BUSINESS EXCELLENCE MODEL FOR RETAIL BANKING

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ABSTRACT

Creating customer value and building stockholder value are the cornerstones for excellence in any business endeavour. In an under-developed economy, financial institutions may accomplish these objectives through a customer focus strategy and implementation of some quality management principles. However, with the increasing accessibility to new technologies and intensified competition, managers have been alerted and become more aware of the fact that achieving excellence is made even more difficult - financial institutions must now do much more to excel in the competitive retail banking environment of the new millennium. It is believed, and the findings of the present work support, that the formulation of a robust improvement model capable of guiding through the whole excellence pursuant process will provide a solid foundation for successfully meeting the challenge.

The burning desire to enhance competitiveness and drive for achieving business excellence have nurtured the development of a new Business Excellence Model for successful implementation of TQM in retail banking. It was found that existing TQM and business excellence models provide only prescriptive and indicative roadmaps for companies to follow but fail to provide a complete coverage of TQM concepts, holistic measure of business excellence and validated links between TQM elements and business excellence. Hence, some financial institutions may cast doubts on their applicability of TQM because the relationships between TQM principles and the results of business excellence are not assessed. As such, it should be valuable to develop and provide a model, which is capable of covering the TQM essence in a structured way to drive total quality improvement efforts.

The present research aims to develop a theory-driven as well as practical model for retail banks and the retail banking sector to achieve business excellence. In the process, Hong Kong retail banks and the Hong Kong retail banking sector were chosen as the context for the present research to obtain valuable data on how successful implementation of TQM essence could contribute to business excellence in a Chinese society. Both employees and customers inputs, being the important sources of stakeholder information, have been the basis for analysis. Top performing bank's executives were interviewed to identify the core activities and factors that determine their bank's success. Further, data were collected from executives of 47 retail banks in Hong Kong. Structural equation modelling was employed to develop the new Business Excellence Model (BEM). SEM's software programme was employed to analyse the goodness of fit of the new BEM. The forces of excellence indices and business excellence indices of the sampled retail banks were computed using the Partial Least Squares (PLS) technique. The same procedure was also applied to the data collected

from retail customers in the survey to measure the level of customer satisfaction of the retail banking sector. The indices of the BEM were then matched to the customer satisfaction indices of retail banks and retail banking sector for higher level of analysis. Findings of the present work indicate that the new BEM fits the data of the 47 retail banks very well. The BEM is a valid and reliable model for enabling retail banks to review the current level of practice in relation to their critical success factors continuously. With the new BEM, they can now measure and drive improvement in their critical activities and finally achieving business excellence. Similar results obtained for customer focus dimension of the BEM and the customer satisfaction measurement have further substantiated the robustness and usefulness of the new BEM. Hence, the new Business Excellence Model should be a valuable means for retail banks and the retail banking sector to pursue business excellence and to gain a competitive edge in the new millennium.

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LIST OF ABBREVIATIONS

BEI	Business Excellence Index
BEM	Business Excellence Model
CFQM	Customer-focused Quality Management Model
CFI	Comparative Fit Index
CIT	Critical Incident Technique
CSF	Critical Success Factor
ECSI	European Customer Satisfaction Index
IRR	Inter-bank Borrowing Rate
MPF	Mandatory Provident Fund
NFI	Bentler-Bonett Normed Fit Index
NNFI	Bentler-Bonett Nonnormed Fit Index
PLS	Partial least-square
RMR	Root Mean Squared Residual
RMSEA	Root Mean Squared Error of Approximation
SEM	Structural Equation Modelling
TQM	Total Quality Management

CHAPTER ONE

BUSINESS EXCELLENCE FOR RETAIL BANKING

1.1 INTRODUCTION

With decades of quality movements, Total Quality Management (TQM) is evolved and developed with a more fundamental mission of helping companies to attain business excellence. Many organisations and companies have embarked on change process and TQM implementation with various objectives of improving productivity, effectiveness, efficiency, customer satisfaction, gaining competitive advantage and achieving world-class status. All these objectives are actually talking about how well companies do their jobs, that is, the different aspects of business excellence. As Peter Drucker (1981) put it, "The overall objective of any organisation or business is to achieve business excellence, which should be the primary objective of any organisation or business." In other words, companies' primary objective of TQM implementation is to achieve business excellence. Thus, the mission of TQM should be on helping companies to achieve business excellence.

Surprisingly, although the goal of achieving business excellence has underpinned

most of the TQM literature, the business excellence concept has seldom been explicitly considered, discussed or seriously measured in the past literature. Most of the literature has taken it for granted and thereby placing their focuses on internal assessment as well as continuous improvement of internal processes, while business excellence was conventionally viewed as synonymous to financial measures of organisational performance. The shortcomings of financial measures have led to the growth of process measures such as measures of customer satisfaction and measures of service quality. The need for a single business excellence measure capable of providing a clear performance measure on various functional areas/ processes of an organisation is therefore apparent. Moreover, quality of services of companies is very much depends on whether they have identified their leading activities and critical processes, and whether these activities are performed in a manner that helps them move toward their goals.

Bearing this in mind, the present research takes a critical examination of what and how essential TQM elements can be used to measure business excellence and enhance business performance of local retail banks through the formulation of a sound business excellence model.

1.2 BACKGROUND OF THE RESEARCH

Hong Kong as a leading international financial centre and banking centre should

provides a unique Chinese context for research in the relationship between TQM and business excellence. Many researchers of business management, economics and organisational behaviour have conducted research in the Asian and Chinese setting to see how well their western theories and concepts can be applied in a different culture. There is no exception to TQM, the concepts of TQM have been promoted by the Hong Kong Government and several other subvented organisations in the early 1990's to the local industries (Wong, 1995). Hence, many Hong Kong companies including retail banks should have been subjected to the influences of TQM concepts.

Moreover, there are several unique characteristics of Hong Kong retail banking sector that made it a desirable and interesting context for research in business excellence. Despite having several barriers to full open market competition (e.g., the one-building condition and the remaining IRRs), Hong Kong is an international banking centre that has a large representation of global players. Thus, an understanding and knowledge of the behaviour of Chinese competitors and customers would be of particular value to their operation of banking business because over 90% of the Hong Kong people are Chinese. Besides, its market structure is also interesting and unique. For example, there is a relatively high market share concentration in a few banking groups and a large number of small independent banks which participate on a small scale in the sector, and the high concentration of lending in residential housing and property related finance.

Nevertheless, there remains significant potential in the local retail market for fee-based products and services. For example, the introduction of the Mandatory

Provident Funds (i.e. MPF) should boost the demand for financial services locally. Changes in the global financial landscape including the introduction of e-banking provides new opportunities for smaller/ medium retail banks in achieving a measure of cost containment while at the same time, augment market shares through soliciting new customers via the internet. The e-banking will eventually become a value-added service for customers and become a source of fee income. During the Asian financial crisis, it has already observed that many local banks gained market shares from foreign banks, who have closed their operations. The huge market potential in Mainland China and the increasing integration of Hong Kong and Mainland China represent long term opportunities for local banks and foreign banks planning to conduct banking business in Hong Kong. All these foreseeable changes will impose both opportunities and threats to the local retail banking sector; it is therefore now a high time to make assessment of the soundness of the previous retail banks measures. The research findings would offer an understanding and knowledge of the key success factors necessary to compete effectively in the local retail banking sector should be of great value the bankers and bank managers.

1.3 THE PROBLEM STATEMENT

The purpose of the present research is to develop a new Business Excellence Model (BEM) for retail banks to manage and assess their leading activities or factors that determine success. In the process, the critical success factors (CSFs) of retail banks and relevant in the retail banking industry will be examined and identified. This is an

crucial step of the whole research process because success of retail banks depends on whether they have identified their leading and critical activities, and whether these activities are performed in a manner that helps them move toward their goals. In addition, essential TQM elements will be used to enrich the new BEM. It is envisaged that the new BEM, being built on solid TQM elements and incorporated with CSFs, is a structured and measurable roadmap that should be able to enhance retail banks performance. The new BEM would provide retail banks a means of assessing and building up their competitive advantage. Specifically, this research attempts to answer the following research questions:

1. What is/are the inadequacies of the existing CFQM model of retail banks?
2. What is/are the critical success factors of retail banks and local retail banking sector?
3. What can TQM elements help in enriching the existing CFQM model and form a new Business Excellence Model while satisfying the suggested modelling criteria?
4. What is the validity and reliability of the new BEM?
5. How can the new BEM help retail banks to enhance their performances through better management of their leading activities?
6. How is it compared to the results of an alternative customer satisfaction measure?

1.4 SIGNIFCANCE OF THE PRESENT RESEARCH

Conventional TQM and business excellence models are more than often built on prescriptive quality management theories and experts' subjective opinions which may not necessarily be relevant to any specific industry setting. Recently, some researchers

(Kanji, 1998; Johnson et al., 1995; Fornell, 1992) have spearheaded efforts in structural models development. Their efforts have revealed the shortcomings of the traditional approaches of measuring quality through award models and putting focus solely on financial performance measure. The present research will derive critical success factors (CSFs) or driving forces in the retail banks which are of high relevance also to the local retail banking sector to form the basis of the new BEM. In addition, the new BEM will also be a theory-driven model by enriching it with the essence of TQM. In this way, the new BEM as a structured and validated improvement model may help to overcome the shortcomings of previously developed models. Thus, retail banks and the retail banking sector may benefit from the new BEM model in terms of being able to provide a systematic and simultaneous measures of quality of different aspects of their leading activities and provide accurate information for managerial decision making and to stakeholders' decisions.

The present research also extends the Business Excellence index (BEI) to the local retail banking context and spearheads the development of aggregate business excellence indices and forces of excellence indices in the retail banking sector for stakeholders' information. The resultant indices can be used for ongoing comparison. It is believed that the provision of the indices to stakeholders is important for the further development of Hong Kong retail banking sector. Moreover, the database generated from this work can serve as a benchmark for retail banks and other financial institutions to compare and improve their performances.

Nevertheless, this work will add to our knowledge of the usefulness of the new BEM

model by matching the BEM's results to the results of an alternative customer satisfaction measure. The customer satisfaction indices will form another database for retail banks' benchmarking because there is currently no aggregate customer satisfaction index for the Hong Kong retail banking sector.

Apparently, the retail banking sector is an important service industry of any international financial centre like Hong Kong. By improving the performance of the local retail banking sector, the resultant effect on the overall Hong Kong economy will be tremendous and it would also be beneficial to the Asian region as a whole in today's globalised financial and trading activities.

1.5 AN OVERVIEW OF METHODOLOGY

The present research follows a qualitative approach to identify critical success factors of retail banks and essential elements of TQM. In the search of CSFs of retail banks, quality management executives of top performing retail banks will be interviewed and critical success factors will be retrieved by critical incident technique. A general understanding of the leading activities of retail banking can also be obtained through the interviews and critical incidents told. This information will be complemented by the qualitative analysis results from literature review of TQM and quality management of retail banking for developing a new Business Excellence Model (BEM) typical to the retail banking context. Based on TQM theories, banks' critical success factors and business excellence will be linked up to form a structured

Business Excellence Model for which the relationships specified in the model can be measured.

Moreover, the different concepts (i.e., critical success factors) of the new BEM will be operationalised into different items of a questionnaire with references to both the Kanji's BEM measuring instruments and suggestions of the bank executives. It is then followed by the use of a quantitative method for data collection and analysis. The measuring instrument will then be administered to a sample of retail banks in the local retail banking sector.

A powerful theory and model testing method will be employed to test and validate the newly developed BEM. This method is called structural equation modelling (SEM). It is a recently acknowledged powerful statistical method for modelling because its focal point is in analysing structural equation models through measuring the extent of "fits" of the hypothesized model to the null model, that is how adequately this model describes the sample data (Byrne, 1994). A software programme for SEM method called EQS for Windows will be employed to examine the overall model fit of the new BEM. For more accurate SEM analysis as suggested by previous researchers (Bentler, 1995), a bundle of goodness of fit indices produced by the EQS rather than a single index will be considered.

After the validation of the BEM, forces of excellence indices and business excellence indices of the sampled banks will be estimated by using another powerful statistical

procedure-PLS. The Partial Least Squares (PLS) of SAS programme is a multivariate analysis procedure capable of estimating the structural parameters (i.e., weights) of latent variables in causal models. The estimated weights together with the means scores of the variables can then be used for the computation of indices for each force of excellence and business excellence for retail banks. Using the new BEM and the resulted indices, the current banking activities and performances of the sample retail banks can be analysed and suggestions for improvement can be made.

In addition, data will be collected from retail banking customers through survey. The European Customer Satisfaction Index Model (ECSI) and its associated instrument will be adopted to measure the customer satisfaction scores of the retail banks and the local retail banking sector. The above mentioned process and procedures will be applied again to assess the actual customer satisfaction scores of retail banks. The customer satisfaction indices for the sector will be computed and eventually be compared with the results of the BEM for further meaningful analysis.

1.6 ORGANISATION OF THE RESEARCH RESULTS

Research results of the present work are organised into nine chapters. Chapter one introduces the problem background and objectives of the present research. Chapter two provides a qualitative analysis of characteristics of the Hong Kong retail banking

sector, the retail banking products usage pattern and the existing quality management model of retail banks, and the inadequacies and weaknesses of the model will then be reviewed. Chapter three provides a critical review on the TQM philosophy, the concept of business excellence and the interfaces between the two. From literature review, the linkage between TQM and business excellence is examined. Then the various approaches to TQM implementation and modelling will be compared. Amongst these, the usefulness of the critical success factors (CSFs) Approach to Modelling in terms of modelling criteria will be discussed. Chapter four provides explanations on the chosen research methodology. This includes the discussions on research perspectives, the research design, data collection and data analysis methods employed in the research process. Besides, the planned research process is outlined in a research work scheme for easy reference. Chapter five describes the development of the new Business Excellence Model (BEM) in great detail. At first, it reports on the results of the exploratory research and its findings. The findings (i.e., the critical success factors identified from top performing retail banks) are compared to the TQM and business excellence models previously reviewed to see how the two results can be used to enrich the existing CFQM of retail banks. Then, the results of the two are synthesis to form the new Business Excellence Model for retail banks. Chapter six describes in details the process of validation of the new BEM using the structural equation modelling (SEM) procedures. The results of the structural equation analysis are used to show the validity and reliability of the model. Chapter seven reports on the procedures of using Partial Least Squares technique to estimate weights and computes the indices for forces of excellence and business excellence of the validated BEM. A discussion of indices of retail banks and the resulted implication is also given in this chapter. Chapter eight describes existing alternative customer satisfaction models. It

then reports on the use of one robust customer satisfaction model for measuring customer satisfaction of the local retail banking sector. The customer satisfaction indices are then matched to the indices of the new BEM to draw meaningful implication. Chapter ten outlines the summary and conclusions for the present research. Limitations and further research direction are also given in this chapter.

CHAPTER TWO

LITERATURE REVIEW ON QUALITY MANAGEMENT IN RETAIL BANKING

2.1 INTRODUCTION

This chapter aims to review current research and search for empirical evidence of the application of quality management concepts and models in retail banking and establish the need for a new structural Business Excellence Model (BEM) that can best help retailing banks in pursuing business excellence. In the first section, main activities of retail banking are furnished as some background information to retail banking business. Then, a review of literature on the conceptualisation and implementation of quality management concepts developed in retail banking was conducted, so as to understand the main questions and problems that have been addressed to date. Next, part of the exploratory research's findings on the existing quality management model practiced by top performing retailing banks are described and discussed. Finally, the main quality concepts or models currently practiced in retail banks of Hong Kong are summarised. The current model is then subjected to critical review to identify any inadequacies of the model and areas for improvement, which will serve as a basis for the building of the new Business Excellence Model for retail banking.

2.2 PRINCIPAL ACTIVITIES OF RETAIL BANKING

In Hong Kong, one of the principal activities of commercial banks is to provide retail banking services. One good summary of the classical view of retail banking activities is provided by the encyclopedia of banking and finance,

> *" Commercial banks, operating essentially via a branch network, took in consumer deposits which was then usually used to provide loans..... The role of branch was to provide a complete service range to clients." (Cooper, 1999)*

In this research, the classical view of retail banking is adopted as it reflects the kind of retail banking activities currently performed in the retail banking sector of Hong Kong.

2.21 Characteristics of Hong Kong Retail Banking Sector

Hong Kong is a major international financial centre, with a total of 350 authorised institutions from 40 countries actively conducting banking business. Active in the retail banking sector are the 158 licenced banks, with over 1,100 branches serving a slightly nearly seven million population in Hong Kong (HKGOVT, 1999). However, the Hong Kong retail banking sector has a relatively high market share concentration in two retail banking groups (see Appendix IA for details).

According to the Survey Research of Hong Kong Media Market Report (SRH) 95-

98, savings accounts service is the most well-received and penetrated service of retail banks in Hong Kong (see Appendix IB & IC).

Although the Hong Kong retail banking sector consists of banks, licensed deposit takers(RLBs), deposit takers (DTCs) and other financial institutions, the contributions of RLBs and DTCs to the sector are not significant. They now account for less than 2% of the market in terms of both deposits and loans (see Appendix IC & Table 2.1). As it can be seen from Table 2.1, 98% of all deposits in Hong Kong are placed with banks or the two banking groups. This has been the result of the prudential banking framework of Hong Kong which has been designed to provide a measure of protection to depositors by directing small deposits to banks. This has indirectly resulted in the present structure of the local retail banking market into one mainly dominated by banks and banking groups.

TABLE 2.1 *Comparison of Deposits & Loans Among Banks, Banking Groups and independent RLBs and DTCs*

	Banks & Banking Groups		*Independent RLBs & DTCs*	
	HK$ billion	*% of total*	*HK$ billion*	*% of total*
Deposits	*2,619*	*98.24*	*47*	*1.76*
Loans	*4,043*	*98.08*	*79*	*1.92*

Note: Banking Groups include banks and their subsidiary financial institutions
Source: HKMA as at December 1997

Taking into account the significant role of retail banks to the whole retail banking market, it is therefore worthwhile to choose retail banks as a context of the present

research.

2.22 CUSTOMERS OF RETAIL BANK

As mentioned in previous section, retail banks provide a full range and wide spectrum of retail banking services to a broad spectrum of clients in the consumer market, ranging from consumers, small to medium businesses, both domestic and international. All the users of these services can be considered as the external customers of a retail bank in terms of TQM terminology. However, the external customers of a retail bank usually consist of a mix of two main types of customers. One type of customer is depositors; they are the people that provide a cheap source of funds for a retail bank. Deposits and savings affect the profitability of the retail banks through costs of funds (i.e. the cost side of the retail banking business). The other type of customer is borrowers; a retail bank earns its income mainly through lending activities. In banking, indeed, the profitability and efficiency of banks or retail banks are often measured in terms of cost-to-income ratio (CIR) and loan-to-deposit ratio (LDR).

In today's increasingly competitive environment in the Hong Kong financial services markets, retail banks have been indigenous in earning customer loyalty through product features and service excellence. The notion of satisfying customers has held up reasonably well in the local retail banking industry. For instance, with a subdued property market and a rising number of market players, a home mortgage "war" broke out in Hong Kong's retail banking market, at the turn

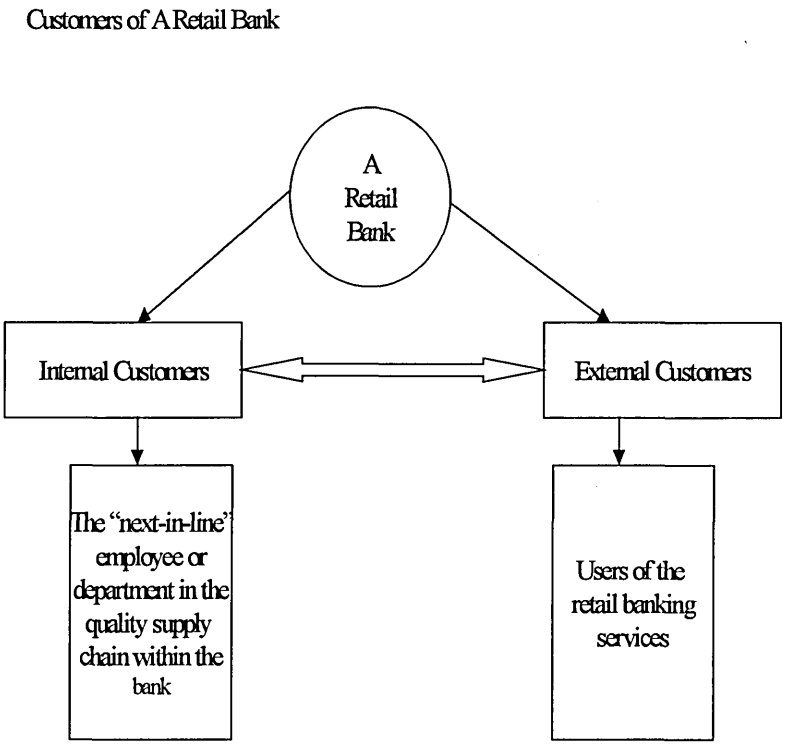
of the 21st century. For example, a well-known local commercial bank in its recent review had decided to remodel its domestic branches in 1998 aiming to make the branches more customer-focused and better able to anticipate and respond to changes in their retail market. In their review process, they have identified four distinct types of clients that they are currently serving and they are merchants, check cashers, retired people, and students. Having carefully identified their customers' needs, the bank was able to redesign some of their products and services to suit the specific needs of their customers. An increase in sales was reported. Hence, successful retail banks have to figure out innovative ways to measure and act upon customer information. The present research is also aimed to extend an indexing method to retail banking sector for their measurement of business excellence.

For retail banking and as is the case for all businesses, its internal customer or internal organisational stakeholder is its employee. In delighting the customers of the retail banking, both of the needs of the internal and external customers should be determined and satisfied. The notion is that coworkers who depend on us are our customers and therefore deserve the same respect and attention that external customers receive. For "total" quality management, it is important that this "next-in-line" or internal customer-supplier concept be understood by all employees and actually practiced in these relationships. The internal customer concept promotes cross-functional team and lateral communication. Yet, the majority of existing service quality research in retail banking has focused solely on external customers (Carman, 1990; Cronin & Taylor, 1992; Parasuraman et.al., 1991). Therefore, a valid and good Total Quality Management Model should take into account the

internal and external customer satisfaction simultaneously. The present research has taken all these factors into consideration in the building of the new Business Excellence Model (BEM) for retail banking. Figure 2.1 shows the internal and external customers of a retail bank and their relationships.

Figure 2.1

Customers of A Retail Bank



2.3 LITERATURE ON QUALITY MANAGEMENT IN RETAIL BANKING

For half a century, the unique characteristics of financial services as a growing major economic contributor in most developed economies and as an increasingly deregulated business has attracted a lot of attention from both academics and practitioners.

Literature pertaining to service quality and quality management in the context of financial services and retail banking services are abundant. A review of the literature and published research reports uncovers that quality management and customer satisfaction tend to play a crucial role in high involvement industries like banking services. In fact, leading scholars in service quality research (Parasuraman, Zeithaml, and Berry, 1988; and others) having been using retail banking services to develop knowledge of service quality. In this section, research focus and previous findings of the articles published in the past twenty years in the context of retail banking services management were synthesised and identified. Table 2.2 gives a summary of research focus and major findings of previous research in retail banking services management.

Table 2.2

Research Focus and Findings of Articles Published in Banking Management

Research Focus	Research	Research Finding
Service Quality & profitability	Ross(1990)	In credit cards industry, found that profit on services used by a ten-year bank customer were on average three times greater than for a five-year bank customer, reflecting the importance of customer loyalty in the competitive banking market.
	Fornell (1992)	Documented the aggregate financial implications of customer satisfaction (including banking sector) in a Swedish study, finding a significant relationship between customer satisfaction and increased loyalty of customers, reduced price elasticity, lower transaction costs in providing the service to the customers.
	Rust and Zahorik (1993)	Demonstrated the relationship between customer satisfaction and customer retention in a retail bank setting.
	Hallowell (1996)	Documented that customer satisfaction is significantly related to customer loyalty in a bank setting and loyalty is related to profitability in seven of eight regressions conducted.

	Storbacka & Luukinen (1996)	Found that customer satisfaction is a function of relationship volume and not directly related to profitability.
Perception of service quality & customer satisfaction	Parasuraman, Zeithaml, Berry (1988)	Developed a SERVQUAL instrument for the identification of the antecedents of service quality and customer satisfaction. Found a positive and significant relationship between customers perceptions of service quality, and their willingness to recommend the company and their purchase intentions.
	Laroshe, Rosenblatt, Manning (1986)	Revealed the importance of customer focus and found that speed service, convenient location, staff competence, and friendliness as important determinants of customer satisfaction.
	LeBlance & Nguyen (1988)	Proposed a five-dimensional framework of customer satisfaction in the Canadian credit sector, including factors such as corporate image, internal organisation, staff service and customer-personnel interaction.
	Carman (1990)	Developed an industry-specific instrument with added dimensions the original SERVQUAL

		instrument for measuring service quality.
	Akviran (1994)	Remarked on the importance of customer focus in retail banking and developed an instrument to measure customer service quality in branch banking.
	Blanchard and Galloway (1994)	Developed a 31-item instrument for assessing quality in retail banking, emphasising its congruence with known constructs of quality measurement.
Modelling Customer Satisfaction	Ennew and Binks (1996)	Restated the importance of customer focus. Adopted tailor-made constructs of service quality and satisfaction to measure service quality in retail banking in UK.
TQM and Leadership	Johnson, Nader, Fornell (1996)	Developed a structural equation model for measuring all customer satisfaction for a complex service using bank loans as a case.
People-based Management	Cowling and Newman (1995)	Revealed through case studies the important role of personnel managers as leaders in implementation of TQM in retail banks of UK.
	Avkiran (1999)	Developed a BANKSERV instrument, found and highlighted the important role of staff-customer contact in the bank branch.
	Johnston (1997)	Identified commitment of front-line staff of banks as

		critical determinants of service quality in retail banking.
Quality Management and Critical Success Factors	Durkin and Bennett (1999)	Revealed that bank employees play a key facilitator role in implementation of bank strategy.
	Longo and Cox (1999)	Identify some success factors for UK clearing banks including customer satisfaction, technology, reputation, staff motivation, management commitment, quality and training.

The debate on service quality began in 1985 in the marketing literature, it was given a major boost by marketing scholars like Cronin and Taylor (1992), Parasuraman, Zeithaml and Berry (1988). Subsequent works on service quality by Carman (1990), Teas (1994), notwithstanding, the debate has not yet reached a point of resolution.

The themes of research under the category of service quality and profitability were mainly concerned with the examination of the impact of service quality on financial outcomes. Managerially, the research stream began to seek documentation that investments in service quality were paying off.

Research focus of articles under perception of service quality and customer satisfaction has been centred on the link between perceived service quality and customer satisfaction. This group of research has gradually developed two popular

measurement instruments and two dominant but different conceptualisations of the factors that drive customer satisfaction.

Recently, the subject discussed under modelling customer satisfaction emphasised the development of a structural equation model for measuring the antecedents and consequences of customer satisfaction and the value of obtaining an aggregate index at national level.

The group of articles under TQM and human resources were primarily focused on the role and functions of human resources management in Total Quality Management (TQM) implementation.

The last category includes articles on identifying the critical success factors of the clearing banks and found that reputation, quality, management commitment, staff motivation and technology were the key success factors as perceived by branch managers.

To sum up, several concepts and components of TQM had received well-structured attention in the banking literature. Perceived quality of service has a major share of the existing research on quality management in retail banking. It is easy to understand because perceived service quality plays an important role in high involvement industries like banking. Customer satisfaction and customer focus were the second heavily researched topic in the banking literature. It is not surprising, as banks have traditionally placed a high value on customer

relationships with both retail and commercial customers.

Noticeably, however, these authors have placed unequal attention on customer satisfaction and staff satisfaction in their research. These authors have seldom employed an internal customer perspective to single out the importance of staff satisfaction issues, instead human resources management perspective was often used. Moreover, process management has not been seriously researched in the banking literature as compared to its role in manufacturing and operational research literature. At the aggregate level, a growing body of knowledge is emerging about the relationships between customer satisfaction, service quality management, and to a lesser extent profitability in banking services. Hence, these components should form the basis for the study of managing excellence in retail banks. That is to say, these various elements should be taken into consideration in the formulation of a new Business Excellence Model for retail banking. Based on the above review, the existing findings were limited to either a particular relationship/aspect of Total Quality Management or at best to a few parts of the overall Total Quality Management picture. There is a lack of a holistic model incorporating all essence of TQM for driving excellence in banking business. There is also no published works on assessing the service excellence of retail banking in Hong Kong.

2.4 Current CFQM Model of Retail Banking and Its Inadequacies

The above extensive literature review should give a contemporary account of the research focus and findings in the field. From the review, it appears that evidence have been shown on the importance of TQM's concepts and components (including customer satisfaction and people-based management and leadership) on retail banking performance management, but in a separate/ partial form.

2.41 Current CFQM Model of Retail Banking

Apart from literature search, an exploratory empirical research was also conducted to get a better understanding of quality management efforts of retail banks in Hong Kong. Based on our findings, three retail banks (HongkongBank, Standard Chartered Bank and American Express) have started their quality management and improvements efforts as early as 1989. While two more retail banks have joined in the total quality improvement efforts and won the HKMA Quality Award lately. Among the retail banks studied in our exploratory research, one of the top performing and dominant retail banks has employed a quality management model for achieving service excellence. According to the quality manager of that bank, they believe that an integrated quality management framework is needed for incorporating and supporting all quality initiatives. Therefore, they had set up a "Customer-focused Quality Management Model" (CFQM). It seems that they

were content with the "CFQM" model, which they believed have brought them success and outperformed competitors. The customer-focused quality management model (abbreviation CFQM model will be used interchangeably throughout the thesis) of the bank is shown in Figure 2.2. According to the information gathered from the bank's brochures and the critical incident interview, the quality management model is based on the Malcolm Baldrige National Quality Award criteria, which also forms the framework for the Hong Kong Quality Award. The model was thought to be an effective quality management framework for its retail operations in Hong Kong as the bank was the past winner of the Hong Kong Quality Award.

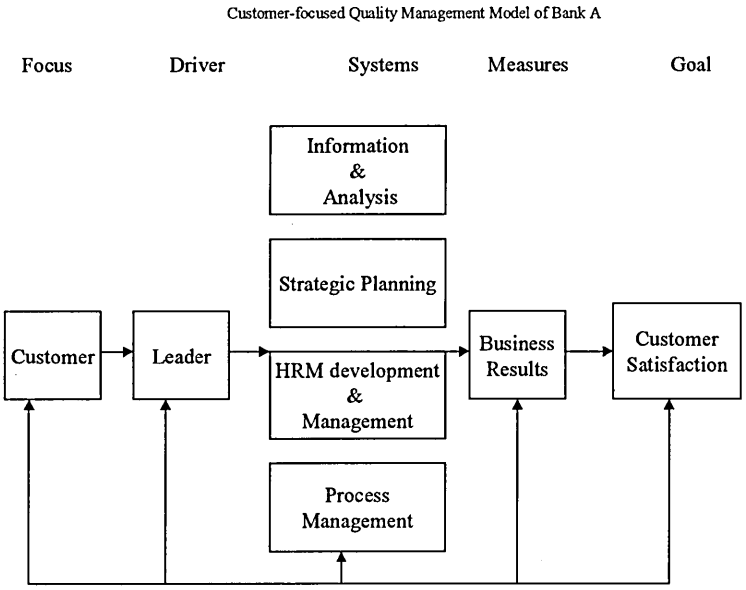
The "Customer-focused Quality Management Model" (CFQM model) is an actual model employed and practiced by a bank in its retail division. Moreover, it also contains some components discussed in the previous banking literature. For these two reasons, it will be considered as a representative of the current quality management model of retail banking.

The components and their relationships are described in a greater detail as follows:

As shown in Figure 2.2, the forming of a customer-focused policy is the foundation for achieving higher performance. According to the " CFQM model",

retail banks should first design a customer-oriented quality strategy. The customer-oriented strategy as a way to implement the policy of the bank was developed based on information from comprehensive market research on customer satisfaction. Then, the customer-oriented strategy is used to focus the whole bank on the need to provide a cost-effective and high quality service to retail customers. This strategy is supported by a quality management structure made up of leaders as represented by the component "leader" in the model. The leaders should then employ systems to guide the sustained pursuit of quality and performance objectives. Those systems comprise "information and analysis", "strategic planning', "human resources development and management", and "process management". The CFQM model suggests that, in this way, service quality of the bank can be raised through the careful monitoring of the four systems. Quality services will in turn boost retail sales and hence better bank performance. Finally, business results will be measured to determine whether the goal of customer satisfaction is achieved. It is not surprising that this model seems to have crystallised the existing views of authors on quality management because it was developed based on the Malcolm Baldrige National Quality Award criteria. However, this model has several inadequacies and should be further improved and structured before it will become useful to retail banks looking for performance improvements.

Figure 2.2 Current CFQM Model of Retail Banking



Source: A Licence Bank in Hong Kong

2.42 Inadequacies of the CFQM Model of Retail Banking

The existing "CFQM " model is no doubt a comprehensive approach to quality management. From the model(Figure 2.2) and its title, it is evident that retail banks appreciated the importance of customer focus in improving retail bank's performance. In today's competitive market, customer focus should be an important component of retail bank's quality and performance management. Obviously, it can been seen from Figure 2.2 that customer focus was treated as a strategy and used as a policy to provide a direction only. However, customer-focus

can also be a way to implement the TQM principle of delighting the customer. From the model, however, there was certainly no system in place to coordinate the use of customer needs information, the production and provision of value satisfying activities. For successful implementation of TQM, it demands the involvement, guidance and commitment of leaders throughout the quality improvement journey. This is considered as one of the major inadequacies of the current CFQM model. Moreover, customer focus as a way of delighting customer should be driven by leaders rather than the other way around. That is to say, it should not be treated simply as a kind of the policy of banks that senior management or leaders should executed. Similar to process management, information and analysis and human resources management, customer focus can only be achieved through leadership driving policy and strategy. Moreover, customer focus does not come so easy, it may require the change of mind-set which has to be strongly supported through the leadership process. In other words, customer focus as a direction or policy should be part of the strategic planning of the leaders and being driven by leadership. Regarding the prime role of leadership, it has already been well documented by quality experts such as Oakland (1993) and Kanji (1998). It has also been incorporated as the prime variable in many quality management models and business excellence models such as the Business Excellence Model of European Foundation for Quality Management.

Besides, the variable "leader" is not right or appropriate. Because what matters is that implementing a successful quality process demands strong leadership. Leadership is exhibited through the processes used to mobilise and direct the quality activities of the bank and its employees (Wolkins, 1996). Therefore, the

emphasis should be on leadership rather than on a "leader".

Moreover, the model focuses on customer satisfaction as an outcome after measurement of business results also posed problems. Customer satisfaction is a kind of non-financial result, which should be measured as part of the business results. Following Kanji (1998) and Taylor and Baker (1994), customer satisfaction is not only an outcome of an organisation but also a mediator construct in the total quality management framework. Indeed, some researchers have recently proposed to use customer satisfaction as a kind of non-financial indicator of a company's performance (Fornell, 1992). As a kind of performance indicator, managing customer satisfaction constitutes an invaluable source for all strategic business analysis and quality management. That is to say, customer satisfaction as part of customer focus should be used as a means and a driving force for gaining better performance(Kanji, 1998; Eklof and Westlund, 1998). Moreover, in modern business management, the goal of retail bank as business organisation should not only be aimed at satisfying their external customers but also responsible for a number of stakeholders, especially shareholders/stockholders (Wong, 1996).

Finally, strategic planning is not an operating system. Strategic planning should not be separate from leadership as it is an kind of activity in leadership where leaders must take part in the creation of strategies, systems and methods for achieving excellence (Tummala, et. al., 1995). Through leaders regular involvement in visible activities such as planning and review of bank's quality performance, areas for improvement can be determined and better bank

performance can be resulted.

To conclude, it was shown that commitments are present in the quality and performance management of the banks. However, in Oakland's phrase " Making quality happen requires not only commitment but a competence in the mechanics of TQM/business excellence.....". The existing model and literature on quality management in retail banking have raised many issues for both academics and practitioners by providing important but insufficient insights into the analytical, methodological and practical issues relating to the actual driving forces of business excellence. The model has doubtless provided some criteria on service quality and customer satisfaction for retail banking. However, it led to misunderstanding on some fundamental issues such as leadership, customer focus and customer satisfaction. Further, there is a problem with the logic flow of systems of activities in achieving higher performance and excellence. The problem is that it was simply developed based on some of the Malcolm Baldrige Award's criteria, no testing or assessment has been done on how those components should be linked. As far as the body of literature is concerned, some of the fundamental components of TQM were overlooked as most of the literature revealed focus only on a particular aspect of total quality management. Nevertheless, the bulk of this research has been in the context of USA, UK and European banking institutions in which the banking environment can be quite different from the eastern part of the World in Chinese society.

Crucial work involves development of an appropriate model that prioritises

systems of works and activities towards achieving excellence are needed. Therefore, a new business excellence model for retail banking should be developed to improve and enrich the current CFQM model of retail banking.

2.5 CONCLUSION

In this chapter, literature on quality management in retail banking context has been reviewed. A better understanding of the development of quality management concepts in retail banking was provided. Besides, the main questions being dealt with by current body of banking research were synthesised and outlined. A model on CFQM consolidating the contemporary views being currently practiced in retail banking was found and described. The CFQM model of retail banking was used as a framework for further extending the research on quality management in retail banking. A close examination of the model in use reveals that there are some inadequacies of the current model, which sets forth improvement quest for developing a new Business Excellence Model (BEM) model for retail banking. It is believed that leadership together with the four principles of TQM- delighting the customer, management by fact, people based management and process management- will form the core of TQM and business excellence. The detail discussion of TQM activities for the pursuit of business excellence will be discussed in the next chapter.

CHAPTER THREE

RELATIONSHIP OF TOTAL QUALITY MANAGEMENT AND BUSINESS EXCELLENCE

3.1 INTRODUCTION

The previous chapter reviews the current literature on quality management in retail banking, current quality management model used in retail banking and discussed the inadequacies of the 'Customer-focused Quality Management model' (CFQM) of retail banking. The inadequacies found are mainly related to the missing links that can improve the 'Customer-focused Quality Management Model' (CFQM) into a new Business Excellence Model (BEM) which can help banks better manage products and service quality so as to achieve excellence and outperform their competitors. It is believed that TQM as a holistic management approach to quality will be useful for fulfilling the inadequacies of the current 'CFQM' model of retail banking. Moreover, today's top performing companies like Xerox, Federal Express often adopt the principles of TQM in their pursuit of performance excellence, this chapter is therefore devoted to discuss the various approaches for attaining business excellence through total quality management. For this purpose, the essence of TQM is first examined and then the various approaches for TQM implementation will be introduced. Next, the advantages of using the critical success factors approach for modelling purpose will be discussed. Lastly, explanation for

the selection of Kanji's business excellence model to enhance the development of the new Business Excellence Model (BEM) for retail banking is given.

3.2 ESSENCE OF TOTAL QUALITY MANAGMENT

In order to ensure that all of the essential elements of Total quality management (TQM) have covered adequately in developing the new BEM for retail banking , we begin with the meaning of Total quality Management. As far as we know, TQM is a philosophy that provides a holistic approach to deal with quality (Kanji and Asher, 1993; Ishikawa and Lee; 1985). To understand total quality management, it is therefore worthwhile to begin by understanding "*quality*".

3.21 What is Quality?

Over the historical development of quality management concepts, quality has been defined in a number of different ways by a number of different people, quality experts and companies. Various definitions are laid as below:

> *" Performance of the standard expected by the customer " (CEO, Federal Express).*

According to Oxford English Dictionary, quality means " peculiar excellence or superiority" and "degree of excellence."

To many Chinese customers, quality is often used to signify excellence of a product or service-people talk about " National's quality", "Boeing's quality" and "Rolex's quality". Quality experts like Oakland defined quality as meeting the true requirements of the customer-needs and expectations (1993).

In fact, quality has no absolute meaning. The reason is that *quality* is in the eye of the beholder (Deming, 1986). Under TQM, quality is ultimately defined by customers.

3.22 What is Total Quality Management?

Over three decades of work, TQM has undergone a process of evolution into a philosophy as evident from inclusion of an expanded number of concepts in its course of development, and the numerous research works that have been done on the subject (Black and Porter, 1996). However, Powell (1995) pointed out that, one of the major inadequacies of most of the empirical studies on TQM implementation and performance, is the lack of statistical rigour and theoretical support. The present research therefore involved a review on the make up of the TQM philosophy that specifies its core values and distinctive set of interventions intended to promote those values.

It is believed that a good start may stem from a discussion of the main tenets of quality masters so as to reveal the essence of TQM before developing the new BEM for retail banking. The following briefly outlines the major tenets of quality masters:

W. Edwards Deming

Deming is often regarded as the father of the Total Quality Management movement. He emphasised on the role of scientific and systematic management of the quality chain to improve quality and productivity and ensure the long-term survival of the firms and improve competitive position (Wong, 1998; Dale, 1990). In his latest work, Deming started to develop the underlying theory of quality management and presented quality management as" a system of profound knowledge'. He discussed quality management as a system of profound knowledge in terms of an appreciation for a system, the theory of variations, a theory of knowledge and a theory of psychology (Deming, 1993). Several researchers (Wong, 1995, 1996; Gitlow and Gitlow, 1994) found that understanding Deming's system of profound knowledge encourages leaders of companies to give up existing ideas of management and adopts a perspective that embraces the new paradigms. These include manage to create a win-win environment, manage with a longer-term process and results orientation, and manage to promote cooperation.

