593				1961	289	6.78547
Q5j		0.1624962				1958	289	6.77509
Q4			0.5084227			2139	289	7.40138
Q5k			0.6699231			1963	289	6.79239
Q1				0.5318768		2243	289	7.76125
Q3				0.6348536		2269	289	7.85121
Q20				0.1849728		1933	289	6.68858
Q8					0.6033027	2127	289	7.35986
Q13					0.6894468	2068	289	7.15571
S(ci*mi)	7.187768	8.538292	7.135063	8.997899	8.080956			
S(ci*Ri)	11.168279	13.319049	10.605112	12.165329	11.634746			
Index	64.358783	64.105868	67.279469	73.963464	69.455372			

(Chinese)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.2468877					944	136	6.94118
Q2b	0.6331537					874	136	6.42647
Q2c	0.2979715					948	136	6.97059
Q5a		0.1599485				968	136	7.11765
Q5b		0.1501854				921	136	6.77206
Q5c		0.1209112				841	136	6.18382
Q5d		0.1301069				918	136	6.75
Q5e		0.1110876				931	136	6.84559
Q5f		0.1039477				911	136	6.69853
Q5g		0.1163165				908	136	6.67647
Q5h		0.1582996				901	136	6.625
Q5i		0.1669025				906	136	6.66176
Q5j		0.1660770				911	136	6.69853
Q4			0.4864956			1011	136	7.43382
Q5k			0.7240505			915	136	6.72794
Q1				0.5205959		1044	136	7.67647
Q3				0.5670102		1066	136	7.83824
Q20				0.1870930		902	136	6.63235
Q8					0.5603994	1003	136	7.375
Q13					0.6538441	963	136	7.08088
S(ci*mi)	6.681658	7.904066	7.277346	8.406866	7.548495			
S(ci*Ri)	10.602116	12.454046	10.894915	11.472292	10.928192			
Index	63.021933	63.465845	66.795799	73.279744	69.073599			

Appendix Vc: Customer Satisfaction Index for Sheraton Hong Kong Hotel & Towers

Customer Satisfaction Index 2000 for Sheraton Hong Kong Hotel & Towers

(Overall)								
Outer Coefficients								
Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.3741171					1599	250	6.396
Q2b	0.2447301					1502	250	6.008
Q2c	0.5149068					1641	250	6.564
Q5a		0.1332224				1644	250	6.576
Q5b		0.1277420				1631	250	6.524
Q5c		0.1340961				1640	250	6.56
Q5d		0.1038566				1577	250	6.308
Q5e		0.1109957				1630	250	6.52
Q5f		0.1074203				1638	250	6.552
Q5g		0.1202778				1658	250	6.632
Q5h		0.1265516				1675	250	6.7
Q5i		0.1374238				1676	250	6.704
Q5j		0.1326141				1668	250	6.672
Q4			0.5529992			1714	250	6.856
Q5k			0.5416998			1640	248	6.6129
Q1				0.4147918		1749	250	6.996
Q3				0.4388490		1700	250	6.8
Q20				0.3581168		1611	250	6.444
Q8					0.6487199	1597	250	6.388
Q13					0.4645437	856	250	3.424
S(ci*mi)	6.109286	6.889235	6.278872	6.982004	4.621357			
S(ci*Ri)	10.203786	11.107804	9.852291	10.905818	10.019372			
Index	59.872734	62.021578	63.730069	64.020906	46.124214			

Customer Satisfaction Index 2000 for Sheraton Hong Kong Hotel & Towers

(Male)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.5674452					748	118	6.33898
Q2b	0.2010259					704	118	5.9661
Q2c	0.3435581					765	118	6.48305
Q5a		0.1258629				771	118	6.5339
Q5b		0.1243914				765	118	6.48305
Q5c		0.1299640				770	118	6.52542
Q5d		0.1075378				730	118	6.18644
Q5e		0.1178360				754	118	6.38983
Q5f		0.1050520				769	118	6.51695
Q5g		0.1166047				779	118	6.60169
Q5h		0.1255498				793	118	6.72034
Q5i		0.1305223				796	118	6.74576
Q5j		0.1272844				787	118	6.66949
Q4			0.5544873			753	118	6.38136
Q5k			0.5229944			817	116	7.0431
Q1				0.3961116		833	118	7.05932
Q3				0.3998502		806	118	6.83051
Q20				0.3849405		746	118	6.32203
Q8					0.6806419	743	118	6.29661
Q13					0.4349263	461	118	3.90678
S(ci*mi)	5.911642	6.712043	6.144403	6.780164	4.869330			
S(ci*Ri)	10.008263	10.895448	9.697335	10.628121	10.040114			
Index	59.067613	61.604108	63.361765	63.794572	48.498750			