Joseph M. Juran

Juran is best known for his contributions in the understanding of the cost of quality. Juran together with Gryna (1970) observed the overwhelming emphases on money and costs placed by businesses and in managerial eyes, and therefore recommended using the cost of quality for identifying quality improvement opportunities. Juran defines quality as consisting of two forms. One form of quality is income oriented and consists of those

features of the product that meet customer needs and thereby produce income. A second form of quality is cost oriented and consists of freedom from failures and deficiencies. In this sense, quality usually costs less. In his "trilogy", he considered quality management as three basic processes comprising of quality planning, quality control and quality improvement (see Juran, 1986) and showed how these processes are interrelated. Dale (1990) commented that Juran's trilogy is useful for top management in developing and refining quality policies.

Armand V. Feigenbaum

Feigenbaum is a forerunner for the present understanding of TQM. He believes that total quality should be a principal guidepost in the development and implementation of any programmes for realising business goals. He said that "Total Quality Control" is company-wide and effective system for integrating the quality development, maintenance and improvement efforts of the various functions of an organisation so as to enable marketing and engineering, production and service at the most economical levels which allows for full customer satisfaction (Feigenbaum, 1991). He is also the pioneer in clarify the cost of quality issues that worried most managers by classifying the cost of quality in terms of appraisal costs, prevention costs and failure costs.

Philip B. Crosby

Likewise, Crosby is the advocator of the well-known concept "zero defect". He demanded that "zero defect" should be the attitude of companies in defect prevention and

zero defect should become the performance standard of companies (Crosby, 1979). His four absolutes of quality management paved the way for many American companies to improve their quality. To guide the implementation of zero defect programme, he has also developed a five- stage management maturity grid to measure quality achievement.

Kaoru Ishikawa

Ishikawa's synthesis of a company-wide quality control philosophy contributed to Japan's ascendancy as the quality leader of the world and is regarded as the Father of Quality Circle by Japanese companies (Wong, 1996). To encourage companies' application of quality control, he simplified and developed seven statistical techniques (i.e. the Seven QC tools) for quality control in industry. He suggested that the Seven QC tools, if used skillfully, will enable 95% of workplace problems to be solved (Ishikawa, 1991). Indeed, "quality circle" and " cause-and-effect diagram" are still in use by many companies for quality improvements (Ho, 1995).

Genichi Taguchi

Taguchi is well known for developing a methodology to improve quality and reduce costs, which is now referred to as the "Taguchi methods". Taguchi focused of the development of statistical methods to improve quality, particularly in the areas of product design. He defines the quality of a product as the loss imparted by the product to society. From this, he designed the Taguchi loss function, which translates the cost of deviation from the target value into a financial measure. He maintains that the Taguchi loss

function is a driver for continuous improvement. He pointed out that these costs should be calculated and communicated to management for decision making.

3.23 A Summary of Primary Elements of TQM

From the above discussion, the primary elements of TQM philosophy can be derived from their teachings and be summarised as follows.

Customer Focus : TQM is customer focused and " the customer defines the quality". No matter what a company does to foster quality improvement-training employees, integrating quality into the design process, uses new measurement tools- the customer ultimately determines whether the efforts were worthwhile. Employees as the internal customer in the quality supply chain, their satisfaction is also crucial to total quality implementation.

People Make Quality: TQM requires total employee involvement (commitment at all levels). Top management commitment and employee awareness are essentials in TQM implementation. Regardless of the excellence of a company's data and change control systems, and money invested will be wasted if employees are not committed to the fostering of TQM.

Integrating Process: TQM is a complex, integrating process for meeting customer needs and expectations. For this to happen, clear links must exist across the company from vision to objectives, and to all of the critical processes of the company.

Continuous Improvement: A major thrust in TQM is continuous improvement of all processes of a company.

Management by Fact: Decisions, changes, customer needs, process improvement needs must be fact based so that continuous improvement can be measured and revised. Simply, "change for the sake of change" can be avoided.

To conclude, TQM is a management philosophy and a business tool. In achieving TQM, companies have to follow a set of guiding principles and organisational practices which helps to improve productivity, effectiveness, efficiency and finally competitiveness of the business. As such, the primary elements identified will be considered for developing the new Business Excellence Model (BEM).

3.3 WHAT IS BUSINESS EXCELLENCE?

According to the European Quality Award (EQA) criteria, the European Foundation for Quality Management (EFQM, 1999) defines "Excellence" as :

" Outstanding practice in managing the organisation and achieving results based on fundamental concepts which will include: results orientation, customer focus, leadership and constancy of purpose, processes and facts, involvement of people, continuous improvement and innovation, mutually beneficial partnerships, public responsibility." (Source: EFQM, 1999)

Nevertheless, it can be argued that excellence in business, both practically and philosophically, is a word of great significance and indicates a sense of mission and a commitment beyond profit potential and the bottom line.

3.31 Conventional Measure of Organisational Performance

With exception of the two quality management models, the European's Business Excellence Model and Kanji's Business Excellence Model, the concept of business excellence has not been explicitly discussed yet in quality management literature to date. Moreover, many award based models although have been claimed to contribute to organisational excellence, but they have not been empirically tested or validated.

Conventionally, retail banks and organisations have been pre-occupied with financial measures of organisational performance. The shortcomings of financial measures have led to process or functional measures. For examples, there are measures of productivity, service quality (Parasuraman et al, 1991; Saraph et al., 1989) and recently measures of

customer satisfaction (Fornell, 1992; Kristensen et al., 1992). One of the biggest impacts on performance measurement during the past century was Kaplan and Norton's Balanced Scorecard, which concentrates on measures that drive growth and profitability. Noticeably, Kaplan and Norton (1992) pointed out there is a lack of a single measure capable of providing a clear performance measure on various functional areas of an organisation. It would be more useful for managers to receive a balanced presentation of both financial and operational measures.

3.32 Balanced Scorecard & Business Excellence As Alternative Performance Measure

Recognising this problem, Kaplan and Norton (1992) introduced a "Balanced Scorecard" kind of measure that seems to provide a solution. Since then, the business scorecard approach has been adopted by many companies to achieve business excellence. More importantly, a growing realisation of the limitations of traditional performance measure has led to the examination of techniques such as non-financial performance measurement in the field of TQM. Among these efforts, Kanji (1998) shows in his article that there are commonalties between Kaplan's business scorecard approach and his business excellence methodology. In his analysis, he found that the business scorecard approach does not show how each performance areas should be measured and cannot show which performance areas are more critical to the companies (Kanji, 1998). In addition, Kanji and his followers further pointed out that it is essential to adopt a TQM process and apply

the critical success factors for an organisation to achieve business excellence (Kanji and Malek, 1999).

3.33 Business Excellence Index

With this in mind, Kanji have taken a step further by advancing business excellence as a collective and simultaneous measure of a company's stakeholders' satisfaction. Kanji (1998) describes business excellence in terms of an index measure, which is called "Business Excellence Index". The Business Excellence Index is a means of measuring stakeholders' satisfaction and the resultant indices can facilitate decision-making.

To conclude, Kanji's business excellence model has brought the field of TQM a leap forward by providing an innovative and practical means of measuring stakeholders' satisfaction of a company to obtain a comprehensive assessment of the organisational performance. Indeed, in modern business management, business success is often interpreted as providing solutions to problems and finding new opportunities to benefit stakeholder rather than just having good financial performance. That is to say, business success or business excellence are now more than often being linked to an organisation's ability to learn from its customers, employees, suppliers, shareholders, and competitors in a continuous and vigorous manner.

3.4 TQM AND BUSINESS EXCELLENCE

3.41 Business Excellence As a Mission of TQM

Although the quality gurus have focused on different foci in their teachings, they also have much in common. TQM seeks to improve productivity and performance excellence, and it does so by focusing on customer satisfaction and by involving employees in continuous improvement processes. For instance, the European Foundation of Quality Management (EFQM) uses the term *business excellence* to mean outstanding practice in managing organisations and achieving results based on fundamental quality management concepts. The US Congress used TQM concepts to determine sets of standards of excellence for their Malcolm Baldrige National Quality Award (MBNQA).

Thus, in broad terms, the overall objective of TQM is to achieve business excellence, which should be the primary objective of any organisation or business (Drucker , 1988). Achieving excellence may mean improving productivity; effectiveness, efficiency, and gaining competitive advantage (Cartin, 1993; Goetsch and Davis, 2000). This excellence has to be recognised by the customers. To win their recognition, business excellence should be able to help a company in creating values that satisfy customers continuously. Hence, TQM philosophy is evolved and developed with a more fundamental mission of helping companies to attain business excellence.

3.42 Business Excellence As Benefit of TQM

A rationale put forward by American Society for Quality (ASQ) is that:

> *" ....the best way to win in global competition is with quality at low cost. The best ways to produce quality at a low cost is to continually improve people, processes, and environments. The best way to continually improve people, processes and environments is the Total Quality way."*

Nevertheless, a driving force behind modern organisations' effort to become more competitive is the demand of the global marketplace for quality and business excellence (Cartin, 1993; Wong, 1995). And nowadays, consumers have become the most powerful driving forces in the global marketplace and this is especially true for service industries like retail banking. Customers demands, coupled with the globalisation phenomenon, have made today's marketplace intensely competitive. Consequently, in order to survive and prosper in this environment, organisations should continually improve the quality of their products, services, processes and people through TQM (Wong, 1996). TQM is a vehicle for espousing customer values and a vehicle for these changes. TQM is certainly not a panacea for satisfying all organisation goals including business excellence, but it is increasingly being seen as a management and business tool for companies to achieve good business results and competitiveness. Many companies like Federal Express, Rank Xerox and Motorola have adopted TQM and obtained staggering business results (Pike and Barnes, 1994; Wong, 1996).

The usefulness of TQM in helping companies to achieve business results was also reflected in the growing number of national and international standards and awards being recognised and adopted by governments and corporations of both developed and developing countries. Some of the most prestigious external quality awards include the Deming Prize, the MBNQA, and the EQA. Briefly, awards for quality achievement began with the Japanese, the Deming Prize. In 1987, the U.S. Congress developed the Malcolm Baldrige National Quality Award (MBNQA). In 1992, the European Quality Award (EQA) was established. Around the same time period, the Hong Kong Quality Award (HKQA) was also established. In the mid-1990s, the Indian Quality Award was finally established. All the awards are recognition of high achievement in raising quality/ productivity and performance. Most of all, the main thrust vested in these awards are to provide a framework to make their businesses more competitive or to achieve business excellence even though the criteria vary somewhat between awards (Wong, 1995).

3.43 Business Excellence As Performance Measure

As introduced earlier, business excellence is actually a kind of collective measure of key organisational areas of an organisational performance. As such, the performance of an

organisation can be regarded as one of the interface between total quality management and business excellence.

To conclude, it is clear that quality experts had developed TQM as a business tool for companies to drive business performance. Followers like Oakland (1993) think that TQM is synonymous with business excellence while Besterfield (1995) believe that TQM is the art of managing the whole organisation to achieve business excellence. More recently, quality experts like Kanji advance the concept of business excellence as a robust measure of organisational performance because business excellence is now being increasingly recognised as the desired outcome of many business endeavours.

3.5 EXISTING TQM MODELS AND BUSINESS EXCELLENCE MODELS

As shown in the previous sections, the links between TQM and business excellence is apparent and therefore should be established in any useful TQM implementation model. The section is thus devoted to the search of the link in existing TQM models and business excellence models. A variety of TQM models can be found in the literature. However, many TQM followers recognised the difficulty of the companies to implement those general principles laid down by the quality gurus. More often than not, researchers (Hackman and Wagerman, 1995; Oakland; 1993) found that implementations of total

quality management process should be aided by implementation models that guide quality practitioners, managers through the process of improvement. In line with this, some of the most important and relevant TQM frameworks are reviewed as follows:

Saraph et al (1989) proposed an eight- critical factors model of quality management based on prescriptions of various eminent quality authorities. The factors identified include: the role of management leadership, employee relations, training, process management, quality data reporting, product/service design, role of quality department and supplier quality management.

Ahire et al (1996) identified 12 TQM dimensions through a synthesis of the quality management literature reviewed. They include: top management commitment, customer focus, supplier management, design quality management, benchmarking, statistical process usage, internal quality information usage, employee empowerment, employee involvement, employee training, product quality and supplier performance.

Although these models provide a broad range of empirically tested critical factors, the researchers had not shown the linkages among their proposed critical factors. Besides, those factors identified in these models are essentially lists of things to do and are not in themselves the success factors for TQM adoption. More importantly, the established link between business excellence and TQM has not been provided in any of these models.

Besides, none of these studies indicate how well each of their factors contributes, at an aggregate level, to the successful implementation of TQM. Basically, the critical factors proposed provide answers on a set of "things to do for the quality seeking companies" than a real quality management plan for companies. This group of models can be only regarded as conceptual models as the basic questions of TQM implementation namely what, who, how and why cannot be adequately answered by these models or by these researchers.

Although quality awards were originally designed as a tool to assess companies progress towards TQM implementation or a motivational tool for TQM adoption. Many writers have advocated the use of those well-known quality award models such as the MBNQA and EQA as a framework for TQM implementation.

The model developed by Black and Porter (1996) is a representative model of the type. According to them, the group of quality dimensions of their model was determined based on the Malcolm Baldrige National Quality Award (MBNQA) criteria and the European Quality Award (EQA) criteria. After factor analysis, a total of ten critical success factors of TQM were identified.

While the award based models have proved to be quite useful for corporate giants, these models provide little meaning to beginners and especially to medium-to-smaller companies (Hewitt, 1997). This is natural as Garvin (1991) commented that, the

MBNQA award is best as an audit framework. For audit purpose means that companies are presumed to have reached certain stage in their quality journey and a lot of quality implementation basics will not be addressed and more importantly the concept of *business exc*ellence will not be explicitly addressed and explained. This may partly explain why so many medium and smaller businesses perceived that they don't need business excellence (Hewitt, 1997). Thus, there is a pressing need for a model capable of exploring how well the TQM principles can contribute to business excellence. Fortunately, a Business Excellence model was recently developed by Kanji (1998). Kanji (1998) employed the TQM elements approach and identified the prime driver for business excellence, four principles and eight core concepts for TQM implementation.

To offer a more meaningful analysis, a comparison of the existing TQM models and Business Excellence Models in terms of the quality principles covered and the approach employed are given in Table 3.1. In this way, the extent of representation and the extent of applicability of the existing models on some common TQM dimensions can be highlighted. It can be seen from Table 3.1 that Kanji's model is the most comprehensive model that had incorporated the common TQM dimensions / principles, which are congruent with the TQM philosophy. The principles of TQM that have been covered in Kanji's business excellence model include: Leadership, Delighting the Customer, People based Management, Management by Fact, Continuous Improvement. In Kanji's model, every TQM principle is then linked to two TQM concepts in the pursuit of business excellence. These TQM concepts are external customer satisfaction, internal customers

are real, people make quality, teamwork, all work is a process, measurement, prevention, and continuous improvement cycle.

TABLE 3.1

Comparison of TQM models and Business Excellence Models

Model/ Framework	Approach For TQM Implementation	Elements of TQM Covered
Business Excellence Model (Kanji 1998b)	TQM elements Approach	Leadership, Delight the Customer, People-based Management, Management by Fact, Continuous Improvement, Internal & External Customer Satisfaction, Teamwork, People make quality, All work is process, measurement, continuous improvement cycle, Prevention
Malcolm Baldrige National Quality Award Framework	Award Criteria Approach	Leadership, Information and analysis, strategic planning, human resources management, customer focus & satisfaction, Results progress measurement.
EQA's Business Excellence Model (EFQM, 1999)	Award Criteria Approach	Leadership, people, policy & strategy, partnerships & resources, processes, people results, customer results, society results, key performance results.
CSFs Framework for Quality Management (Saraph et al., 1989)	The Guru Approach	Role of top management, role of quality department, training, product design, supplier quality management, process management,

TQM Critical Success Factors (Black & Porter, 1996)	Award based Approach	People and customer management, supplier management, communication of improvement information, quality measurement system, operational quality planning, supplier partnerships, teamwork structures, corporate quality culture, strategic quality management, orientation, customer satisfaction.

3.6 APPROACHES FOR TQM IMPLEMENTATION

As discussed in the previous section, many quality leaders (Kanji and Asher, 1993; Oakland, 1993) recognised the importance of providing solid frameworks and structured models for companies to follow so as to achieve business excellence.

By comparing the existing TQM models and Business Excellence Models of the present literature in Table 3.1, it provides some light on the importance of the approaches employed for model development. For better modelling purpose, a variety of approaches for TQM implementation will be identified and outlined as follows:

A. The TQM Element Approach

This approach takes key business processes or subsystems of organisation and uses the tools of TQM to foster improvements. This method was widely used by companies in the

early 1980s in United States and Hong Kong (Wong, 1993). Examples of this approach include the use of quality circles, statistical process control, Taguchi methods, and quality function deployment were used by companies.

B. The Guru Approach

This approach emphasizes the uses of the teachings of the leading quality masters as a benchmark against which to determine where the organisation has deficiencies and then makes appropriate changes to remedy those deficiencies. For examples, managers may learn Deming's 14 points and then work on implementing the principles learned. How to do it was solely up to individual interpretations.

C. Critical Success Factors (CSFs) Approach

In the CSFs Approach, researchers visit companies taking a leadership role in TQM and determine their degree of and reasons for success (i.e. their critical success factors). In this way, the dimensions of the models represent the key organisational areas of the companies that must be well managed for the companies to be successful. The researchers then integrate these CSFs with their own TQM knowledge to determine what are the key activities of a particular type of company and develop accordingly a framework for TQM implementation.

D. The Award Criteria Approach

In this approach, a company uses the criteria of a quality award to identify areas for improvement (Lozier and Teeter, 1996; Wells, 1998). Under this approach, TQM implementation focuses on meeting specific award criteria. And the result is an award based model. The frameworks built through this approach are often in-house models developed by individual organisations for internal use. Indeed, the present research found that one of the leading retail banks studied had adopted this approach in developing an in-house quality management framework. Numerous other examples of these types of models can be found in corporate giants like Rank Xerox, IBM, Texas Instruments etc. Although many argue that this is not an appropriate use of award criteria, some organisations do use this approach and result in improvements. Yusof and Aspinwall (2000) argued that award based models can be one of the tools to be employed when a company has reached certain level of maturity in their implementation of TQM.

For modelling purpose, these approaches are further assessed against a group of modelling criteria described in Chapter One to determine whether they represent a valid model for measuring business excellence. An assessment of the approaches is presented in Table 3.2 .

The assessment in Table 3.2 provides some light on the strengths and weaknesses of the existing approaches. In addition, major issues of modelling are highlighted. Although a

number of approaches or devices can be used for TQM implementation, it is reflected in their representative model that not all the approach will result in a robust TQM implementation model.

Most importantly, all these mentioned modelling approaches, with the exception of the critical success factors (CSFs) approach, do not in themselves offer any understanding of the key drivers of business. It can be argued that this is a major inadequacy of the mentioned modelling approaches.

Table 3.2

Assessment of Approaches for TQM Implementation Based on Modelling Criteria

Criteria for Modelling	The Guru Approach	The Award Criteria Approach	The Critical Success Factors (CSFs) Approach
Representative Example of the Model	Saraph et al (1989)	Black and Porter (1996), EQA's Business Excellence Model	Kanji's Business Excellence Model (1998b)
Nature of the Model	Indicative model*	Indicative model*	conceptual and measurement model combined
Systematic & Easy to Understand	No	Yes	Yes
Simple Structure	No structure	Yes	Yes
Addressing Basic TQM Implementation Questions ?	Partially done	Yes	Yes
Clear Links between elements of the model	No	Yes	Yes

Measurement method & Measurement Standards for each component of the model	Vague and Broad	* Yes, but arbitrary model components and arbitrary weightings are imposed. No suggestion on measurement method.	Yes. Statistical method for measuring each constructs and performance results is suggested.
Detail concept of Business Excellence	No	No	Yes, business excellence concept is explicitly considered.

Note: * Refer to Kanji (1998) for a detail meaning of indicative model. * Source : Finn and Porter (1994), in their comparisons of major quality award.

3.7 CRITICAL SUCCESS FACTOR APPROACH FOR MODELLING

From the assessment shown in Table 3.2 of the previous section, it was found that the critical success factors (CSFs) approach is a better approach for modelling (Kanji, 1998b; Kanji and Malek, 1999). Its strengths have been reflected in Kanji's business excellence model (Yusof and Aspinwall, 2000;Kanji and Yui, 1997).

With this in mind, this section is devoted to the discussion of the critical success factors approach for modelling. Firstly, the concept of critical success factors will be described. Following that, the strengths of CSFs as a modelling devise will be outlined.

3.71 What are Critical Success Factors (CSFs)?

Basically, critical success factors is a term used to mean the limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for organisation. Say it simply, critical success factors (CSFs) are what must be accomplished well for the mission to be achieved.

Kanji (1998) also stated CSFs as the *"..... few things that must go well to ensure success for a manager or an organization"*.

3.72 Strengths of the Critical Success Factors Approach

Recently, the use of critical success factors (CSFs) approach for the development of frameworks has become a trend in the research field.

Many writers argue that the CSFs approach can result in more robust framework for planning and implementation (Crag & Grant, 1993, Kay et al., 1995; Holloway, 1996). Kanji (1998) indicated that CSFs is a useful approach for identifying critical success factors for business excellence because it can focus attention on areas where "things must go right". Martin (1990) pointed out that CSFs approach combined with statistical computer software could effectively translate business strategy planning. Moreover, the strengths of CSFs approach can be outlined as follows:

- provide a set of criteria for assessing the strengths & weaknesses of a company
- systematic identification of important organisational areas of the company to focus improvement attention
- provide resources allocation implication or indication for strategic planning
- provide the basis for performance measurement management

3.73 Application of the Critical Success Factors Approach In Business

The critical success factors (CSFs) approach is not a new approach, it has been adopted and applied in businesses and industries. Examples of a vital few of these applications are outlined below (Holloway, 1996):

- Performance measurement management for strategy execution
- Identification of CSFs for information system executives for career planning and advancement purposes
- New product development
- Identification of CSFs for TQM implementation in Oregan State University

As such, it is believed that the CSFs approach will be a useful approach for model development of the present research. In this way, the critical success factors in the basic structure of the retail banking industry that may have significant impact on retail banks' performance operating in that industry should be identified and measured for further

improvements. In order to attain business excellence, in fact, this information is much needed and should form an integral part of the retail banks' strategic planning process.

3.8 PRINCIPLES OF KANJI'S BUSINESS EXCELLENCE MODEL AS A THEORETICAL BASIS FOR THE NEW BEM FOR RETAIL BANKING

From detail discussion of the previous sections, it was found that Kanji's business excellence model represents an accurate and valid TQM model for assessing business excellence. It may be the sole model that had been developed through the critical success factors approach and survived well from the general modelling criteria to date. Moreover, Yusof and Aspinwall (2000) commented Kanji's business excellence model as an attractive and practical implementation model for companies to follow after his extensive literature review of implementation frameworks.

In line with Yusof and Aspinwall's suggestion, Kanji's business excellence model is selected to provide the principal theoretical framework for the development of the new Business Excellence Model (BEM) for retail banking.

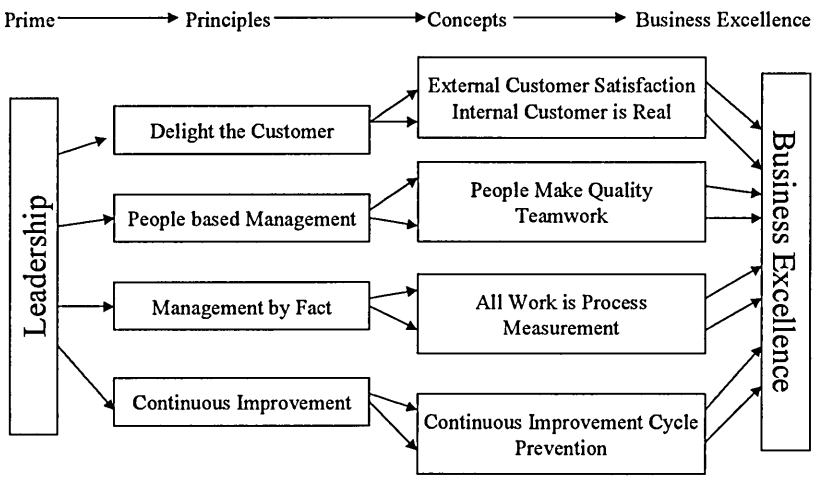
As a result of this decision, this section will present Kanji's business excellence model in greater details and see how can the principles of the model be applied to enrich the current "CFQM" of the retail banking.

3.81 About The Principles of Kanji's Business Excellence Model

Kanji and Asher (1993) stated that quality is a continuous process that can be broken anywhere in the system of supply and customer service. Keeping this in mind, the Business Excellence model was designed to embrace two sets of critical quality management factors (Kanji, 1998). The Business Excellence Model is reproduced in Figure 3.1. One set of factors belongs to the "results" of what a company desires to achieve in its quality journey. While the other set of critical factors takes care of how the results can be achieved.

Figure 3.1 Kanji's Business Excellence Model

Figure 3.1 Kanji's Business Excellence Model (Source: Kanji (1998b)



Kanji's Business Excellence Model (Source:Kanji, 1998)

Basically, all these factors are the core principles and concepts of Total Quality Management. Kanji stated that these principles and concepts are embraced in the model to address the various questions and issues that concern companies during their implementation of TQM. Leadership as the first and prime principle indicates the important role of top management as leaders in their roles of designing, supporting, motivating, communicating and leading the quality drive of the entire organisation. In the TQM process, leaders play an important role in providing a quality vision and building-in the quality culture. Customer focus and satisfaction, and employee satisfaction can only be achieved through leadership driving strategy. That is to say, the leaders should direct and involve all the people to ***where*** the company desires to go. The second principle of the model is "delight the customer", which addresses the question of ***what*** *to do*. It emphasises on recognising and satisfying what the customers' need. By discovering and understanding customers' needs and expectations, company will know ***what to do***. Next comes the principle of "management by fact" which tells the company ***how to do***. By this principle, Kanji (1998) means that the ways to achieve total quality and excellence are aligning process management teams and making decisions based on facts rather than intuition or personal judgement. The question of ***who should do*** it is addressed by the principle of "people-based management". By this principle, Kanji recognises that no systems, technology or tools can produce quality without people. He stated that only "people make quality". Effective organisation and involvement of people through teamwork and equipped people with appropriate knowledge, tools and technology are the right ways to produce quality. Finally, the principle of "continuous improvement" provides answers to the question of ***why doing it***. This principle reinforces the concept

that total quality is a continuous process that cannot be achieved through quick fix. It has to be done through a never-ending cycle of improvements and prevention. All these principles together if implemented successfully, according to Kanji (1998), will ultimately help the company to achieve business excellence. Finally, Kanji's has demonstrated how to measure the quality of all key organisational areas simultaneously, causal connections among them and show their collective influence on organisational performance. According to the model, business excellence represents a collective measure of customer's satisfaction, employee's satisfaction and shareholder's satisfaction in order to provide a comprehensive assessment of organisational performance.

In sum, all the principles of Kanji's Business Excellence Model are congruent with the core principles and concepts of the TQM philosophy and the vision of TQM philosophy.

3.82 About the Business Excellence Model As a Whole

Up to this stage, it should be clear that for modelling purposes, Kanji's model is consistent with the TQM philosophy proposed by the quality guru as well as TQM elements proposed by major TQM contributors. In other words, Kanji's model represents a model with strong theoretical support, which is an important element of concern in modelling.

Regarding to the representation and applicability of the Business Excellence Model, Kanji had synthesised not only the primary TQM elements but also other critical success

factors for business excellence. Previous survey results by Kanji and other researchers (Kanji and Yui, 1997; Kanji and Malek, 1999) reported that the constructs of the model were recognised by respondents as critical success factors.

The accuracy of a model in measuring organisational performance is a validity issue. With regards to this, Kanji's model have been empirically applied and tested in various business and industry settings and were proved to be an accurate and valid model (Kanji and Malek, 1999). While many other models such as the MBNQA framework have not been subjected to rigorous empirical tests for validity. This fact is reflected in the various changes and movements between some Baldrige items and categories over the thirteen years since its commencement (Finn and Porter, 1994).

Recognising the needs of practitioners for an implementation model, Kanji (1998b) decided to translate the former Pyramid model (a conceptual model) into a structural model for business excellence to facilitate its implementation. From Figure 3.1, it is clear that the five principles and eight core concepts of TQM have been translated into a systematically linked structure of relationships. Further, all these critical quality management factors are finally tied up with the end result-business excellence.

In a way to make the relationships among the factors meaningful, a structural approach was used (Kanji, 1998b). Besides, a robust statistical method was proposed for companies' measurement of results. According to Kanji, this method is capable of

performing simultaneous computation of structural equations of factors relationships to obtain indices for easy comprehension and comparisons.

In sum, Kanji's Business Excellence Model is the sole model found to be capable of satisfying all the general criteria of a good model. Thus, Kanji's business excellence model provides a potential solution to the task of searching for a representative measurement model for retail banking.

3.9 CONCLUSION

In this chapter, an extensive TQM literature and other literatures have been reviewed in order to consolidate the theoretical meanings of TQM elements and its philosophy, and the relationships between TQM and business excellence. After the analysis, it was found that :

> Total quality management is an approach to doing business that helps to achieve competitiveness (a form of business excellence) through the continual improvement of an organisation's products, services, people, processes to delight the customers. Achieving business excellence is in fact the primary mission of TQM. In order to achieve business excellence, the application of principles of TQM and quantitative methods to harness human and other resources of a company are necessary.

To outperform competitors and improve business performance are the most common forms of business excellence companies desire to attain, and are the driving forces for companies to implement TQM.

As such, proper and effective ways to help practitioners to implement Total Quality Management and in turn to achieve business excellence is considered as necessary. While successful application of the many TQM principles outlined by the quality guru requires a structured approach to do it. A sound model provides such a way by securing links between TQM principles and practical application. Put in other words, this means a sound model helps to translate theory into practice through some systematic means.

Accordingly, a theory-driven improvement model was searched through comparisons of existing TQM and business excellence models in terms of their approaches and a set of modelling criteria. In the process, Kanji's business excellence model was found as a substantially validated model for use as a theoretical basis and a working model in my research.

To determine what the new Business Excellence Model (BEM) for retail banking should constitute therefore is first on the basis of theoretical principles of Kanji's business excellence model. Furthermore, this will be supplemented by recent practices found in the interviews and reported by a number of banks' annual reports and publications referenced in the present research. This part will be elaborated and discussed in greater detail in Chapter Five.

CHAPTER FOUR

RESEARCH DESIGN AND METHODOLOGY

4.1 INTRODUCTION

This chapter discusses those important research design and methodology issues relevant to the present research. Briefly, it embraces explanations on the planned design selected for conducting this research, and the methods used in collecting and analysing data for this research.

Bernard (1998) and Burns (1994) specify that "research is a systematic way of asking questions, a systematic method of inquiry. The purpose of research is to obtain knowledge or to find answers to a problem". In essence, we conduct research to provide an objective description of the world. Along the same line, the present research attempts to develop a more structured and concrete framework for retailing banks to pursue business excellence.

Now, the next question of concern is how the research ought to be done. To qualify to be an accepted piece of research work, the research shall follows a scientific methodology to assess existing knowledge through the acquisition and analysis of meaningful data, to solve problems and create new knowledge that is generally applicable (Bernard, 1998; Zaltman et al., 1973). Hence, the present

research follows Bernard's research suggestion in investigating the factors leading to business excellence in Hong Kong retail banking. The final output of this research is a more developed model for retail banks. Details of the plan for conducting the present research are spelt out in the chapter.

4.2 TYPES OF RESEARCH APPROACH

In this section, the central concern is on the most appropriate research approach with respect to the present research issue. Kumar (1998) classifies the types of research approach in terms of the extent of practical application of the research, the purpose of the research and the type of information sought.

4.21 The application of the research

In literature, there is generally a distinction between basic research and applied research. The focus of basic research is to investigate issues relevant to acquire information about a phenomenon with little emphasis placed on applications to the real world.

Applied research involves the application of research techniques, procedure, and

methods that form the body of research methodology to the collection of information about various aspects of a problem so that information gathered can be used in other ways (Kumar, 1998).

The present research belongs also to the family of applied research where the measurement of the European Customer Satisfaction Index (ECSI) is being applied to the retail-banking sector of Hong Kong. To this end, a research strategy that maximizes the applicability of findings is chosen.

4.22 Objectives of the research

With respect to the perspective of research objectives, this research entails a combination of three out of the four perspectives classified and described by Kumar. They are namely exploratory research, descriptive research, causal research and explanatory research. Each of these perspectives differs significantly in terms of research purpose and the related data collection methods. The three elements related to the perspectives of this research are briefly explained as follows:

Descriptive Research

Accordingly the present research has some element of " descriptive research" where the phenomenon exists in retail banking setting is reported in the forms of

percentages and indices.

Causal Research

The element of "causal research" serves our purpose of uncovering the relationship/association between total quality management (TQM) and business excellence in the retail-banking sector of Hong Kong.

Explanatory Research

This research also tries to find out why and how TQM principles and concepts can contribute to business excellence. Indeed, most studies in management sciences can be classified into various combinations of these four perspectives.

4.23 Types of information sought

Lastly, Kumar (1998) discusses the paradigms of research regarding the split between the qualitative and quantitative research. Kumar (1998) and several others (Dunn, 1999; Bernard, 1998; Aaker and Robert, 1994) suggest that quantitative research methods are more appropriate for dealing with structural issues such as isolates and defines variables. Quantitative research uses pre-determined and fine-tuned instruments such as questionnaire survey for data collection, which are usually referred to as thin, hard and generalisable. While the unique strength of

qualitative research method is its ability to deal with a full variety of evidence-documents, artifacts, interview. Qualitative research method is appropriate for describing and explaining a situation, phenomenon or problem.

Although many researchers traditionally identify themselves as belonging to one of these two distinct paradigms, some (Dunn, 1999; Bernard, 1998; Gill and Johnson; 1997) argues that a sound mix of qualitative and quantitative data is inevitable in any study of human thought and behaviour. It is therefore advisable to adopt a "methodologically pluralist" position in research and sees these two paradigms as complementary rather than competing approaches to the same empirical study.

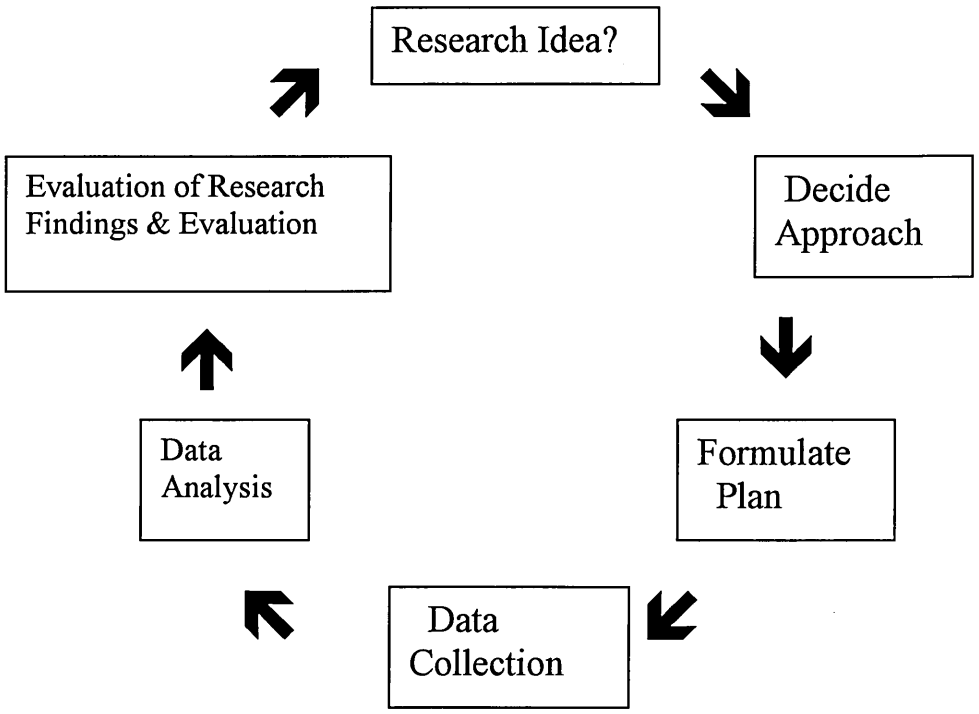
For that reason, particular attention is paid to those weaknesses associate with a single-method approach. As such, the present research appreciates this need and adopts a multi-method approach in investigating the forces of business excellence in retail banking.

4.3 THE RESEARCH PROCESS

A research process is a sequence of procedures or activities with a lot of interaction between the conceptual and empirical world, deduction and induction occurring at the same time. It relates to translating the scientific method into practice. The

research process for this study involves a sequence of activities that are outlined in Figure 4.1.

Figure 4.1 *The Loop Conceptualisation of the Present Research Process*



From the inception of the present research idea to the final report of results, the research process of the present research has several crucial steps. The flow generally follows the sequence illustrated in the diagram above.

4.4 RESEARCH DESIGN

Research design is essential for every research as it is a strategy and plan aimed at enabling answers to be obtained to research questions. In other words, research design represents a blueprint for how a research study is to be completed. Through research design the researcher have to: (1) conceptualise an operational plan to undertake the various tasks required to complete the research; and (2) ensure that these procedures are adequate to obtain valid and accurate answers to the research problem.

Accordingly, a detailed work scheme is designed for specifying the stages of developing and validating the condensed model of Excellence for retail banking, stages of data collection and analysis of the present research. An outline of the detailed work scheme is given below:

Table 4.1 Outline of the Present Work Scheme

Stages	Research Activities	Outcomes
Exploratory Stage	Literature review on development of quality management concepts for retail banking and models used by retailing banks. Case studies of successful retailing banks through in-depth interview Literature review on the customer satisfaction models & the ECSI model.	Identification of inadequacies of the existing quality management (QM) model & quality efforts undertaken by retailing banks Identification of CSFs of successful retailing banks at the industry level

Model Building Stage	Literature review on business excellence models incorporating the core TQM principles Enriching the existing QM model used by retailing banks with CSFs, and the TQM principles of the chosen business excellence model	Developing the new business excellence model for retail banking-the Business Excellence model (BEM).
Model Testing & Validation Stage	Adapt & fine-tuned a questionnaire for assessing the model of Business Excellence for Retail Banking (BEM) based on exploratory studies findings, literature review, & pre-test by bank's executives. Survey on retailing banks in Hong Kong	An adapted bank survey instrument.
	Develop a questionnaire for assessing customer satisfaction based on the European Customer Satisfaction Index Model (ECSI) and review by a customer focus group. Conduct a customer survey to retailing bank's customers in Hong Kong	A customer survey instrument incorporated customer-determined measures & importance evaluations.
	Empirical testing of the two data sets with EQS programmes to measure the goodness of fit of the models	The goodness of fit of the BEM model
	Using structural equation modelling technique to validate the "BEM" model and the ECSI model. Interpret the goodness of fit results of EQS programmes, and validity & reliability testing results of PLS.SAS programme to determine the validity & reliability of the model.	The goodness of fit of the ECSI model. Statistical validity and reliability of the model are confirmed.

Model Application Stage	Apply the validated model to assess forces of business excellence in retail banking. Using PLS.SAS to calculate the indices for the retail banking sector as a whole and for three categories of retailing banks	"BEM" Indices for the retail banking sector. Forces of Excellence Indices for the retail banking sector.
Focus Analysis Stage	Using PLS.SAS to calculate the customer satisfaction indices for retail banking sector and for major categories of retailing banks to form the customer input (an external source of data). Incorporate the model of "BEM" results with the customer input (i.e. customer satisfaction indices) for further focus analysis of the model	Customer Satisfaction Indices for retail banking sector and for major categories of retailing banks. Link up business excellence indices & customer satisfaction indices for retail banking sector and for three categories of retailing banks.

4.41 Exploratory Stage

The exploratory study involved two parts. For the first part, an extensive literature review was performed to identify the inadequacies of the quality management models currently used by retailing banks and the ways to enrich and improve the current model of retail banking. In addition to this, literature review on customer satisfaction models was also performed to search for a scientifically based method for obtaining reliable data from customers.

For the second part, in-depth interviews were conducted with executives of three

successful banks in order to further examine and identify what critical success factors are required to effect business excellence in retail banking. Executives were asked to provide critical incidents on their ways to business success. Through these incidents, it was able to identify and explain the detail of why banks select those success factors and how those success factors work in their respective situations. In short, information arises from these incidents forms a premise for building a business excellence model for retail banking industry.

4.42 Model Building Stage

A Business Excellence Model (BEM) for retail banking industry (the term "BEM" or Business Excellence Model for retail banking will be used interchangeably in this research report) model is built with an aim to develop a scientifically based model for measuring and driving business excellence in retail banking. It is also intended to broaden the bankers' currently narrow range of utilized quality management models and methodologies and to encourage the use of a properly structured model with unique measurement possibilities.

In building the Business Excellence Model (BEM) for retail banking, literature review on structural business excellence models incorporating core TQM principles was performed. The result is then compared with the critical success factors (CSFs) of successful retailing banks. In the process, Kanji's business

excellence model was chosen as a basis for building the new BEM for retail banking because Kanji's model has the exceptional qualities of incorporating all core TQM principles and those critical success factors of retail banking identified in my exploratory studies. Indeed, the critical success factors (CSFs) identified are similar to the core TQM principles stated in Kanji's model. For the purpose of this research, we called them the forces of business excellence.

Lastly, a tentative Business Excellence Model for retail banking Industry (BEM) was developed and was structured around the forces of business excellence for retail banking industry. This work is important as the cornerstone of conducting scientific research rests in developing sound theoretical framework, and followed by rigorous testing of the model.

4.43 Model-testing and Model Validation Stage

A questionnaire survey on retail banking in Hong Kong was conducted to test and validate the Business Excellence Model for the retail banking sector. A business excellence instrument (i.e., Kanji's instrument) was adapted and fine-tuned to retail banking context. The forces of business excellence of the "BEM" were refined and operationalised into measurable items of a questionnaire based on exploratory studies findings, literature review and validated by banks' executives. The main thrust of construct validity rely on whether the variables actually measure what they purport to measure. One of the main threats to construct validity is common

method variance. Common method variance refers to the potentially erroneous relationship between two variables when no relationship exists. The error is generally attributed to a number of factors such as systematic response style and bias for social desirability. Bearing this in mind, the procedural methods have been employed in the design and refinement of measurement instruments of the present research. To minimise common method variance, multi-item scales were used and the dependent variables were put at the end of the questionnaire instruments. Specifically, multi-item scales reduce common method variance by using several questions to address a single construct. When summing the items for each variable, common method variance is reduced (Spector, 1987). Whereas placing the dependent variable at the end of the questionnaire guides the respondent to answer more objectively, with less guessing as to the real nature of the survey.

The application of the forces of business excellence has been linked up with the performance indicators to find out the causal relationships between them. The BEM was then subject to testing based on the data collected. A structural equation modelling programme- EQS was used to identify the goodness of fit of the model. Since no single goodness of fit index can measure absolutely how reliable is the result, a bundle of goodness of fit indices rather than a single χ^2 is considered to ensure and achieve reliable results for the present research. Parallel to this work, a customer satisfaction survey was also administered to customers of the retail banking in Hong Kong for measuring the level of customer satisfaction. The measurement instrument was first developed based on the European Customer Satisfaction Index Model (ECSI) and its related measurement instrument. Then,

the questionnaire was pre-tested and incorporated changes as recommended by the customer focus group. Lastly, the EQS programme is used to test the data obtained from the survey to identify its goodness of fit.

4.44 Model Application Stage

Based on the validated models, the Business Excellence Model for retail banking (BEM) indices and the indices for each individual forces of business excellence were computed using the Partial Least-squares (PLS.SAS) method. In this way, the present research has extended Fornell's Indexing methodology (1996) to the construction of forces of business excellence for retail banking.

4.45 Focus Analysis Stage

Further detailed analysis of the "Customer Focus" construct of the Business Excellence Model (BEM) for retail banking was performed to gain a better understanding of how well the model as a whole and the individual forces of business excellence operate.

In the process, the "Customer Focus" force was selected for the focus analysis and the overall customer satisfaction indices were also calculated through the PLS.SAS programme. It is considered that customer satisfaction index serves as a customer input outside the organisation that is too important to be ignored. In this way, the

customer satisfaction index can be linked up to the "Customer Focus" index of the new BEM for higher level analysis. It is believed that this is a meaningful way to complement the quantitative findings in gaining a better understanding of the nw BEM for retail banking.

4.5 DATA COLLECTION METHODS

4.51 In-depth Interview

In the exploratory stage of the research, an intensive rather than extensive research strategy was adopted where in-depth interviews were carried out with executives of selected successful retail banks in Hong Kong. Selection was based on two criteria: (1) the bank has a dominant role in the retail banking market, (2) it belongs to the top three performers in the market. Those three that satisfied the two criteria would be targets of the in-depth interview as they represent the real winners in the market and should have certain successful experience to share.

Comparisons of the banks' performance were based on commonly used financial performance ratios in the banking sector averaged over a three-year period (1996-

1998). These ratios included return-on-equity (ROE), cost-to-income ratio (CIR) and loan-to-deposit ratio (LDR). After the comparisons, executives of the three banks were approached. Executives responsible for quality management activities of the three selected banks were interviewed. An interview guide was used to ensure interviews do not get lost in a few topics or in topics of no relevance. Flanagan's critical incident technique (CIT) was used to explore and generate information about critical aspects of their quality management efforts. In other words, executives were asked to provide prominent example of their quality improvement efforts. The critical incident technique (CIT; Flanagan, 1954) proved to be a valuable method for focusing participants' perceptions of what they saw as critical or important aspects of quality management and forces of excellence in retail banking setting. It is a promising qualitative research technique, which is known for its ability in eliciting useful information from the interviewees in a semi-structured interview format. A critical incident means any observable human activity that is " sufficiently complete in itself to permit inferences and predictions to be made about a person or a situation " (CIT; Flanagan, 1954). The advantage of using this technique is that a clear picture can be obtained through the telling of the critical story. In fact, information on the kind of quality management models currently used by retailing banks and their inadequacies were also identified through the use of this technique. It is believed that this approach helps in building a practical model since the importance of modelling effective practices/factors of business excellence can be better ensured.

4.52 Survey Research

A. Survey on the Retail Banking sector

In considering the application of the forces of business excellence at the industry level, a questionnaire survey was used to gather information about the application of the forces of business excellence of the Business Excellence Model (BEM) in the retail banking sector of Hong Kong.

The Survey Framework

The literature provides useful tips for conducting research in retail banking; it was found that the response rates for mail questionnaire surveys are often extremely low. As Mr. Czarnecki of the Benchmarking Network company suggests, ".....also, some levels of managers in banks may be unwilling to complete a survey. Therefore, for these individuals, one may need to conduct a brief interview as a substitute for conducting a survey." After well thought over, it was decided that the key informants should be first contacted through telephone calls to overcome this inherent difficulty of doing research in retail banking and followed by personal interviews. Moreover, some experienced researchers (Dunn, 1999; Bernard, 1998) suggest that this approach would likely yield better results than the generic survey form.

The target population for this industry survey consisted of 158 bank's key informants in Hong Kong. In Hong Kong, "Banks" are the only authorised financial institutions that can operate full retail banking services under the current licensing system (HKGOVT, 1999). Of these, 58 belong to multi-branch banks and 100 belong to banks subject to one-building condition restriction. A list of the banks was found in latest annual report of the Hong Kong Monetary Authority. Further, telephone numbers of banks were found in their annual reports. Key informants were people who are generally responsible for retail services or people who know the bank's retail operation well. Bernard (1999) stated that a few key informants are capable of providing adequate information about a particular activity. Along the same line, the present survey seeks for a kind of information that requires a few knowledgeable and articulate informants rather than an unbiased sample of people. Therefore, key informant interviews were an integral part of this business excellence survey. Telephone calls were directed to the key informants with significant responsibility for retailing services of their banks. They include customer relation managers, personnel managers, and quality managers who work in a variety of retail banking functions. From the telephone conversations, some key informants expressed that many of their colleagues felt burdened from the numerous surveys received each year from students, sub-vented institutions and even from their own banks.

A total of 450 telephone calls were made to these key informants of 158 banks of the two distinct banking groups in the market, altogether 50 interviews were successfully arranged. Interviews were conducted at lunch times and in venues specified by the participants. Finally, 50 questionnaires were completed, which is

typical of surveys in banking. Then, a proportionate sampling technique was used after the sample was obtained in order to ensure representativeness and avoid overrepresentation. The proportion was based on the market share of the two distinct groups of competitors in the Hong Kong retail banking market. Simply, the participants who responded from each bank were selected randomly to match the characteristics of the population (Bordens and Abbott, 1996). As a result, 47 were usable among the responses. Key informants have been with the banks for an average of 13.56 years and been in retail division or dealing with retail services for an average 9.89 years.

B. Customer Satisfaction Survey

For a better understanding of the customer responses to performance of the local retail banking sector, it was decided to collect information from the external customer of retail banking's products or services too. A customer satisfaction questionnaire with both Chinese and English versions were used to collect data from retail customers.

The Survey Framework

A field survey was conducted in Hong Kong in late September 1999. Although the

sample frame was the entire population of Hong Kong, the sample of customer responses was drawn from three central commercial districts of Hong Kong. The localization of this sample allowed for better representation of the different categories of retail banks in Hong Kong. The data were collected on different days and at same distributed time intervals to further reduce time-related bias.

To further ensure the validity and reliability of the responses, a trained survey team of six research assistants filled in all questionnaires. For the purpose of the present research, in addition, respondents were screened to determine whether they had used their primary bank's retail banking products or services within the past month. Besides, they were reminded that questions are directed to their primary bank. Here, primary bank means the bank that customer have at least a savings/ deposit or loan account with it. The rationale has been mentioned before in chapter two, retail banking business is mainly comprise of the collection of deposits/savings as a cheap source of funds, and the lending and investment of funds as a source of income. Moreover, the present research also found that the most popular and well- received retail banking product in Hong Kong is still with savings account. We believe this screening is necessary for ensuring that the respondents who have had recent experience and perception with their primary banks' service in question. A total of 500 questionnaires were filled, resulting in 450 usable responses.

4.6 DATA ANALYSIS METHODS

The present research employed the structural equation modelling (SEM) statistical technique for complete data analysis purpose. Structural equation modelling (SEM) offers distinct advantages over traditional statistical techniques (Mentzer et al.,1994; Bogozzi, 1982, 1977). SEM is powerful for testing and validating theoretical models. Moreover, SEM is an advance technique that combines the measurement model (confirmatory factor analysis) and the structural model (regression analysis) into a simultaneous statistical test. Given the powerfulness of SEM, two SEM computer programmes were employed in this research for statistical analysis. First, the EQS software was employed to perform simultaneous test of various aspects of the "Business Excellence Model "(BEM); second, a Partial Least square (PLS) procedure of SAS was used for complementary measure of construct validity and reliability for the specified model. The PLS procedure of SAS was also used for calculating the indices as highly recommended by Fornell and his colleagues (1996) and Kanji (1998).

4.61 Structural Equation Modelling with EQS/Windows

A linear structural equation modelling software called EQS (Windows version 5.7)

was employed to determine the validity and accuracy of the Business Excellence Model for retail banking.

A. Purpose and Process of Statistical Modelling with EQS

Advancements in structural equation modelling (SEM) make this statistical technique useful in testing the model's validity in empirical research. The EQS software is a recent popularly used SEM software, which is capable of reading SPSS data sets directly, and converts them into EQS data sets. After the BEM model is specified, its plausibility can then be tested based on sample data that comprise all observed variables in the model. The primary task in this model testing and model validating procedure is to determine the goodness of fit between the BEM and the sample data. The EQS programme is powerful (Bentler and Wu, 1995) in generating values of residuals and values of chi-square statistics (including probability value). Model accuracy is represented by values of residuals. Residual represents the discrepancy between the hypothesised BEM and the observed data. While model validity is represented by values of fit indices. A number of fit indices can be generated from EQS and they would be selected for use only when certain commonly accepted criteria are fulfilled. The criteria for" ideal" fit indices are: 1) relative independence of sample size; 2) accuracy and consistency to assess different models; and 3) ease of interpretation. Among those fit indices available from EQS, only a few fulfilled our requirement and were subsequently used by this research. Further detailed discussion of this issue will be

given in chapter six " Validation and Reliability of the Business Excellence Model for retail banking".

4.62 Partial Least-squares Method (PLS.SAS)

The Partial Least-squares software (PLS) was employed for parameter estimation of the causal model- Business Excellence Model (BEM), which was then used for calculating the index scores. Fornell first advanced the PLS.SAS software in his studies by using it for the calculation of the Sweden Customer Satisfaction Barometer (SCSB). It was then subsequently used by European countries including UK and Denmark and in USA for compilation of their own Customer Satisfaction Index.

A. Purpose

The PLS.SAS software is yet another programme that can be used for modelling relationships between one or more Y variables and one-to-many explanatory variables. However, the PLS.SAS and EQS are not directly compatible with each other in computing terms. Nevertheless, Igbaria and his colleagues (1995) state that

PLS is a second-generation multivariate data 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 modeling technique, often termed structural equation modeling, accommodates a priori knowledge derived from theory and / or previous theory with empirical data, they offer a potential for scientific explanation that goes far beyond description and empirical association.

Given the robustness of PLS technique, it was employed here aiming to identify weighted combinations of the X variables (loading vectors) which best model the Y variables. Because a key objective of representing the Business Excellence Model (BEM) as a latent variable SEM is to do a confirmatory analysis to estimate the values of the structural parameters (i.e. the weights). Specifically, based on the Business Excellence Model (BEM), PLS was used to assess weights for the forces of retailing excellence (i.e.CSFs) that maximise their explanatory power on retail banking excellence as the ultimate endogenous/dependent (Y) variable. The estimated weights were then used to calculate index values for each model construct and for the BEM for retail banking.

B. Strengths of PLS

The advantages of using PLS method has been reflected in its being continuously applied in many areas of research and technology such as medicine, analytical

efficiently with data sets where there are many variables that are highly correlated and involving substantial random noise. Another distinctive advantage is that size dimensions do not matter with PLS (for example, there can be more variables than observations). Moreover, many researchers pointed out that many existing service quality research studies were hampered by the problem of skewness, which is common for the indicators of certain constructs, for instance, the satisfaction construct (Fornell, 1992; Michalos, 1986; Oliver 1981). With PLS, Fornell's multiple-indicator approach can be followed in this research to handle the problem of skewness. PLS method does have some minor weaknesses. For examples, the PLS software do not have a graphical front end and therefore relies on lines of code to create the model; it is not convenient to use as it cannot run on commonly used data files such as SPSS & Excel; and there is still a minimum number of data lines that the package required for its successful execution, etc. Nevertheless, these weaknesses did not constitute a concern for the purposes of the present research.

C. Execution of the PLS.SAS Programme

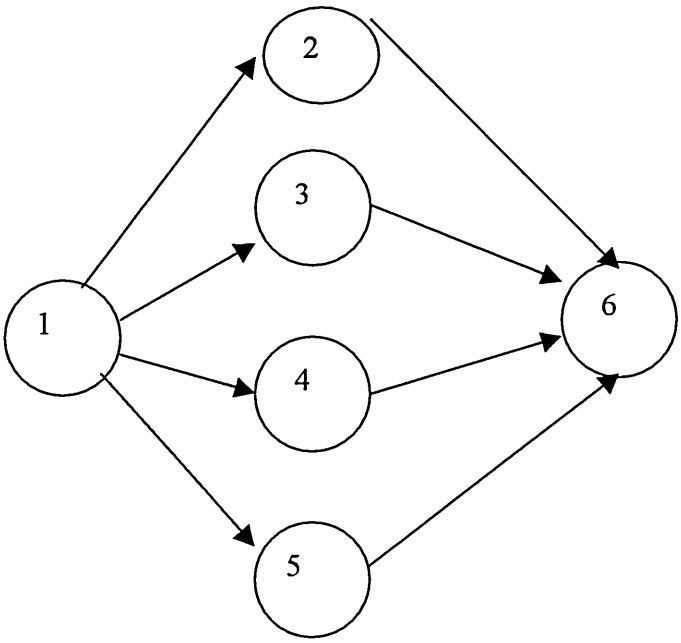
The PLS software runs on SAS package with text data files. As mentioned earlier, the PLS software cannot run on SPSS files but can run on text files, so file conversions were done beforehand. At first, the PLS programme is called into the SAS programme editor. Then, a number of lines of commands needed to be changed and specified in order to execute the programme. These include the first

changed and specified in order to execute the programme. These include the first line, which specifies the name of the data set that the programme being asked to run on. Afterwards, a number of lines of commands appears at the end of the PLS programme can be changed for defining the specific structure of the model (i.e., model configuration). As an illustration of the lines of commands used, a sample of the lines for the present Business Excellence Model (BEM) for retail banking is shown:

```
 N        =  {3 6 3 4 6 4};
Ir        =  {2 1 3 1 4 1 5 1 6 2 3 4 5};
Irn       =  {2 2 2 2 5};
Io        =  {1 1 1 1 1 0};
Ssize     =  47;
Maxnoit   =  100;
Criterio  =  0.000001;
Fpopt     =  0;
Fpcrit    =  0.000001;
Nfpit     =  100;
```

To aid the understanding of the structure of the Business Excellence Model (BEM) for retail banking, a diagram showing the configuration of the Business Excellence Model and how the forces of business excellence relate to each other is drawn in Figure 4.2.

Figure 4.2 ***Configuration of the "Business Excellence Model" (BEM) for Retail Banking***



Key:
1 = Leadership, 2= Customer Focus, 3= People-based Management,
4=Management by Fact, 5= Continuous Improvement, 6= Business Excellence

1. Forces of Business Excellence & Manifest Variables in the Business Excellence Model for Retail Banks

As can be clearly seen from Figure 4.2, the Business Excellence Model (BEM) is a full latent variable model. Latent variables are those representing theoretical

constructs (i.e. abstract concepts) that cannot be observed directly. Traditionally, each latent variable is represented by its corresponding items (i.e., manifest/ observed variables) or more commonly termed as indicators using SEM terminology. For the present research, a priori assignment of items (i.e. indicators) to latent variables was driven and determined by the theory and empirical review by practitioners. The latent variables of the model and their corresponding indicators were shown in Table 4.2 below.

Table 4.2 ***Forces of Business Excellence and Manifest Variables of the Business Excellence Model***

Item	Forces of Business Excellence	No. of Manifest Variables (Item No. in Questionnaire)
A	Leadership	3 (I, II, III)
B	Customer Focus	6 (IV.1, IV.2, IV.3, V.1, V.3, VI.2)
C	People-based Management	3 (VII.1, VII.2 VIII.1)
D	Management by Fact	4 (IX, X, XI.1, XI.2)
E	Continuous Improvement	6 (XII.1, XII.2, XII.3, XIII.1, XIII.2, XIII.3)
VI	Business Excellence	4 (XIV, XV, XVI, XVII)

Like most of the social sciences constructs (i.e. variables), the latent variables of the present "BEM" for retail banking including Leadership, Customer Focus, People-based Management, Management by Fact and Business Excellence are very complex since they consist of a large number of items in their measurement scales. Although SEM provide estimates on a complete model incorporating both measurement and structural considerations, published research revealed that they often have difficulty in handling too many indicators for too many latent constructs. In practice, some researchers (Mentzer & Garver, 1999; Bollen & Long, 1992) indicated that SEM has a difficult time identifying the measurement model if too many indicators are used to represent a single latent variable. According to Mentzer and Garver (1999), partial disaggregation is a more practical SEM application that allows the use of a large number of indicators to represent a latent variable.

A Partial disaggregation measurement model can be produced by combining items into composites. In operationalisation of partial disagregation of the measurement models of this study, for example, items for Leadership are combined into three composites, i.e. I, II and III representing Strategic Planning, Commitment to Quality, and Communication respectively. Each composite is actually a composite of three items, which are summed together. Same for the Customer Focus construct, it consists of three composites, that is IV, V and VI, which represent Commitment to Customer Satisfaction, Commitment to Staff Satisfaction and Commitment to Customer Relationship respectively. Similarly, the Business

Excellence construct consists of four composite indicators representing Delivering Customer Value, Building Shareholders Value, Corporate Citizenship and Employee Relations, respectively. Composite indicators would then be entered into the measurement model as multiple indicators to estimate the above six latent variables.

By employing partial disaggregation technique and composites, random error is reduced, a complex model is simplified, and the important concept of multiple indicator measurement is maintained (Dabholkar et al., 1997). Recent research also revealed that composite indicators are more reliable than single item indicators (Mentzer and Garver, 1999; Bogozzi & Heatherton, 1994).

2. Programme Command of PLS.SAS

As mentioned earlier, the different commands of those lines specified at the end of the PLS programme are used for defining different parts of the model. For clarity, a detail explanation of their meanings is described in Table 4.3 below.

n	This line informs the PLS programme on the number of indicators that will feed into each latent variable (i.e. dimension) of the structural equation model. For instance, 3 composite indicators feed into dimension one, 6 indicators feed into dimension six etc.
ir	This line specifies the relations among dependent and independent variables of the model, specifically which variables are dependent and independent variables for each inner relation. For example, the line ir (2 1 3 1 4 1 5 1 6 2 3 4 5) means that dimensions 2,3,4,and 5 are fed by dimension one; while dimension 6 are fed by dimensions 2,3,4 and 5.
io	It defines whether the outer indicators go in or out for each variable in the inner relations. The line (1 1 1 1 0) means the first four dimensions go in (i.e. one means in) and the fifth dimension go out (i.e. zero means out).
Ssize	It informs the programme the sample size for that particular PLS runs, i.e. the total number of data lines submitted for that run.
Maxnoit	It commands the maximum number of iterations for the PLS procedure to carry out before it stops.
Citerio	It is the converge criterion. Iteration ceases when all coefficient estimates converge to with CITERIO.
irn	It indicates the number of variables in the inner relation. For example, "5 " means that there is four dimensions feeding into dimension six plus the dimension itself making "5" altogether.
fpopt	If the inner relations form an interdependent system, there are the following options: (1) fpopt = 0; the fix point is not exercised. (2) fpopt = 1; the first step in the FP iteration is OLS. (3) fpopt = 2; the first step in the FP iteration is 2SLS.

Table 4.3 Explanation of the PLS.SAS Command (Source: PLS.SAS documentation)

D. Programme Output of PLS.SAS

The PLS.SAS programme produces several types of estimations/outputs, which is also presented in Table 4.4. These outputs are useful for analysis.

Table 4.4 Descriptions on Output of PLS.SAS

Inner Coefficients (Structural Parameters)	They are the coefficients of functional equations linking latent variables. Statistically they reflect the strengths of causal relationships among variables. Each inner coefficient shows the amount of change in an effect (endogenous) variable that results from a unit of change in a cause variable (it can be either an exogenous or another preceding endogenous variable). A general rule of thumb is that positive inner coefficients are desirable for all causal relationships specified in the model. Because this means there are positive correlation between dependent & independent variables, hence the direction of causation.
Outer Coefficients ωi	They are the unstandardised structural weights of indicators (i.e. manifest variables). Outer coefficient should have a value of 0.1 or more in order for the relevant indicator to be useful. The usual practice is that indicator with a value less than 0.1 has to be deleted from the model and the programme should be re-run to get a new output. However, those low value indicators, if any, should be deleted one by one with caution.
Correlation Matrix	It is the Pearson correlation, r, matrix among all exogenous and endogenous variables in the model. They indicate the strength of relationship among the variables.
Coefficient of Determination (r2)	It represents the proportion of regression sum of squares for corresponding latent variables that is explained by the regression model.
Pearson Correlation Coefficient (r)	They are the correlation of latent variables that have causal relationship. The higher the value, the stronger is the relationship between the variables.
Cronbach Coefficient (α)	It shows the internal consistency of latent variables, which serve as common factors that are being empirically reflected by indicators. The commonly accepted standard is that coefficient α should have a value >0.7 in order for latent variable to be a reliable measure.
Standard Deviation	It shows the spread of the parameter estimate from the mean. An acceptable standard is that the value should not extremely small.

4.63 COMPUTATION OF BEM INDICES AND ECSI INDICES

Using the output of PLS, specifically, the parameter estimates (i.e., weights) of individual manifest variables for all latent constructs (i.e. forces for retailing excellence, BEM excellence, customer satisfaction antecedents and consequence, and overall customer satisfaction), those indices can be calculated following Kanji's index formula (1998):

$$\text{Index} = \frac{\sum_{n=1}^{3} W_i \, x_i - \sum_{n=1}^{3} W_i}{(n-1)\sum_{n=1}^{3} W_i} \times 100$$

Where n= number of divisions in item scale

4.7 CONCLUSION

In this chapter, we have briefly discussed the research design and methodology chosen for the present research. All the information regarding the complete process

of this research was organised in a reader's (customer) friendly format as far as possible. To summarise, core methodological concepts of conducting rigorous scientific research were discussed throughout the chapter. At each section, specific techniques and acceptable standards have been examined. They include the need for the adoption of a systematic investigation into the chosen research problem for this research, the determination of objectives of this research to embrace a combination of descriptive, causal and explanatory elements of research, and the careful determination of research approaches. While the complex research design is outlined in a work scheme, the process of building and validating the Business Excellence Model (BEM) for retail banking were also explained briefly. Lastly, the data collection methods and data analysis methods have been explained in greater detail in last section of this chapter.

CHAPTER FIVE

DEVELOPMENT OF A BUSINESS EXCELLENCE MODEL FOR RETAIL BANKING

5.1 INTRODUCTION

To remain competitive, banks can no longer rely on traditional ways of satisfying customers and stakeholders. Some banks have adopted TQM and are reengineering their organisational forms and functions accordingly to improve their ability to please customers. Often in the rush to serve the customer, the most easily available frameworks on hand such as the Malcolm Baldrige Award framework and the Hong Kong Quality Award framework are employed without much adjustments and understanding, and money is not spent effectively. This may be the reason for the inadequacies of the existing 'Customer-focused Quality Management' model. Moreover, in many research of TQM, a critical success factors approach towards building a sound model appears to have received inadequate emphasis, and will therefore be the focus of this chapter. The purpose of this chapter is to develop a practical Business Excellence Model(BEM) for retail banking. An exploratory research was conducted to identify critical success factors of top performers in the retail banking market and to see in practice which kind of TQM principles are critical to retail banks' performance. Then a new BEM will be built for the retail banks and the retail banking sector based on

exploratory research findings and the principles of Kanji's business excellence model.

5.2 IDENTIFY CRITICAL SUCCESS FACTORS OF RETAIL BANKING

As discussed in the chapter of research methodology, an exploratory research was conducted to identify critical success factors of top performers in the retail banking markets. In our initial review, it was found that retail banks are the top performers in the retail banking market. Moreover, the Hong Kong retail banking sector is largely and almost exclusively shared among the retail banks. Little room is left for other financial competitors. In view of this, it is more valuable to identify the critical success factors of successful retail banks for performance benchmarks and for model building.

The exploratory research consists of case studies of the top performing retail banks. The case study method was used to obtain a clearer picture of reality. In that, in-depth interviews with top performing retail banks executives were performed and information were retrieved by a special case study methodology - critical incidents method. In the process, the researcher introduced the topic, then asked the interviewee to provide an incident on the topic. The interviewees did most of the talking in all the interviews performed. This technique suits the aim of this exploratory research in which the researcher wants more specific information. Details of the exploratory research and the advantages of using the

critical incidents method had already been put forward in the previous chapter while the aim of this section is to discuss the findings on these top performers regarding their ways and methods for achieving business excellence.

5.21 Exploratory Research Findings

Below we shall describe critical features of three top performing retail banks. In-depth interviews were conducted with quality management executives of these banks. They include a corporate giant with a regional retail division, and two domestic retail banks. Details of the selection criteria were laid out in the chapter of research methodology.

Case One-Bank A

It is the regional retail division of an international commercial bank in Hong Kong. The retail division and the corporation as a whole have won many quality awards from both local and overseas institutions. The retail division has launched its TQM process since 1989 while the entire corporation started its effort in the mid-90s. The bank plays an integral role in the local retail banking sector and Hong Kong financial system. It belongs to one of the banking group that dominates the retail banking market of Hong Kong.

Critical Incident 1

The first bank we studied was one of the pioneers among the Hong Kong retails banks in adopting a TQM programme. It has adopted customer service as its

primary focus of the TQM since 1992. Its origins lie in the late 1980s when the bank faced severe staff shortages caused by rapid growth in the services sector of Hong Kong. The high turnover rate was contributing to a steady decline in the experience of the staff that the bank managed to retain. At the same time, increased competition and uprising customer demands for better service made it difficult for the bank to continue to operate in the traditional way without severely affecting their service delivery.

> *" Our answer to the problem was a customer-focused quality strategy designed to focus the entire organisation on the need to provide a cost-effective but quality service to both retail and corporate customers...."* says the executive responsible for quality management.

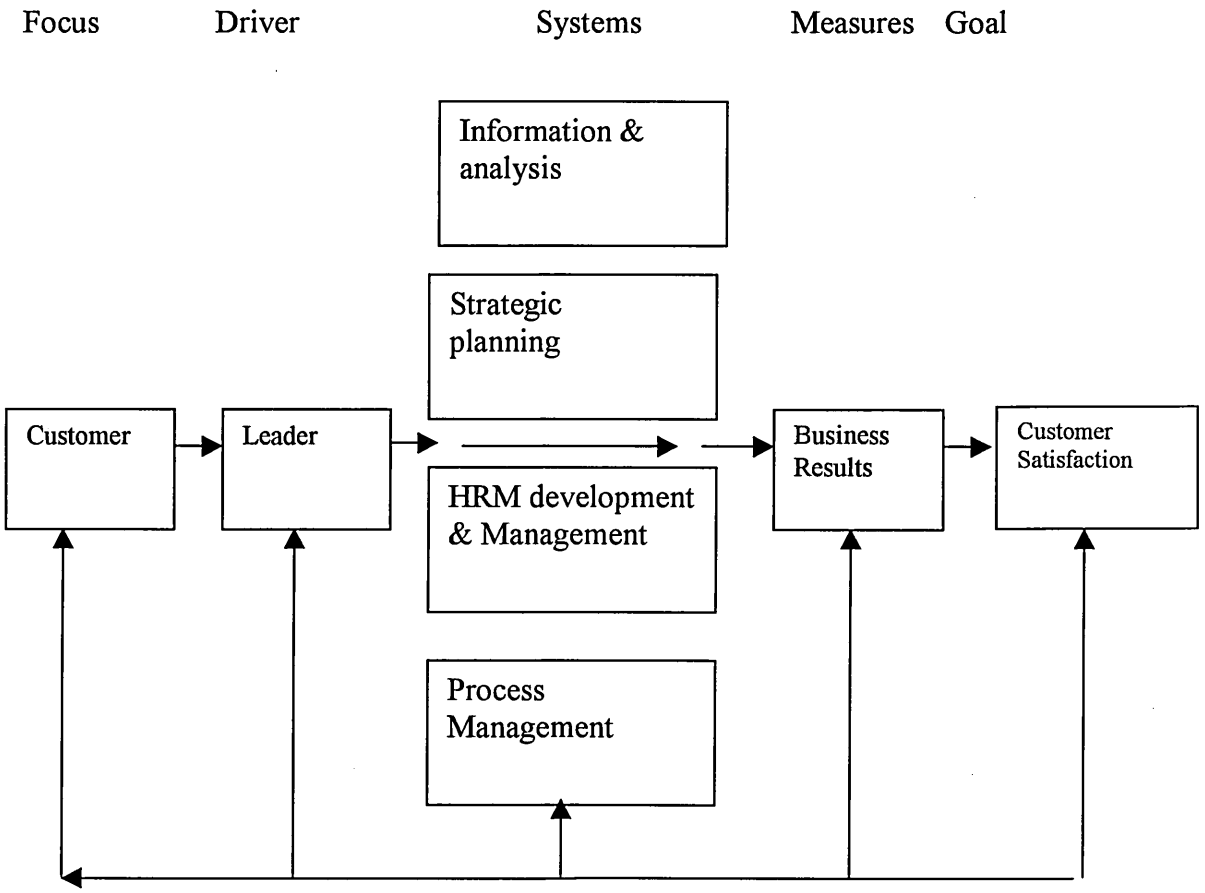
A number of TQM initiatives were in place which include a new company's statement of common purpose, customer satisfaction survey, an overhaul of the bank's complaint handling process and the set up of a quality management structure. Besides, products and service promotion programmes were launched to help develop and encourage the right sales and service behaviour among staff.

In 1992, the senior management had decided to reinforce its early gains by incorporating all TQM initiatives in the former TQM programmes into an integrated quality management model. The bank called it the "Customer-focused quality management model". The executive further commented that, "The model provided us with an effective operating framework for our retail operations in Hong Kong. Based on the model, our bank's executive director for the region had

personally monitored progress on a regular basis. From the model, we are now clear about what are our parts and much confident of how can we contribute. We won a lot of quality awards with this model."

As a result, the bank was able to maintain a group of high caliber staff. Several staff of the bank received " Outstanding Manager" award from local Institute of Human Resources Management and local HRM club. Moreover, the executive reported that the bank has a record of outstanding financial performance in the past seven years and few customer complaints after the inception of the model. The "CFQM" model of the bank is shown below in Figure 5.1.

Figure 5.1 ***Customer-focused Quality Management Model of Bank A***



(Source: Bank A)

In fact, the bank survived the recent recession in Hong Kong and has maintained its leading position while many retail banks suffered from high ratio of non-performing loans (NPL) of 32% as compared to the 4% (NPL) of the bank. (source: HKGOVT, 1999)

Case Two-Bank B

The second bank studied has a smaller number of branch networks in Hong Kong. However, the bank is one of the top performers in the retail banking market.

Critical Incident 2

The bank's profitability dropped during the period of 1997 and 1998. At that time, the bank was engaged in both "price wars" in the home mortgage market and "amenity wars" in the credit cards market. According to the Relations Officer,

> "Our customer service campaigns can be traced back to 1994. Our bank has launched quality service campaigns to improve levels of customer service in our retail operations. Our bank has had some success on gaining customer satisfaction..... But, in late 1997, the intense competition of the local

market had forced us to add more and more accessories to our products and services ....." " Yet, we found shortly that these efforts were futile and did not add any to our customers values."

The bank found the improved service may bolster sales in the short run, however, competitors would introduce service enhancements that eliminate the competitive advantage. Recognising this problem, the bank changed its strategy. It uses information technology to target responses to the needs of particular segments. For example, when "affluent " customers receive their monthly statements, the telephone number listed for inquiries provides entrée to a higher level of service. This approach put the bank ahead of the competitors in its fight for sales and profits.

In 1999, the bank has achieved an increase in its market share and improved financial performance. For example, its ROE (i.e. return to average equity) was up from 6% in 1998 to 10.2 % in 1999.

Case Three-Bank C

This is a large retail bank in Hong Kong with more than 80 years of operating history in Hong Kong. It has retail operations established in many places of the world.

Critical Incident 3

This bank has a diverse clientele. In an effort to further improve customer satisfaction, the bank has conducted customer research and tried to link customer satisfaction scores to the internal processes and service delivery process.

In its consumer research, the bank found that the needs of certain customer groups were quite different and sometimes conflicting. Moreover, it was found that the bank had 600 procedures governing the operation of a branch, so there was an urgent need to simplified and streamlining those obstructing processes and procedures for the bank to function efficiently. They found that the bank's customers could be identified as small retailers, cheque cashers, rate watchers and retired people.

According to the head of service delivery,

> *" Small retailers are the local, small-business owners who bring in cash boxes at the end of the day. They developed relationships with the tellers and hated to wait in line. They liked the availability of a change counter and expected the bank to have sufficient coins and notes and change for them..... " " Check cashers are wage workers, usually paid on Saturday or Friday, who wanted to get into and out of the bank quickly and wanted to be paid in cash. They represented a source of potential new accounts. Retired people held a majority of the bank's time deposits and offshore deposits, and investment accounts. They liked to use the branch and loved to be recognised when they came in. For rate watchers, they came often to the branch to check the rates and may switch banks for a quarter-point*

difference in savings and mortgage loans rates."

Based on this customer information, the bank redesigned its branch operation and internal processes to better meet the needs of this diverse clientele. Several projects had produced substantial cost savings. An example of these projects is that, each bank branch designated a teller window for customers with single transactions only (i.e. the case of cheque cashers). This allowed this group of customers to get in and out quickly. During peak times, this teller would help customers with multiple transactions if no single-transaction customers were in the queue.

The bank found this strategy effective and had helped them to retain and attract new customers and saved money. To improve efficiency, the bank had saved over 4 million (per annum in HK$) through its branch productivity review, saved over 7 million through centralisation of bill centres and saved around 1 million through procedural redesign for handling clearing cheques. The bank said they would keep on search for a variety of practical solutions to keep meeting changing customers' needs.

5.22 Discussion on the Critical Incidents

Through the incidents, it can be observed that the top performing retail banks

have adopted TQM and applied some TQM principles to improve their service quality and satisfaction level of their customers. Besides, all of them reported the effectiveness of these quality efforts in improving the banks' financial performance. Examples on the practice of TQM principles in the incidents cited are given in Table 5.1.

TABLE 5.1 Critical Success Factors of Retail Banking in the Incidents

Incident	TQM Principles	Examples of Critical Success Factors Embedded with TQM concepts
Bank A	Leadership	Senior management builds a model to incorporate all TQM initiatives.
	Customer Focus	A customer-focused quality strategy designed to focus the entire organisation on the need to provide quality service to both retail and corporate customers.
	People based Management	Products and service promotion programmes were launched to help develop and encourage the right sales and service behaviour among staff.
	Management by Fact	Collect customer satisfaction data and customer complaints for quality improvements and delivery processes redesign.
Bank B	Customer Focus	Tried to understand customer needs, measure customer satisfaction and improved service quality based on the customer data.
	Management by Fact	Redesign products and service delivery process through technology and based on process data.
Bank C	Customer Focus	Conducted consumer research to understand customers.
	Management by Fact	It undertook projects to review branches productivity and streamlining the operational procedures.
	Continuous Improvement	They have ongoing efforts in improving efficiency through centralisation of cheque clearing handling procedures and in searching for better solutions.

Below gives a brief discussion of the above incidents:

Incidents of bank A, B and C are examples whereby top performing retail banks involved applied quality management principles and concepts to manage the quality service and achieve some degree of excellence of their banks. Some of the factors as shown in Table 5.1 had been applied very well. Through the incidents, it can be observed that several TQM principles can help banks to improve the quality of their operations, products and services. They also provide additional evidence that those TQM principles had helped the retail banks to achieve some degree of excellence (although mostly in financial terms), and therefore they are the actual critical success factors of those retail banks. Another valuable sign is that those critical success factors are synonymous to the TQM principles in Kanji's business excellence model.

In incident one, Bank A has committed to a customer-focused strategy and adopted a "CFQM" model to solve its staff shortage problem and to improve its service quality delivery. In its model, Bank A 's senior management was committed to quality management as reflected by its efforts in incorporating all the quality initiatives into a model to help focus their company's effort (Leadership). Although several inadequacies can be found in the model as discussed previously (refers to chapter three for details), the model can be a representative model of what existing retail banks had achieved in terms of quality improvements. This is also one of the reason why Bank A's model was

selected to represent the existing model of Hong Kong retail banks and as a basis to compared upon and improved upon. The collection of customer satisfaction and customer complaint data to improve service delivery processes reflects the concepts of "Customer Focus" and " "Management by Fact". The undertaking of sales and service promotion programmes to help develop and encourage employees the right sales and service behaviour reflect the concept of " People based Management". These factors as an integrated whole have helped the bank to obtain good financial results, few customer complaints, low non-performing loans (NPL) percentage and maintain its dominant and leading position in recession (i.e. business excellence). The appreciation of the use of the quality model by employees and the achievement in quality awards, all these reflect the attainment of some degree of business excellence by the bank.

In incident two, Bank B recognised the importance of customer's defined quality and redesigned its products/ services and service delivery processes accordingly to improve the quality of its services (i.e. Management by Fact & Customer Focus). Through these quality efforts, the bank enjoyed a rise in return-on-equity (ROE) that is "business excellence".

In last incident, Bank C conducted consumer research to understand customers (i.e. Customer Focus). It undertook projects to review branches productivity and streamlining the operational procedures (i.e. Management by Fact). They have ongoing efforts in improving efficiency for example through centralisation of cheque clearing handling procedures and searching for better solutions (i.e.

continuous improvement). Consequently, the bank had substantial cost savings over several key operational areas of retail bank (i.e. business excellence).

5.23 Conclusion from the Critical Incidents

Practical examples of application of TQM principles to achieve organisational excellence can be found in the retail banks. Moreover, the most significant lesson learned from the incidents is that the five TQM principles can provide a complete coverage of all critical success factors of retail banking. Besides, certain implications can be drawn from the first incident on practical relationships between the TQM principles. For example, it is shown in the first incident that senior management effort to incorporate all TQM initiatives had contributed to its implementation of people management and its ongoing success. All in all, it can be tentatively concluded that these five TQM principles have been the critical success factors of retail banks and the five principles when linked together (i.e. in a model form) can have even greater impact on the success of the retail banks.

5.3 DEVELOPING A CONDENSED VERSION OF KANJI'S BUSINESS EXCELLENCE MODEL

5.31 Purpose of a Business Excellence Model for Retail Banking

As was discussed in previous section, TQM has generated a strong focus on customer satisfaction and close customer contact and co-ordination in one of the retail bank studied. However, as assessed previously, the model in use by the retail bank have several major inadequacies and shortcomings that should be improved upon to maximise the benefits of TQM and to achieve success. For example, retail banks are in business to make profit. Needless to say, the overall aim of TQM implementation of commercial banks is to build a balanced stakeholder satisfaction and so as increasing the profitability of their long term success (Wong, 1998). Thus, 'Customer Satisfaction' is part of the 'Business Results' and should be treated as a kind of measure of the success of TQM adoption. Both of them are actually outcomes of TQM adoption. Therefore, the link between improvements in customer satisfaction and increases in profitability as well as in other performance measures should be incorporated into the model to provide top management with persuasive reason and motivation to achieve business excellence.