(Female)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.0880720					851	132	6.44697
Q2b	0.2577656					798	132	6.04545
Q2c	0.7707801					876	132	6.63636
Q5a		0.1455401				873	132	6.61364
Q5b		0.1346393				866	132	6.56061
Q5c		0.1424021				870	132	6.59091
Q5d		0.1025183				827	132	6.26515
Q5e		0.0965073				864	132	6.54545
Q5f		0.1074069				869	132	6.58333
Q5g		0.1193930				879	132	6.65909
Q5h		0.1224168				908	132	6.87879
Q5i		0.1452857				893	132	6.76515
Q5j		0.1411623				881	132	6.67424
Q4			0.5554900			858	132	6.5
Q5k			0.5600556			938	132	7.10606
Q1				0.4423634		937	132	7.09848
Q3				0.4942889		913	132	6.91667
Q20				0.2960437		841	132	6.37121
Q8					0.6048065	854	132	6.4697
Q13					0.5058994	540	132	4.09091
S(ci*mi)	6.124667	7.070384	6.474928	7.212403	4.871797			
S(ci*Ri)	10.049559	11.315446	10.039910	11.094264	9.996353			
Index	60.944633	62.484356	64.491895	65.010195	48.735747			

Customer Satisfaction Index 2000 for Sheraton Hong Kong Hotel & Towers

(White)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.0976658					970	152	6.38158
Q2b	0.3357625					903	152	5.94079
Q2c	0.6884072					985	152	6.48026
Q5a		0.1353410				1006	152	6.61842
Q5b		0.1302551				997	152	6.55921
Q5c		0.1327127				1000	152	6.57895
Q5d		0.0924971				939	152	6.17763
Q5e		0.1116493				987	152	6.49342
Q5f		0.1141675				999	152	6.57237
Q5g		0.1211077				1016	152	6.68421
Q5h		0.1221038				1044	152	6.86842
Q5i		0.1373448				1021	152	6.71711
Q5j		0.1358214				1012	152	6.65789
Q4			0.5414341			982	152	6.46053
Q5k			0.5465527			1065	151	7.05298
Q1				0.3980859		1078	152	7.09211
Q3				0.4475804		1040	152	6.84211
Q20				0.3697833		965	152	6.34868
Q8					0.6697064	976	152	6.42105
Q13					0.4485712	648	152	4.26316
S(ci*mi)	5.957181	6.911987	6.264788	7.017847	5.094272			
S(ci*ri)	10.096520	11.097004	9.791881	10.939046	10.064498			
Index	59.002319	62.286970	63.979410	64.154103	50.616256			

Q2a deleted

(Chinese)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2b	0.8105047					174	28	6.21429
Q2c	0.2335008					198	28	7.07143
Q5a		0.1280182				180	28	6.42857
Q5b		0.1207375				177	28	6.32143
Q5c		0.1281673				182	28	6.5
Q5d		0.1093114				175	28	6.25
Q5e		0.1117520				183	28	6.53571
Q5f		0.1070794				181	28	6.46429
Q5g		0.1164327				181	28	6.46429
Q5h		0.1181523				185	28	6.60714
Q5i		0.1021023				187	28	6.67857
Q5j		0.1167695				182	28	6.5
Q4			0.5297439			171	28	6.10714
Q5k			0.5279190			199	27	7.37037
Q1				0.4424204		201	28	7.17857
Q3				0.4075093		194	28	6.92857
Q20				0.3244692		174	28	6.21429
Q8					0.5647501	168	28	6
Q13					0.5144797	65	28	2.32143
S(ci*mi)	5.643887	6.340742	6.068517	6.841349	3.503599			
S(ci*ri)	9.396050	10.426703	9.518966	10.569590	9.713068			
Index	60.066590	60.812532	63.751854	64.726722	36.070978			

Appendix Vd: Customer Satisfaction Index for Holiday Inn Golden Mile Hong Kong

Customer Satisfaction Index 2000 for Holiday Inn Golden Mile Hong Kong

(Overall)								
Outer Coefficients								
Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.4474173					1652	250	6.608
Q2b	0.6299878					1549	250	6.196
Q2c	0.0116678					1667	250	6.668
Q5a		0.1290224				1696	250	6.784
Q5b		0.1320165				1603	250	6.412
Q5c		0.1338578				1487	250	5.948
Q5d		0.1344769				1540	250	6.16
Q5e		0.1319680				1546	250	6.184
Q5f		0.1372971				1551	250	6.204
Q5g		0.1420587				1552	250	6.208
Q5h		0.1749955				1581	250	6.324
Q5i		0.1725286				1583	250	6.332
Q5j		0.1516042				1574	250	6.296
Q4			0.4793551			1829	250	7.316
Q5k			0.5899837			1573	250	6.292
Q1				0.4331832		1888	250	7.552
Q3				0.4095820		1919	250	7.676
Q20				0.3340378		1645	250	6.58
Q8					0.6171050	1991	250	7.964
Q13					0.4134286	1367	250	5.468
S(ci*mi)	5.848666	7.609920	6.149801	7.436517	6.144718			
S(ci*Ri)	9.801656	12.958431	9.62405	10.591227	9.274802			
Index	59.670181	58.725630	63.900344	70.213930	66.251743			

Customer Satisfaction Index 2000 for Holiday Inn Golden Mile Hong Kong

Q2c deleted

(Male)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.3762226					604	96	6.29167
Q2b	0.7561796					568	96	5.91667
Q5a		0.2215541				643	96	6.69792
Q5b		0.1792109				624	96	6.5
Q5c		0.1313424				565	96	5.88542
Q5d		0.2162006				581	96	6.05208
Q5e		0.1719217				593	96	6.17708
Q5f		0.1718651				596	96	6.20833
Q5g		0.1509833				602	96	6.27083
Q5h		0.0903914				611	96	6.36458
Q5i		0.1485612				630	96	6.5625
Q5j		0.2547445				611	96	6.36458
Q4			0.5834109			621	96	6.46875
Q5k			0.4948683			723	96	7.53125
Q1				0.4337761		687	96	7.15625
Q3				0.4404809		757	96	7.88542
Q20				0.2757598		633	96	6.59375
Q8					0.1894900	718	96	7.47917
Q13					0.8257922	777	96	8.09375
S(ci*mi)	5.708728	9.240856	6.422637	7.245860	7.085701			
S(ci*ri)	10.191620	15.630977	9.704513	10.350151	9.137540			
Index	56.013938	59.118865	66.181962	70.007287	77.544950			

Q2c deleted

(Female)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.6049815					979	154	6.35714
Q2b	0.5071158					912	154	5.92208
Q5a		0.1153937				1046	154	6.79221
Q5b		0.1309530				1000	154	6.49351
Q5c		0.1649034				887	154	5.75974
Q5d		0.1389722				881	154	5.72078
Q5e		0.1554627				900	154	5.84416
Q5f		0.1322385				918	154	5.96104
Q5g		0.1437666				916	154	5.94805
Q5h		0.1549859				956	154	6.20779
Q5i		0.2153220				982	154	6.37662
Q5j		0.2283823				956	154	6.20779
Q4			0.5318999			980	154	6.36364
Q5k			0.5358462			1144	154	7.42857
Q1				0.4976460		1147	154	7.44805
Q3				0.4988659		1255	154	8.14935
Q20				0.2169308		1027	154	6.66883
Q8					0.5798731	1194	154	7.75325
Q13					0.4582140	1300	154	8.44156
S(ci*mi)	5.737036	8.103428	6.297643	8.005159	7.325852			
S(ci*ri)	10.008876	14.223423	9.609715	10.920984	9.342784			
Index	57.319483	56.972416	65.534132	73.300706	78.411879			