Further, the existing model may confuse management and other stakeholders of the banks, as TQM is not just concerned with customer satisfaction. Noticeably, profitability, productivity, competitiveness, employee satisfaction are also important performance measures of business excellence and success. This modern concept of "business excellence" indeed agrees well with the one proposed by the well-known 'European Model for Business Excellence'. Besides, some of the factors in the existing 'CFQM' model used in retail banking such as

strategic management and process management, and information and analysis are not new factors by themselves. They are actually parts of the some TQM principles according to the TQM philosophy. For example, strategic planning is within the principle of leadership under TQM. The implication is that successful TQM implementation requires also a business-based reference framework to provide those TQM insights to deliver improved results. Without a structured model, quality improvement actions, retail banking activities and decisions may not necessary be linked to corporate objectives. More than often, these actions end up with resources being consumed doing activities which are necessary but not value-adding.

Hence, these top performing retail banks and other banks could have done better with a systematic and structured model to follow through their quality improvement efforts towards business excellence. In this way, logical workflow can be ensured and stakeholders support can be built.. In practice, TQM is what you make it do for you. As with any system, this is not because of any particular component, but because of all the TQM components working together as a system. Without a sound approach and a sound model, it would be extremely challenging to accommodate the needs of diverse areas of the retail banking business and the needs of diverse stakeholders that may have different or conflicting agendas. Even when this is accomplished, determining how to correctly analyse and interpret stakeholders' data to achieve the best business results is another formidable task. As discussed before, the critical success factors (CSFs) approach to modelling have proven to be effective. Recently, key TQM contributors like Kanji advocated the use of a structured model and indexing

method for measuring success and as well as communicating and recognising results in order to ensure total quality permanency.

As it was found in the exploratory research, most (except one) retail banks do not have reliable and valid framework for their quality improvement efforts. Moreover, the inadequacies of the existing "Customer Focused Quality Management " model should be improved by adopting a model with stronger theoretical grounds. For example, Kanji's model has a comprehensive coverage of TQM principles of the key TQM contributors. Another advantage is that Kanji's model has already been empirical tested and validated by other researchers.

Nevertheless, total quality improvement actually entails finding out what to improve, who is going to do, measuring results, comparing with expected targets and reviewing for continuous improvement. On the same token, business excellence can be achieved through excellent leadership whose establish excellent management of people in order to achieve excellent services, which results in stakeholder satisfaction and ultimately excellent in business results. An integrated and collective measuring system will be valuable than isolated measuring systems where each measurement criterion or tool is used separately at different stages.

5.32 Adopting the Condensed Version of Kanji's Business Excellence Model

Although the critical success factors of retail banks have been empirically found in the exploratory research of the present study, it is far from conclusive to build a model solely based on those factors. The reason is implied in the criteria of a solid model which demands the specification of a systematic and structured linkages of the variables and constructs involved and those linkages must be based on strong theoretical grounds (Hatcher, 1996; Bentler, 1992; Byrne, 1998). The literature (i.e. Kanji's model) can provide a good account on the causal connections specified in the new Business Excellence Model (BEM) for retail banking.

While the importance of having strong theoretical grounds for a model is appreciated, it would also be a mistake to ignore what managers in industry are actually doing in relation to TQM practices. It is because practitioners can tell why and how certain approaches and practices are utilised depending on their strategic imperatives and more importantly based on their perceived needs of their respective banks. Hence, it's better to develop the new BEM on the basis of their perceived CSFs. Therefore, a comparison between the critical success factors of retail banking, the elements of the existing 'Customer-focused Quality Management Model' and Kanji's business excellence model is performed and shown in Table 5.2. It aims to provide more insights into the building of a new

model of business excellence (BEM) for retail banking.

TABLE 5.2
Comparison of Factors between Findings, 'CFQM' Model & Kanji's Model

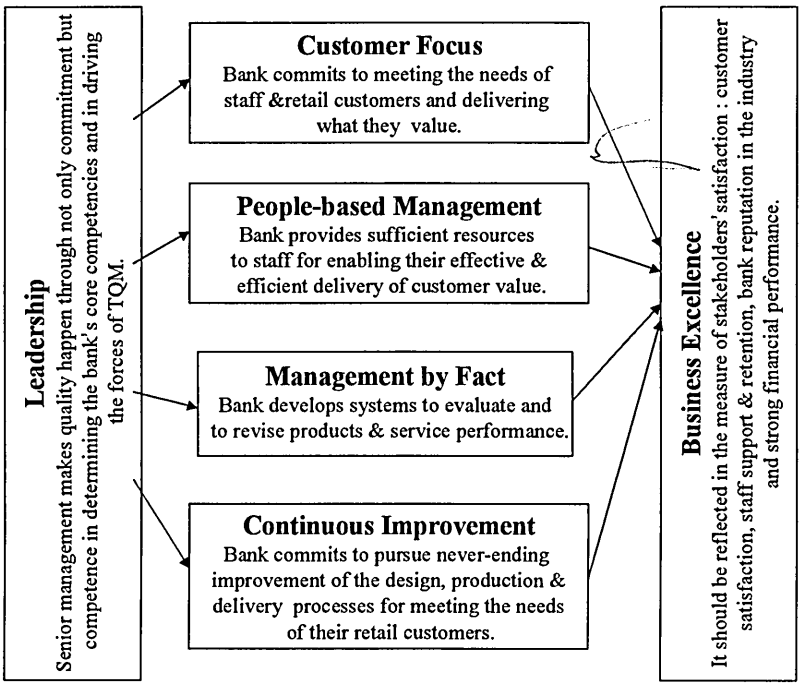
Principles of TQM incorporated	Existing Model	Exploratory Findings	Kanji's business excellence model
Leadership (as Prime factor)	Ø	✓	✓
Delight the customers	Ø	✓	✓
Management by Fact	✓	✓	✓
People based Management	✓	✓	✓
Continuous Improvement	X	✓	✓
Has an adequate measure of the results (i.e. business excellence)?	X	Ø	✓
Has the linkage amongst the principles been identified for implementation?	YES	NOT YET	YES
Has the model been empirically tested & validated?	NO	NOT YET	YES

A general comparison of the three findings based on the TQM philosophy and criteria for a good model can be seen from the table. In the table, those TQM principles that have been incorporated or applied are marked as "✓", while "x" indicates those that have not been incorporated and " Ø" represented those that have just been partially incorporated (i.e. some aspect/s of the principle is missing).

From the comparison, it is clear that Kanji's model is capable of enriching the existing retail banking model with more solid TQM principles and supplemented the exploratory findings with possible theoretical linkages of the constructs for practical TQM implementation.

As such, Kanji's Business Excellence Model is adopted to enrich the existing "CFQM" model, relevant TQM principles and concepts of the model are condensed together according to the CSFs found in exploratory findings to suit the needs of retail banking. Combined, this methodology developed in this research provides an improvement over other approaches generally taken in the literature and takes account of the unique features of each finding (i.e., literature findings and empirical findings). Specifically, the new BEM constitutes Leadership, Customer Focus, People based Management, Management by Fact, and Continuous Improvement and Business Excellence. Figure 5.2 illustrated the proposed new Business Excellence Model (BEM) for retail banking. Moreover, the term "forces of business excellence " will be used for the new BEM. Hence, the researcher wants to highlight the point that individual and collective performance of critical success factors will have driving impacts on the goal of business excellence.

Figure 5.2 ***The Condensed Business Excellence Model for Retail Banking***



Details regarding each forces of business excellence and their proposed relationships are outlined as follows:

Leadership

Similar to Kanji's model, the prime driving force of the new "BEM" is the construct "Leadership" though the indicators are tuned to the context of retail banking. In the new BEM, "Leadership" is the prime driving force of how well

direction is given, groundwork is laid down and quality infrastructure is built in for the four subsequent driving forces of the new BEM. In other words, leadership here is concerned with how well top management as formal leaders performs various leadership roles (Kanji and Tambi, 1999a) that change the behaviour of other people within or outside the bank (e.g., team members, subordinates, customers, suppliers, broad of directors etc.) to do the right things right the first time. For instance, improving the management of operation and delivery processes in retail banks involved replacing a strategy of detection of problems like long waiting queues with one of prevention. Top management responsible for directing the attention on the beginning of the process-the inputs- and changing the emphasis to making sure the inputs are capable of meeting the requirements of the process. Employees' work effectiveness is viewed as a direct function of the quality systems that managers create (Ishikawa and Lee, 1985; Deming, 1986).

In fact, the importance of leadership is well documented in management and strategic management literature (Powell, 1995). In the implementation of TQM, effective leadership should start with top management's vision, capitalising on market opportunities, continues through the TQM strategy that will give the bank competitive advantage, and leads to business excellence. Nevertheless, the empirical example of Bank A provides evidence on the importance of effective leadership in coordinating and integrating the bank's TQM initiatives to achieve success.

Customer Focus

Retail banks should have an intermediate goal of satisfying their final customers' requirements and expectations. This intermediate goal as a means of achieving business excellence will direct the setting of strategies and plans, the operations and performances of different functional and operational teams in the bank. It has already been well documented that customer should be the starting point of any quality improvement efforts. Specifically, retail banks should include (1) emphasis on customer requirements and customer satisfaction to define retail banking products and services (i.e. customer-defined quality); (2) integration of customer information into the management and improvement systems- particularly into the new product development and the production and delivery processes; (3) emphasis on customer service (e.g. cycle-time reduction, relationships enhancement, and follow up services, etc.); (4) efforts to become integrated with customers as appropriate (i.e., often termed "partnering"), such as joint improvement teams. The cases of Bank B and Bank C further support, to some extent, the importance of customer focus in achieving success. Nevertheless, customer-driven core competencies may be the most cost-effective way to achieve competitive excellence.

People based Management

Retail banking is a labour intensive industry and people is an expensive and

importance resource of retail banks. To make good use of the human resources, employees need to be equipped with the knowledge and skills for the job. In this way, employees can be involved in continuous improvement (quality, cycle time, and waste), usually through teams. Moreover, every employee in the retail bank should be encouraged to work closely together to better coordinate his or her work. This emphasis is associated with the TQM philosophy that people make quality (Kanji and Asher, 1993) and it's better to drive decision making close to the actual processes and thus to a corresponding increase in employee empowerment. Indeed, there is growing evidence that success with TQM can never be achieved without having support from the people. For example, tellers of the bank may probably be in the best position to learn about what types of customers come in the banks often and how can these customers be satisfied. As is reflected in Case 3, the tellers might have already realised that the retired people hated to be rushed and wanted to have a comfortable place to chat on their needs well before the announcement of the consumer research. Here, the idea is why not make a good use of the potential of the resources (i.e., people is a kind of resource)on hand. In fact, the involvement of people (i.e., employees) will not only produce innovative, valuable solutions but also enhances employees' pride and sense of responsibility and create a greater awareness and concerns in dealing with the banks' customers, i.e., the result of development of a continuous improvement culture within the banks. To perform at a high level, retail bank needs to listen to its staff about their concerns and take appropriate action in the same way that a bank would consider the voice of external customers in making decisions about products and services quality agenda.

Management by Fact

Besides the "voice" of customers, the "voice" of the process is also crucial to successful implementation of TQM and attaining business excellence. In the model, process management means an emphasis on the concept of process as a fundamental building block of the retail banking operations and activities. Clearly to produce a product or service which meets the requirements of the retail customers, it is necessary for the bank to define, monitor and control the inputs to the process, which in turn may be supplied as output from an earlier process. As pointed out by Oakland (1993) that at every supplier-customer interface there resides a transformation process, and every single task throughout an organisation must be viewed as a process in this way. This results in an emphasis on integrating critical processes and process improvement. Here, process means the linked activities with the purpose of producing products and services for retail customers within the bank. Such processes should actually involve combinations of people, machinery, tools, techniques and materials in a systematic series of actions to accomplish the purpose of the retail bank. As such, having a system of integrated processes should help in channeling resources together to carry out the operation and delivery of services smoothly.

Besides, process management has to be complemented with an emphasis on deployment of systematic analysis and fact-based decision making driven by objective data and information. Information sharing among functional teams and

operational teams is necessary for better process management. Information regarding the operations and performances of the bank should be established as a basis for decision-makings in resources allocation and continuous improvement.

Continuous Improvement

Today's businesses are largely operating in rapidly changing business environments where dynamic changes in the technology, economic conditions, politics, physical environment, people and consumers have become a natural phenomena (Wong, 1995,1996). The Hong Kong retail banking sector also faces with a lot of these challenges including the Asian Financial crisis happened earlier, the downturn of the economic cycle of Hong Kong, the interest rate hike, deregulation of the Hong Kong financial industry, and the global trend of developing e-business in the new electronic era. Certainly, all these have and will continue to affect the operations of retail banks in a different extent. It is witnessed that consumers' demands and expectations change along with the business environment. As such, retail banks have to improve its performance continuously to cope with the ever-changing needs and expectations of their customers. The need of continuous improvement should become the operating attitude of retail banks and should be cultivated in the mind of every employee of retail banks. Continuous improvement operates on prevention. That means the continual process of driving possible failure out of the system can breed a culture of continuous improvement over time and prevents the causes of problems (Kanji and Asher, 1993).

Business Excellence for Retail Banking

Following the new Business Excellence Model, retail banks will be equipped with a systematic and structured road map for managing the critical forces for business results. The effective management of the above forces of excellence should enable retail banks to achieve customer satisfaction, lower costs, retain caliber staff, outperform competitors, inspire other financial institutions and ultimately attain ongoing success and good financial & non-financial performances. All these performance achievements together constitute the concept of business excellence. Indeed, business excellence as first proposed by Kanji (1998) and the EFQM should be a balanced stakeholders' measure which comprises the simultaneous measurement of customer's, employee's, and shareholder's satisfaction to obtain a comprehensive evaluation of the organisational performance.

In summary, the new BEM has an added feature of a systematic structure that specifies causal connection among the driving forces of excellence in retail banking. Many researches in TQM conducted in the past were focused only on establishing TQM principles & practices but did not explicitly consider causal connections between them (Owlia and Aspinwall, 1996; Powell, 1995; Parasuraman et al, 1995, Saraph et al, 1989). With the TQM structure constructed in the new BEM, the examination of critical TQM dimensions/ forces of excellence can take a further step, that of causal analysis. By performing causal analysis, it would be possible to confirm whether the structure of the new BEM is

correct and the strength of causal connections among the forces of excellence constructs and the business excellence construct can also be determined.

5.4 CONCLUSION

This chapter has made use of case studies and critical incident methods to identify critical success factors for retail banking. Through the critical incident methods, relevant TQM principles already applied in retail banking to achieve organisational excellence were found. They are Leadership, Customer Focus, People based Management, Management by Fact and Continuous Improvement. The findings from the incidents support that these TQM principles are critical to the success of the retail banks and success in retail banking. More importantly, the most important lesson learned from the incidents is that a Business Excellence model could help the retail bank to achieve greater success through coordinated TQM efforts and activities. In addition, the result of the findings from exploratory literature is then compared to Kanji's model and the existing "CFQM" model of retail banking. The result suggests the adoption of a condensed version of Kanji's model as a new Business Excellence Model(BEM) with fine-tuned features of the retail banking context. In this way, the new BEM will have a stronger theoretical foundation, while still maintaining high relevancy to banking practitioners. Moreover, the new Business Excellence Model (BEM) for retail banking like Kanji's model (1998b) has an added feature- a structure that specifies causal connection among the driving forces of excellence.

CHAPTER 6

VALIDATION AND RELIABILITY OF THE BUSINESS EXCELLENCE MODEL FOR RETAIL BANKING

6.1 INTRODUCTION

In the previous chapter, the researcher followed a methodology of a qualitative phase to develop the new Business Excellence Model (BEM) based on literature review and in-depth interviews. Addressing the inadequacies and shortcomings of the existing "Customer-focused Quality Management Model" (CFQM), the new BEM has incorporated all relevant and empirically determined critical success factors (CSFs) into the current retail banking model. Through these procedures, the new BEM should therefore be a better model for retail banks and the local retail banking sector to adopt in managing TQM and business excellence. This chapter goes on to validate the new BEM with the data of 47 retail banks in Hong Kong. Structural equation analysis was employed to assess the underlying relationships as theorised among the six constructs in the new BEM. Overall speaking, the structural analysis results highly support that the theorised BEM stands as a valid model, which provides a good fit for the data of the retail banks.

6.2 SURVEY ON THE MANAGERS OF RETAIL BANKS IN HONG KONG

As mentioned in the chapter on methodology, survey was done through semi-structured interviews with managers and key informants of retail banks. From the 548 telephone calls, 50 interviews were successfully arranged and 50 bank's key informant completed the questionnaires, resulting in 47 usable responses.

6.21 Measurement Instrument

Kanji' business excellence measurement instrument was adopted and used for testing of the constructs. Prior to the survey, these measures were subjected to a formal pre-test by executives and officers responsible for retail banking services. Some minor modifications had been carried out to suit the retail banking context and to make the meaning of some items more understandable. The finalised measurement instrument consists of six dimensions that correspond to five driving forces of excellence (i.e. the critical success factors) and business excellence. A sample of the questionnaire is attached in Appendix XII.

6.22 Assessing Reliability and Validity of Constructs and Indicators of the Business Excellence Model

I. Content Validity of the Measurement Instrument

According to Nunnally (1978), a valid instrument is one that measures what it is intended to measure. Content validity is concerned with how well the researcher has created the scale items to cover the content of variables under study. The developed instrument for the present research is considered to have content validity for two reasons. At first, most of the scale items came from an established instrument (i.e., Kanji's instrument). Moreover, the selection and modification of some items were based on literature and a detailed evaluation by banking practitioners and academics.

II. Reliability of the Measurement Instrument

In determining the reliability of the measurement instrument, an internal consistency analysis was performed separately for each variable in the theorised BEM. Broadly speaking, reliability refers to the consistency and stability of a score from a measurement scale. In this research, the Cronbach Alpha (i.e. reliability alpha, α) is calculated to assess the homogeneity of items that belong to the same variable (Cronbach, 1951). Cronbach Alpha (α) is generally accepted as an index of internal

consistency reliability; alpha value (α) will be high if the various items that constitute the construct are strongly correlated with one another, ceteris paribus. Table 6.1 provides the Cronbach Alphas for all the indicators included in the measurement model. Since all the reliability alphas were above the critical value of 0.7 (Nunnally,1978), this result indicates that the reliability of all the indicators and constructs are adequate and all the items had been appropriately assigned to each variable in the new BEM. A ten-point rating scale is used for the measurement instrument ranging from 1 to 10. The reliability alphas (α) of various indicators and sample items for each variable are shown in Table 6.1 and discussed as follows:

The Prime Construct- Leadership dimension

The Leadership (ELEAD) construct comprises of the variables of Strategic Planning (SP), Management Commitment to Quality (MCQ), and Communication (COMU). In the implementation of TQM, top management plays a key role in visioning the importance of quality wide across the bank, determining the bank's core competencies, prioritising quality improvement activities, communicating their commitment to quality, setting appropriate customer focus strategies, and building the internal infrastructure for quality. Besides, senior management must demonstrate commitment through participation, facilitation and support for the quality adventure. A total of eight items were used to measure the variables under leadership. Sample items for these variables are " Senior management opens channels of communication

Table 6.1 : Reliability Alphas, Constructs and Indicators of Business Excellence Model

Constructs & Indicators	Alpha	No. of questions	Sample Questions
Leadership dimension (ELEAD)	.87	8	----------
Strategic Planning (SP)	.84	3	Senior Management analyses and determines our core competencies and prioritises quality improvement activities
Management Commitment to Quality (MCQ)	.76	3	Our senior management participates and supports in quality improvement process
Communication (COMU)	.73	2	Senior management uses methods to show their quality commitment
Customer Focus (CF) Dimension	.79	8	----------
Commitment to Customer Satisfaction (CCS)	.89	3	Bank's practices & procedures consistently focus on delivering customer satisfaction
Commitment to Staff Satisfaction (CSS)	.72	3	Our bank is a good place to work
Commitment to Customer Relationship (CCR)	.73	2	Bank eager to build life-long relationships with customers
People-based Management (PBM) Dimension	.91	4	----------
People Make Quality (PMQ)	.70	2	Bank provides resources for staff to improve effectiveness and efficiencies of services
Teamwork (TEAM)	.78	2	Bank uses action teams to solve local problems
Management by Fact Dimension (MBF)	.84	7	----------
Integrated process (IP)	.79	3	Our bank can be visualized as a web of processes linked together as a system
Process Management (PM)	.83	2	Bank has appropriate methods for measuring quality of the processes
Information Management & Analysis (IMA)	.93	2	Bank collects a wide range of complete & accurate data for decision making
Continuous Improvement Dimension (CI)	.78	6	----------
Prevention (PREV)	.76	3	Processes are designed to prevent potential problems
Culture of Continuous Improvement (CCI)	.84	3	Bank has regular review and conscious reinforcement of service standards
Business Excellence Dimension (BE)	.87	10	----------
Deliver Customer Value (DCV)	.88	3	Customers are satisfied with our products and services
Build Stockholders Value (BSV)	.92	2	Bank has strong financial performance
Corporate Citizenship (CC)	.80	3	Bank leads new trends & development in retail banking
Employee Relations (ER)	.78	2	Bank has many long-service caliber staff

and rewards the champions of quality"; " Senior management analyses and determines the core competencies of our banks and prioritises quality improvement activities"; " Senior management participates and supports long-term quality improvement process". The leadership construct as a whole has a reliability alpha (α) of 0.866, while the three variables earned reliability alphas (α) of 0.844, 0.761 and 0.732 respectively.

Force of Excellence Construct- Customer Focus dimension

Customer focus is one of the important driving forces of business excellence. Crampton and Wagner (1994) stated that quality is a customer perception, which is based on how well the product, and service meets the customer's needs. The Customer Focus (CF) construct consists of variables of Commitment to Customer Satisfaction (CCS), Commitment to Staff Satisfaction (CSS), and Commitment to Customer Relations (CCR). The emphasis here is that customers defined quality and attaining customer satisfaction is thought to increase profit. As such, bank's efforts and activities must be directed towards understanding and satisfying both internal and external customers. And the extent of customer focus can be reflected in the extent of commitment to the satisfaction of their customers and in their commitment to building and maintaining long-term relationships with their customers. A total of 8 items is used to measure this construct. Some sample items include "Bank consistently offers products and services that create customer value"; " Bank engages in market research activities to determine customer needs"; " Our bank is a good place to work"; " Bank

eager to build life-long relationship with customer"; " Bank commits to support and satisfy staff". The construct has an alpha (α) of 0.794. The reliability alphas (α) for these variables were 0.893, 0.721, 0.727 respectively.

Force of Excellence Construct- People based Management dimension

Retail banking is a labour intensive industry, so it is crucial for banks to make effective and efficient use of its people as a primary and expensive resource. Total quality is achieved through people. Overall, quality tools and technology are mechanisms used to improve the effectiveness and efficiency of the works of people. Processes and procedures should be designed to facilitate staff efficiency. People can achieve synergies through teamwork – a way of coordinating people towards goal achievement. Therefore, the People based Management (PBM) construct consists of People Make Quality (PMQ) and Teamwork (TEAM). Sample items include," Bank provides resources for staff to improve the effectiveness and efficiencies of the services processes." " Bank aligns process management teams to improve service quality"; " Our bank uses action teams to solve local problems". The reliability alphas (α) of these variables were 0.701 and 0.783 respectively.

Force of Excellence- Management by Fact dimension

The Management by Fact (MBF) construct consists of "Integrated Process" (IP), "Process Management" (PM), "Information Management & Analysis" (IMA). Process management is an essential part of any quality management effort. For efficient and effective use of all resources of the bank, the processes between them should be smooth which requires an integrated and closely linked structure and the breakdown of barriers. This came from the notion of interdependency of processes in the quality supply chain. Moreover, process designs and linkages should be recentered on customer satisfaction rather than engineering-based designs. Besides, there should be an ongoing measurement and review of processes for quality improvements. Quality improvements and performance measurement must be based on facts and data. Sample items are "Bank has systems of designing and developing innovative products, operation and processes."; " Bank collects a wide range of complete & accurate data for decision making"; " Our bank can be visualised as a web of processes linked together as a system". Reliability alphas (α) of these variables were 0.790, 0.831 and 0.934 respectively.

Force of Excellence construct-Continuous Improvement dimension

In meeting the dynamic and changing needs and expectations of customers, banks have to set up appropriate mechanisms and channels for solving operational or local problems. Quality plans and mechanisms should be set up to prevent problems. Besides, banks should also cultivate a culture of continuous improvement and an environment of self-reinforcing cycle of commitment to quality improvements. A bank has a culture of continuous improvement if everyone thinks and acts in quality sense all the time. This will result in ongoing efforts for improvement of services of banks. The Continuous Improvement construct (CI) involves " Prevention" (PREV) and " Culture of Continuous Improvement" (CCI). Sample items are "Bank has methods to prevent problems from arising"; " Bank analyses trends in customer satisfaction for quality improvement". Reliability alphas (α) of these variables were 0.756 and 0.844 respectively.

Business Excellence dimension

The Business Excellence (BE) construct involves Deliver Customer Value (DCV), Build Stockholder Value (BSV), Employee Relations (ER) and Corporate Citizenship

(CC). Excellence in business should be a function of personal and organisational factors working in harmony to produce goods and services that improve quality of retail banking services. Therefore, the present research suggests that business excellence is grounded in these four foundational cornerstones of excellence. Business excellence is achieved from profits created from customer purchases and loyalty, efficient and effective processes, high performance levels of staff, a good and healthy business operating environment, within the banking industry (i.e. business environment) (Wong, 1996, 1998). Banks should promote the goodness of the business environment in which it operates through corporate citizenship. Corporate citizenship means business being a citizen of the business environment has the responsibility of a good citizen such as expectations for social responsibility & employee development etc. Bank practices must create enduring value for the bank and its stakeholders. When a bank has attained these four objectives, it has achieved the goal of business excellence. Sample items include "Bank has many long-service caliber staff"; " " Bank maintains prudence and high credibility", " Bank has strong financial performance"; " Customers are satisfied with our products and services". Reliability alphas (α) of these variables were 0.877, 0.923, 0.804, and 0.781 respectively.

6.3 RESULTS ON MODEL TESTING AND ANALYSIS

6.31 Descriptive Statistics of the Survey Result

6.311 Mean Scores and Correlation Analysis

After analyzing the indicator and construct reliability, we can now confirm that reliability of the measurement scales. And the data collected from the survey can be used for the testing of the model.

The first part of this section presents simple descriptive statistics for the indicator variables being analysed. At first, the mean scores of various indicator variables on a 10-point scale are computed since the mean scores can be used to represent a gross measure of a bank's activities and performance. This section presents and discusses the mean scores of various indicators according to their respective dimension.

Leadership dimension

Under Leadership, the means of the three variables were 8.68, 8.29 and 6.87 for Strategic Planning, Management Commitment to Quality and Communication respectively. The mean scores reflected that the respondents perceived that their senior management or their banks have done a good job in strategic planning of quality

improvement activities. Besides, they also perceived that their senior management were committed to quality and the importance of quality were shown in senior management's commitment to quality improvement processes. It is reflected that senior management, however, should establish more effective communication strategy as the means scores for communication is comparatively low.

Customer Focus dimension

The means for Commitment to Customer Satisfaction and Commitment to Customer Relationship were 7.92 and 7.78. It revealed that the respondents believed that their retail banks were committed to the satisfaction of its clients. However, the mean for Commitment to Staff Satisfaction was 6.42, which was apparently lower than that of the clients. It suggested that the respondents were not quite sure about their bank's commitment to the satisfaction of its employees. This implied that the concept of internal customer is not yet appreciated in these banks, thus, the retail banks should care more about their employees together with their clients for better quality improvement results.

People based Management dimension

The responses revealed low means for People Make Quality and Teamwork which were 5.93 and 6.74. This result is consistent with what was found on the bank's

commitment to employee's satisfaction. It should be noted that total quality could hardly be achieved if staff is not motivated to take part in improvement of their works. The retail banks are therefore urged to take measures and actions in understanding the needs of their employees and involved employees in the value creation processes and activities. Better performance in quality could be achieved with better-motivated employees and coordinated teamwork activities.

Management by Fact dimension

The responses revealed high means for Integrated Process, Process Management and Information Management & Analysis which were 7.29, 7.68 and 7.08 respectively. The respondents agreed that their bank has an integrated structure of processes for quality improvements and the process has been managed quite well. The result echoes the recent reports from the government that many retail banks in Hong Kong such as the HSBC and the Bank of China Group had taken measures to modernise, streamline and reengineer their operations and delivery process during the past six years (Various reports, Hong Kong government). Besides, under the prudent supervision of the Hong Kong Monetary Authority (HKMA), retail banks and the sector as a whole had strong focus on information management, and financial performance measurement.

Continuous Improvement dimension

The means of Prevention and Culture of Continuous Improvement were 6.36 and 6.32 respectively. Although the respondents somewhat agreed that their banks have engaged in continuous improvement of quality and services, however, the efforts may be insufficient. It indicated that there is still room for quality improvement as the respondents perceived that their banks can do more on prevention measures and a culture of continuous improvement was not yet in place.

Business Excellence dimension

Regarding the performance of the retail banks, the mean scores obtained reflected that the respondents believed that their banks have done very well financially. They also believed that their customers were satisfied with their products and services and their banks had gained some reputation in the Hong Kong retail banking industry. The mean scores for Deliver Customer Value, Build Stockholders Value and Corporate Citizenship were 7.76, 8.23 and 7.08. The responses indicated that the employee relation performance of the retail banks was well below the other three performances, which was 6.42. Overall speaking, the respondents perceived that the performance of their banks were very competitive in the market.

6.312 Correlation Analysis

To more fully understand the nature of relationship between the 17 variables, the Pearson correlation analysis was performed to determine how these 17 variables are related. The Pearson correlation coefficient (i.e., r) can be used to assess the nature of the relationship between variables when the variables are assessed on either an interval or ratio-level of measurement (Hatcher, 1996). Pearson correlation may range in size from (–)1.00 through (+)1.00, with the absolute values of 0.50 indicating moderate correlation and 0.70 indicating strong correlation. There is also the ρ value associated with the correlation. This is the ρ value obtained from a test of null hypothesis that the correlation between two variables is zero in the population (note: the alternative way for this statistical test is that the correlation is not equal to zero in the population; however, this alternative hypothesis is two-sided, which means that it does not predict whether the population correlation is positive or negative, only that it is not equal to zero). For example, the correlation of 0.826, the corresponding value is 0.0001. This means that, given the sample size, there is only 1 chance in 10,000 of obtaining a correlation of 0.826 if the population correlation was really zero. Therefore, the null hypothesis can be rejected. In other words, the observed correlation was statistically significant. Table 6.2 shows the Pearson correlation matrix of the indicator variables, the correlations between indicator variables and their level of statistical significance (ρ) are discussed as follows:

Leadership dimension

As it can be seen from the table, the three variables under leadership were closely correlated with each other. It suggested that banks have well planned customer focus strategies maintains a strong commitment to quality ($r = 0.826$, $\rho = 0.0001$). Besides, management's commitment to quality may better perceived if that commitment is well communicated ($r = 0.665$, $\rho = 0.0001$). That is to say, the three variables represent a consistent measure and can serve as indicators of leadership.

Moreover, the three indicators had also moderate to high correlation with other dependent indicator variables. For example, retail banks that had good strategic plans tend to had also strong commitment to customer satisfaction ($r = 0.705$, $\rho = 0.0001$) and had integrated process ($r = 0.647$, $\rho = 0.0001$). Whereas banks had strong management commitment to quality were able to develop efficient process ($r = 0.583$, $\rho = 0.0001$) and to make good use of information and facts ($r = 0.561$, $\rho = 0.0001$). The end result of commitment to quality were customer satisfaction ($r = 0.810$, $\rho = 0.0001$) and competitive financial performance which led to stockholder satisfaction ($r = 0.419$, $\rho = 0.0001$).

Customer Focus dimension

The result of the correlation analysis shows that all three variables under the customer focus construct were related each other. The result implies that those banks committed to customer satisfaction were also committed to developing long term relationships with customers ($r = 0.740$, $\rho=0.0001$) and were also committed to employees satisfaction ($r = 0.783$, $\rho=0.0001$. Besides, banks had a strong commitment to employees satisfaction had a better chance of developing long term relationship commitment to customers ($r = 0.767, \rho= 0.0001$).

In addition, those banks committed to employee satisfaction had more teamwork ($r = 0.611$, $\rho=0.0001$) and stronger employees involvement in quality improvement activities ($r = 0.713$, $\rho=0.0001$). The end result is having better employee relations ($r = 0.767$, $\rho=0.0001$) and providing good values for customers ($r = 0.609$, $\rho=0.0001$).

People based Management dimension

Under the people based management construct, the two variables were closely related to one another ($r = 0.666, \rho=0.0001$). It suggested that banks that had involved employees into the quality improvement would use teams as basis to coordinated their

works. The result also indicated that the more the banks involve their employees in the value creation processes, the more likely the cultivation of culture of continuous improvement (r = 0.778, ρ= 0.0003). The banks could achieve the end results of better employee relation (r =0.589,ρ=0.0001) and competitive financial performance (r = 0.590,ρ=0.0001).

Management by Fact dimension

It is shown in the correlation matrix that the integrated process, process management and information management & analysis were related with each other. Banks that were careful about the structure of their processes had also objective assessment of their processes and performances (r = 0.662,ρ= 0.0001). They would use fact and encourage information sharing among teams and employees for quality improvement (r =0.650,ρ=0.0001).

Integrated process and Information management had helped the banks in prevention of problems from arising (r = 0.561,ρ=0.0001, r =0.650,ρ=0.0001). Moreover, banks that had process management also would have employees focused on continuous improvement (r = 0.711,ρ=0.0001).

Continuous Improvement dimension

Lastly, high correlation was also found between the two variables of the continuous improvement construct (r = 0.748,ρ= 0.0003). For example, banks committed to continuous improvement of quality of their products and services were also conscious on developing methods to prevent problems from arising. The end result of having a culture of continuous improvement were better value for customers (r = 0.657,ρ=0.0001) and better financial performance for stockholder satisfaction (r = 0.553,ρ=0.0001).

Business Excellence dimension

Banks having good relations with their employee were more able to deliver customer satisfaction (r = 0.574,ρ=0.0001). Moreover, banks that were capable of delivering customer value would attract more customer purchased which would in turn improve their financial performance (r = 0.669,ρ=0.0001). It is also reflected that banks had maintained good employee relations were more able to develop an image of good corporate citizenship (r=0.561,ρ=0.0001).

In summary, the pattern of the correlations supports some of the predictions of the Business Excellence Model for retail banking. With respect to strength, all correlation

Table 6.2 : Means and Correlation Among Indicator Variables

	Variable	mean	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	SP	8.68	1.000																
2	MCQ	8.29	.826*	1.000															
3	COMU	6.87	.657*	.665*	1.000														
4	CCS	7.92	.705*	.584*	.321**	1.000													
5	CSS	7.78	.231**	.232**	.604*	.783*	1.000												
6	CCR	6.42	.254**	.772*	.233**	.740*	.767*	1.000											
7	PMQ	5.93	.327*	.583*	.609*	.714*	.713*	.323**	1.000										
8	TEAM	6.74	.238**	.235**	.572*	.328**	.611*	.264*	.666*	1.000									
9	IP	7.29	.647*	.250**	.225**	.335**	.506*	.454*	.476*	.422*	1.000								
10	PM	7.68	.329**	.583*	.281**	.314**	.228**	.332**	.293**	.700*	.662*	1.000							
11	IMA	7.08	.381**	.561*	.574*	.660*	.622*	.270**	.640*	.611**	.447*	.650*	1.000						
12	PREV	6.36	.709*	.323*	.327*	.703*	.669*	.207**	.238**	.647*	.561*	.657*	.650*	1.000					
13	CCI	6.32	.640*	.274**	.254**	.765*	.711*	.125	.778*	.676*	.610*	.711*	.697*	.748*	1.000				
14	CC	7.08	.323*	.231**	.457*	.327**	.394*	.365*	.326*	.279**	.335**	.228	.317**	.340*	.425*	1.000			
15	ER	6.42	.238**	.355*	.325*	.279**	.767**	.254**	.589*	.398*	.250**	.355*	.235*	.280*	.381*	.561*	1.000		
16	DCV	7.76	.697*	.810*	.218**	.714*	.609*	.574*	.437*	.455*	.400**	.740*	.434*	.511**	.657*	.461*	.574*	1.000	
17	BSV	8.23	.522*	.419*	.170**	.476*	.327*	.399**	.590*	.423*	.327*	.326*	.337*	.457*	.553*	.238*	.290*	.669*	1.000

Note: Pearson Correlation Coefficients / Prob >|R| under H_0: Rho= 0, N = 47

*P<0.0001, **P<0.0003

range from moderately strong to strong associations between indicator variables and their respective construct. Moreover, all observed correlations were statistically significant. These findings together with the previous reliability alpha results advocate the presence of six dimensions/constructs in the Business Excellence Model for retail banking.

6.32 RESULTS OF STRUCTURAL EQUATIONS ANALYSIS AND PARAMETERS ESTIMATION

Apart from descriptive results, this section focuses on the discussion of the structural equation analysis results. The Business Excellence Model was tested using the EQS 5 for Windows developed by Bentler and Wu (1995) using the maximum likelihood (ML) estimation procedure. The analyses using the maximum likelihood method of parameter estimation and examined the underlying causal relationships among constructs in the Business Excellence Model for retail banking. In structural equation modelling (SEM), the basis of the statistical analysis was the covariance matrix of the observed responses. Since the variables of the Model are in fact indicators of the six constructs, a decision was made to aggregate the variables for each construct. In other words, the values of variables within each construct are aggregated together to give the value of the construct they represent. Accordingly, Strategic Planning (SP). Management Commitment to Quality (MCQ) and Communication (COMU) together form the construct of Leadership (ELEAD), with a reliability alpha of 0.87. Hence,

Commitment to Customer Satisfaction (CCS), Commitment to Staff Satisfaction (CSS) and Commitment to Customer Relationship (CCR) together form the construct of Customer Focus, with a reliability alpha of 0.79. Same as the other forces of excellence constructs, People Make Quality (PBM) and Teamwork (TEAM) together form the construct of People based Management (PBM), with a reliability alpha of 0.91. While the variable of Prevention (PREV) and Culture of Continuous Improvement (CCI) together form the construct of Continuous Improvement (CI), with a reliability alpha of 0.78. Whereas Integrated Process (IP), Process Management (PM) and Information Management & Analysis (IMA) together form the construct of Management by Fact (MBF), with a reliability alpha of 0.84. The last construct of Business Excellence (BE) was formed by adding up Deliver Customer Value (DCV), Build Stockholder Value (BSV), Corporate Citizenship (CC) and Employee Relations (ER). The Business Excellence construct has a reliability alpha of 0.87. The results in Table 6.1 which was shown previously had already confirm the validity and reliability of the six dimensions, because all six constructs exhibited good internal consistency as were reflected by their associated reliability alphas.

6.321 SIGNIFICANCE TESTING AND GOODNESS-OF-FIT TESTS

To determine whether the Business Excellence Model as a theoretical model successfully accounts for the actual relationships observed in the data, the Business

Excellence Model (BEM) built in last chapter was arranged and examined in somewhat different causal sequence. The first partial model is shown in Figure 6.1. In this initial partial model, Leadership was related directly to Customer Focus and People based Management and these three constructs were hypothesised to precede and have a causal effect on Business Excellence. This initial partial model had a chi-square χ^2_{df} of $14.852_{df=2}$ and a Normed Fit Index (NFI) of 0.944, and a Comparative Fit Index (CFI) of 0.951.

Then another partial model (Figure 6.2) relating leadership to Management by Fact and Continuous Improvement were hypothesised to precede and have a causal effect on Business Excellence. This second partial model had a χ^2_{df} of $70.677_{df=4}$, NFI of 0.775, and CFI of 0.777. The NFI and CFI may range in value from 0 to 1. Values on the NFI, NNFI, and CFI over 0.9 indicate an acceptable fit between model and data; the closer to 1.000, the better (Bentler, 1992; Hatcher, 1994). An informal rule of thumb used by researchers is that the value of chi-square is acceptable as long as the ratio of chi-square to its degree of freedom is less than 3. A comparison of the model fits (χ^2_{diff}) was performed to compare the fit of the two models to data. Since the observed chi-square difference value between the two partial models was clearly significant (χ^2_{diff} is 27.9, $p<0.001$). This means that the first partial model is a better model when compared to the latter initial partial model.

Following this, further modifications to the two partial models (Figures 6.3 and 6.4) were done to examine whether direct causal relationships exhibit between Leadership

and Business Excellence. That is to say, the mediator constructs of Customer Focus, People based Management, Management by Fact, and Continuous Improvement were taken out of the model to assess the moderating and mediating effect of relationships. Modification to the first initial partial model had a χ^2_{df} of $169.65_{df=9}$, an NFI of 0.664 and a CFI of 0.677. Modification to the second model had a χ^2_{df} of $119.434_{df=7}$, an NFI of 0.435 and a CFI of 0.599. Results indicated that Leadership did not have direct effect on Business Excellence, as the two modified models did not fit the data. The summary statistics of model fits for these four initial models, and chi-square difference tests were performed and given in Table 6.3 for easy reference. Finally, the two initial partial models were combined together to form the full Business Excellence Model (BEM) as was the one proposed in the previous chapter. It aims to test the relationships among the five forces of excellence constructs and their effects on business excellence. The results in Table 6.4 showed that the Business Excellence Model (BEM) had a χ^2_{df} of $0.528_{df=4}$, a high probability value of 0.97, Comparative Fit Index (CFI) of 1.000, Normed Fit Index (NFI) of 0.999. More reliable goodness of fit statistics have been used. For example, the RMSEA (i.e., root mean squared error of approximation) measures the lack of fit and takes parsimony into account by assessing the discrepancy per degree of freedom between the population covariance matrix and the fitted matrix. That is, it penalises for overfitting. The adequacy of the present model estimate (RMSEA is 0.003) was also confirmed by the small (the rule of thumb is less than 0.1) RMSEA value (Bentler, 1990; Byrne, 1994, 1998; Hatcher, 1994). The results listed in Table 6.4 are strongly in favour of

Figure 6.1 Partial Model 1 of the BEM model (relating leadership to CS & PBM constructs to Business Excellence)

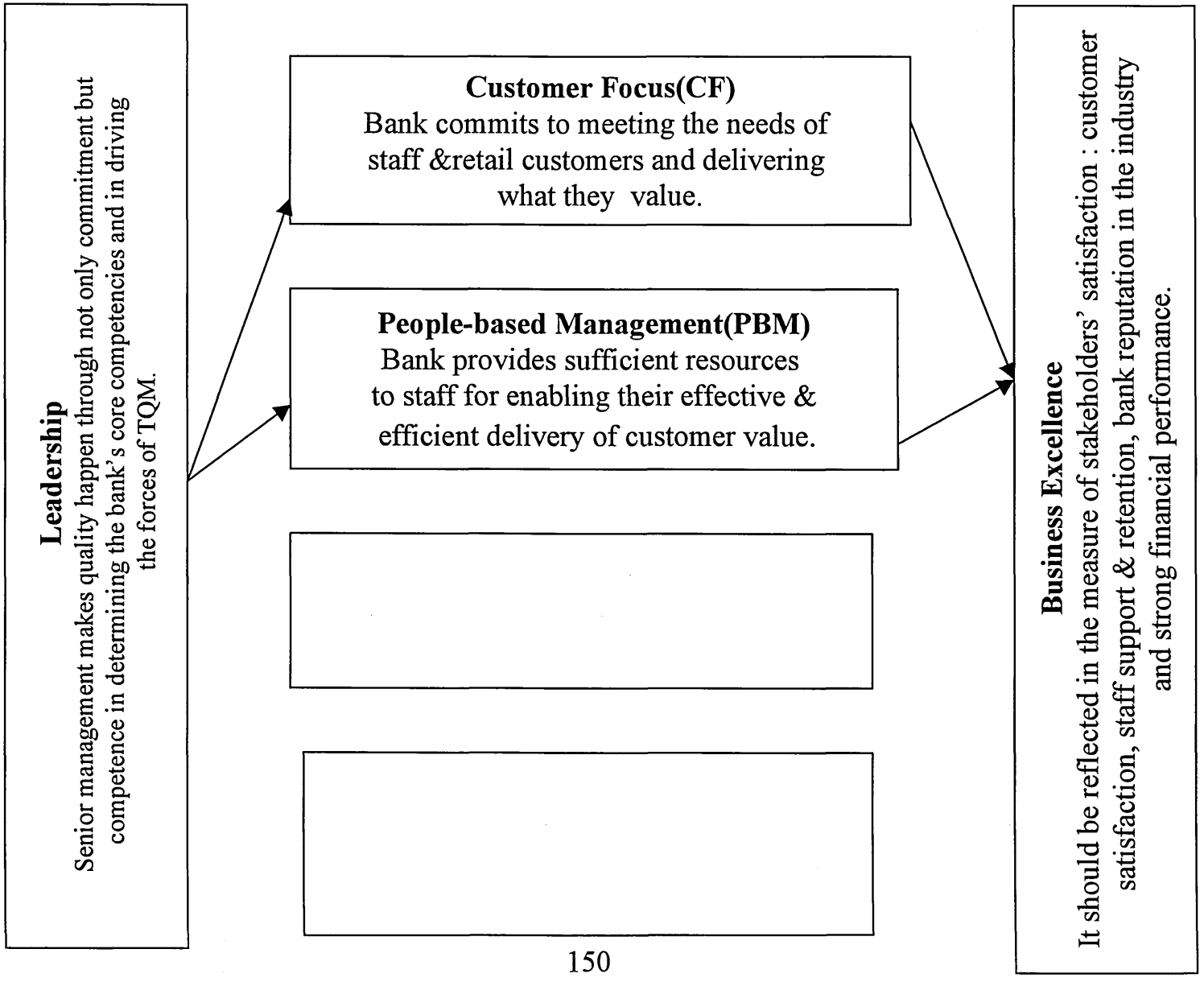


Figure 6.2 Partial Model 2 of the Business Excellence Model (relating Leadership to Management by Fact & Continuous Improvement Constructs to Business Excellence)

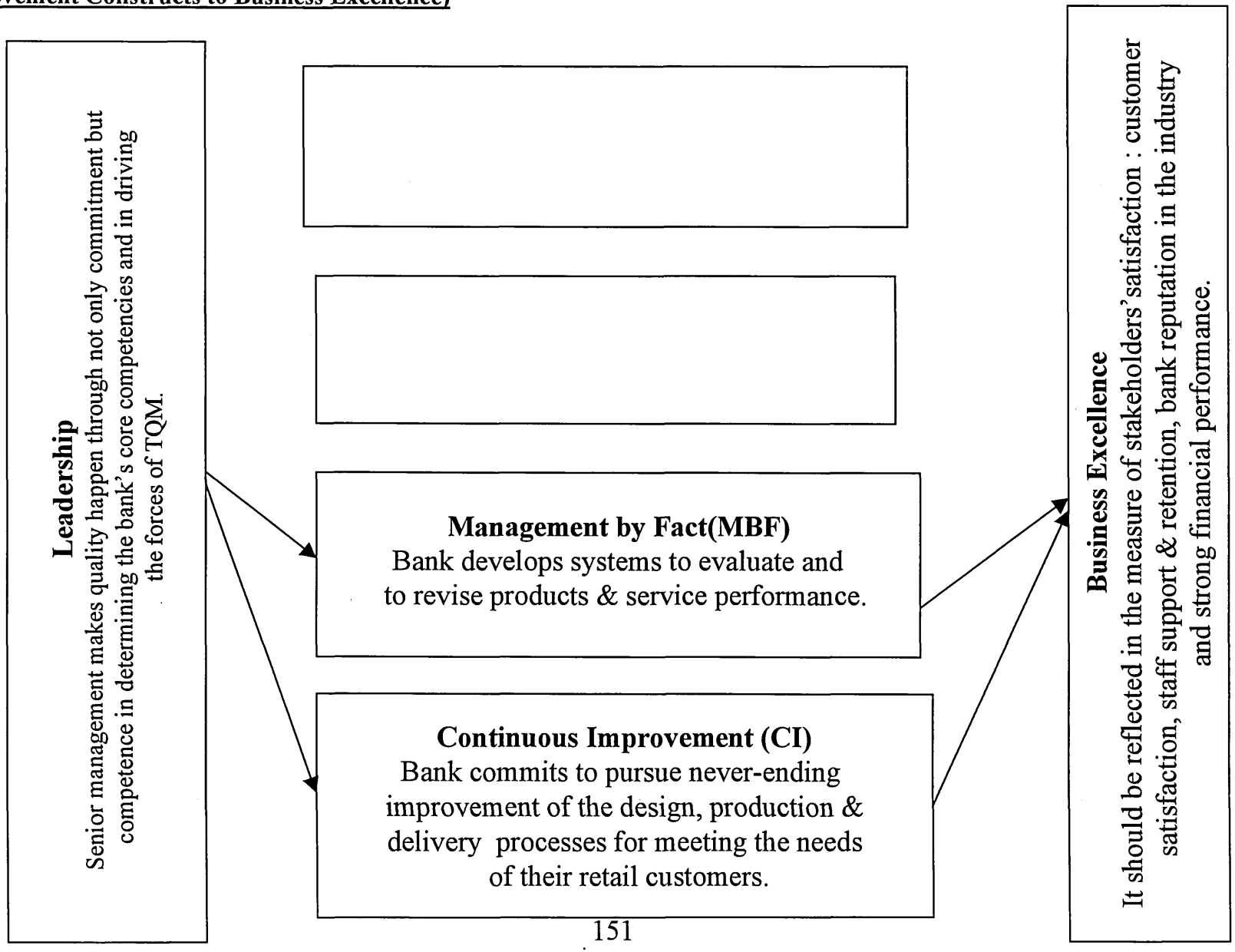
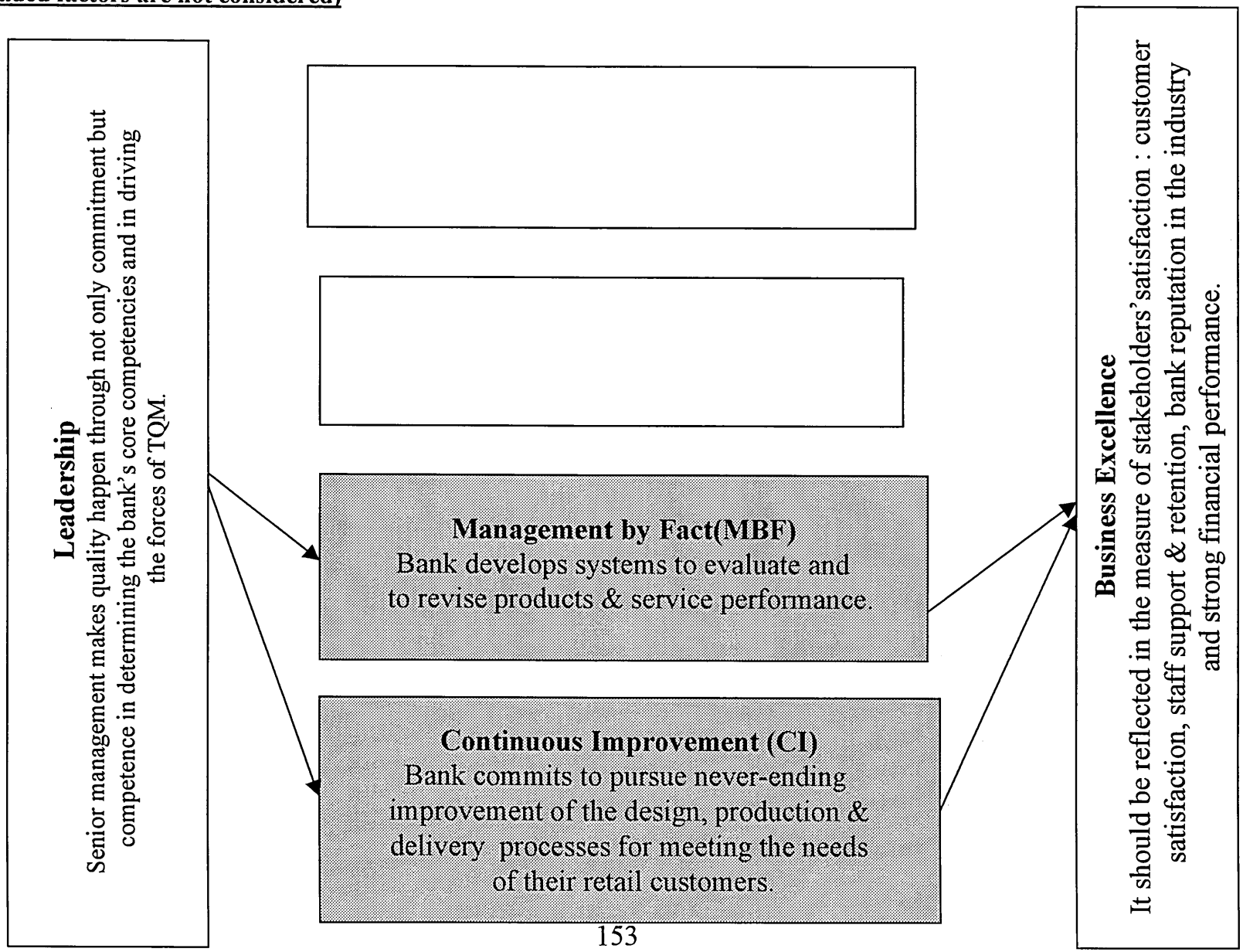


Figure 6.3 Direct Model 1 (relating leadership directly to business excellence w/o the mediating factors of CF & PBM; the shaded factors are not considered)

Figure 6.4 Direct model 2(relating leadership directly to Business Excellence w/o the mediating factors of MBF & CI constructs; the shaded factors are not considered)



the structure of the full Business Excellence Model (BEM) for retail banking since all goodness of fit indices associated with the BEM indicate a very good fit between model and data.

Table 6.3 Summary Statistics of Model Fit Results

MODEL	χ^2_{df}, NFI	χ^2_{diff} (p value)
Partial Model 1	$14.852_{df=2}$, 0.944	27.9125 ($p<0.001$)
Partial Model 2	$70.677_{df=4}$, 0.775	
Direct Model 1	$169.65_{df=9}$, 0.664	N/A
Direct Model 2	$119.434_{df=7}$, 0.435	
The Full BEM w/ paths between the five constructs	$0.528_{df=4}$, 0.999	13.692 ($p<0.005$)

Note: $p<0.001$, 1-tailed (against Null-hypothesis)

TABLE 6.4 Output of the Business Excellence Model

Structural Paths & Model Fit Indices	Estimates
Leadership to Customer Focus	0.869***
Leadership to People based Management	0.752***
Leadership to Management by Fact	0.884***
Leadership to Continuous Improvement	0.744***
Customer Focus to Business Excellence	0.203*
People based Management to Business Excellence	0.260**
Management by Fact to Business Excellence	0.257*
Continuous Improvement to Business Excellence	0.198*
Model χ^2	0.528
Degree of Freedom	4
Probability	0.97
NFI	0.999
NNFI	1.027
CFI	1.000
RMSEA (Root mean squared error of App.)	0.003
*** p< 0.001 (two-tailed test)	
** p< 0.01 (two-tailed test)	
* p< 0.05 (two-tailed test)	

Note: the path coefficient is significant at 0.05 if t exceeds 1.96, is significant at 0.01 if t exceeds 2.58, and is significant at 0.001 level if t exceeds 3.29.

Parameter Estimation

To determine the significance of the parameter estimates of the BEM, the t statistics associated with the structural parameter estimates can be examined. The results listed in Table 6.4 reflected that nearly all structural parameter estimates were significant

because all t values were significantly different from zero at $p< 0.05$, $p< 0.01$ and $p< 0.001$ respectively. The results of t values using EQS 5 were shown as follows:

Leadership to Customer Focus (11.929)
Leadership to People based Management (8.344)
Leadership to Management by Fact (12.850)
Leadership to Continuous Improvement (6.797)
Customer Focus to Business Excellence (2.226)
People based Management to Business Excellence (2.097)
Management by Fact to Business Excellence (3.306)
Continuous Improvement to Business Excellence (1.962)

Path Coefficients

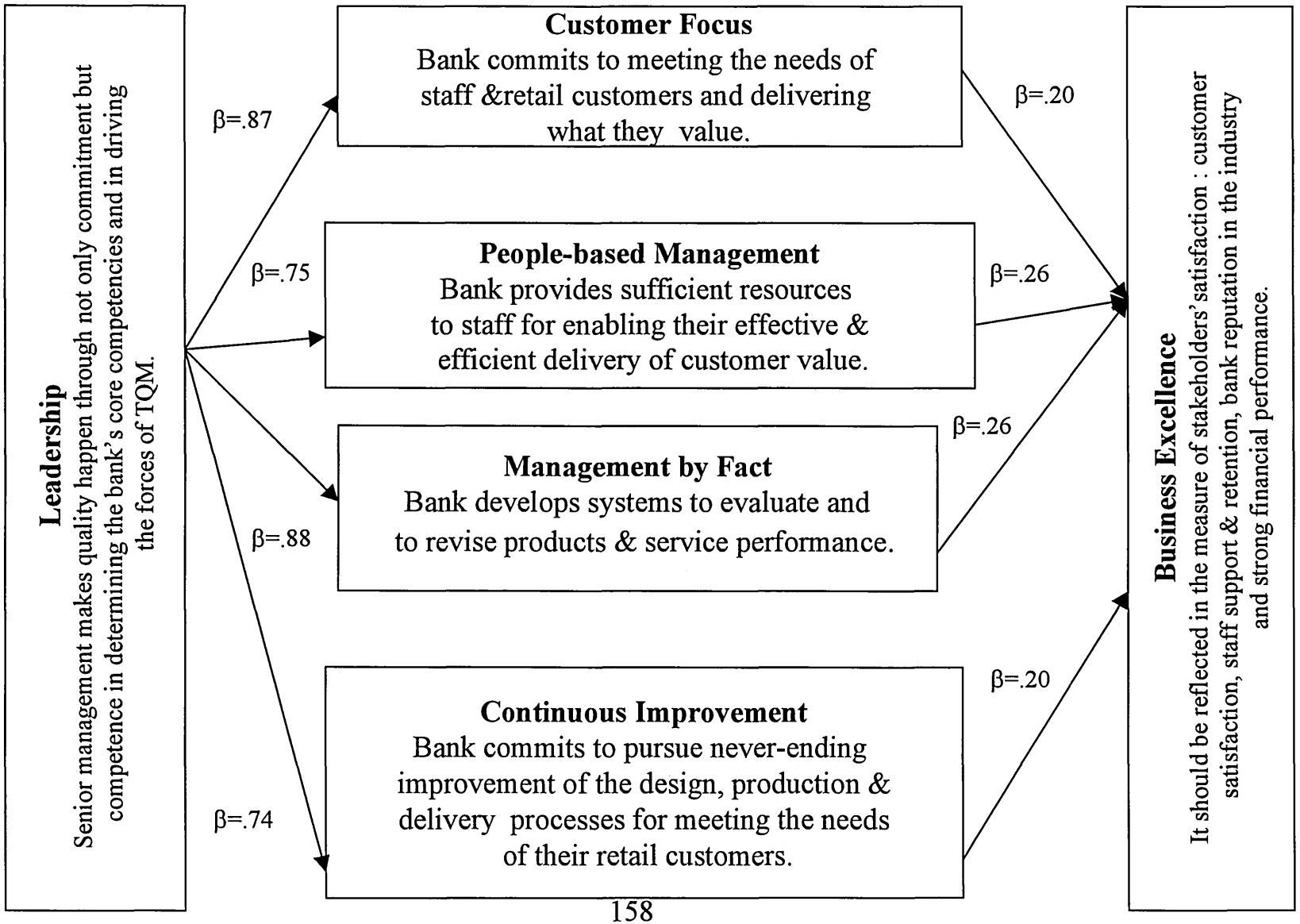
This part examines the path coefficients (β) of the theorised Business Excellence Model in greater detail. As was shown in Table 6.4, Leadership as a prime force of excellence had significant impact on Customer Focus ($\beta=0.869$, $p< 0.001$), on People based Management ($\beta=0.752$ $p< 0.001$), on Management by Fact ($\beta=0.884$ $p<0.001$), and on Continuous Improvement ($\beta=0.744$ $p<0.001$). In turn, the four forces of excellence had significant mediating effects on Business Excellence. Customer Focus had a significant effect on Business Excellence ($\beta=0.203$ $p< 0.05$), and People based Management also had a significant effect on Business Excellence ($\beta=0.260$ $p< 0.05$). Besides, Management by Fact had significant impact on Business Excellence

(β=0.257 $p< 0.001$). Lastly, Continuous Improvement also shared significant effect on Business Excellence (β=0.198 $p< 0.05$). All path estimates obtained from the structural equation analysis are shown in the Business Excellence Model (BEM) in Figure 6.5. The path coefficients provide good support for the relationships/ linkages hypothesised in the Business Excellence Model. These findings together with the analysis of the structural equation models suggest that the structure of the BEM is statistically valid and reliable. In other words, leadership force will influence customer focus, people based management, management by fact and continuous improvement that all these forces together help banks achieve business excellence.

6.4 DISCUSSION AND CONCLUSION

From findings of previous sections, it is now clear that both the descriptive statistics and the structural equation analysis results support the validity and reliability of the new Business Excellence Model (BEM). The adequacy of the theoretical BEM has been proven by the chi-square difference test shown in Table 6.3 and Table 6.4. Apparently, the relationships/ linkages specified in the BEM provide the best fit between model and data as compared to the other three partial models without the moderating effects of the four forces of excellence. Overall speaking, these statistics together support empirically the theoretical model and confirm the contributions of the five driving forces of excellence namely, leadership, customer focus, people based

Figure 6.5 The Business Excellence Model for Retail Banking (path estimates are indicated in the diagram)



management, management by fact, and continuous improvement on the end results of business excellence.

The important issue from the present research assessment concerns the strategic implications of results for retail banking and in general for those involved in retail banking sector. Previous research in TQM has brought forward issues related to the importance of modelling business excellence as a means for achieving competitive advantage. The present research has shown empirically that the newly developed Business Excellence Model (BEM) provides a systematically structured model for use of retail banks and in retail banking. Present research results also support the identified forces of excellence as determinants of business excellence of retail banking. The implications suggest that its retail banks have good strategic planning and commitment to quality, this would lead to employee commitment and contribution to continuous improvement of banking services. In addition, findings also confirm that retail bank have made good use of information and facts for integrating organisational processes and process management, and continuous improvement of operational and delivery quality of services enables banks to achieve business excellence. In sum, the present research results agree very well with the existing knowledge that customer satisfaction, employee satisfaction and impact on society are achieved through leadership driving customer focus, people management, process management, and ongoing improvements, leading ultimately to excellence in business.

Concerning the overall findings, it can be argued that when the senior management has a good strategic planning of the bank's customer focus and/or quality management activities, the bank will be more committed to the satisfaction of both employee and customers. Apart from this, the effective involvement of its people through training & development, and teamwork enables the bank to develop good employee relations and deliver customer value (i.e., business excellence). The Customer focus and People based Management as forces of excellence may be considered as the "soft" forces that drive good relationships with customers and employees. When the staff are more satisfied, they would be more inclined to contribute their best to strive for good bank performance through quality works in intermediate processes and consciousness of improvement opportunities of their work processes. The continuous improvement in products and services of the bank will help in retaining satisfied customers and attracting new customers. Hence, bank has a better chance to outperform its competitors with these positive driving forces of excellence.

Apart from the "soft" forces, effective leadership will facilitate the establishment of integrated operation and delivery processes- a better infrastructure. The establishment of integrated structure of operation and delivery processes enhances the effective communication, facts and information sharing across levels and function teams. Effective communication and integrated process will bring in closer interactions and more understanding of each other works among functions. This in turn somehow

enable the cultivation of a culture of continuous improvement as more information and facts can be used for improvement decisions. Accurate and fair process measurement can be ensured with decision making based on information and facts. With a culture of continuous improvement and effective process management, the bank will be in a better position to lower costs and understand and serve its customers and ultimately achieve competitive advantage. These two forces can be considered as the "hard" forces that drive the bank toward business excellence. Hence, the present research findings agree that, to be excellent in retail banking, requires that retail banks have balanced management of both the "soft" and "hard" driving forces of the organisation.

In summary, the cornerstone of conducting scientific research in management sciences rests in developing a sound theoretical framework, followed by rigorous testing of the theory in the framework. Advancements in structural equation modelling (SEM) make this statistical technique useful in testing construct and model validity. In line with this research endeavour, the present research has successfully performed structural equation modelling (SEM) analysis and correlation analysis to test and verify the validity and reliability of the new Business Excellence Model for retail banks. As demonstrated in the chapter, the Business Excellence Model for retail banks has passed a number of statistical tests and assessments including the structural equation analysis. The model fit indices suggest that the present Business Excellence Model satisfied all the requirements of a valid and reliable model according to the structural equation modelling literature. More importantly, this empirically validated model (i.e., the Business Excellence Model) is more robust than the existing "CFQM" model and

therefore offers a better framework for retail banks to follow in their effort to achieve business excellence. In addition, the identification and incorporation of forces of excellence (i.e., critical success factors of retail banks) in the model enables banks to make quality decisions regarding the effective and efficient use of their limited resources for business excellence. Last but not the least, the development of the Business Excellence Model enables also the computation of Business Excellence Index and forces of excellence indices. The resultant indices will be of particular benefit to retail banks for meaningful comparisons, benchmarking, and ongoing improvements to achieve business success. The calculation of these indices using statistical methods will be discussed in greater detail in next chapter.

CHATPER SEVEN

MEASURING BUSINESS EXCELLENCE FOR RETAIL BANKING

7.1 INTRODUCTION

After the development and successful empirically validation of the Business Excellence Model (BEM), the model should perform well in describing the relationships between the critical success factors (i.e., forces of excellence) and the performances of retail banks in the Hong Kong retail banking environment. As advocated by Kanji, it is now possible to determine the contribution of each critical success factors toward business excellence with Kanji's indexing method for meaningful performance measurement. This chapter makes use of the newly validated BEM and extends Kanji's methodology- the Partial Least Squares (PLS) technique to measure the Business Excellence Index (BEI) for the 47 retail banks. The Partial Least Squares results of the 47 retail banks will be discussed.

7.2 KANJI'S BUSINESS EXCELLENCE INDEX AND CONTRIBUTION OF CSFs TOWARD BUSINESS EXCELLENCE

Apart from the idea of developing a business excellence model, Kanji (1998) has also advanced a robust statistical technique-PLS for the measurement of contribution of critical success factors toward business excellence. The details of the PLS technique was explained in the chapter of Methodology. In brief the general formula for calculating the index from weights (generated by PLS) and means (from original data) has been used by many structural equation models such as the American Customer Satisfaction Index (ASCI). Using the PLS technique, the resultant indices can be used to reflect how well different processes/ areas of the bank are performing. The apparent advantage of having such indices is the benefit obtained from direct comparison across each of the bank's entire customer service process, as well as comparison of the same business in different geographical areas. More importantly, the Business Excellence Index (BEI) represents an objective measurement mechanism over time for the retail banks to monitor their performance on an ongoing basis.

Another advantage stems from this indexing mechanism is that the indices representing different aspects of the customer service process can be reported separately (e.g. an index for customer focus) and can also be combined into the final computation to present a single number (i.e., a business excellence index) between one to a hundred. Since a single aggregated number that represents a particular business

performance score is available, it makes the task of comparison of business performances and excellence more easily, practical and user friendly for companies. Thus, the present research has adopted Kanji's methodology and extended it to the computation of Business Excellence Index (BEI) and the associated forces of excellence (i.e., CSFs) indices for retail banking. In this way, retail banks can utilise the BEI and the forces of excellence indices for monitoring both the overall performance as well as the individual performance of each critical aspect of their customer satisfaction process.

7.3 PARTIAL LEAST SQUARES METHOD AND BUSINESS EXCELLENCE INDEX

From the literature, it was revealed that the Partial Least Squares (PLS) technique has been used for the calculation of Customer Satisfaction Index in many countries such as Sweden, Britain, Europe and the States. Many researchers advocate that PLS is the preferred estimation procedure for structural equation models (Johnson et al., 1996; Kristensen et al.,1999). A typical example is the customer satisfaction index which has been well adopted by governments and organisations in these countries to monitor their performance (Fornell et al., 1996; Kristensen et al.,1999). Kanji (1998) has extended the PLS technique to calculate the business excellence index, which is a more comprehensive measure of a company performance than on only a single aspect-

customer satisfaction. Indeed, a key objective of representing the BEM as a latent variable structural model is to do a confirmatory analysis to estimate the values of the structural parameters for the calculation of index. Ryan et al (1995) stated that this approach is perhaps the most common approach in practice.

Using the validated Business Excellence Model (BEM) as a basic model structure for retail banking, PLS analysis was carried out to obtain structural parameter estimates (i.e. outer coefficients or outer relations of the measurement model). In the process, the PLS technique was applied to the calculation of Business Excellence Index based on the Business Excellence Model that had been appropriated to the unique local retail banking context. Specifically, PLS was employed to estimate weights (i.e., structural parameters) for all forces of excellence constructs (i.e., CSFs) that maximise their ability to explain the ultimate dependent construct-Business Excellence in retail banking. The estimated weights (i.e. outer coefficients) were then used to calculate an index for every construct in the Business Excellence Model (BEM). Broadly speaking, for every force of excellence (i.e. CSF) and business excellence, their index scores are a function of mean scores of corresponding manifest variables such that higher mean scores give higher index scores. Naturally, mean scores reflect performance level of activities that are measured. As such, a rise in an index will reflect an increase in the performance level of activities equivalent to the required increase in mean scores.

7.4 GENERAL DATA DESCRIPTION

There were 47 retail banks participated in the survey. These responses comprise of data from large and small-to-medium retail banks in Hong Kong. It includes local retail banks and international retail banks. For those large retail banks, they are usually large in size, operating an extensive branch network and belong to prominent banking groups in the Hong Kong retail banking market. Whereas the smaller/ medium sized local retail banks usually have a long operating history in Hong Kong with or without branch networks. The number of years the respondents worked in their banks indicate that they should have a good understanding of the respective banks they work for and the type of customers they dealt with. A summary of the profile of the retail banks participated in the survey was given in Table 7.1.

TABLE 7.1 A Summary of the Profile of the Participants in the Survey

Sample: Number of retail banks:	Retail banks in Hong Kong 50 retail banks (all members' banks of the two retail bank groups, local banks, and small to medium banks).
No. of retail banks have a TQM or business success framework:	7
Number of respondents:	47
Size of retail banks:	Number of branch range from 7 to over 375 branches in Hong Kong.
Average no. of years respondents worked	

for retail banks: Average no. of years respondents responsible for retail services:	13.56 years 9.89 years

7.5 PLS RESULTS FOR THE 47 RETAIL BANKS

The results of the means (χ_{is}) and the weights (i.e., structural parameters, w_{is}), of the manifest variables for each force of excellence and business excellence were first generated using the PLS procedures and the resulting indices for the 47 retail banks are shown in the following tables.

TABLE 7.2A Weights (Outer Coefficients), w_{is} of Manifest Variables for Forces of Excellence and Business Excellence for 47 Retail Banks

Forces of Excellence (CSFs) (items in questionnaire)	1	2	3	4	$\sum w_i$
Leadership (I, II)	0.640725	0.3950122			1.035
Customer Focus (IV, V)	0.6228027	0.4635833			1.087
People based Management (VII, VIII)	0.384572	0.6281468			1.012
Management by Fact (X, XI)	0.5316684	0.573248			1.104
Continuous Improvement (XII, XIII)	0.6782773	0.3878614			1.065
Business Excellence (XIV; XV, XVI. 2, XVII. 2)	0.3347519	0.2985415	0.2767469	0.2644336	1.174

TABLE 7.2B Means, XiS, of Manifest Variables for Forces of Excellence & Business Excellence for 47 Retail Banks

Forces of Excellence (CSFs)	1	2	3	4
Leadership	7.83	7.42		
Customer Focus	7.25	7.05		
People Based Management	5.93	6.74		
Management by Fact	7.29	7.18		
Continuous Improvement	6.36	6.32		
Business Excellence	7.93	8.23	7.01	7.02

TABLE 7.3A Weights (Outer Coefficients), w_{is} of Manifest Variables for Forces of Excellence and Business Excellence for the Largest Retail Bank Group

Forces of Excellence (CSFs) (items in questionnaire)	1	2	3	4	5	6	$\sum w_i$
Leadership (I, II, III)	.7471514	.3281696	.2269898				1.269
Customer Focus (IV, VI)	.7234133	.3510045					1.074
People based Management (VII.2, VIII)	.4582413	.7113166					1.169
Management by Fact (IX, X, XI)	.7681932	.3496629	.1989769				1.285
Continuous Improvement (XII, XIII)	.8582413	.3726424					1.23
Business Excellence (XIV.1,2; XV; XVI.1,3; XVII.2)	.3739963	.2452417	.2128919	.2009379	.1990089	.2011327	1.273

TABLE 7.3B Means, XiS, of Manifest Variables for Forces of Excellence & Business Excellence for the Largest Retail Bank Group

Forces of Excellence (CSFs)	1	2	3	4	5	
Leadership	8.68	8.67	7.78			
Customer Focus	8.1	7.09				
People Based Management	5.47	7.19				
Management by Fact	7.93	8.48	7.62			
Continuous Improvement	7.32	6.36				
Business Excellence	8.24	8.5	8.9	8.54	7.77	6.9

TABLE 7.4A Weights (Outer Coefficients), w_{iS} of Manifest Variables for Forces of Excellence and Business Excellence for the Second Largest Retail Bank Group

Forces of Excellence (CSFs) (items in questionnaire)	1	2	3	4	$\sum w_i$
Leadership (I.1; II.1)	.6440922	.4565073			1.100
Customer Focus (IV.1,2)	.7300456	.2766225			1.006
People based Management (VII.2; VIII.1)	.2016148	.8370526			1.038
Management by Fact (IX; X)	.7228967	.4213614			1.144
Continuous Improvement (XII.1,2)	.5466646	.5009461			1.056
Business Excellence (XIV.1,2; XV.1; XVI.3)	.2099321	.4402209	.2730344	.2272331	1.149

TABLE 7.4B Means, XiS, of Manifest Variables for Forces of Excellence & Business Excellence for the Second Largest Retail Bank Group

Forces of Excellence (CSFs)	1	2	3	4
Leadership	7.69	7.78		
Customer Focus	6.43	6.22		
People Based Management	6.04	6.06		
Management by Fact	7.33	7.38		
Continuous Improvement	6.02	6.86		
Business Excellence	6.79	7.87	7.41	6.26

TABLE 7.5A Weights (Outer Coefficients), w_{is} of Manifest Variables for Forces of Excellence and Business Excellence for Smaller/ Medium-sized Local Retail Banks

Forces of Excellence (CSFs) (items in questionnaire)	1	2	3	4	Σw_i
Leadership (I; II)	.6271127	.4744688			1.101
Customer Focus (IV,V, VI)	.4951345	.4241947	.2090321		1.128
People based Management (VII; VIII)	.7056434	.5667128			1.271
Management by Fact (X.1,2)	.5474242	.5587284			1.101
Continuous Improvement (XII.1,2)	.5940168	.4795199			1.089
Business Excellence (XIV.1,2; XV.1; XVII)	.3882834	.2784729	.2413824	.2052453	1.113

TABLE 7.5B Means, XiS, of Manifest Variables for Forces of Excellence & Business Excellence for Smaller/ Medium-sized Local Retail Banks

Forces of Excellence (CSFs)	1	2	3	4
Leadership	8.19	7.52		
Customer Focus	7.65	7.54	7.6	
People Based Management	7.23	6.99		
Management by Fact	6.35	5.95		
Continuous Improvement	6	5.97		
Business Excellence	7.28	7.1	7.05	7.01

7.51 FORCES OF EXCELLENCE INDICES FOR 47 RETAIL BANKS

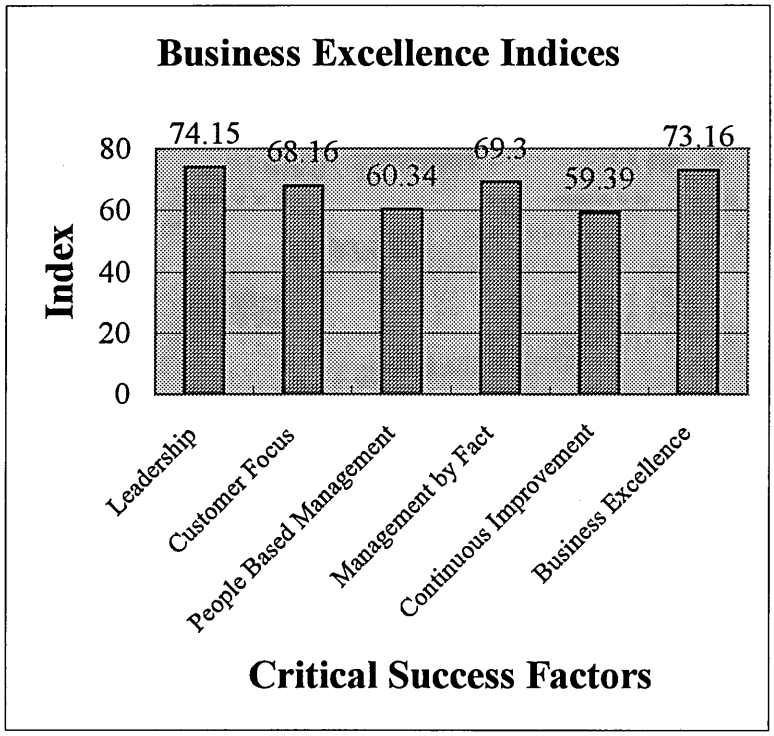
A summary of Business Excellence (BEM) Indices for the 47 retail banks, including two largest retail banks groups, small and medium local retail banks are computed and provided in Table 7.6. The summary is organised in a way to provide some meaningful comparisons of business performances of retail banks across the sector, as well as reflecting the unique composition of retail bank players in the Hong Kong

retail banking market. In addition, a graphical presentation of its Business Excellence Index and associated indices is illustrated in Figure 7.1.

TABLE 7.6 Business Excellence Indices of the 47 Retail Banks

Forces of Excellence (CSFs)	Index (All Retail Banks) 47	Index (The Largest Retail Bank Group) 14	Index (The Second Largest Retail Bank Group) 17	Index (Smaller/ Medium sized Local Banks) 16
Leadership	74.15	84.32	74.75	76.68
Customer Focus	68.16	75.22	59.69	73.36
People Based Management	60.34	61.29	56.17	68.03
Management by Fact	69.30	78.20	70.13	57.87
Continuous Improvement	59.39	66.99	60.28	55.40
Business Excellence	73.16	80.63	69.39	68.18

FIGURE 7.1 *Forces of Excellence & Business Excellence Indices for 47 Retail Banks*



From Table 7.6 and Figure 7.1, it can be seen that the overall Business Excellence Index (BEI) for all retail banks is 73.16 which reflects that retail banks' performances are satisfactory as perceived by their employees, but are lower than expected for one of the world's major banking centres. It may be due to the fact that the retail banking market has been suffering from sluggish growth, high interest rates and subdued loan and property markets in Hong Kong after the Asian financial crisis. Since the present research is the first of its kind in providing a comprehensive measure and aggregate measure of retail banks' activities and business performances, there is no past index reported on industry's performance or any official index on retail banks' performance for a high-level comparison. A detailed look at the various elements of the Business Excellence Model provides some insights on how well the banks have performed in

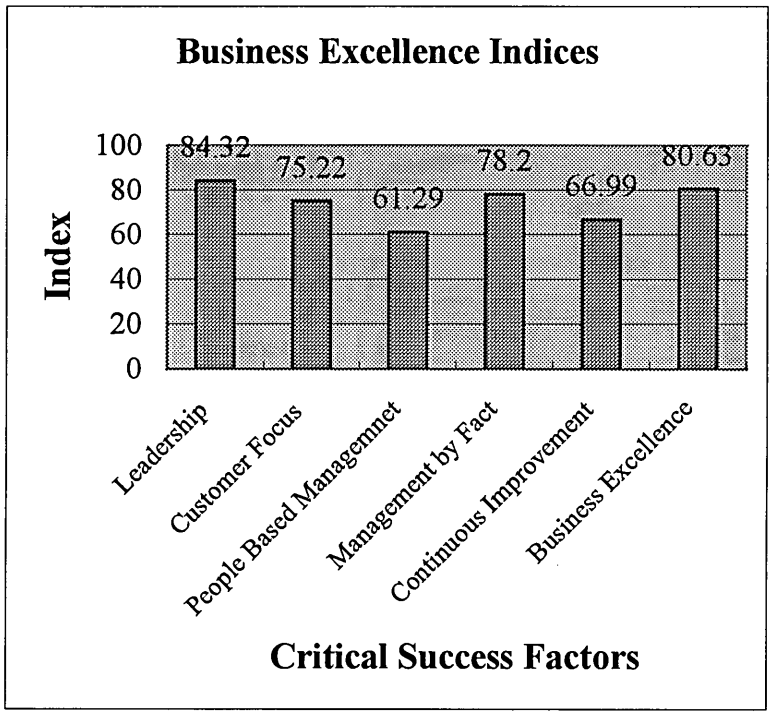
different organisational processes/ areas. Overall speaking, the forces of excellence indices reveal that those banks did better in the process/area of Leadership, Customer Focus, and Management by Fact with indices of 74.15, 68.13 and 69.3 respectively. On the hand, the indices reflect that retail banks had plenty of room for improvements in areas of Continuous Improvement (except the largest retail banks group which had performed quite well in almost all areas) and People based Management. The indices are 59.39 and 60.34 respectively which are relatively less than satisfactory. Hence, retail banks are advised to pay more attention to these two driving forces of excellence or critical success factors of the Business Excellence Model in their efforts to improve their overall performances and BEM index.

7.52 INDICES FOR THE LARGEST GROUP OF RETAIL BANKS

As mentioned in chapter two, the Hong Kong retail banking sector has a number of unique characteristics which need to be taken into consideration for meaningful analysis. With this in mind, Hong Kong retail banks have been separated into three groups for this purpose. They are the largest retail banks group (14), the second largest retail banks group (17) and the smaller/ medium sized local banks group (16). In this way, the results would better reflect the unique characteristics of the Hong Kong retail banking market and different aspects of different market players' performance. Moreover, the grouping of data in this manner is to compare the effects of differently characterised samples on the behaviour of the Business Excellence Model for retail banking. Specifically, the grouping of data permits an examination of the model's

behaviour in each category of retail bank by observing different performances in their driving forces and overall performances. This is also a usual and preferred way of categorising the retail banks in the local retail banking as reflected in the reports of the consumer research firms (Survey Research Hong Kong, various reports; Report of the Consumer Council, 1994).