Customer Satisfaction Index 2000 for Holiday Inn Golden Mile Hong Kong

Q2c deleted

(White)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.4871772					706	112	6.30357
Q2b	0.6359271					665	112	5.9375
Q5a		0.1786921				753	112	6.72321
Q5b		0.1741691				717	112	6.40179
Q5c		0.1492196				647	112	5.77679
Q5d		0.1540173				668	112	5.96429
Q5e		0.1581064				670	112	5.98214
Q5f		0.1554985				686	112	6.125
Q5g		0.1776351				688	112	6.14286
Q5h		0.1101912				707	112	6.3125
Q5i		0.1790613				721	112	6.4375
Q5j		0.2507034				705	112	6.29464
Q4			0.5401352			715	112	6.38393
Q5k			0.5456796			840	112	7.5
Q1				0.4920968		809	112	7.22321
Q3				0.4886517		890	112	7.94643
Q20				0.2258730		737	112	6.58036
Q8					0.5954132	850	112	7.58929
Q13					0.4278820	929	112	8.29464
S(ci*mi)	5.723669	8.825505	6.454967	7.717260	7.044594			
S(ci*Ri)	10.107939	15.185646	9.772333	10.859594	9.209657			
Index	56.625483	58.117417	66.053486	71.063986	76.491385			

Q2c deleted

(Chinese)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.2580387					421	66	6.37879
Q2b	0.8283144					393	66	5.95455
Q5a		0.1396379				451	66	6.83333
Q5b		0.1484988				435	66	6.59091
Q5c		0.1833974				385	66	5.83333
Q5d		0.1627053				387	66	5.86364
Q5e		0.1280408				403	66	6.10606
Q5f		0.1427378				407	66	6.16667
Q5g		0.1379702				403	66	6.10606
Q5h		0.1408176				414	66	6.27273
Q5i		0.2141733				433	66	6.56061
Q5j		0.2285502				420	66	6.36364
Q4			0.5515496			429	66	6.5
Q5k			0.4821367			493	66	7.4697
Q1				0.4306031		489	66	7.40909
Q3				0.4668051		533	66	8.07576
Q20				0.2743731		436	66	6.60606
Q8					0.8414985	511	66	7.74242
Q13					0.1827978	551	66	8.34848
S(ci*mi)	5.491857	8.577591	6.152801	7.600926	7.017027			
S(ci*Ri)	9.777178	14.638764	9.303177	10.546032	9.218667			
Index	56.170163	58.595051	66.136561	72.073805	76.117588			

**Appendix Ve: Customer Satisfaction Index for
J W Marriott Hotel Hong Kong**

Customer Satisfaction Index 2000 for J W Marriott Hotel Hong Kong

(Overall)									
Outer Coefficients									
Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN	
Q2a	0.2237723					1564	250	6.256	
Q2b	0.5554840					1510	250	6.04	
Q2c	0.3783713					1589	250	6.356	
Q5a		0.1107197				1663	250	6.652	
Q5b		0.1213844				1632	250	6.528	
Q5c		0.1216802				1591	250	6.364	
Q5d		0.1241827				1567	250	6.268	
Q5e		0.1309135				1597	250	6.388	
Q5f		0.1201719				1616	249	6.48996	
Q5g		0.1389143				1622	250	6.488	
Q5h		0.1825215				1601	248	6.45565	
Q5i		0.1893904				1612	250	6.448	
Q5j		0.1466963				1610	249	6.46586	
Q4			0.4824520			1729	250	6.916	
Q5k			0.6909835			1611	250	6.444	
Q1				0.3266124		1839	250	7.356	
Q3				0.6284856		1881	250	7.524	
Q20				0.3822425		1732	250	6.928	
Q8					0.9800695	1711	250	6.844	
Q13					0.0820274	1127	250	4.508	
S(ci*mi)	6.002343	7.560544	6.615900	8.442122	6.015278				
S(ci*ri)	10.418648	12.479174	10.560920	12.036065	9.558872				
Index	57.611535	60.585289	62.645115	70.140219	62.928745				

Customer Satisfaction Index 2000 for J W Marriott Hotel Hong Kong

Q2a deleted

(Male)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2b	0.6078788					700	117	5.98291
Q2c	0.5402997					746	117	6.37607
Q5a		0.1396849				773	117	6.60684
Q5b		0.1409871				754	117	6.44444
Q5c		0.1425040				739	117	6.31624
Q5d		0.1143833				738	117	6.30769
Q5e		0.1335168				753	117	6.4359
Q5f		0.1282523				761	117	6.50427
Q5g		0.1147602				744	117	6.35897
Q5h		0.1408578				750	116	6.46552
Q5i		0.1599045				749	117	6.40171
Q5j		0.1496775				755	117	6.45299
Q4			0.5008120			821	117	7.01709
Q5k			0.6195587			731	117	6.24786
Q1				0.3704676		858	117	7.33333
Q3				0.3572727		916	117	7.82906
Q20				0.4126054		788	117	6.73504
Q8					0.7450776	802	117	6.8547
Q13					0.3177370	806	117	6.88889
S(ci*mi)	5.933691	7.412009	6.264792	7.152441	6.233324			
S(ci*Ri)	10.333607	12.280756	10.083336	10.263111	9.565331			
Index	57.421299	60.354662	62.130153	69.690768	65.165796			

(Female)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.7242883					838	133	6.30075
Q2b	0.1920553					810	133	6.09023
Q2c	0.2050296					843	133	6.33835
Q5a		0.0936697				890	133	6.69173
Q5b		0.1128608				878	133	6.6015
Q5c		0.1112100				852	133	6.40602
Q5d		0.1417104				829	133	6.23308
Q5e		0.1211354				844	133	6.34586
Q5f		0.1219474				859	132	6.50758
Q5g		0.1451893				878	133	6.6015
Q5h		0.1838994				855	132	6.47727
Q5i		0.1939946				863	133	6.48872
Q5j		0.1529441				855	132	6.47727
Q4			0.5307561			948	133	7.12782
Q5k			0.5712811			840	133	6.31579
Q1				0.4688289		969	133	7.28571
Q3				0.3794110		1049	133	7.88722
Q20				0.3508963		870	133	6.54135
Q8					0.6198256	909	133	6.83459
Q13					0.4629572	918	133	6.90226
S(ci*mi)	5.911396	7.550370	6.289188	7.504451	6.348918			
S(ci*Ri)	10.092359	12.407050	9.918335	10.792226	9.745045			
Index	58.572990	60.855486	63.409713	69.535713	65.150214			

Customer Satisfaction Index 2000 for J W Marriott Hotel Hong Kong

(White)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.1441418					963	152	6.33553
Q2b	0.6514903					926	152	6.09211
Q2c	0.3594413					982	152	6.46053
Q5a		0.1185811				1010	152	6.64474
Q5b		0.1313802				992	152	6.52632
Q5c		0.1287135				965	152	6.34868
Q5d		0.1311908				960	152	6.31579
Q5e		0.1201007				978	152	6.43421
Q5f		0.118223				1000	152	6.57895
Q5g		0.1334512				983	152	6.46711
Q5h		0.1719543				981	151	6.49669
Q5i		0.1964555				989	152	6.50658
Q5j		0.1507753				995	152	6.54605
Q4			0.5109585			1083	152	7.125
Q5k			0.5944505			957	152	6.29605
Q1				0.4623760		1111	152	7.30921
Q3				0.3288209		1192	152	7.84211
Q20				0.3830966		1008	152	6.63158
Q8					0.9643430	1055	152	6.94079
Q13					0.0515752	1068	152	7.02632
S(ci*mi)	6.049268	7.686224	6.277862	7.324493	6.039767			
S(ci*Ri)	10.395661	12.607426	9.948681	10.568642	9.143264			
Index	58.190321	60.965849	63.102455	69.304021	66.057015			

Q2a deleted

(Chinese)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2b	0.8458945					291	49	5.93878
Q2c	0.2906593					300	49	6.12245
Q5a		0.1362934				329	49	6.71429
Q5b		0.1219750				321	49	6.55102
Q5c		0.1262813				318	49	6.4898
Q5d		0.1204485				310	49	6.32653
Q5e		0.1446392				311	49	6.34694
Q5f		0.1494445				316	49	6.44898
Q5g		0.1502055				321	49	6.55102
Q5h		0.1455588				312	49	6.36735
Q5i		0.1477000				315	49	6.42857
Q5j		0.1522407				307	48	6.39583
Q4			0.5055708			347	49	7.08163
Q5k			0.6225534			312	49	6.36735
Q1				0.4225161		359	49	7.32653
Q3				0.3697366		388	49	7.91837
Q20				0.4071182		321	49	6.55102
Q8					0.6412616	326	49	6.65306
Q13					0.4398384	329	49	6.71429
S(ci*mi)	5.666570	7.616757	6.416156	7.490956	6.138453			
S(ci*Ri)	10.228984	12.553082	10.153118	10.794338	9.729900			
Index	55.397196	60.676391	63.193948	69.397086	63.088556			