FIGURE 7.2 *Forces of Excellence & Business Excellence Indices for the largest group of Retail Banks*



Overall, as is shown in Table 7.6, the largest retail banks group compares more favourably than any other groups with the highest BEM index (80.63) among the three. By financial terms, in fact, one of the member banks of the group has attained a status of being one of world's largest and most profitable banking corporation (Wardly Card, 1999). The Business Excellence Index and its associated forces' indices are

depicted in Figure 7.2. Despite the advent of the Asian financial crisis, the largest retail banks group had a solid performance. With regards to their performance on individual driving forces/ success factors, they had performed quite well in Leadership, Customer Focus, and Management by Fact with indices of 84.32, 75.22 and 78.2 respectively. These indices are the highest among the three groups, which indicates that this group has maintained good balanced works in some dimensions of the Business Excellence Model except in areas of People Based Management and Continuous Improvement. The two indices of the group that are 61.29 and 66.99 are much in the same order as their respective indices of all retail banks. While the lowest index (i.e., People based Management) is still satisfactory, the group should pay more attention to the improvement of this dimension as human resources will still be the most influential resources for the servicing industries like banking. For the largest retail banks group, results of the present analysis highlights the tendency of over reliance on mechanic system, routine type of audits and technology for good short-term performances. The relatively lower index for the Continuous Improvement dimension also reveals similar difficulties in cultivating a culture of continuous improvement if quality is not make through people.

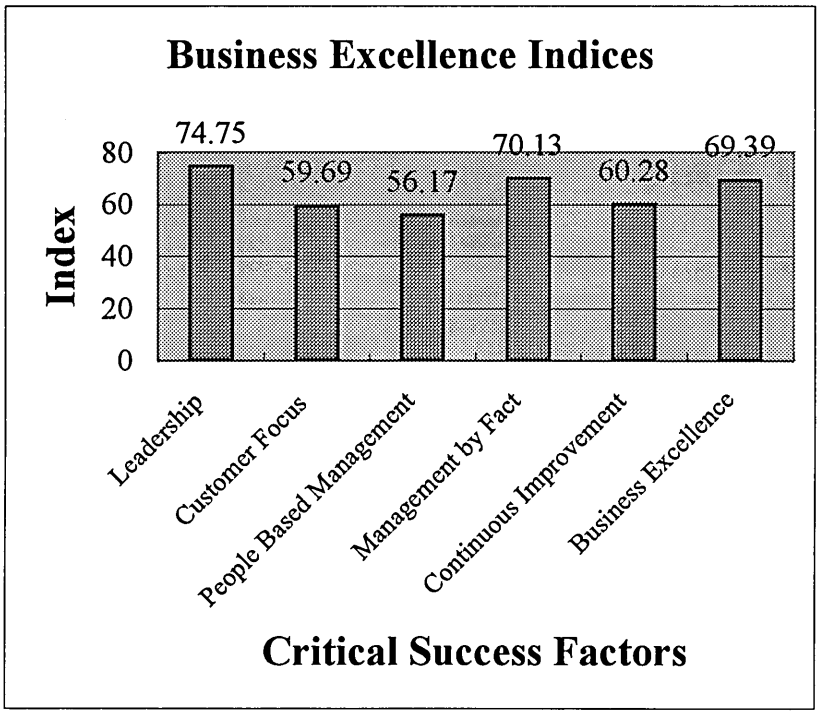
7.53 INDICES FOR THE SECOND LARGEST GROUP OF RETAIL BANKS

The second largest group of retail banks consists of member banks which joined together to become larger in branch and ATM operations in the late 80s. As shown in

Figure 7.3, the second largest group of retail banks had a BEI of 69.39. Although the index is still satisfactory, it should be noted that the index figure is just slightly (i.e. roughly one point) higher than that of the smaller/medium sized local retail banks. Obviously, this result puts a serious question on the efficiency of these banks since these retail banks together have over 9 times (513) of branches and ATM than the smaller retail banks. In terms of branch and ATM network, this group has already had scale advantage over the smaller retail banks; therefore, the performance of this group should have been stronger than that of their smaller competitors. Conversely, these retail banks had done better in Leadership and Management by Fact with indices of 74.75 and 70.13 respectively. Moreover, the results reveal that these retail banks are especially weak in People based Management, Customer Focus and Continuous Improvement with indices of 56.17 and 59.69 and 60.28 respectively. Similar to the results of the largest group, it seems that large retail banks in general still have a tendency of over reliance on policy, auditing mechanism and procedure to do things and thought quality come along automatically with these hardware. This is not the right way. Technology should be used for enabling employees or customers themselves to enhance banking service encounter satisfaction rather than replacing employee in quality service production and delivery. In other words, technology should be used by bank's frontline employees to improve the efficiency and effectiveness of service encounters by enabling customization, spontaneously delighting customers and improving service recovery. For this group, the ignorance of roles of internal and external customers in the total quality management process had eroded much of their scale advantage, which is reflected in their overall business

performances and business excellence index. When comparing its BEI with that of the largest group, the problem is more manifest, with an 11 points difference in the BEI, this should have provided a warning to the senior management of this group of retail banks.

FIGURE 7.3 *Forces of Excellence & Business Excellence Indices for the Second Largest group of Retail Banks*

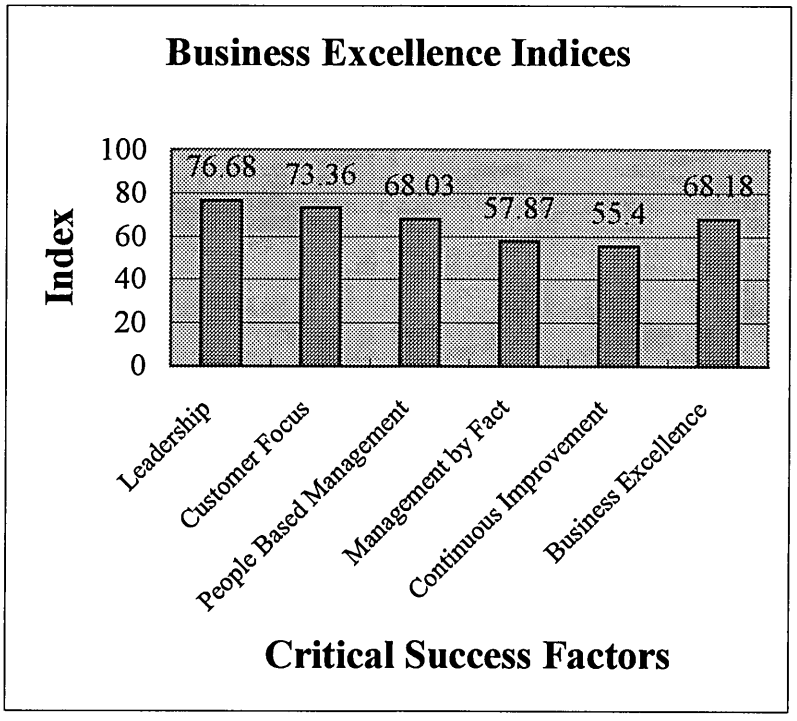


7.54 INDICES FOR SMALLER / MEDIUM SIZED RETAIL BANKS

The business performance of smaller/ medium sized retail banks is depicted in Figure 7.4. Although these banks had a lowest Business Excellence Index (BEI) of 68.18 among the three, their performance can still be considered as acceptable when

compared to the respective index of the second largest retail banks. Moreover, the smaller retail banks have the highest index on People based Management, i.e. 68.03 and the second highest score in Leadership, i.e. 76.68 respectively. The index score of Customer Focus (73.36) is also relatively satisfactory which is higher than the respective index for all retail banks. Whereas they are especially weak in Management by Fact with an index of 57.87, and the lowest score of 55.4 in continuous improvement while the rest of the indices are in the same order as the large retail banks. From the findings, it is reflected there is scope for further improvement in the performance of smaller banks especially in the "hard" aspect.

FIGURE 7.4 *Forces of Excellence & Business Excellence Indices for Smaller/Medium sized Local Retail Banks*



7.6 DISCUSSION ON THE INDICES OF THE RETAIL BANKS

After reviewing the Business Excellence indices and forces of excellence indices of the 47 retail banks, several performance scenarios are revealed and observed.

Regarding the differences in the indices of the larger and smaller retail banks, it is reasonable to see a higher Business Excellence Index for the larger retail banks because of their scale advantage and other competitive advantages. However, the forces of excellence indices of the present research have in addition revealed another difference in their performances that smaller retail banks have taken a better care of the "soft" elements of the Business Excellence Model (BEM). That is to say, smaller banks exhibited relatively good performances in Leadership, Customer Focus and People based Management. One of the reason may be due to the fact that smaller banks have fewer employees, fewer hierarchical levels that enhance top management visibility, communication and sharing of information within the banks. This helped to explain why smaller banks have a high value index in Leadership. Moreover, smaller banks have fewer resources; they are therefore more likely to rely on their people to make quality. This also led to the result of a high index score on customer focus due to commitment to staff satisfaction. Despite of the scale disadvantages, the emphasis on software dimension of business excellence had enhanced the performances of these banks, as their Business Excellence Index score is just one point less than their giant competitors (i.e. the 2nd largest group of retail banks). The good relations with employees and customers may promote the marketing activities at the branch level.

This may explain why some smaller banks were able to gain market share through loan growth in last two years. During Asian financial crisis, smaller local retail banks gaining market shares from foreign banks whose closed operations was indeed an observed phenomenon in the Hong Kong retail banking market. This once again supports the relationship specified in the BEM that People Based Management is one of the essential driving forces for business success. Indeed, people management has become increasingly critical to retail bank's success in a complex and dynamic banking environment. Nevertheless, in the broader context of a rapidly changing global financial landscape, both the "software" and "hardware" forces of the retail banks must be carefully weighted and taken care of in considering quality improvements to achieve business excellence (Wong, 1996). Moreover, the validated linkages in the new BEM exhibit symmetrical relationships between the four mediating forces of excellence. More specifically, the implication is that the smaller retail banks should develop systems and streamline their operations. It can be done through realignments of functions and integration of process to improve the effectiveness and efficiencies of their operations and delivery processes. Apart from having good relationship with employee and customers, smaller banks would get the best out of these relationships if a culture of continuous improvement were built because the culture would serve as a system of self-reinforcing quality improvement mechanism capable of regulating the ongoing health of retail banks. The continual involvement of employees in quality improvements requires a culture to nurture their sustainability.

On the other hand, the "hardware" dimensions of the Business Excellence Model , i.e., Management by Fact and Prevention have been well aware and taken care of by the larger banks. Notably, the larger retail banks have more resources to help them in complying with prudential regulatory and supervisory requirements imposed by the Hong Kong government. However, the larger banks exhibited an overemphasis on rules, regulations and meeting the official bank audit requirements, but TQM cannot be achieved through complying with standards. Clearly, process management is an essential step but success is more likely where individuals (i.e. employee, managers) take full ownership for their own activities and choose to take them continuously forward. This is what the researcher would call the real ownership of excellence. It is noted from past research that retail banking's customers expect and demand flexibility and customization in service encounters (Bitner et al., 2000) . Virtually, customers do not like rigid rules- they want services that fit their individual needs. Customers also appreciate the unique characteristics of services allow providers to adjust and adapt during service production to fit the individual needs of customers. Hence, the ability to adapt in real time is a distinct advantage for bankers who wish to be responsive to customer desires for individualised service. Apparently, successful customization cannot be achieved through automation and technology. It will largely depend on contact employee's ability to recognise a situation and adapt the delivery or the service accordingly. This point illustrates the important role of "people"(i.e., software) rather than "technology" in quality service production. Nevertheless, the indices reflected that these retail banks are aware of the importance of quality management and process management. However, there are still plenty of rooms for improvement by them in

both strategic and operational integration of processes amongst member banks, and sharing information for the real scale advantage to be realised (e.g. this is strongly advised for the second largest group of retail banks). In fact, having large scale alone is not enough. In order to get the most from member bank; retail banks of this group need to place more attention on meeting the needs and expectations of their customers and employees. In the current local retail banking environment, having large scale may help the banks in absorbing deposits and savings, but for the fee based services such as loans would certainly have a bearing on how well the bank in satisfying and providing value for money to customers. As a number of TQM researchers maintained the ultimate driving force for any industry and any economy is determined by the demands of the customer (i.e., people). In the longer run, competitive advantages and business success can only be attained if emphases on "hard" forces and "soft" forces are balanced.

Lastly, there is also room for improvement even for the largest group of retail banks. The largest group could have better performance if they can allocate more resources in the cultivation of self-reinforcing mechanism for continuous quality improvement (i.e. a continuous improvement culture) instead of relying solely on the technology, systems and processes for quality improvements. Nevertheless, a culture of continuous improvement should be a better answer for sustaining total quality permanency in today's customer-driven economy where customers have increasingly been given more choice in an increasingly competitive and over-supplied retail banking market. The relatively good performance of these banks implied two critical

points for quality improvements and achieving business success. Firstly, it is more apparent from the present research results that retail banks who had followed some kind of framework, for example, the "CFQM" framework, for their quality improvements can enhance their performance. Second, it is reflected empirically that these banks are still weak in performance in the people aspect despite having a working framework to follow. Thus, there is a need for a structured and validated Business Excellence Model for these retail banks for improving their performance and finally achieving business excellence.

7.7 CAUSAL RELATIONSHIPS BETWEEN FORCES OF EXCELLENCE AND BUSINESS EXCELLENCE FOR THE 47 RETAIL BANKS

As mentioned at the beginning of this chapter, the partial least square (PLS) technique is also capable of generating a number of important statistics and estimates. PLS estimates the inner relations (the structural model), i.e., the relationships between the latent variables/constructs, and the outer relations (the measurement model, i.e., the relationships between the measurement variables and the latent variables). In PLS, all inner coefficients or structural parameters assume values that reflect the strengths of the causal relationships between constructs. Specifically, each structural parameter reflects the amount of change in an effect (dependent variables) that results from a unit of change in a cause (exogenous variables or preceding endogenous variables) with all other causes of that effect held constant. Besides, the PLS also generates R^2,

that is the coefficient of determination in the model. In the model, R^2 shows the proportion of variation of customer focus that is explained by leadership. Simply saying, it explains the proportion of the total variation that is explained by the cause variable.

The inner coefficients and R^2 values for the data sets of 49 retail banks are shown in Figure 7.5. The same estimates for the three separate groups namely the largest retail banks group, the second largest retail banks group and the smaller / medium sized local retail banks are also shown for comparison. As illustrated in Figure 7.5, the path coefficients / inner coefficients are shown on the corresponding paths/ lines linking all constructs of the Business Excellence Model (BEM). The path coefficients are used to indicate the strength of influence a change of one unit in a construct's value would have on the next. For example, the path bearing on business excellence from customer focus for all retail banks is 0.32. This means that for a one point increase in the preceding variable (i.e. customer focus), would lead to a "0.32" point increase in the effect variable- business excellence. At the same time, the R^2 values (the number above a latent variable) for the paths are also indicated. Overall speaking, the R^2 for Business Excellence for retail banking for the all data sets range from 0.74 to 0.92. This means that the BEM can explain 74 % to 92 % of the variation of Business Excellence of retail banks in all the data sets. All except three of them exceed the standards (a minimum value of .65) lay down by the ECSI Technical Committee (ECSI Technical Committee, 1998). In behavioural statistics, an R^2 of between 0.5 to 0.6 is considered as acceptable (Lewis, 1989). However, it is revealed from all the

data set that their performance in People Based Management and Continuous Improvement are less satisfactory than their performance in Leadership and Management by Fact. Besides, the difference of their performance in Customer Focus is relatively narrower. From this findings, it is clear that retail banks in general have taken their customer focus strategy more seriously to heart than anything else.

7.8 RELATIVE IMPORTANCE OF FORCES OF EXCELLENCE TO BUSINESS EXCELLENCE OF ALL DATA SETS

From Figure 7.5, it is clear that the driving force of "Leadership" has strong influence on the other four driving forces of excellence for all data sets. The corresponding path coefficients range from 0. 53 to 0.96 for the three data sets indicating a strong degree of influence. It is reasonable because " Leadership" is the prime driving force in setting a right customer focus strategy based on the core competencies of the retail banks towards the allocation and commitment of resources for various quality activities and processes of the banks. In a dynamic and competitive retail banking environment, the crucial role of leadership in building an organisation that is resilient to change is reflected in the high path coefficient values in all three data sets. Resilience is built on process efficiency, a knowledgeable and committed workforce, and an environment that promotes learning and the sharing of information for ongoing

quality improvement. Thus, leadership should have strong influence on the other four driving forces of excellence for retail banks to succeed.

Under the influence of leadership, "Customer Focus" has the strongest influence on the result of business excellence among the four driving forces of excellence. Its inner coefficients range from 0.28 to 0.34. This is in line with the common belief that customer focus is a crucial strategy for every company wishing to achieve a better business performance in today's consumer driven marketplaces. The force concerns with the extent of commitment to customer satisfaction, no matter internal and external and the commitment to developing long term relationships with customers. To remain competitive in a dynamic industry like retail banking, banks generally understand that it is important to know their customers well and consistently offer customer valued banking products and services, in order to retain and attract customers. Most of the banks also realise that customer focus strategy would help to ensure practices and procedures consistently focus on delivering customer satisfaction. Only those banks that are committed to customer-determined quality, i.e. quality driven by their customers, can succeed in the long run. Present research results once again provide evidence that " Customer Focus" has a strong causal relationship with business excellence. On the other hand, "Continuous Improvement" has the weakest influence on the effect variable of the BEM, with inner coefficients ranging from 0.18 to 0.26. This may be due to the fact that retail banks tend to rely on " hard" infrastructure such as structuring, re-engineering the operations and delivery processes, and the development of preventive measures than on developing the "soft"

infrastructure- a culture for quality improvements. Hence, the full effect of "Continuous Improvement" on business excellence cannot be realised by these retail banks. The lack of emphasis on " People based Management " by the larger retail banks is reflected in the associated weak path coefficients ranging from 0.15 to 0.37. The reason may be that the larger retail banks, especially the second largest group have not yet intertwined people with technology. In fact, the business performance of the second largest retail banks group were not as satisfactory as they should be in relations to their huge branch network and size of assets. It is also reflected in the strong influence of " Management by Fact" on the effect variable. For most of the larger banks, the force of " Management by Fact" have been used to drive smooth operations, thus this force has a stronger influence on business excellence than "Continuous Improvement " and " People based Management". Its inner coefficients range from 0.26 to 0.36. Conversely, it is remarkable that "People based Management" has a stronger influence on the effect variables for smaller banks than " Management by Fact" and "Continuous Improvement". The inner coefficient of 0.37 means that it accounted for a large amount of effect on business excellence for smaller local retail banks. This may be explained by the fact that smaller local retail banks have fewer resources to spend on systems and technology. Hence, they have a stronger motivation to get the best out of their people and involve people in attracting and retaining customers.

7.9 CONCLUSION

This chapter has shown that the Business Excellence Model (BEM) for retail banking can be used to assess the business performance of the 47 retail banks. The Business Excellence Indices (BEI) of the four data sets, ranging from 68.18 to 80.63 indicate that a big performance gap exists in the retail banking market amongst different retail bank groups. To narrow if not possible to close the gap, the smaller/ medium sized local banks are in need of a proper strategy and solid working model for them to follow suit for achieving business success. The estimation of the model, which is given in Figure 7.5, showed that the BEM structure (i.e. the specified causal relationships between variables) gives a very good explanation of business excellence. The coefficient of determination, R^2 of all data sets range from 0.74 to 0.92 suggest that the four forces of excellence can explain very well the variation in Business Excellence for these retail banks. It has also been successful in producing the Business Excellence Indices and forces of excellence (i.e. critical success factors) indices for the 47 retail banks through a robust statistical technique-PLS. Besides, the 47 retail banks have in addition been separated into three groups for meaningful comparisons. The results reveal some remarkable differences in business performance and success of the three groups of retail banks. The reasons for these differences are also found to be associated with their respective emphasis on different driving forces of excellence of the BEM for retail banking.

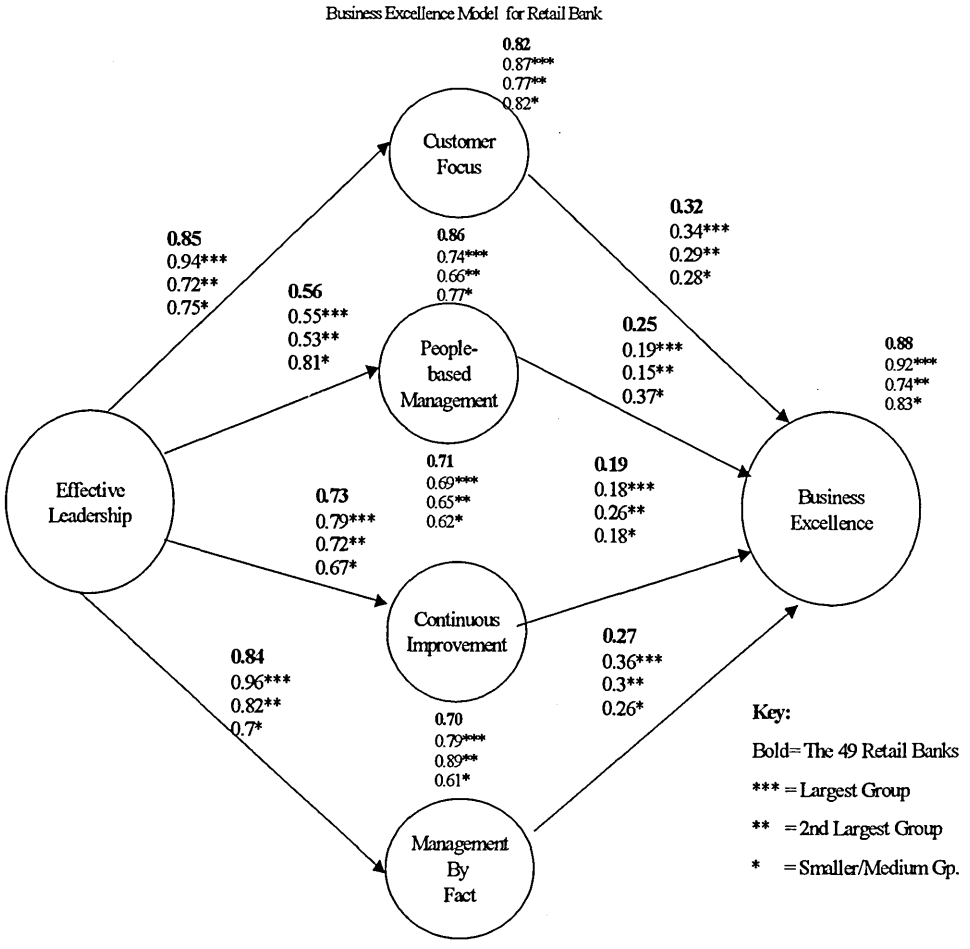
Although the PLS results for the 47 retail banks are meant for different groups of retail banking institutions, they can serve as some good benchmarks for individual retail banks or retail banking institutions. Nevertheless, there is a lack of consistent and regularly disseminated and balanced measure of business success factors for retail banking sector at an aggregate sector level from the employee perspective. This missing link is needed for understanding the effective and efficient functioning of the retail banks and the retail banking sector at large. Regularly produced performance indicators based on Business Excellence Index (BEI) would be useful for retail banks. The present work sets a robust benchmark for the retail banks and the retail banking sector. With indices of the model, it is now easier for retail banks to detect which critical process has gone wrong. Driving forces or critical success factors with low index scores are candidates for improvement. The Business Excellence Index (BEI) based on the validated Business Excellence Model (BEM) provides a robust means to analyse interrelationships among the driving forces of excellence (i.e. critical success factors) for retail banks and can serve as an ongoing comprehensive measurement mechanism for the retail banks and for the sector. Thus, the newly developed BEM for retail banking will provide a solid model to ensure that actions are systematically structured and organised.

All in all, it can be argued that effective business excellence management requires a better understanding of the key operational factors, which drive future success. The new Business Excellence Model (BEM) for retail banking was developed based on a simple but important principle that retail banking managers need a more balanced set

of performance indicators to run their businesses well. Thus, the indicators should measure performance against the critical success factors (CSFs) of retail banking, and the balancing tension between traditional financial and non-financial measures. The newly developed BEM for retail banking can serve this purpose well.

Besides employees, customers can also provide valuable information on how well they have been served and satisfied. As such, in the next chapter, the same PLS technique will be applied to the data collected from retail banking customers to measure the actual customer satisfaction indices for retail banks and the retail banking sector.

FIGURE 7.5 How the Inner Coefficients & R^2 Values for the 47 Retail Banks, the Largest Group, the Second Largest Group and the Smaller Local Group Map to the Business Excellence Model for Retail Banking



CHAPTER EIGHT

MEASURING CUSTOMER SATISFACTION FOR RETAIL BANKING

8.1 INTRODUCTION

In the preceding chapter, it is shown that the new Business Excellence Model (BEM) can very well describe the relationships between the forces of excellence and business performances of the retail banking using the employee data. While employee as internal customer/ stakeholder of retail banking provide one side of the story, it may be worthwhile to also collect information from the external customer, i.e., another crucial stakeholder of retail banking in measuring customer satisfaction. Nevertheless, customer satisfaction is a key issue for every bank striving for business success; therefore, retail banks should also evaluate what their customer's value most and determine their customer focused strategies accordingly to delivering quality services. Such consideration may demand input directly from customers through customer satisfaction measurement mechanism. Following the approach adopted by the European Foundation of Quality Management (EFQM), the European Customer Satisfaction Index Model (ECSI) was employed to measure retail banking's customer satisfaction. This chapter represents an integrated part of the entire Business Excellence management process to measure and improve customer satisfaction for retail banking by considering also the customer input. Specifically, the present chapter

focuses on using ECSI model with the PLS technique to compute customer satisfaction index for the retail banking sector. The PLS results of the retail banking sector from 450 retail banking customers are outlined in this chapter.

8.2 FORNELL'S CUSTOMER SATISFACTION INDEX AND THE EUROPEAN CUSTOMER SATISFACTION INDEX

Customer satisfaction should be treated like a profit centre: as an investment, not as a cost. In fact, according to the findings in our critical incidents interviews, banks executives stated that they are now viewing branches as profit centres rather than cost that help in the marketing of profitable banking products and services. But the economics of customer satisfaction can be deceptive. Retail banks can easily overspend without really understanding the financial consequences of increased customer satisfaction. Conversely, lack of focus on customers often squeeze out a profit by reducing quality, which turns away customers in the process and hurting future profits. Hence, measuring customer satisfaction and computing customer satisfaction indices should add value to business performance management of retail banks.

Recently, Fornell and his colleagues advanced a robust conceptual framework that systematically links relationships from quality, customer satisfaction to the effects of satisfaction on repurchase intentions and performance (Eklof and Westlund, 1998).

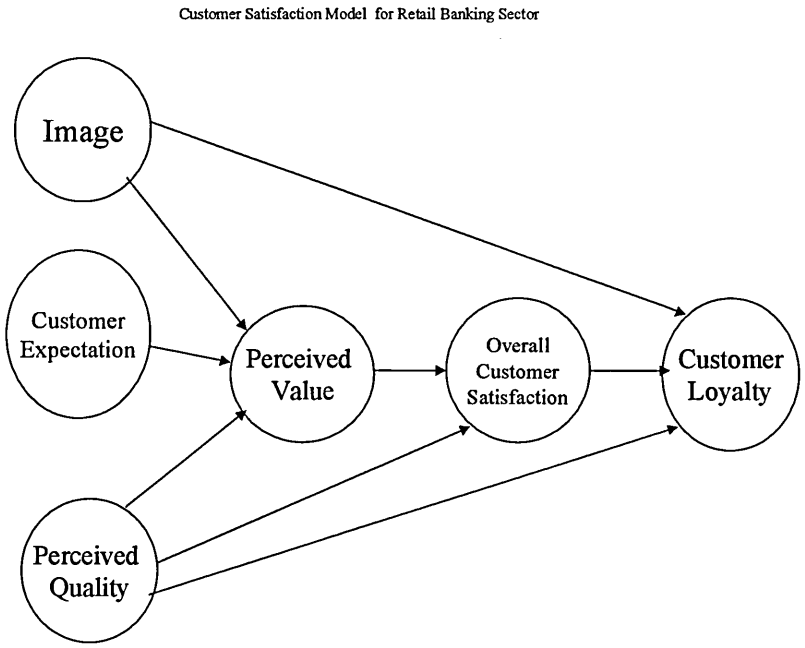
The American Customer Satisfaction Index (ACSI) model (originally named SCSB) and associated customer satisfaction measurement (CSM) instrument are amongst the first system to be able to capture and demonstrate empirically the causal relationships among the antecedents and consequences of customer satisfaction. The ACSI model has been well received in most of the English speaking economies. Zeithaml (2000) recognises the ACSI model as a work that has moved the field of customer satisfaction studies significantly forward.

Moreover, Kanji (1998) and several other quality experts pointed out that customer satisfaction index (CSI) studies should be embraced in the total quality management efforts of companies as a meaningful alternative performance indicator that defines opportunity and directs ongoing improvements. In the light of this suggestion, the present chapter attempts also to compute a global / aggregate customer satisfaction index for the Hong Kong retail banking sector, specifically in Chinese context.

Prior research suggests that several aggregate customer satisfaction models may serve the mentioned purpose. Kristensen et al (1999) argues that the European Customer Satisfaction Index (ECSI) model is relatively superior at predicting customer satisfaction and customer behaviour. Hence, the ECSI model derived from the ACSI may serve as a reliable framework for the customer satisfaction index computation.

As such, the European Customer Satisfaction Index model (ECSI) is adopted to calculate the Customer Satisfaction Index (CSI) with slight modification to suit the context of retail banking. The adopted ECSI model is depicted in Figure 8.1.

Figure 8.1 The Adopted European Customer Satisfaction Index Model



The basic ECSI model (see Figure 8.1) is also a structural equation model with a number of latent variables. The ECSI model links customer satisfaction to its determinants, i.e., Expectation, Perceived Quality, Image, Perceived value; in turn, to its consequence, namely customer loyalty. The model is adopted from the ECSI

model, which follows the same as the basic ECSI model except that the latent variable "Perceived Quality" is considered as a single construct instead of breaking it into two separate constructs. Consistent with the ECSI model, "Image" is the first determinant of overall customer satisfaction, which captures a customer's evaluation of quality image on basis of the banks past performance history and a comparison of the bank's image with the customers' ideal and the one that the customer desired. "Perceived Quality" is the second determinant of overall customer satisfaction, which is the retail customer's evaluation of recent consumption experience of retail banking products and services and is expected to have a direct effect on overall customer satisfaction of retail banking customers. The third antecedent factor is customer's expectation, which captures all previous consumption experience and non-experiential information such as word-of mouth and advertising, and anchor customers' evaluations of satisfaction in the vicinity of the expectations. The role of expectations is important because the nature of ongoing relationship between a retail bank and its customer base is such that expected future quality is critical to overall customer satisfaction. The last determinant in the model is "Perceived Value", which represents the perceived level of product or service quality relative to the price paid. In other words, the relative influence of value versus quality on satisfaction indicates the importance of price in customers' evaluations of satisfaction. Using value judgements to measure performance also controls for differences in income and budget constraints across respondents. Besides, "Overall Customer Satisfaction" is the main dependent variable of the service of the retail banks besides of customer loyalty. The link between "Customer Loyalty" and " Overall Customer Satisfaction" is the final relationship in the ECSI's model. "

Customer Loyalty" is the ultimate dependent variable in the model because of its value as a survey-based proxy for financial returns (Fornell et al., 1996). An increase in customer loyalty and subsequent retention should generally increase revenues and decrease costs over time, which increases profits. If the customers remain loyal to their retail bank, they will recommend and continue to use the products and services of their primary retail bank. All the causal relationships are indicated in the model given in Figure 8.1. The latent variables were operationalised in the same way as in the ECSI; the well-known national cross-company measurement instruments of customer satisfaction with minor changes in wordings to appropriate to the retail banking context. The changes in wordings have been reviewed and confirmed by a customer focus group. All the measurement variables were rated on 10-point scales. For example, "Overall Customer Satisfaction " is a composite of three of these 10-point scale items: overall satisfaction, a comparison of service performance to expected performance, and a comparison of performance with the customer's ideal service. Another instant, " Customer Loyalty" is a composite of three measures, the customers' stated repurchase likelihood, and a measure of price tolerance and the customers' stated recommendation likelihood. Recall that from the previous chapter, compared with an individual rating scale, a multiple-item index provides a more sensitive and meaningful satisfaction measure. The questionnaire is given in Appendix XIII. A sample of the latent variables, R^2 and manifest variables are shown in Table 8.1. From the result of reliability analysis, the Cronbach's alpha (α) showed that the alpha coefficients (i.e., internal consistency of each variable) for all six variables are acceptable, ranging from 0.77 to 0.93 (see Table 8.1 & Appendix XIII), well above the

minimum value of 0.7 as an indication of reliability for the present research. The high reliability (α) values are not surprising as the model and the measurement instruments are adopted from the previously tested ECSI's instrument.

TABLE 8.1 Latent Variables and Measurement Variables of ECSI Model

Constructs & (α)	**R^2 & No. of Questions**	**Sample Manifest Variable**
Image (0.87)	0.86, 2	If you can imagine an ideal Bank, how well do you think this bank compare with this ideal
Customer Expectation (0.77)	0.82, 3	Overall expectation of quality of bank's services
Perceived Quality (0.93)	0.89, 12	How often things have gone wrong
Perceived Value (0.8)	0.90, 2	Value given performance of overall banking services
Overall Customer Satisfaction (0.9)	0.94, 2	Overall, how satisfied are you with the services of your bank
Customer Loyalty (0.83)	0.91, 2	Whenever you think of anything to do with financial services, this bank will be of your first choice.

8.3 CUSTOMER SATISFACTION INDEX AND PARTIAL LEAST SQUARES (PLS) TECHNIQUE

As mentioned in previous chapter, Fornell and his colleagues have pioneered the use of the PLS technique in computing the American Customer Satisfaction Index. Since then, a number of researchers have used the PLS technique for the compilation of Customer Satisfaction Index in the States, Europe and Singapore (Ryan et al., 1995). Recently, Kanji (1998) has extended the use of PLS technique for the compilation of Business Excellence Index. Despite the increasing spread of the PLS technique, it is the first time that this index method is applied to the local retail banking sector for the compilation of a global Customer Satisfaction Index for the sector. Based on the ECSI model, PLS was employed to estimate weights (i.e., outer coefficients) for the antecedent factors that maximise their ability to explain the "Overall Customer Satisfaction" and ultimately "Loyalty".

8.4 GENERAL DATA DESCRIPTION

There are a total of 450 retail customers participating in this banking survey. Following the same procedure explained in previous chapter, these customers are divided into three groups. They include: retail customers of the largest banks, retail customers of the second largest group of banks, and retail customers of the smaller/

medium sized local retail banks. Customer with the largest sum of deposits and or loans account with the retail bank will be considered as retail customer of the bank. The reason has already been put forward in chapter two and chapter four that the principle activities of retail banks are in taking of deposits and lending out money. A summary of profile of the sample in the survey is shown in Table 8.2.

TABLE 8.2 A Summary of the Profile of Sample

Characteristics	
Sample:	Customers with retail account/s with the retail banks in Hong Kong
Number of respondents:	450
Sex:	Male (247) Female (203)
Age:	Under 20 (3) 21-24 (61) 25-30 (121) 31-35 (224) 36-40 (28) 41-45 (7) 46-50 (6)
Monthly Income (HK$)	Under HK$5,000 (4) HK$5,000-$9,999 (7) HK$10,000-$14,999 (86) HK$15,000-$19,999 (70) HK$20,000-$24,999 (116) HK$25,000-$29,999 (93) HK$30,000-$34,999 (21) HK$35,000-$39,999 (43) Above HK$40,000 (10)

8.5 *PARTIAL LEAST SQUARES RESULTS FOR THE RETAIL BANKING SECTOR*

The results of the weights, $W_i S$, and the means, $X_i S$, of manifest variables for each latent variable and the resulting customer satisfaction indices for retail banking sector are shown in the following tables.

TABLE 8.3A Weights (Structural Parameters), $W_i S$ of Manifest Variables for Latent Variables for Retail Banking Sector

Latent Variables (items in questionnaire)	1	2	3	$\sum W_i S$
Image (Q16,Q17)	.7024409	.4166297		1.118
Customer Expectation (Q3,Q4,Q5)	.3874436	.4071305	.3007525	1.094
Perceived Quality(Q8,Q7(1-10),Q9)	.7013677	.1998782	.2542089	1.114
Perceived Value (Q6,Q7(11))	.6139926	. 5049845		1.109
Overall Customer Satisfaction (Q12,Q13)	.5390342	. 5282847		1.067
Customer Loyalty (Q10,Q11,Q18)	.3078297	.5394125	.2200512	1.067

TABLE 8.3B Means, $X_i S$ of Manifest Variables for Latent Variables for Retail Banking Sector

Latent Variables	1	2	3
Image	7.37	7.56	
Customer Expectation	6.88	7.35	6.72
Perceived Quality	7.32	7.07	7.44
Perceived Value	6.82	6.65	
Overall Customer Satisfaction	7.18	7.15	
Customer Loyalty	7.18	7.15	7.2

TABLE 8.4A Weights (Structural Parameters), W_iS of Manifest Variables for Latent Variables for the Largest Group of Retail Banks

Latent Variables (items in questionnaire)	1	2	3	$\sum W_iS$
Image (Q16,Q17)	.6990073	.3359376		1.034
Customer Expectation (Q3,Q4,Q5)	.2686459	.6217335	.247314	1.137
Perceived Quality(Q8,Q7(1-10),Q9)	.4741735	.3032778	.3004612	1.077
Perceived Value (Q6,Q7(11))	.4797237	.5577164		1.021
Overall Customer Satisfaction (Q12,Q13)	.6065344	.4736781		1.08
Customer Loyalty (Q10,Q11)	.7032796	.3513387		1.05

TABLE 8.4B Means, X_iS of Manifest Variables for Latent Variables for Largest Group of Retail Banks

Latent Variables	1	2	3
Image	8.35	8.44	
Customer Expectation	7.01	8.1	7.47
Perceived Quality	8.24	7.88	8.25
Perceived Value	7.57	7.04	
Overall Customer Satisfaction	8.23	7.69	
Customer Loyalty	8.22	7.88	

TABLE 8.5 A Weights (Structural Parameters), $W_i S$ of Manifest Variables for Latent Variables for the Second Largest Group of Retail Banks

Latent Variables (items in questionnaire)	1	2	3	$\sum W_i S$
Image (Q16,Q17)	.4465862	.6437527		1.090
Customer Expectation (Q3,Q4,Q5)	.3568373	.2818475	.4002176	1.038
Perceived Quality(Q8,Q7(1-10),Q9)	.4226568	.3687576	.4522348	1.243
Perceived Value (Q6,Q7(11))	.6752216	.3450572		1.020
Overall Customer Satisfaction (Q12,Q13)	.8316981	.3311184		1.162
Customer Loyalty (Q10,Q11)	.6741553	.3687591		1.042

TABLE 8.5B Means, $X_i S$ of Manifest Variables for Latent Variables for the Second Largest Group of Retail Banks

Latent Variables	1	2	3
Image	7.35	7.29	
Customer Expectation	6.90	6.06	5.89
Perceived Quality	6.35	6.75	6.98
Perceived Value	6.32	6.51	
Overall Customer Satisfaction	6.55	6.29	
Customer Loyalty	6.66	6.85	

TABLE 8.6 A Weights (Structural Parameters), W_iS of Manifest Variables for Latent Variables for the Smaller/Medium Sized Local Retail Banks

Latent Variables (items in questionnaire)	1	2	3	$\sum W_iS$
Image (Q16,Q17)	.5424291	.5589744		1.101
Customer Expectation (Q3,Q4,Q5)	.6303575	.2308719	.2470771	1.108
Perceived Quality(Q8,Q7(1-10),Q9)	.4882058	.4241943	.3152338	1.227
Perceived Value (Q6,Q7(11))	.7032136	.3622358		1.065
Overall Customer Satisfaction (Q12,Q13)	.6958894	.4022147		1.098
Customer Loyalty (Q10,Q11,Q18)	.3928548	.2753237	.4172154	1.085

TABLE 8.6B Means, X_iS of Manifest Variables for Latent Variables for the Smaller/Medium Sized Local Retail Banks

Latent Variables	1	2	3
Image	7.46	7.21	
Customer Expectation	7.24	7.05	8.35
Perceived Quality	8.01	7.91	7.9
Perceived Value	7.37	7.52	
Overall Customer Satisfaction	7.27	7.34	
Customer Loyalty	7.41	7.58	7.63

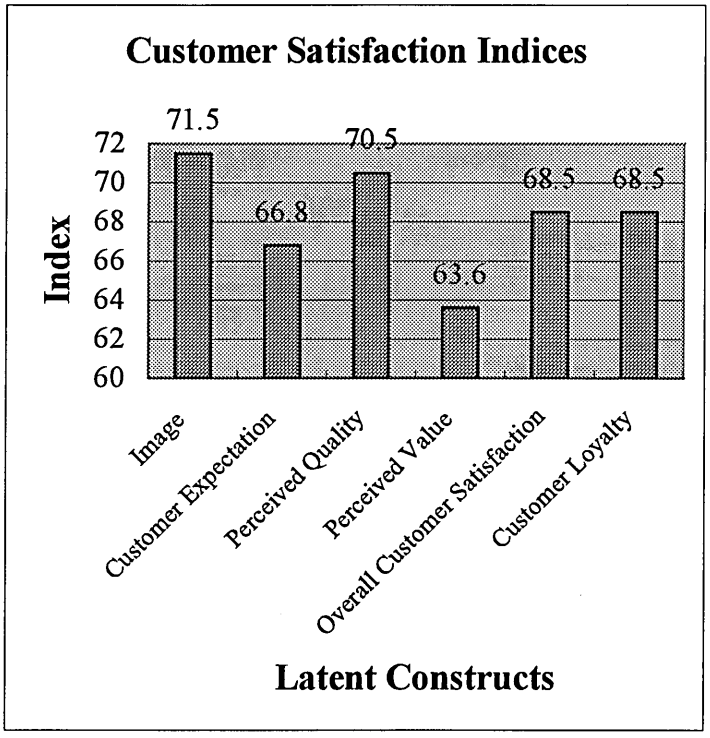
8.51 CUSTOMER SATISFACTION INDICES FOR RETAIL BANKING SECTOR

The Customer Satisfaction Indices (CSI) for the retail banking sector, including the one for the largest banks, the one for the second largest banks, and the one for the smaller /medium sized local banks are shown in TABLE 8.7. The overall Customer Satisfaction Index (CSI) for the retail banking sector is 68.5, which indicates that the overall score on their products and services is satisfactory. Looking at the antecedents of customer satisfaction of the ECSI model, the sector as a whole has performed better in Perceived Quality and Image with indices of 70.5 and 71.5. This is also reflected in satisfactory index of 68.5 for Customer Loyalty. The Customer Satisfaction Indices (CSI) for the retail banking sector are depicted in Figure 8.2.