Appendix Vf: Customer Satisfaction Index for Kowloon Shangri-La

Customer Satisfaction Index 2001 for Kowloon Shangri-La

(Overall)								
Outer Coefficients								
Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.1770455					1761	250	7.044
Q2b	0.6727510					1631	250	6.524
Q2c	0.4213115					1748	250	6.992
Q5a		0.1663154				1806	250	7.224
Q5b		0.1771945				1696	250	6.784
Q5c		0.1250158				1571	250	6.284
Q5d		0.1201856				1752	250	7.008
Q5e		0.1093961				1747	250	6.988
Q5f		0.1050250				1717	250	6.868
Q5g		0.1166921				1721	248	6.93952
Q5h		0.2056493				1718	250	6.872
Q5i		0.1942870				1728	250	6.912
Q5j		0.1828425				1722	250	6.888
Q4			0.3535177			1870	250	7.48
Q5k			0.8492147			1711	250	6.844
Q1				0.4824588		1937	250	7.748
Q3				0.5995670		1955	250	7.82
Q20				0.2883753		1581	250	6.324
Q8					0.6767889	1836	250	7.344
Q13					0.5543875	1806	250	7.224
S(ci*mi)	7.310838	8.839918	7.253605	8.879989	7.744057			
S(ci*ri)	11.439972	13.523430	10.824592	12.333610	11.080588			
Index	63.906083	65.367426	67.010430	71.998296	69.888501			

Customer Satisfaction Index 2001 for Kowloon Shangri-La

(Male)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.0145923					468	68	6.88235
Q2b	0.7671630					439	68	6.45588
Q2c	0.3928569					483	68	7.10294
Q5a		0.1699407				486	68	7.14706
Q5b		0.1898861				465	68	6.83824
Q5c		0.1285495				426	68	6.26471
Q5d		0.1376318				484	68	7.11765
Q5e		0.0833282				490	68	7.20588
Q5f		0.0844322				475	68	6.98529
Q5g		0.1343439				476	68	7
Q5h		0.1939101				468	68	6.88235
Q5i		0.1909911				477	68	7.01471
Q5j		0.1674342				470	68	6.91176
Q4			0.3007152			508	68	7.47059
Q5k			0.8428073			472	68	6.94118
Q1				0.5131846		516	68	7.58824
Q3				0.5197662		530	68	7.79412
Q20				0.2431432		423	68	6.22059
Q8					0.8590851	486	68	7.14706
Q13					0.3412246	501	68	7.36765
S(ci*mi)	6.668971	8.779768	6.953071	8.181684	7.453644			
S(ci*Ri)	10.571510	13.324030	10.291703	11.484846	10.802787			
Index	63.084373	65.894235	67.559970	71.238954	68.997419			

(Female)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.2383696					1293	182	7.1044
Q2b	0.6454163					1192	182	6.54945
Q2c	0.4209807					1265	182	6.95055
Q5a		0.1657685				1320	182	7.25275
Q5b		0.1724641				1231	182	6.76374
Q5c		0.1223784				1145	182	6.29121
Q5d		0.1118289				1268	182	6.96703
Q5e		0.1193532				1257	182	6.90659
Q5f		0.1116582				1242	182	6.82418
Q5g		0.1123813				1245	180	6.91667
Q5h		0.2078998				1250	182	6.86813
Q5i		0.1936486				1251	182	6.87363
Q5j		0.1868319				1252	182	6.87912
Q4			0.3776359			1362	182	7.48352
Q5k			0.8477423			1239	182	6.80769
Q1				0.4494715		1421	182	7.80769
Q3				0.6541861		1425	182	7.82967
Q20				0.3229902		1158	182	6.36264
Q8					0.5870449	1350	182	7.41758
Q13					0.6285223	1305	182	7.17033
S(ci*mi)	7.541875	8.821383	7.371835	9.259818	7.645599			
S(ci*Ri)	11.742899	13.537916	11.028404	12.839830	10.940105			
Index	64.224979	65.160570	66.844080	72.117919	69.885974			