TABLE 8.7 A Summary of the Indices for the Retail Banking Sector

	Whole Sector (450)	Largest Group (187)	Second Largest Group (108)	Smaller/Medium Sized Local Group (155)
Image	71.5	82.0	70.2	70.4
Customer Expectation	66.8	74.5	58.7	71.6
Perceived Quality	70.5	80.2	63.3	77.2
Perceived Value	63.6	69.7	59.8	71.3
Overall Customer Satisfaction	68.5	77.7	60.5	69.9
Customer Loyalty	68.5	79.0	63.6	72.1

FIGURE 8.2 Customer Satisfaction Index for the Retail Banking Sector



8.52 CUSTOMER SATISFACTION INDEX FOR THE LARGEST GROUP OF RETAIL BANKS

From the descriptive data analysis, it was found that the 450 customers participated in the survey belong to different retail banks which fall in the three general categories/groups of banks mentioned in the measurement of Business Excellence Index. Out of them, 187 are customers of the largest group, 108 are customers of the second largest group, while the remaining 155 are customers of the smaller/medium sized local retail banks. The Customer Satisfaction Index (CSI) and its antecedent indices for the largest group of retail banks are given in Figure 8.3 below.

FIGURE 8.3 Customer Satisfaction Index for the Largest Group of Retail Banks

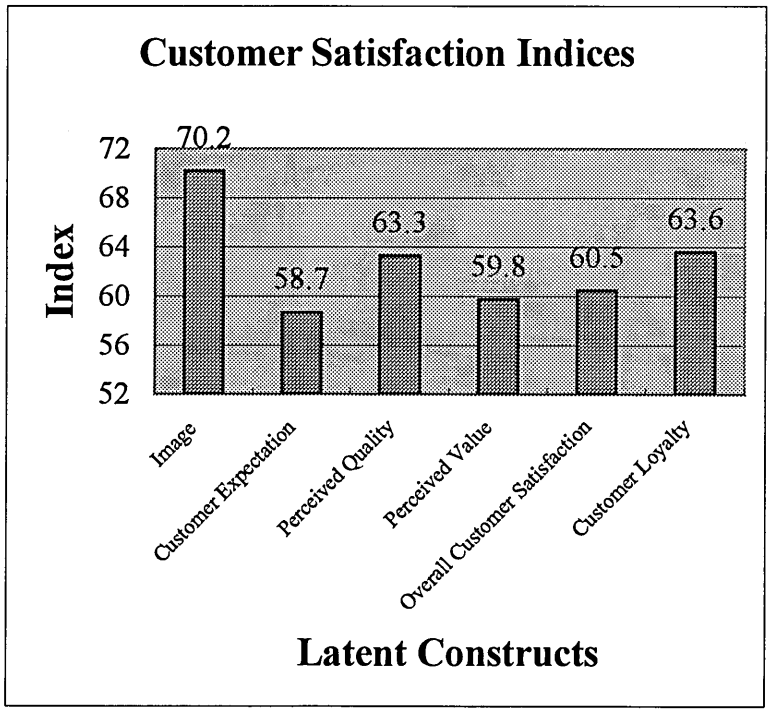
From table 8.7, it is revealed that the largest group of retail banks has the highest customer satisfaction scores of 77.7. This CSI figure is much higher than the other two categories of retail banks. This implies that the largest retail banks have already outperformed their competitors at least in gaining their Customer Satisfaction. Indeed, all indices for antecedents of Overall Customer Satisfaction are better than those of the second largest group of retail banks. Moreover, these indices are of much the same order as the indices of the retail banking sector as a whole. The lowest index obtained (69.7) is in Perceived Value. This reflects again the importance of delivering customer values. In fact, this is one of the performance indicators of the Business Excellence construct of the Business Excellence Model (BEM) developed by the present research. Clearly, the indices for "Overall Customer Satisfaction" and " Customer Loyalty" can be further improved by improving the banks' performance in "Perceived Value" according to the present findings on the adopted European Customer Satisfaction Model (ECSI).

8.53 CUSTOMER SATISFACTION INDEX FOR THE SECOND LARGEST GROUP OF RETAIL BANKS

This group of retail banks although have a comparable number of branches as the largest group of retail banks, however, the Customer Satisfaction Index (CSI) is 17

points lower. The implication is that the expansion of branch networks alone would not bring in customer satisfaction but operation costs that will affect the profit level for retail banks. Certainly, the implication is that what this kind of effort can do is make the non-value-adding activities cheaper at the most. Besides, it can be seen from Figure 8.4 that both the indices of Perceived Quality, Perceived Value, and Customer Loyalty are all lower than that of their smaller competitors. The low index score in Customer Loyalty also implied that the satisfaction of customers is important to customer retention.

FIGURE 8.4 Customer Satisfaction Index for the Second Largest Group of Retail Banks



8.54 CUSTOMER SATISFACTION INDEX FOR SMALLER/MEDIUM SIZED LOCAL RETAIL BANKS

Out of the 450 respondents, nearly one-third of them is a customer of the smaller /medium sized local retail banks. The Customer Satisfaction Index for this group of retail banks is given in Figure 8.5. Comparatively speaking, the Customer Satisfaction Index for this group, although not as high as the largest banks, seems to be good, as it is 9 points higher than that of their giant competitors. Achieving a Customer Satisfaction Index score of 69.9 with much fewer resources implies that smaller local banks seem to be more efficient in their customer focus strategies.

FIGURE 8.5 Customer Satisfaction Index for the Smaller/ Medium Sized Local Retail Banks

8.6 DISCUSSION ON THE CUSTOMER SATISFACTION INDICES FOR RETAIL BANKING SECTOR

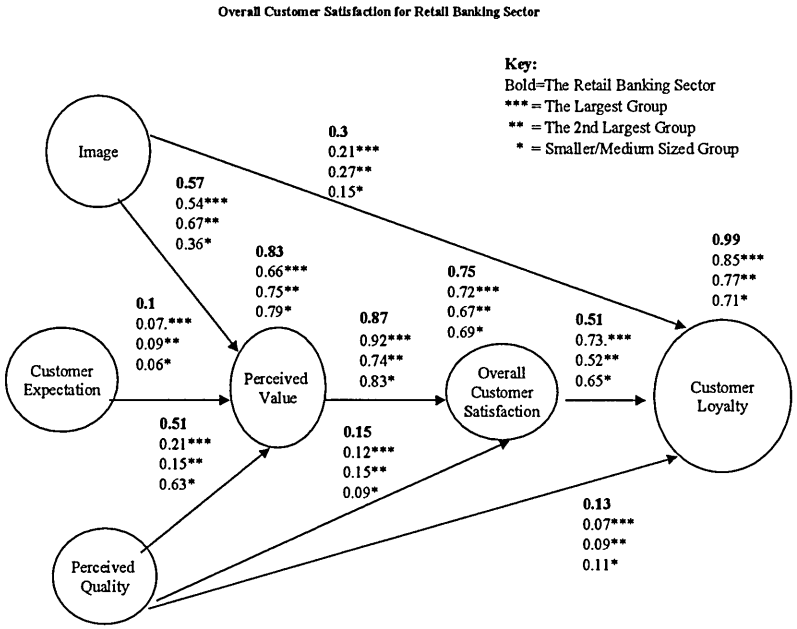
Although most managers interviewed, claimed that one of their bank's primary organisational goals is to orient and focus on customers, the number of banks that are truly customer focused remains small. From Table 8.7, it can be seen that Customer Satisfaction Indices (CSI) for all data sets although seems to be acceptable, but the difference in the customer satisfaction index amongst the three groups is large, ranging from 60.5 to 77.7. This result together with the CSI score for the sector as a whole indicates that not all the customers were satisfied with the services offered by the local retail banking industry. As the present research is the first attempt to produce and report an aggregate Customer Satisfaction Index for the retail banking sector, no comparison with the previous performance can be made. However, the CSI for the sector as a whole is lower than a similar index (i.e., American Customer Satisfaction Index) for banking industry in the States (Quality Progress, 1998 & 1999).

Moreover, the estimation of the adopted ECSI's model with all data sets is given in Figure 8.6. Both the inner coefficients and the coefficient of determination (R^2) are also indicated in the model. It showed that the structure of the adopted European Customer Satisfaction Index (ECSI) provides a very good explanation of customer

satisfaction, the path coefficients ranging from 0.74 to 0.92 indicating strong degree of influence of "Perceived Value" on "Overall Customer Satisfaction" of retail banking customers. This reflected that Asian retail banking customers are more likely to emphasise value for money. As reported in recent studies for other sectors, Asian retail banking customers are practical and are taking a cautious approach to discretionary spending (Seller, 1991). Besides, both the direct and indirect effects of "Perceived Quality" on "Customer Satisfaction" (0.15 and 0.44) are much lower than that of the "Perceived Value" (0.87). A one-point increase in perceived value index results in a 0.87 point increase in the customer satisfaction index. The results indicate that customer satisfaction of the retail banking customers are expressed through perceived value, not directly from customer expectation, image. The direct impact of customer expectation on customer satisfaction is negligible, with an indirect coefficient of 0.087. Most importantly, "Overall Customer Satisfaction" is by far the most important factor when it comes to the generation of customer loyalty, with path coefficients ranging from 0.51 to 0.73. As the retail banking industry is highly competitive and homogeneous in terms of service and facilities, bankers should focus more efforts and resources on not only satisfying customers but also delivering what the customers value. The R^2 values of different data sets ranging from 0.71 to 0.99 suggest that the adopted ECSI model can explain very well the variation in customer loyalty. Nevertheless, the present research has led to suggestions for model development and sets a robust benchmark for comparing future satisfaction of retail banking customers. The Overall Customer Satisfaction Index (CSI) offers a robust and

additional performance indicator for the highly competitive and homogeneous retail banking environment.

FIGURE 8.6 How the Inner Coefficients and R^2 Values for Retail Banking Sector, the Largest Group, the Second Largest Group and the Smaller/ Medium Sized Local Retail Banks Map to the ECSI Model



8.7 MATCHING THE CUSTOMER SATISFACTION INDICES TO THE BUSINESS EXCELLENCE INDICES

One of the remarkable findings from the present research on the two performance measurement indicators is that the Customer Satisfaction Indices for all data sets are

similar to those produced by the Business Excellence Model (BEM) in the force of "Customer Focus". For example, the index for the second largest group of retail banks in customer satisfaction is 60.8 and the index of "Customer Focus" force of the Business Excellence Model for the same group also obtained a similar score of 59.7. Moreover, the results indicate that the larger the sample size, the closer the resultant indices of the two measures (i.e., the CSI and Customer Focus Index). A summary of the comparison is given in Table 8.8.

TABLE 8.8 A Comparison on the Customer Satisfaction Indices and Customer Focus Indices of the BEM

Data Set/s	Customer Satisfaction Index	Customer Focus Index
The Sector/ All 47 retail banks	68.49	68.5
Largest Gp. of Retail Banks	77.70	75.2
2nd Largest Gp. of Retail Banks	60.84	59.7
Smaller/ Medium sized Local Retail Banks	69.95	73.4

The research implications of these results are twofold. First, the present research results reflect that employee perceptions seems to be a reliable surrogate measure of customer satisfaction for retail banking data sets. Indeed, some researchers also reported that employee's perception is a good surrogate measure of customer satisfaction in their studies (Schneider and Bowen, 1985; Johnson et al., 1996; Hackman and Wagerman, 1995). Second and more importantly, the newly developed Business Excellence Model (BEM) and its associated business excellence index and forces of excellence indices offer another robust and reliable measure of all critical activities of the retail banking including customer satisfaction. That is to say, the present Business Excellence Model and its forces of excellence indices can serve as an alternative measure of customer satisfaction. By matching the Customer Satisfaction Indices to one part of the Forces of Excellence Indices in the BEM, it was found that similar results are obtained for the two different measures. This remarkable finding has further substantiated the robustness and the usefulness of the Business Excellence Model (BEM) for retail banking developed in the present research. In addition, the significant influence of perceived value on overall customer satisfaction and the strong relation between customer satisfaction and customer loyalty found in the retail banking customer's data sets reflect also the importance of "Delivering Customer Value" in business excellence and success measurement. In fact, customer value is a new global trend. Retail banking customers demand a right combination of not only product and service quality and bank's reputation but also practically the value for money. Situated in a city of high accessibility, bankers should pay more attention to

enhance the value of their offerings to achieve a competitive advantage is observed in the present research.

8.8 CONCLUSION

This chapter is an integrated part of the entire business excellence management process, which focuses on using a balanced approach towards the management of business excellence, i.e. collecting and integrating information from both customers and employees for customer satisfaction improvement and business excellence management. Although CSI is not a goal, but may serve as an alternative instrument in all forward-looking quality management efforts and can complement or integrate into the Business Excellence management work. It must be borne in mind however, the most important research implication is that a structural Business Excellence Model for retail banking is needed and the developed BEM can provide a solid framework for retail banks to follow and balance their resource allocation and efforts towards business excellence and success. Therefore, it is proposed that ongoing efforts for coordinated Customer Satisfaction Indices and the present global CSI should be taken for the local retail banking sector. The global CSI should provide a basis for benchmarking efforts.

CHATER NINE

SUMMARY AND CONCLUSIONS

9.1 INTRODUCTION

This concluding chapter aims to provide a brief review of the research problems and the methodology, summarises the major findings and conclusions of the present research, discusses the implications of the present research, describes its limitations and finally suggests areas of future research.

9.2 A BRIEF OVERVIEW OF THE RESEARCH

9.21 Research Problem

The purpose of this research is to develop a Business Excellence model (BEM) which captures the critical success factors (CSFs) of retail banking as well as their defined relationships with TQM principles and concepts. Achieving and attaining success in a highly competitive retail banking market is not an easy task, one of the most influential factors is ensuring the formulation of a sound business framework prior embarking on quality improvement activities. Besides, there is a pressing need for

identifying and measuring the critical drivers of sustained performance and business excellence in retail banking. In light of these desires, the present research further focuses on reviewing the inadequacies of the current "Customer-focused quality management model" (CFQM) of retail banking, identifying critical success factors of retail banking, and finally developing a measurable structural model for retail banks and the retail banking sector.

Following the eye-opening modelling methodology of Kanji, the present research identifies and incorporates the critical success factors of retail banking, and goes on to develop a systematic and structured business excellence model for enabling retail banks to plan for business success and to identify areas for improvements. To confirm the statistical vigour of the BEM, the Business Excellence Model (BEM) is also assessed on its validity and reliability.

9.22 Research Methodology

The present research has employed a systematic investigation into the research problem. It applied Fornell et al 's (1996) and Kanji's (1998) method and extended it to an Asian retail banking context. A research scheme was developed to guide the conduct of the present research (see chapter four). It consists of several stages: exploratory, model developing, model testing and validation and model application.

Another feature of the present research is that it includes the collection and analysis of data and information from two kind of important stakeholders of any company, that is, employees (internal) and customers (external). Since it is imperative that a sound model be developed that paves the way for achieving business success in retail banking sector, a set of modelling criteria was closely followed.

At the exploratory stage, an extensive review of current literature on TQM and quality management in retail banking was performed to examine the adequacies of the existing CFQM model and the ways TQM principles can enrich and promote business excellence (see chapter two and three). Besides, the present research also complements it with a methodology of a qualitative phase to develop the model. Specifically, the executives and quality managers of three top performers in the retail banking market have been interviewed to identify the critical success factors (CSFs) of their respective banks (see chapter five).

For building a theory-driven as well as practical model, both the information from past literature and interviews have been incorporated into and form the basis of the framework for building a new Business Excellence Model (BEM) for retail banking. The resultant BEM is a model comprising the critical success factors of retail banking and at the same time sharing the condensed features of Kanji's Business Excellence Model (see chapter five).

In the model testing and validating stage, the measuring instrument of Kanji's business excellence model is adopted with modification to suit the retail banking context and refined according to the newly developed BEM. The resultant measuring instrument was then reviewed and pretested by banking practitioners. A total of 50 interviews were successfully arranged out of 450 telephone requests. 47 usable responses were obtained from 50 semi-structured interviews using the developed survey instrument. The linear structural equation modelling (SEM) technique was employed to validate and test the BEM for retail banking. Specifically, a structural equation modelling (SEM) programme-EQS for Windows was employed to evaluate the goodness of fit of the model (see chapter six). After using a quantitative survey to verify the model, another robust statistical technique-PLS was then employed to calculate the Business Excellence Indices (BEI) and the forces of excellence indices for retail banking (see chapter seven).

In the focus analysis stage, the European Customer Satisfaction Index model and its associated instrument were employed to measure customer satisfaction of local retail banking customers. A survey had been performed and 450 usable responses were obtained from that customer satisfaction survey. The PLS technique was employed again for the calculation of the customer satisfaction indices (CSI) for the retail banking sector. Finally, the results of the customer satisfaction analysis are matched to the results of the Business Excellence analysis for higher level analysis (see chapter eight).

9.3 MAJOR RESEARCH FINDINGS

9.31 Inadequacies of the Current "Customer Focused Quality Management" Model of Retail Banking

Despite the abundant research that has been done in the retail banking context, most of the current literature reviewed, focused only on a particular aspect of retail banking operations or activities such as credit cards operations studies, mortgages houses operations, service quality delivery operation studies etc. In other words, there is a lack of a holistic perspective in existing literature that covers all aspects of the retail banking management. Although some quality management models were found to be employed by a few top performing retail banks, those frameworks are far from complete and appropriate for retail banking. It is because those frameworks are originally awards models that may provide some indicative insights but often fail to provide a complete measure of key performance drivers of a particular sector like retail banking. Indeed, there is now a growing realisation of the limitations of award models in their failings to enable the measurement of the prescribed quality management factors. Yusof and Aspinwall (1999) argued that blindly following the award criteria of this type of models as CSF can be misleading. This can be argued as the main cause of inadequacies in the present "CFQM" model of retail banking such as the lack of a structure of quality improvement activities and a lack of concern on those critical success factors that are relevant to the retail banking context. More

importantly, those award models are mostly descriptive and prescriptive models that fail to provide any validated relationships and ways for their measurement. Clearly, improvement will only happen if performance is measured. Following this kind of models would create measurement problems for retail banks, that is, retail banks have to spend more resources on the search for appropriate measurement techniques on their own. To this end, it should be valuable to develop and provide a model, which is capable of covering the TQM essence in a structured way to drive total quality improvement efforts that ultimately bring in business excellence.

9.32 Interface Between TQM and Business Excellence

From the literature review on TQM and quality management in retail banking, it was found that there is a close relationship between TQM and Business Excellence. However, the interface between TQM and business excellence was seldom explicitly mentioned or measured in contemporary TQM and business excellence literature. The present work explicitly discusses the interface between them and has successfully verified the links between TQM and business excellence. Virtually, business excellence can be argued as a mission of and a reason for TQM, and as a benefit of TQM adoption. Business excellence can also be argued as a kind of collective measure of organisational performance and of vigour of TQM adoption. Nevertheless, present research's findings support that TQM is a strategic means and holistic approach

towards business excellence and TQM essence can contribute to excellence of retail banking.

9.33 Critical Success Factors (CSFs) Approach to BEM Modelling

From the literature review, it was found that the quest for competitive advantage from critical success factors (i.e., CSFs) is the essence of the business level for the setting of appropriate business strategy. An appropriate strategy can lead a bank's resources in the desired direction. The critical success factors approach is believed to be a practical approach for modelling because the stress is on factors determining success. Along the same line, the present research has examined and identified the critical success factors (CSFs), which are relevant in the retail banking industry, through in-depth case studies and the use of critical incident technique. Moreover, it was found that the application of critical success factors approach to the modelling of business excellence have a particular strength in producing results that are of high relevant value for managerial decision making. This is of particular consideration to the present research because retail banking managers, in the past, have to rely on a narrow set of financial indicators to support their decision making in a complex retail banking environment. Recognising these difficulties of the banking managers, the new Business Excellence Model (BEM) is aimed to provide a better framework for understanding the key

business drivers of retail banking performance and for bringing a wider set of measures together, so that managers have an appropriate range of indicators to use. It is because the BEM for retail banking provides measures on performance against the critical success factors of retail banking. To this end, an industry–level analysis approach was undertaken and the critical success factors in the basic structure of the retail banking industry were stressed. In the process, critical success factors of the top performing retail banks are identified. Kanji's Business Excellence model is found to be a holistic model that addresses all basic questions an organisation should encounter in successful implementation of TQM towards business excellence. Nevertheless, it was found that Kanji's model shares and captures all the identified critical success factors of retail banking in a systematic sense. For the above considerations, a condensed version of Kanji's business excellence model was adopted to develop the new Business Excellence Model (BEM) for retail banking. In terms of the modelling criteria laid down previously, the new BEM has several important strengths. At first, it is theory-driven. Unlike most models (except Kanji's model), the new Business Excellence Model (BEM) is an improvement model with a validated structure that facilitates the production of measurement or performance indicators, i.e., business excellence indices and forces of excellence indices. These indices would be of significant comparison and decision making values for managers and practitioners. Because the comparison of performances were made easy with the index as an alternative indicator.

9.34 Identification of Forces of Excellence and Development of A Business Excellence Model (BEM)

Since the identified critical success factors were incorporated in the new BEM as prime and mediating constructs driving for business excellence, the term "forces of excellence" was used to describe the essence of these factors/ constructs. In order to capture the essence of all driving forces of retail banking, the new BEM has altogether six constructs namely leadership (LEAD), customer focus (CF), people based management (PBM), management by fact (MBF) and continuous improvement (CI) and business excellence (BE). The six constructs formed into a structure of one prime driving force (i.e., leadership), four mediating driving forces (i.e., CF, PBM, MBF, CI), which ultimately lead to the results of business excellence. The constructs and the structure of the model can be seen as a condensed version of Kanji's business excellence model.

9.35 Validation of the Business Excellence Model for Retail Banking

Results obtained from the structural equation modelling (SEM) analysis support the theorising causal relationships among the six constructs. That is to say, retail banks that have strong leadership in driving a customer focus strategy, maintain commitment

to quality and satisfaction of both internal and external customers will be more able to involve employees in quality improvement activities. The involvement of employees can facilitate the cultivation of an ongoing and self-reinforcing continuous improvement culture. These "soft" factors or forces would lead to employees' contributions to delivering customer value and in turn affect the building of shareholder value. Moreover, results also support that retail banks that have an integrated process would facilitate efficient process management and encourage the sharing of fact and information among functions, and teams for quality improvement. And the use of integrated process and teamwork will promote more interactions and understandings that enable the formation of a culture that have ongoing commitment to quality improvements and ultimately lead to business excellence. Results of comparison of different data sets also provide strong evidence to the balancing relationships among the forces of excellence that both the "soft" and "hard" forces contribute to retail banks performance.

From Structural equation analysis using EQS programme, the Business Excellence Model (BEM) provides a very good fit to the data of the 47 retail banks. All the goodness of fit statistics indicate that the causal relationships of the constructs or the specified structure of the BEM is valid. The model has a χ^2 of 0.528 (d.f. = 4), a Comparative Fit Index (CFI) of 1.00, a Normed Fit Index (NFI) of 0.999, Non-Normed Fit Index (NNFI) of 1.027, LISREL GFI of 0.996, a Root Mean Squared Residual (RMR) of 0.018 and standardized RMR of 0.009 (Byrne,1994).

To achieve reliable results, a bundle of rather than a single goodness of fit index are used to ensure the reliability of the results which includes those capable of indicating model validity for small samples such as CFI. Indeed, the BEM should have content validity. It is because its constructs are the actual critical success factors (CSFs) of the top performing retail banks. These CSFs were identified through the critical incident methods in the case studies interviews. Through three critical incidents, it shows that the application of the BEM forces (CSFs) is essential for retail banks to achieve business excellence. A final advantage stems from using the new BEM for retail banking is that bank managers can determine the strength of forces relationships, individual and collective contribution of the forces towards the different aspects of business performances.

9.36 Business Excellence Indices for the 47 Retail Banks

A robust statistical method- PLS was employed to estimate and compute the Business Excellence Indices for the 47 retail banks. The overall BEM index for all retail banks is 73.16, which indicates that the retail banks performances are satisfactory. For the individual force of excellence of the BEM, these retail banks have better performance in Leadership with an index of 74.15. The retail banks have weaker performance in Customer Focus, Management by Fact with indices of 68.16 and 69.3 respectively, while their performances in People based Management and Continuous Improvement is not satisfactory with indices of 60.36 and 59.39. Therefore, the retail banks should

focus on improving these forces in order to improve the overall Business Excellence Index.

The data set of the 49 retail banks were further broken down into three data sets according to the usual statistical categories of the largest group of retail banks, the second largest group of retail banks and the smaller/ medium sized local retail banks. The Business Excellence Index (BEI) for the largest group of retail banks is the highest as expected. It is remarkable however to reveal that the BEI score of the smaller /medium local banks is just slightly (one-point) lower than the second largest group of retail banks despite their scale disadvantage. This implies that large branch network and scale alone do not necessarily protect the larger retail banks from intense competition in today's highly competitive and homogeneous retail banking market. Delivering customer value and quality service is a better strategy for survival and profit in today's competitive business environment.

Moreover, the present research has also revealed that the larger retail banks in general have done better on the "hardware" aspect than their smaller counterparts, that is Management by Fact. Their indices for this force of excellence are 78.2 and 70.54 respectively. On the other hand, the smaller local retail banks have done better on the "soft" aspects of business excellence management such as People based Management and Customer Focus. The results reflect the difference in the strategies between the

larger and smaller retail banks. Nevertheless, the lower performance indices of these banks as compared to that of the largest group reflects that both the "hard" and "soft" forces have to be taken care of for retail banks to improve their performance further. In addition, the retail banks would have done better if there had been a structural model, which shows the links between key performance drives and in turn guides the way the forces should be implemented and help in the assessment of these forces at the same time. The Business Excellence Model (BEM) for retail banking would offer such a link. The R^2 values generated by PLS for all data sets indicate that the BEM has a strong explanatory power in the business performance of these retail banks. Nevertheless, the synthesis and development of Business Excellence Index (BEI) serve to satisfy the pressing need to augment current approaches to evaluating the financial health of Hong Kong retail banks and Hong Kong retail banking sector. The BEI and forces of excellence indices developed in the present research represents a new type of customer-based (internal) measurement system for evaluating and enhancing the performance of local retail banks and the local retail banking sector.

9.37 Customer Satisfaction Indices for the Retail Banking Sector

Besides collecting and analysing the data from employees, actual customer satisfaction data were collected and customer input was sought. The European Customer Satisfaction Index Model is adopted and applied to assess the satisfaction of retail

banking customers. PLS technique is again employed to estimate the Customer Satisfaction Indices (CSI) of 450 retail banking customers. The overall CSI score for the sector, as a whole is 68.49, which is satisfactory. In addition, it is remarkable to see that the value of the Customer Satisfaction Index (CSI) sought from the retail customers are similar and very close to the value of that estimated by the Business Excellence Model (BEM). Specifically, the CSI values for all data sets are very close to the values of the "Customer Focus" (CF) force. For example, the CSI value for the second largest group is 60.84 and the CF index score is 59.69. It was also found that the values of the Customer Satisfaction Index (CSI) and the Customer Focus (CF) index became closer when all data sets are combined again for measurement. That is to say the larger the sample size, the closer the estimated values of the two. The results is important and encouraging because this implies that the forces of excellence constructs of the BEM provide an alternate and accurate measurement as reflected in its assessment of customer satisfaction. The Customer Satisfaction Indices of retail banking sector reveal that the local retail banking customers are not fully satisfied with the current retail banking services. There is still a lot of room for improvement for retail banks in this aspect.

Moreover, the R^2 generated by the PLS for all data sets indicate the strong explanatory power of the adopted ECSI model in customer satisfaction and customer loyalty.

9.3 MANAGERIAL IMPLICATION

This work contributes to quality management and bank management research in retail banking in a number of ways. At first, the present research highlights best practice in top performing retail banks in the local sector including how they track performance and what they achieve. Next, the present work has successfully identified key drivers of sustained high performance (i.e., critical success factors) in retail banking, which is important for management in decision-making. Finally, a Business Excellence Model (BEM) specifically for retail banking is developed and validated. The newly developed BEM satisfies both the theoretical and statistical requirements for a good and valid model. The BEM possesses the qualities of a robust model. The BEM which has been validated across different categories of retail banks of the local retail banking sector should be applicable for assessing business excellence of retail banks and other financial institutions in the retail banking sector. Besides, the new BEM offers distinct advantages over the contemporary TQM or business excellence models in several ways. The new BEM should also offer managers a better understanding of the key drivers of sustained performance in retail banking. In addition, the new BEM is more than a traditional indicative model because it has a particular strength in guiding a robust measure of key driving forces and business excellence for retail banking. The resulting Business Excellence Index (BEI) and forces of excellence indices serve as an objective and comprehensive single measure of organisational effectiveness, which should be a useful performance indicator for the purpose of comparison across branches at company level and at industry level.

Besides, this research differs substantially from previous studies in quality management of retail banking by attempting to fulfill the inadequacies of the current "Customer focused Quality Management " model of retail banking. The exploratory research results of the present work supports and shows how TQM essence can contribute to excellence in retail banking. Therefore, the newly developed BEM is a theory-driven as well as a more complete and integrative model, which covers all essential elements of TQM that guide retail banks to achieve business excellence. Besides, the present work also differs from previous modelling methodology in the TQM literature in that it applied a critical success factors (CSFs) approach to the modelling of business excellence rather than solely based on prescriptive TQM theories. Specifically, the BEM is a practical model because the success factors or driving forces of business excellence identified have been successfully incorporated into the model for retail banking. In this way, this BEM can direct and enable retail banking managers to concentrate on drivers of sustained high performance. Bank managers can use this BEM to perform frequent and systematic reviews of their branch performance, their strengths and weakness in different driving forces and improve upon on those key driving forces. Thus, it provides an alternative solid indicator to use for action planning.

By identifying the critical dimensions driving and influencing business performances and customer satisfaction and customer loyalty, bankers could prioritise their

resources and efforts, and deploy them effectively and efficiently to improve the forces of excellence dimensions that are left behind. The resultant Business Excellence Indices and forces of excellence indices would help bank managers to target more precisely on their total quality improvement efforts. More importantly, the present work serves as the first attempt to produce an aggregate Business Excellence Index (BEI) and Customer Satisfaction Index (CSI) for the local retail banking industry. The results highlight the fact that total quality management is important to both large and smaller retail banks in achieving success in a highly competitive banking market. It also reveals that larger banks in Hong Kong tend to overemphasis on the "hard" aspects of total quality improvement, while smaller banks tend to rely on the "soft" aspects of quality management to create their competitive advantage. The present research findings highlight and differentiate the critical banking activities that deserve major attention by different types of retail banks and the sector. Besides, the findings of this research provide evidence to the common belief (Peters and Waterman, 1982) that excellence in business requires excellence in both the 'soft' and 'hard' forces of an organisation.

This work also adds strong support to previous research in customer satisfaction measurement and customer satisfaction studies. It confirms that customer satisfaction has a strong influence on customer loyalty in the Hong Kong retail banking context. It further confirms the reliability of the European Customer Satisfaction Model for customer satisfaction assessment. Moreover, the present work acknowledges the most

influential factors in ensuring that business success is the development of a robust model for coordinating key retail banking and total quality improvement activities and is necessary for paving the right way for retail banks in achieving business excellence. By and large, improving the business performance of retail banks and the local retail banking sector will have tremendous positive financial and non-financial impacts on the overall Hong Kong economy and the effects may also be beneficial to the financial stability of the Asian region as today's market is increasingly a globalised market.

This work also lends additional evidence that employee's perception can serve as a surrogate measure of customer satisfaction. In the present work, it was found that the customer satisfaction indices estimated by PLS using customer input are close to the customer focus indices of the BEM using the employee input.

Last but not the least, this work shows that Kanji's structural (SEM) technique for business excellence model formulation is an appropriate technique for the development of an improvement and measurable model. This technique has been extended to the modelling of business excellence in retail banking context. Moreover, this work shows also the usefulness of Partial Least Squares (PLS) for parameter estimations and in turn for the computation of a reader's friendly index. The PLS technique which take into account both weights and means is an improvement over traditional techniques. With indices of critical driving forces (i.e. critical processes/ CSFs) of the BEM, improvement is made easy because those forces with low index

scores are apparently candidates for improvement. Overall, the new "Business Excellence Model" for retail banking serves to satisfy the pressing need to augment current quality management approaches to evaluating financial health of retail banks in the new 21st century marketplace. Furthermore, the synthesis and development of "Business Excellence Index", "forces of excellence indices" and "customer satisfaction indices" represent a new type of customer-based measurement system for evaluating and enhancing the performance of Hong Kong retail banks and the Hong Kong retail banking sector.

To summarise, the present research has successfully developed and validated a Business Excellence Model (BEM) for retail banking. Practically, retail banking institutions can gain a better understanding of and at the same time measure their key business drivers by adopting the Business Excellence Model. In general, this BEM offers a simple, reliable and valid methodology for scientific assessment of retail banking performance. The findings also provide a direction to the development of an empirical understanding of implementation of TQM elements in the Asian retail banking context. Lastly, the present research serves as the first and valuable database for future benchmarking.

9.5 LIMITATIONS AND AREAS FOR FUTURE RESEARCH

In designing the present research, it was attempted to be as scientific as possible. Although the sample size of 47 retail banks is small relative to the total number of retail banks in Hong Kong, it consists of the two largest group of retail banks and the smaller/ medium sized local retail banks. The mix of the sampled retail banks matches with the mix and characteristics of the population of retail banks in Hong Kong. Moreover, the sample mix of customer satisfaction survey matches also the population of retail banks' customers. In addition, the values of the Comparative Fit Index (CFI), which is capable of indicating model validity for small samples are high for all data sets and indicate the results obtained are reliable.

The sample of the present research was restricted to retail banks in Hong Kong because their financial performance are reported regularly, and therefore suit the purpose of this research. Hence, the results are limited to the extent that the Hong Kong retail banking population is different from the retail banking population of other countries. However, a large difference in results is not expected, because there is a high representation of foreign retail banks in Hong Kong. Nevertheless, local retail banks operate in a unique multifaceted business environment, one should not generalise the findings without further research.

Furthermore, the present research should be considered as a pilot study in the field where no previous research has been done on the subject area in the Chinese context. The present research will provide an impetus to employ a critical success factors approach and a structural equation modelling technique for the development and the validation of models for TQM and business excellence. Undoubtedly, future research with larger sample sizes will produce invaluable information for retail banking and other financial institutions searching for competitive edge and business excellence. Coordinated measurement of business excellence and customer satisfaction indices would be most useful when done on a longitudinal basis. It is strongly suggested that business excellence and forces of excellence be regularly measured to identify new or significant business excellence trends. Both employee input and customer input, being the two important sources of stakeholder information, have been the basis for the present analysis. Hence, stakeholder information have been used as the basis for developing and assessing the Business Excellence Model because stakeholder satisfaction is the focus of business excellence measure. Future research may seek for valuable information from other important stakeholders of retail banking such as competitors.