Customer Satisfaction Index 2001 for Kowloon Shangri-La

(White)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.1522590					999	141	7.08511
Q2b	0.6948358					924	141	6.55319
Q2c	0.4332136					988	141	7.00709
Q5a		0.1567171				1015	141	7.19858
Q5b		0.1675944				957	141	6.78723
Q5c		0.1345737				886	141	6.28369
Q5d		0.1346544				989	141	7.01418
Q5e		0.1148432				982	141	6.96454
Q5f		0.1013666				966	141	6.85106
Q5g		0.1178787				972	140	6.94286
Q5h		0.1996916				971	141	6.88652
Q5i		0.1897736				971	141	6.88652
Q5j		0.1796031				969	141	6.87234
Q4			0.3753322			1064	141	7.5461
Q5k			0.8162462			969	141	6.87234
Q1				0.4509897		1095	141	7.76596
Q3				0.6536446		1103	141	7.8227
Q20				0.2549147		893	141	6.33333
Q8					0.8071318	1035	141	7.34043
Q13					0.4200445	1031	141	7.31206
S(ci*mi)	7.387423	8.788126	7.250237	8.870540	7.768904			
S(ci*Ri)	11.522776	13.470268	10.724206	12.235941	11.044587			
Index	64.111485	65.240917	67.606289	72.495773	70.341281			

(Chinese)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.2975226					473	68	6.95588
Q2b	0.6812712					431	68	6.33824
Q2c	0.2066177					476	68	7
Q5a		0.1956248				489	68	7.19118
Q5b		0.1938886				457	68	6.72059
Q5c		0.0903155				437	68	6.42647
Q5d		0.1003735				493	68	7.25
Q5e		0.1099286				489	68	7.19118
Q5f		0.1249950				478	68	7.02941
Q5g		0.1214412				479	68	7.04412
Q5h		0.1906175				474	68	6.97059
Q5i		0.1853785				470	68	6.91176
Q5j		0.1737105				473	68	6.95588
Q4			0.5272248			506	68	7.44118
Q5k			0.7239861			471	68	6.92647
Q1				0.4918290		522	68	7.67647
Q3				0.5623439		531	68	7.80882
Q20				0.3240882		425	68	6.25
Q8					0.5915074	499	68	7.33824
Q13					0.5981736	484	68	7.11765
S(ci*mi)	6.648502	8.874584	7.686630	8.814045	7.408528			
S(ci*Ri)	10.668704	13.376463	11.260898	12.404350	10.707129			
Index	62.317804	66.344770	68.259478	71.056084	69.192480			

Appendix Vg: Customer Satisfaction Index for Mandarin Oriental, Hong Kong

Customer Satisfaction Index 2001 for Mandarin Oriental, Hong Kong

(Overall)								
Outer Coefficients								
Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.1810004					1740	250	6.96
Q2b	0.7517563					1640	250	6.56
Q2c	0.2220004					1748	250	6.992
Q5a		0.1478179				1768	250	7.072
Q5b		0.1397855				1702	250	6.808
Q5c		0.1265840				1526	250	6.104
Q5d		0.1299798				1632	250	6.528
Q5e		0.1322004				1621	250	6.484
Q5f		0.1206040				1588	250	6.352
Q5g		0.1310385				1617	250	6.468
Q5h		0.1748625				1626	250	6.504
Q5i		0.1753050				1646	250	6.584
Q5j		0.1578943				1644	250	6.576
Q4			0.5131002			1822	250	7.288
Q5k			0.6494093			1658	250	6.632
Q1				0.5595214		1938	250	7.752
Q3				0.6019527		1963	250	7.852
Q20				0.1494822		1749	250	6.996
Q8					0.5325354	1834	250	7.336
Q13					0.7576376	1754	247	7.10121
S(ci*mi)	6.588754	7.982781	6.883847	8.798764	7.996654			
S(ci*ri)	10.392814	12.924647	10.462586	11.798607	11.611557			
Index	63.397208	61.764012	65.794896	74.574599	68.868058			

Customer Satisfaction Index 2001 for Mandarin Oriental, Hong Kong

(Male)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.4884401					236	34	6.94118
Q2b	0.5447921					224	34	6.58824
Q2c	0.2185582					238	34	7
Q5a		0.1846180				246	34	7.23529
Q5b		0.1946811				237	34	6.97059
Q5c		0.1514446				207	34	6.08824
Q5d		0.1581491				223	34	6.55882
Q5e		0.0973104				226	34	6.64706
Q5f		0.1868846				221	34	6.5
Q5g		0.1994073				224	34	6.58824
Q5h		0.1748024				222	34	6.52941
Q5i		0.0710896				230	34	6.76471
Q5j		0.0784974				221	34	6.5
Q4			0.4647243			252	34	7.41176
Q5k			0.6823576			227	34	6.67647
Q1				0.5212335		267	34	7.85294
Q3				0.4986758		274	34	8.05882
Q20				0.2770478		247	34	7.26471
Q8					0.7742874	252	34	7.41176
Q13					0.4680279	248	34	7.29412
S(ci*mi)	7.257684	8.463035	6.853086	8.827670	7.910371			
S(ci*ri)	11.266114	13.471961	10.323737	11.672614	11.180838			
Index	64.420480	62.819628	66.381831	75.627191	70.749362			

(Female)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.1182800					1504	216	6.96296
Q2b	0.7986069					1416	216	6.55556
Q2c	0.2239705					1510	216	6.99074
Q5a		0.1447735				1522	216	7.0463
Q5b		0.1361227				1465	216	6.78241
Q5c		0.1250998				1319	216	6.10648
Q5d		0.1275829				1409	216	6.52315
Q5e		0.1336372				1395	216	6.45833
Q5f		0.1146159				1367	216	6.3287
Q5g		0.1258084				1393	216	6.44907
Q5h		0.1736506				1404	216	6.5
Q5i		0.1778987				1416	216	6.55556
Q5j		0.1592546				1423	216	6.58796
Q4			0.5184738			1570	216	7.26852
Q5k			0.6460599			1431	216	6.625
Q1				0.5722148		1671	216	7.73611
Q3				0.6125677		1689	216	7.81944
Q20				0.1275465		1502	216	6.9537
Q8					0.4781774	1582	216	7.32407
Q13					0.8025638	1506	216	6.97222
S(ci*mi)	6.483753	7.864983	6.884150	8.791248	7.817119			
S(ci*ri)	10.267717	12.765999	10.480803	11.810961	11.526671			
Index	63.146985	61.608831	65.683415	74.432961	67.817662			

Customer Satisfaction Index 2001 for Mandarin Oriental, Hong Kong

(White)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.2707452					1042	148	7.04054
Q2b	0.7262163					986	148	6.66216
Q2c	0.1799769					1032	148	6.97297
Q5a		0.1418027				1054	148	7.12162
Q5b		0.1354367				1017	148	6.87162
Q5c		0.1139876				925	148	6.25
Q5d		0.1157242				997	148	6.73649
Q5e		0.1492122				972	148	6.56757
Q5f		0.1341342				949	148	6.41216
Q5g		0.1441480				971	148	6.56081
Q5h		0.1902731				985	148	6.65541
Q5i		0.1862313				990	148	6.68919
Q5j		0.1520245				989	148	6.68243
Q4			0.5510636			1075	148	7.26351
Q5k			0.6023203			994	148	6.71622
Q1				0.5838808		1148	148	7.75676
Q3				0.6106066		1166	148	7.87838
Q20				0.1579123		1040	148	7.02703
Q8					0.4446583	1092	148	7.37838
Q13					0.8296244	1037	148	7.00676
S(ci*mi)	6.822399	8.283311	6.894587	9.096865	7.819551			
S(ci*ri)	10.592446	13.166771	10.380455	12.171597	11.468544			
Index	64.408157	62.910728	66.418932	74.738469	68.182593			

(Chinese)

Outer Coefficients

Item	COL1	COL2	COL3	COL4	COL5	SUM	N	MEAN
Q2a	0.0374892					471	68	6.92647
Q2b	0.8028146					443	68	6.51471
Q2c	0.2884767					472	68	6.94118
Q5a		0.1467137				479	68	7.04412
Q5b		0.1388122				464	68	6.82353
Q5c		0.1305668				404	68	5.94118
Q5d		0.1446768				425	68	6.25
Q5e		0.1076246				442	68	6.5
Q5f		0.0932721				433	68	6.36765
Q5g		0.1113592				429	68	6.30882
Q5h		0.1515039				427	68	6.27941
Q5i		0.1609119				436	68	6.41176
Q5j		0.1626361				438	68	6.44118
Q4			0.4595670			505	68	7.42647
Q5k			0.7186782			444	68	6.52941
Q1				0.5151926		522	68	7.67647
Q3				0.5548768		535	68	7.86765
Q20				0.1489267		477	68	7.01471
Q8					0.5598210	504	68	7.41176
Q13					0.6851111	479	68	7.04412
S(ci*mi)	6.363356	7.339212	6.927262	8.146117	7.730333			
S(ci*ri)	10.159025	12.132696	10.604207	10.970965	11.204389			
Index	62.637471	60.491194	65.325598	74.251596	68.993791			

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