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APPENDIX IA. Local Retail Banking Market

Group Type	Member Banks	No. of Branches	Total
HSBC Group	(HongkongBank		
	217 Hang Seng Bank,		
	158		
			375
BOC Group	Bank of China Group		373
	(With 13 member Banks)		
			373
Small Foreign Bank Group	Standard Chartered Bank		79
	Citibank		17
	Chase Manhattan Bank		7
	Generale BelgianBank Abbr.To Belgian Bank		30
	Bank of America		14
	Bank of Communications		38
	Others		93
Smaller Local banking group	Bank of East Asia(BEA)		106
	Chekiang First Bank Ltd	17	
	Citic Ka Wah Bank LTD	30	
	Dah Sing Bank	38	
	Asia Commercial Bank Ltd	14	
	Dao Heng Bank Ltd	50	
	Hongkong Chinese Bank Ltd	20	
	International bank of Asia Ltd	27	
	Kwong On Bank Ltd	31	
	Liu Chong Hing Bank Ltd	35	
	Overseas Trust Bank Ltd	28	
	Shanghai Commercial Bank Ltd	39	
	Union Bank of Hong Kong Ltd	20	
	United Chinese Bank Ltd	18	
	Wing Hang Bank Ltd	26	
	Wing Lung Bank Ltd	35	
	Others	28	

APPENDIX IB. Common Retail Banking Services Offered in Hong Kong

Banking Needs	Local Services	Global Servies
Savings Needs	Local/Foreign Currency Savings International Gold Coin Unit Trust Savings Plan	
Credit Needs	Mortgage Loans Investment Loans Personal Loans Tax Loans Small Business Loans	Offshare Loan Facility Standby Letter of Credit
Transaction/ Payment Payment Needs	Branch Services ATM Debit Card Current Account Autopay Point of Sales Terminal Phone banking Internet Banking	Traveller's Cheque Global ATM Remittance Credit Cards Money Order
Safety Needs	Safe Box	Worldwide Emergency/ Legal/Medical Assistance services(Credit Cards)
Investment Needs	Local/Foreign Currency Time Deposits Local Stock Foreign Currency Trading Leveraged Deposits Real Estate Investment Private Banking Services Portfolio Management Service	Offshore Deposits Overseas Stock/Bonds Unit Trust Global Custodian Service Investment Portfolio Management Service
Insurance Needs	Life Insurance Home Content Insurance Travel Accidents Insurance Car Insurance Provident Funds	

APPENDIX IC. Market Penetration Rates of Retail Banking Services in Hong Kong (1995-1998)

Population in'000	95	96	97	98
Aged 15+	4,303	4,456	4,654	4,956
Savings Account	92%	94%	96%	95%
Current Account	12%	16%	22%	23%
ATM	26%	32%	44%	51%
Credit Card	13%	26%	49%	65%
Time Deposits	8%	11%	8%	7%
Investment in Stocks	n.a.	n.a.	22%	17%
Personal Loan	1%	1%	n.a.	4%

Sources: Survey Research of Hong Kong Media Market Report (SRH) 95-98

APPENDIX II PLS OUTPUT FOR ALL RETAIL BANKS

The SAS System 11:10 Friday, March 24,

2000 1

OUTPUT INFORMATION:

outer coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0.640725	0	0	0	0	0
ROW2	0.3950122	0	0	0	0	0
ROW3	0	0.6228027	0	0	0	0
ROW4	0	0.4635833	0	0	0	0
ROW5	0	0	0.384572	0	0	0
ROW6	0	0	0.6281468	0	0	0
ROW7	0	0	0	0.5316684	0	0
ROW8	0	0	0	0.573248	0	0
ROW9	0	0	0	0	0.6782773	0
ROW10	0	0	0	0	0.3878614	0
ROW11	0	0	0	0	0	0.3347519
ROW12	0	0	0	0	0	0.2985415
ROW13	0	0	0	0	0	0.2767469
ROW14	0	0	0	0	0	0.2644336

inner coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0.8511199	0	0	0	0	0
ROW3	0.5565562	0	0	0	0	0
ROW4	0.8433411	0	0	0	0	0
ROW5	0.7324116	0	0	0	0	0
ROW6	0	0.3225801	0.2595185	0.1948229	0.2715358	0

Correlation matrix R[xi,xj]:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	1	0.8511199	0.7901483	0.8433411	0.7864116	0.8826617
ROW2	0.8511199	1	0.7506094	0.7847657	0.8237616	0.8735987
ROW3	0.7901483	0.7506094	1	0.8208024	0.7818388	0.8456297
ROW4	0.8433411	0.7847657	0.8208024	1	0.8366443	0.8768342
ROW5	0.7864116	0.8237616	0.7818388	0.8366443	1	0.8619453
ROW6	0.8826617	0.8735987	0.8456297	0.8768342	0.8619453	1

SD=

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0.0782581	0	0	0	0	0
ROW3	0.2378213	0	0	0	0	0
ROW4	0.1801077	0	0	0	0	0
ROW5	0.1920817	0	0	0	0	0
ROW6	0	0.1197443	0.1147046	0.0954031	0.2155606	0

T=

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	10.875806	0	0	0	0	0
ROW3	8.9931524	0	0	0	0	0
ROW4	10.527594	0	0	0	0	0
ROW5	8.5403676	0	0	0	0	0
ROW6	0	4.2624948	5.2008342	6.7749725	4.902937	0

inner R squares:

	COL1	COL2	COL3	COL4	COL5
ROW1	0.8224051	0.8638727	0.7112242	0.6998443	0.8822734

inner R

	COL1	COL2	COL3	COL4	COL5
ROW1	0.8511199	0.8389712	0.8433411	0.7864116	0.9392941

number of iterations:
25

coefficients alpha

0.8668737	0.7944148	0.9150719	0.8040914	0.7792782	0.8697336

APPENDIX III PLS OUTPUT FOR THE LARGEST GROUP OF RETAIL BANKS

OUTPUT INFORMATION:

outer coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0.7471514	0	0	0	0	0
ROW2	0.3281696	0	0	0	0	0
ROW3	0.2269898	0	0	0	0	0
ROW4	0	0.7234133	0	0	0	0
ROW5	0	0.3510045	0	0	0	0
ROW6	0	0	0.4582413	0	0	0
ROW7	0	0	0.7113166	0	0	0
ROW8	0	0	0	0.7681932	0	0
ROW9	0	0	0	0.3486629	0	0
ROW10	0	0	0	0.1989769	0	0
ROW11	0	0	0	0	0.8582413	0
ROW12	0	0	0	0	0.3726424	0
ROW13	0	0	0	0	0	0.3739963
ROW15	0	0	0	0	0	0.2452417
ROW16	0	0	0	0	0	0.2128919
ROW17	0	0	0	0	0	0.2009379
ROW18	0	0	0	0	0	0.1990089
ROW19	0	0	0	0	0	0.2011327

inner coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0.9394419	0	0	0	0	0
ROW3	0.5500322	0	0	0	0	0
ROW4	0.7911321	0	0	0	0	0
ROW5	0.9623754	0	0	0	0	0
ROW6	0	0.3417981	0.1895163	0.1833227	0.3609586	0

Correlation matrix R[xi,xj]:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	1	0.9369813	0.9374636	0.8042706	0.7968814	0.9462404
ROW2	0.9369813	1	0.7901483	0.7993666	0.8237268	0.9430973
ROW3	0.9374636	0.7901483	1	0.9601439	0.942241	0.8576511
ROW4	0.8042706	0.7993666	0.9601439	1	0.9359556	0.9193742
ROW5	0.7968814	0.8237268	0.942241	0.9359556	1	0.8310692
ROW6	0.9462404	0.9430973	0.8576511	0.9193742	0.8310692	1

SD=

COL1	COL2	COL3	COL4	COL5	COL6

ROW1	0	0	0	0	0	0
ROW2	0.1282581	0	0	0	0	0
ROW3	0.0898213	0	0	0	0	0
ROW4	0.1211077	0	0	0	0	0
ROW5	0.1100817	0	0	0	0	0
ROW6	0	0.0754889	0.1324701	0.0954031	0.1156708	0

T=

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	17.99036	0	0	0	0	0
ROW3	6.9241687	0	0	0	0	0
ROW4	6.2848585	0	0	0	0	0
ROW5	9.5445987	0	0	0	0	0
ROW6	0	4.8754988	12.433209	6.0034781	8.902944	0

inner R squares:

	COL1	COL2	COL3	COL4	COL5
ROW1	0.872934	0.7416843	0.6938838	0.7883709	0.9177683

inner R

	COL1	COL2	COL3	COL4	COL5
ROW1	0.9369813	0.9009712	0.932118	0.8997694	0.9580023

number of iterations:
22

coefficients alpha

0.8486105	0.9043148	0.8034761	0.8040914	0.8242923	0.9226049

APPENDIX IV PLS OUTPUT FOR THE 2ND LARGEST GROUP OF RETAIL BANKS

OUTPUT INFORMATION:

outer coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0.6440922	0	0	0	0	0
ROW2	0.4565073	0	0	0	0	0
ROW3	0	0.7300456	0	0	0	0
ROW4	0	0.2766225	0	0	0	0
ROW5	0	0	0.2016148	0	0	0
ROW6	0	0	0.8370526	0	0	0
ROW7	0	0	0	0.7228967	0	0
ROW8	0	0	0	0.4213614	0	0
ROW9	0	0	0	0	0.5466646	0
ROW10	0	0	0	0	0.5009461	0
ROW11	0	0	0	0	0	0.2099321
ROW12	0	0	0	0	0	0.4402209
ROW13	0	0	0	0	0	0.2730344
ROW14	0	0	0	0	0	0.2272331

inner coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0.7240421	0	0	0	0	0
ROW3	0.5317734	0	0	0	0	0
ROW4	0.7186975	0	0	0	0	0
ROW5	0.8244169	0	0	0	0	0
ROW6	0	0.2908176	0.1521946	0.2593221	0.3010367	0

Correlation matrix R[xi,xj]:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	1	0.8000992	0.734777	0.7968814	0.6976525	0.8042706
ROW2	0.8000992	1	0.7861676	0.6506162	0.6310653	0.7875988
ROW3	0.734777	0.7861676	1	0.6167362	0.6667258	0.7045593
ROW4	0.7968814	0.6506162	0.6167362	1	0.7875988	0.8134554
ROW5	0.6976525	0.6310653	0.6667258	0.7875988	1	0.8299261
ROW6	0.8042706	0.7875988	0.7045593	0.8134554	0.8299261	1

SD=

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0.1182594	0	0	0	0	0
ROW3	0.1778316	0	0	0	0	0
ROW4	0.1908652	0	0	0	0	0
ROW5	0.1000897	0	0	0	0	0
ROW6	0	0.097443	0.1099846	0.1229131	0.1543125	0

T=

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	6.006036	0	0	0	0	0
ROW3	8.322467	0	0	0	0	0
ROW4	17.727205	0	0	0	0	0
ROW5	10.3465	0	0	0	0	0
ROW6	0	14.95647	5.9817667	7.972229	20.89672	0

inner R squares:

	COL1	COL2	COL3	COL4	COL5
ROW1	0.7747558	0.6644355	0.6527662	0.8917553	0.7406934

inner R

	COL1	COL2	COL3	COL4	COL5
ROW1	0.9023297	0.7237536	0.7309372	0.7997218	0.8028241

number of iterations:
31

coefficients alpha
0.7068737 0.8074148 0.6898719 0.7970914 0.8046782 0.8486105

APPENDIX V PLS OUTPUT FOR SMALLER/MEDIUM SIZED RETAIL BANKS

OUTPUT INFORMATION:

outer coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0.6271127	0	0	0	0	0
ROW2	0.4744688	0	0	0	0	0
ROW3	0	0.4951345	0	0	0	0
ROW4	0	0.4241947	0	0	0	0
ROW5	0	0.2090321	0	0	0	0
ROW6	0	0	0.7056434	0	0	0
ROW7	0	0	0.5667128	0	0	0
ROW8	0	0	0	0.5474242	0	0
ROW9	0	0	0	0.5587284	0	0
ROW10	0	0	0	0	0.5940168	0
ROW11	0	0	0	0	0.4795199	0
ROW12	0	0	0	0	0	0.3882834
ROW13	0	0	0	0	0	0.2784729
ROW14	0	0	0	0	0	0.2413824
ROW15	0	0	0	0	0	0.2052453

inner coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0.7537925	0	0	0	0	0
ROW3	0.8118764	0	0	0	0	0
ROW4	0.6691341	0	0	0	0	0
ROW5	0.7000767	0	0	0	0	0
ROW6	0	0.2798843	0.3721857	0.1808295	0.2645371	0

Correlation matrix R[xi,xj]:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	1	0.7900506	0.8350437	0.6862132	0.5932024	0.7993202
ROW2	0.7900506	1	0.8723037	0.5076024	0.6966246	0.7225685
ROW3	0.8350437	0.8723037	1	0.6763795	0.5707674	0.7039616
ROW4	0.6862132	0.5076024	0.6763795	1	0.6966245	0.7046458
ROW5	0.5932024	0.6966246	0.5707674	0.6966245	1	0.7270631
ROW6	0.7993202	0.7225685	0.7039616	0.7046458	0.7270631	1

SD=

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0.0892564	0	0	0	0	0
ROW3	0.1678276	0	0	0	0	0

ROW4	0.1301405	0	0	0	0	0
ROW5	0.1723242	0	0	0	0	0
ROW6	0	0.0947441	0.1347505	0.129091	0.1909202	0

T=

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	6.0007806	0	0	0	0	0
ROW3	5.9817667	0	0	0	0	0
ROW4	9.5260684	0	0	0	0	0
ROW5	10.535098	0	0	0	0	0
ROW6	0	18.544064	22.288996	16.67615	6.935219	0

inner R squares:

	COL1	COL2	COL3	COL4	COL5
ROW1	0.8241988	0.7733375	0.6192553	0.6147551	0.8297076

inner R

	COL1	COL2	COL3	COL4	COL5
ROW1	0.9023297	0.7237536	0.738874	0.7270645	0.8975228

number of iterations:
27

coefficients alpha
0.7398501 0.7530374 0.9150719 0.8039347 0.856589 0.8782108

APPENDIX VI PLS OUTPUT FOR THE HONG KONG RETAIL BANKING SECTOR (ECSI Model)

The SAS System 12:12 Sunday, March 26,
2000 1

OUTPUT INFORMATION:

outer coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0.7024409	0	0	0	0	0
ROW2	0.4166297	0	0	0	0	0
ROW3	0	0.3874436	0	0	0	0
ROW4	0	0.4071305	0	0	0	0
ROW5	0	0.3007525	0	0	0	0
ROW6	0	0	0.7013677	0	0	0
ROW7	0	0	0.1998782	0	0	0
ROW8	0	0	0.2542089	0	0	0
ROW9	0	0	0	0.6139926	0	0
ROW10	0	0	0	0.5049845	0	0
ROW11	0	0	0	0	0.5390342	0
ROW12	0	0	0	0	0.5282847	0
ROW13	0	0	0	0	0	0.3078297
ROW14	0	0	0	0	0	0.5394125
ROW15	0	0	0	0	0	0.2200512

inner coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0	0	0	0	0	0
ROW3	0	0	0	0	0	0
ROW4	0.5690323	0.0988159	0.5709939	0	0	0
ROW5	0	0	0.1485347	0.869983	0	0
ROW6	0.3000221	0	0.1306877	0	0.5096759	0

Correlation matrix R[xi,xj]:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	1	0.8049866	0.7530116	0.754143	0.8043469	0.8040428
ROW2	0.8049866	1	0.8140674	0.7723653	0.8640151	0.8645144
ROW3	0.7530116	0.8140674	1	0.906261	0.8179326	0.8171169
ROW4	0.754143	0.7723653	0.906261	1	0.8789734	0.7899192
ROW5	0.8043469	0.8640151	0.8179326	0.8789734	1	0.9993031
ROW6	0.8040428	0.8645144	0.8171169	0.7899192	0.9993031	1

SD=

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0	0	0	0	0	0
ROW3	0	0	0	0	0	0
ROW4	0.1743763	0.138948	0.3951175	0	0	0
ROW5	0	0	0.268184	0.1982989	0	0
ROW6	0.1838139	0	0.5633376	0	0.2538501	0

T=

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0	0	0	0	0	0
ROW3	0	0	0	0	0	0
ROW4	11.09173	16.67614	22.10218	0	0	0
ROW5	0	0	7.053239	9.045271	0	0
ROW6	10.52073	0	15.93298	0	28.86911	0

inner R squares:

	COL1	COL2	COL3
ROW1	0.8332196	0.7928082	0.9986133

inner R

	COL1	COL2	COL3
ROW1	0.9128086	0.8676452	0.9993064

number of iterations:

4

coefficients alpha

0.7999155 0.8798281 0.8606951 0.8275238 0.892575 0.8634469

APPENDIX VII PLS OUTPUT FOR THE LARGEST GROUP OF RETAIL BANKS (ECSI Model)

The SAS System 9:06 Monday, March 28, 2000 1

OUTPUT INFORMATION:

outer coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0.6990073	0	0	0	0	0
ROW2	0.3359376	0	0	0	0	0
ROW3	0	0.2686459	0	0	0	0
ROW4	0	0.6217335	0	0	0	0
ROW5	0	0.247314	0	0	0	0
ROW6	0	0	0.4741735	0	0	0
ROW7	0	0	0.3032778	0	0	0
ROW8	0	0	0.3004612	0	0	0
ROW9	0	0	0	0.4797237	0	0
ROW10	0	0	0	0.5577164	0	0
ROW11	0	0	0	0	0.6065344	0
ROW12	0	0	0	0	0.4736781	0
ROW13	0	0	0	0	0	0.7032796
ROW14	0	0	0	0	0	0.3513387

inner coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0	0	0	0	0	0
ROW3	0	0	0	0	0	0
ROW4	0.5401123	0.0720159	0.2079239	0	0	0
ROW5	0	0	0.1185347	0.923983	0	0
ROW6	0.2110761	0	0.7325877	0	0.0696759	0

Correlation matrix R[xi,xj]:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	1	0.8006063	0.8350437	0.8732025	0.7688596	0.8579506
ROW2	0.8006063	1	0.8732026	0.6966137	0.6865949	0.8645144
ROW3	0.8350437	0.8732026	1	0.7039261	0.8179326	0.8171169
ROW4	0.8732025	0.6966137	0.7039261	1	0.8789734	0.6997592
ROW5	0.7688596	0.6865949	0.8179326	0.8789734	1	0.7597975
ROW6	0.8579506	0.8645144	0.8171169	0.6997592	0.7597975	1

SD=

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0	0	0	0	0	0
ROW3	0	0	0	0	0	0
ROW4	0.0943731	0.079946	0.0851109	0	0	0
ROW5	0	0	0.118144	0.058291	0	0
ROW6	0.1338134	0	0.0133377	0	0.063508	0

T=

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0	0	0	0	0	0
ROW3	0	0	0	0	0	0
ROW4	8.292727	8.322465	5.981766	0	0	0
ROW5	0	0	20.8921	9.045271	0	0
ROW6	17.72702	0	14.95671	0	13.56036	0

inner R squares:

	COL1	COL2	COL3
ROW1	0.8141988	0.8075182	0.8856139

inner R

	COL1	COL2	COL3
ROW1	0.9023297	0.7237536	0.8028234

number of iterations:

4

coefficients alpha

0.7361505 0.7883528 0.8736951 0.8435238 0.8803476 0.8486105

APPENDIX VIII PLS OUTPUT FOR THE 2ND LARGEST GROUP OF RETAIL BANKS (ECSI Model)

The SAS System 11:02, Monday, March 28, 2000 1

OUTPUT INFORMATION:

outer coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0.4465862	0	0	0	0	0
ROW2	0.6437527	0	0	0	0	0
ROW3	0	0.3568373	0	0	0	0
ROW4	0	0.2818475	0	0	0	0
ROW5	0	0.4002176	0	0	0	0
ROW6	0	0	0.4226568	0	0	0
ROW7	0	0	0.3687576	0	0	0
ROW8	0	0	0.4522348	0	0	0
ROW9	0	0	0	0.6752216	0	0
ROW10	0	0	0	0.3450572	0	0
ROW11	0	0	0	0	0.8316981	0
ROW12	0	0	0	0	0.3311184	0
ROW13	0	0	0	0	0	0.6741553
ROW14	0	0	0	0	0	0.3687591

inner coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0	0	0	0	0	0
ROW3	0	0	0	0	0	0
ROW4	0.6670376	0.0898381	0.1509994	0	0	0
ROW5	0	0	0.1485372	0.739795	0	0
ROW6	0.2711223	0	0.0948775	0	0.5206701	0

Correlation matrix R[xi,xj]:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	1	0.7865968	0.7530116	0.827229	0.6887231	0.8272298
ROW2	0.7865968	1	0.6512022	0.817079	0.7116603	0.8637244
ROW3	0.7530116	0.6512022	1	0.688217	0.7179392	0.8570069
ROW4	0.827229	0.817079	0.688217	1	0.6677986	0.6879197
ROW5	0.6887231	0.7116603	0.7179392	0.6677986	1	0.7393039
ROW6	0.8272298	0.8637244	0.8570069	0.6879197	0.7393039	1

SD=

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0	0	0	0	0	0
ROW3	0	0	0	0	0	0
ROW4	0.2043787	0.318946	0.2851175	0	0	0
ROW5	0	0	0.168184	0.2182989	0	0
ROW6	0.1938132	0	0.4933376	0	0.1898501	0

T=

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0	0	0	0	0	0
ROW3	0	0	0	0	0	0
ROW4	19.09163	17.14614	7.541218	0	0	0
ROW5	0	0	8.053239	6.985271	0	0
ROW6	9.87773	0	10.43205	0	32.86917	0

inner R squares:

	COL1	COL2	COL3
ROW1	0.6992196	0.7038082	0.8033364

inner R

	COL1	COL2	COL3
ROW1	0.8928086	0.6981244	0.9103264

number of iterations:

4

coefficients alpha

0.7199155 0.7668281 0.7883751 0.8555238 0.762508 0.8427733

APPENDIX IX PLS OUTPUT FOR SMALLER/MEDIUM SIZED RETAIL BANKS (ECSI Model)

OUTPUT INFORMATION:

outer coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0.5424291	0	0	0	0	0
ROW2	0.5589744	0	0	0	0	0
ROW3	0	0.6303575	0	0	0	0
ROW4	0	0.2308719	0	0	0	0
ROW5	0	0.2470771	0	0	0	0
ROW6	0	0	0.4882058	0	0	0
ROW7	0	0	0.4241943	0	0	0
ROW8	0	0	0.3152338	0	0	0
ROW9	0	0	0	0.7032136	0	0
ROW10	0	0	0	0.3622358	0	0
ROW11	0	0	0	0	0.6958894	0
ROW12	0	0	0	0	0.4022147	0
ROW13	0	0	0	0	0	0.3928548
ROW14	0	0	0	0	0	0.2753237
ROW15	0	0	0	0	0	0.4172154

inner coefficients:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0	0	0	0	0	0
ROW3	0	0	0	0	0	0
ROW4	0.3597123	0.0600159	0.6290076	0	0	0
ROW5	0	0	0.0890747	0.831083	0	0
ROW6	0.1490288	0	0.1120667	0	0.6500762	0

Correlation matrix R[xi,xj]:

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	1	0.751269	0.7067985	0.642706	0.6761305	0.7730612
ROW2	0.751269	1	0.6877854	0.6713653	0.6991576	0.7645144
ROW3	0.7067985	0.6877854	1	0.6366049	0.6879326	0.8170798
ROW4	0.642706	0.6713653	0.6366049	1	0.6969734	0.6373532
ROW5	0.6761305	0.6991576	0.6879326	0.6969734	1	0.7267349
ROW6	0.7730612	0.7645144	0.8170798	0.6373532	0.7267349	1

SD=

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0	0	0	0	0	0
ROW3	0	0	0	0	0	0
ROW4	0.300763	0.288976	0.3077175	0	0	0
ROW5	0	0	0.342384	0.3212923	0	0
ROW6	0.2660039	0	0.6004476	0	0.3738064	0

T=

	COL1	COL2	COL3	COL4	COL5	COL6
ROW1	0	0	0	0	0	0
ROW2	0	0	0	0	0	0
ROW3	0	0	0	0	0	0
ROW4	11.09173	16.67614	7.880218	0	0	0
ROW5	0	0	10.05323	6.675271	0	0
ROW6	18.04323	0	6.978098	0	16.86956	0

inner R squares:

	COL1	COL2	COL3
ROW1	0.7703896	0.8766082	0.9200733

inner R

	COL1	COL2	COL3
ROW1	0.7512686	0.7980032	0.9313064

number of iterations:

4

coefficients alpha

0.7708155 0.7068281 0.8606951 0.8474238 0.7085675 0.8299769

APPENDIX X:EQS OUTPUT FOR ALL RETAIL BANKS

```
1
  EQS, A STRUCTURAL EQUATION PROGRAM              MULTIVARIATE SOFTWARE, INC.
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    PROGRAM CONTROL INFORMATION

     1  /TITLE
     2  combine
     3  /SPECIFICATIONS
     4   DATA='D:\MSECOMB.ESS';
     5   VARIABLES=  23; CASES=   47;
     6   METHODS=ML;
     7   MATRIX=RAW;
     8  /LABELS
     9  V1=SP; V2=MCQ; V3=COMU; V4=CCS; V5=CSS; V6=CCR; V7=PMQ; V8=TEAM;
    10  V9=IP; V10=PM; V11=IMA; V12=PREV; V13=CCI; V14=CC; V15=ER; V16=DCV;
    11  V17=BSV; V18=ELEAD; V19=CF; V20=PMQ; V21=MBF; V22=CICYCLE; V23=BE
    12  /EQUATIONS
13  V19 =  + *V18 + E19;
14  V20 =  + *V18 + E20;
    15  V21 =  + *V18 + E21;
    16  V22 =  + *V18 + E22;
    17  V23=  + *V19 + *V20 + *V21 + *V22 + E23;
    18  /VARIANCES
    19  V18 = *;
    20  E19 = *;
    21  E20 = *;
    22  E21 = *;
    23  E22 = *;
    25  E23 = *;
    26  /COVARIANCES
    27  /PRINT
    28   digit=3;
    29   linesize =80;
    30   fit=all;
    31  /END


       31 RECORDS OF INPUT MODEL FILE WERE READ
```

SAMPLE STATISTICS BASED ON COMPLETE CASES

UNIVARIATE STATISTICS

VARIABLE	ELEAD	CF	PMQ	MBF	CICYCLE
MEAN	7.6085	7.1723	6.3294	7.2394	6.3406
SKEWNESS (G1)	0.7981	0.1059	-0.0069	0.0821	0.0824
KURTOSIS (G2)	-0.7922	-1.1622	-1.3591	-1.6011	-1.3084
STANDARD DEV.	1.4086	1.2400	1.6468	1.6730	1.3890

VARIABLE	BE
MEAN	7.5170
SKEWNESS (G1)	0.4080
KURTOSIS (G2)	-1.2697
STANDARD DEV.	1.4451

MULTIVARIATE KURTOSIS

MARDIA'S COEFFICIENT (G2,P) = 8.6194
NORMALIZED ESTIMATE = 3.0155

ELLIPTICAL THEORY KURTOSIS ESTIMATES

MARDIA-BASED KAPPA = 0.1796 MEAN SCALED UNIVARIATE KURTOSIS = -0.4163

MARDIA-BASED KAPPA IS USED IN COMPUTATION. KAPPA= 0.1796

CASE NUMBERS WITH LARGEST CONTRIBUTION TO NORMALIZED MULTIVARIATE KURTOSIS:

CASE NUMBER	3	4	12	30	46
ESTIMATE	24.3272	63.4851	337.9852	36.9078	6.3082

EQS/EM386 Licensee: ln WONG YUK LAN ____Serial #: E5720771417991
COVARIANCE MATRIX TO BE ANALYZED: 6 VARIABLES (SELECTED FROM 23 VARIABLES)
BASED ON 47 CASES.

		ELEAD V 18	CFSAT V 19	PMQ V 20	MBF V 21	CICYCLE V 22
ELEAD	V 18	1.984				
CF	V 19	1.519	1.538			
PMQ	V 20	2.036	1.933	2.712		
MBF	V 21	2.036	1.846	2.560	2.799	
CICYCLE	V 22	1.730	1.289	1.728	1.723	1.929
BE	V 23	1.912	1.674	2.252	2.259	1.695

		BE V 23
BE	V 23	2.088

BENTLER-WEEKS STRUCTURAL REPRESENTATION:

NUMBER OF DEPENDENT VARIABLES = 5
DEPENDENT V'S : 19 20 21 22 23

NUMBER OF INDEPENDENT VARIABLES = 6
INDEPENDENT V'S : 18
INDEPENDENT E'S : 19 20 21 22 23

3RD STAGE OF COMPUTATION REQUIRED 2120 WORDS OF MEMORY.
PROGRAM ALLOCATED 100000 WORDS

DETERMINANT OF INPUT MATRIX IS 0.21241E-02

EQS/EM386 Licensee: ln WONG YUK LAN _____Serial #: E5720771417991
MAXIMUM LIKELIHOOD SOLUTION (NORMAL DISTRIBUTION THEORY)

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

RESIDUAL COVARIANCE MATRIX (S-SIGMA) :

		ELEAD V 18	CF V 19	PMQ V 20	MBF V 21	CICYCLE V 22
ELEAD	V 18	0.000				
CF	V 19	0.000	0.000			
PMQ	V 20	0.000	0.000	0.000		
MBF	V 21	0.000	0.005	0.000	0.000	
CICYCLE	V 22	0.000	-0.035	-0.047	-0.052	0.000
BUEXCEL	V 23	0.000	-0.004	-0.006	-0.006	-0.028

		BE V 23
BE	V 23	-0.007

AVERAGE ABSOLUTE COVARIANCE RESIDUALS = 0.0010
AVERAGE OFF-DIAGONAL ABSOLUTE COVARIANCE RESIDUALS = 0.0012

STANDARDIZED RESIDUAL MATRIX:

		ELEAD V 18	CF V19	PMQ V20	MBF V21	CICYCLE V 22
ELEAD	V 18	0.000				
CF	V 19	0.000	0.000			
PMQ	V 20	0.000	0.000	0.000		
MBF	V 21	0.000	0.002	0.000	0.000	
CICYCLE	V 22	0.000	-0.020	-0.021	-0.023	0.000
BUEXCEL	V 23	0.000	-0.002	-0.003	-0.002	-0.014

		BE V 23
BE	V 23	-0.003

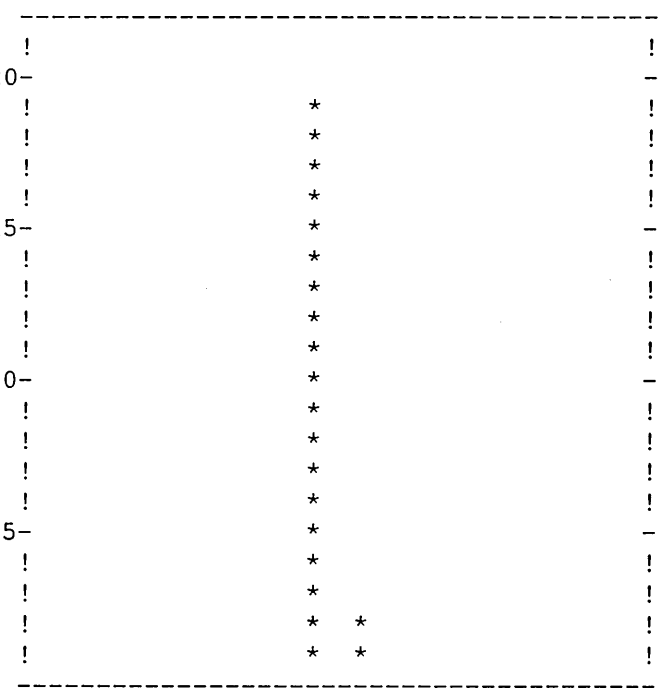
AVERAGE ABSOLUTE STANDARDIZED RESIDUALS = 0.0013
AVERAGE OFF-DIAGONAL ABSOLUTE STANDARDIZED RESIDUALS = 0.0018

MAXIMUM LIKELIHOOD SOLUTION (NORMAL DISTRIBUTION THEORY)

LARGEST STANDARDIZED RESIDUALS:

V 22,V 21	V 22,V 20	V 22,V 19	V 23,V 22	V 23,V 23
-0.023	-0.021	-0.020	-0.014	0.000
V 23,V20	V 23,V 21	V 21,V 19	V 23,V 19	V 21,V 20
-0.003	-0.002	0.002	-0.002	0.000
V 22,V 22	V 23,V 18	V 18,V 18	V 21,V 21	V 21,V 18
0.000	0.000	0.000	0.000	0.000
V 20,V 20	V 20,V 19	V 20,V 18	V 19,V 19	V 19,V 18
0.000	0.000	0.000	0.000	0.000

DISTRIBUTION OF STANDARDIZED RESIDUALS



	RANGE			FREQ	PERCENT
1	-0.5	-	--	0	0.00%
2	-0.4	-	-0.5	0	0.00%
3	-0.3	-	-0.4	0	0.00%
4	-0.2	-	-0.3	0	0.00%
5	-0.1	-	-0.2	0	0.00%
6	0.0	-	-0.1	19	90.48%
7	0.1	-	0.0	2	9.52%
8	0.2	-	0.1	0	0.00%
9	0.3	-	0.2	0	0.00%
A	0.4	-	0.3	0	0.00%
B	0.5	-	0.4	0	0.00%
C	++	-	0.5	0	0.00%
	TOTAL			21	100.00%

MAXIMUM LIKELIHOOD SOLUTION (NORMAL DISTRIBUTION THEORY)

GOODNESS OF FIT SUMMARY

INDEPENDENCE MODEL CHI-SQUARE = 491.752 ON 15 DEGREES OF FREEDOM

INDEPENDENCE AIC = 461.75224 INDEPENDENCE CAIC = 419.00003
MODEL AIC = -7.47229 MODEL CAIC = -18.87288

CHI-SQUARE = 0.528 BASED ON 4 DEGREES OF FREEDOM
PROBABILITY VALUE FOR THE CHI-SQUARE STATISTIC IS 0.97075
THE NORMAL THEORY RLS CHI-SQUARE FOR THIS ML SOLUTION IS 0.527.

BENTLER-BONETT NORMED	FIT INDEX=	0.999
BENTLER-BONETT NONNORMED	FIT INDEX=	1.027
COMPARATIVE FIT INDEX (CFI)	=	1.000
BOLLEN (IFI)	FIT INDEX=	1.007
McDonald (MFI)	FIT INDEX=	1.038
LISREL GFI	FIT INDEX=	0.996
LISREL AGFI	FIT INDEX=	0.980
ROOT MEAN SQUARED RESIDUAL (RMR)	=	0.018
STANDARDIZED RMR	=	0.009
ROOT MEAN SQ. ERROR OF APP.(RMSEA)	=	0.003

ITERATIVE SUMMARY

ITERATION	PARAMETER ABS CHANGE	ALPHA	FUNCTION
1	2.975541	1.00000	8.63316
2	1.754534	1.00000	6.07453
3	2.377996	1.00000	4.29326
4	0.587531	1.00000	3.07639
5	0.349129	1.00000	0.91472
6	0.030312	1.00000	0.01178
7	0.000826	1.00000	0.01147

MAXIMUM LIKELIHOOD SOLUTION (NORMAL DISTRIBUTION THEORY)

MEASUREMENT EQUATIONS WITH STANDARD ERRORS AND TEST STATISTICS

```
CF       =V19 =    .869*V18    + 1.000 E19
                    .064
                  11.929

PMQ      =V20 =    .752*V18    +  1.000 E20
                    .020
                   8.344

MBF      =V21 =    .884*V18    + 1.000 E21
                    .011
                  12.850

CICYCLE =V22 =    .744*V18    + 1.000 E22
                    .068
                   6.797

BE       =V23 =    .203*V19   +  .260*V20   +  .257*V21   +  .198*V22
                    .07          .058          .069          .064
                   2.226        2.097         3.306         1.962

                + 1.000 E23
```

MAXIMUM LIKELIHOOD SOLUTION (NORMAL DISTRIBUTION THEORY)

VARIANCES OF INDEPENDENT VARIABLES

	V		F	
V18 -ELEAD	.984	*I		I
	.414	I		I
	4.796	I		I
		I		I

MAXIMUM LIKELIHOOD SOLUTION (NORMAL DISTRIBUTION THEORY)

VARIANCES OF INDEPENDENT VARIABLES

	E	D
E19 -CFSAT	.376*I	I
	.078 I	I
	4.796 I	I
	I	I
E20 - PMQ	.248*I	I
	.052 I	I
	4.796 I	I
	I	I
E21 -MBF	.354*I	I
	.074 I	I
	4.796 I	I
	I	I
E22 -CICYCLE	.420*I	I
	.088 I	I
	4.796 I	I
	I	I
E23 -BE	.978*I	I
	.016 I	I
	4.796 I	I
	I	I

MAXIMUM LIKELIHOOD SOLUTION (NORMAL DISTRIBUTION THEORY)

STANDARDIZED SOLUTION: R-SQUARED

```
CF      =V19  =   .869*V18  + .494 E19                                  .886
PMQ     =V20  =   .752*V18  + .302 E20                                  .679
MBF     =V21  =   .884*V18  + .356 E21                                  .773
CICYCLE =V22  =   .744*V18  + .467 E22                                  .864
BE      =V23  =   .203*V19  + .260*V20   + .257*V21   + .198*V22
                + .193 E23                                              .963
```

E N D O F M E T H O D

1

Execution begins at 22:23:53.09
Execution ends at 22:23:53.26
Elapsed time = 0.17 seconds

APPENDIX XI: EQS OUTPUT FOR THE HONG KONG RETAIL BANKING SECTOR

```
1
  EQS, A STRUCTURAL EQUATION PROGRAM              MULTIVARIATE SOFTWARE, INC.
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    PROGRAM CONTROL INFORMATION

     1  /TITLE
     2  ECSIMODEL
     3  /SPECIFICATIONS
     4   DATA='D:\MCSFIN1.ESS';
     5   VARIABLES=  6; CASES=  450;
     6   METHODS=ML;
     7   MATRIX=RAW;
     8  /LABELS
     9  V1= IMAGE; V2=SEXPERIE; V3=PQUALITY; V4=PVALUE; V5=OCUSSAT; V6=LOYALTY;
    10 /EQUATIONS
    11 V4 =  + *V1 + *V2 + *V3 + E4;
    12  V5 =  + *V3 + *V4 + E5;
    13  V6 =  + *V1 + *V3 + *V5 + E6;
    14  /VARIANCES
    15  V1 = *;
    16  V2 = *;
    17 V3 = *;
    18 E2 = *;
    19 E3 = *;
    20  E4 = *;
    21  E5 = *;
    22  E6 = *;
    23  /COVARIANCES
    24  /PRINT
    25   digit=3;
    26   linesize =80;
    27   fit=all;
    28  /END


       28 RECORDS OF INPUT MODEL FILE WERE READ


    DATA IS READ FROM D:\MCSFIN1.ESS
    THERE ARE   6 VARIABLES AND   450 CASES
    IT IS A RAW DATA ESS FILE
```

SAMPLE STATISTICS BASED ON COMPLETE CASES

UNIVARIATE STATISTICS

VARIABLE	IMAGE	SEXPERIE	PQUALITY	PVALUE	OCUSSAT	LOYALTY
MEAN	7.4647	6.9819	7.2773	6.7348	7.1646	7.1649
SKEWNESS (G1)	-0.6711	-0.5320	-0.2836	-0.5825	-0.2972	-0.4678
KURTOSIS (G2)	-0.1423	-0.1043	0.0201	0.4691	-0.0761	0.4884
STANDARD DEV.	1.3451	1.2672	1.2611	1.0214	1.2076	1.2410

MULTIVARIATE KURTOSIS

MARDIA'S COEFFICIENT (G2,P) = 8.7069
NORMALIZED ESTIMATE = 10.7523

ELLIPTICAL THEORY KURTOSIS ESTIMATES

MARDIA-BASED KAPPA = 0.2488 MEAN SCALED UNIVARIATE KURTOSIS = 0.0531

MARDIA-BASED KAPPA IS USED IN COMPUTATION. KAPPA= 0.2488

CASE NUMBERS WITH LARGEST CONTRIBUTION TO NORMALIZED MULTIVARIATE KURTOSIS:

CASE NUMBER	61	91	176	206	320
ESTIMATE	1404.2669	700.5780	1404.2669	700.5780	700.5780

COVARIANCE MATRIX TO BE ANALYZED: 6 VARIABLES (SELECTED FROM 6 VARIABLES)
BASED ON 450 CASES.

		IMAGE V1	SEXPERIE V 2	PQUALITY V 3	PVALUE V 4	OCUSSAT V 5	LOYALTY V 6
IMAGE	V 1	1.320					
SEXPERIE	V 2	1.013	1.606				
PQUALITY	V 3	1.321	1.395	1.590			
PVALUE	V 4	1.450	0.980	1.110	1.043		
OCUSSAT	V 5	1.602	1.333	1.464	1.087	1.458	
LOYALTY	V 6	1.721	1.334	1.477	1.113	1.464	1.540

BENTLER-WEEKS STRUCTURAL REPRESENTATION:

NUMBER OF DEPENDENT VARIABLES = 3
DEPENDENT V'S : 4 5 6

NUMBER OF INDEPENDENT VARIABLES = 3
INDEPENDENT V'S : 1 2 3
INDEPENDENT E'S : 4 5 6

3RD STAGE OF COMPUTATION REQUIRED 1456 WORDS OF MEMORY.
PROGRAM ALLOCATED 100000 WORDS

DETERMINANT OF INPUT MATRIX IS 0.97646E-03

TITLE: ECSIMODEL
03/22/00 PAGE : 3
EQS/EM386 Licensee: ln WONG YUK LAN □□□□□□□□Serial #: E5720771417991
MAXIMUM LIKELIHOOD SOLUTION (NORMAL DISTRIBUTION THEORY)

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

RESIDUAL COVARIANCE MATRIX (S-SIGMA) :

		IMAGE V1	SEXPERIE V 2	PQUALITY V 3	PVALUE V 4	OCUSSAT V 5	LOYALTY V 6
IMAGE	V 1	0.000					
SEXPERIE	V 2	0.001	0.000				
PQUALITY	V 3	0.000	0.000	0.000			
PVALUE	V 4	0.002	0.006	0.000	0.000		
OCUSSAT	V 5	0.003	0.001	0.000	0.001	0.000	
LOYALTY	V 6	0.001	-0.002	0.006	0.001	0.000	0.000

AVERAGE ABSOLUTE COVARIANCE RESIDUALS = 0.0002
AVERAGE OFF-DIAGONAL ABSOLUTE COVARIANCE RESIDUALS = 0.0007

STANDARDIZED RESIDUAL MATRIX:

		IMAGE V1	SEXPERIE V 2	PQUALITY V 3	PVALUE V 4	OCUSSAT V 5	LOYALTY V 6
IMAGE	V 1	0.000					
SEXPERIE	V 2	0.002	0.000				
PQUALITY	V 3	0.000	0.000	0.000			
PVALUE	V 4	0.000	0.005	0.000	0.000		
OCUSSAT	V 5	0.000	0.001	0.000	0.001	0.000	
LOYALTY	V 6	0.001	-0.001	0.004	0.001	0.000	0.000

AVERAGE ABSOLUTE STANDARDIZED RESIDUALS = 0.0008
AVERAGE OFF-DIAGONAL ABSOLUTE STANDARDIZED RESIDUALS = 0.0012

TITLE: ECSIMODEL
03/22/00 PAGE : 4

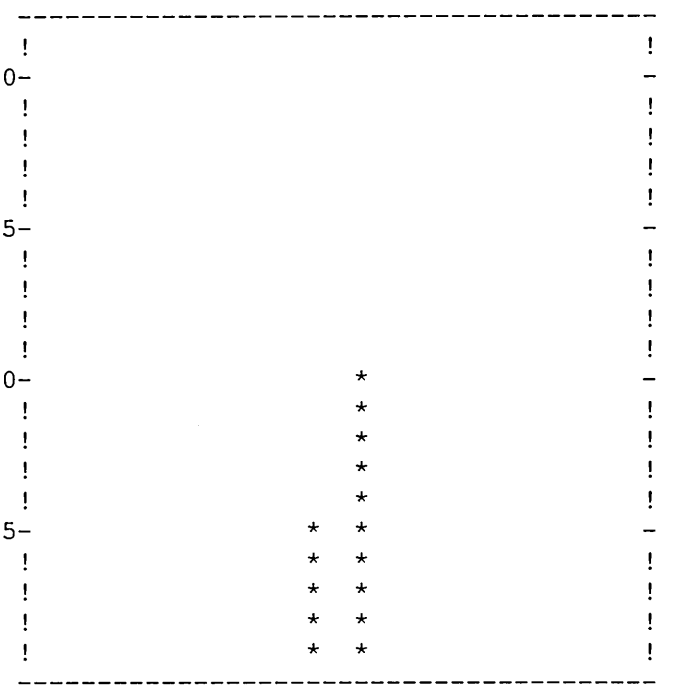
EQS/EM386 Licensee: ln WONG YUK LAN □□□□□□□□Serial #: E5720771417991
MAXIMUM LIKELIHOOD SOLUTION (NORMAL DISTRIBUTION THEORY)

LARGEST STANDARDIZED RESIDUALS:

V 3,V 1	V 5,V 2	V 5,V 1	V 4,V 1	V 4,V 3
0.005	0.004	-0.001	0.001	0.001
V 5,V 3	V 5,V 5	V 5,V 4	V 4,V 4	V 3,V 2
0.001	0.000	0.000	0.000	0.000
V 4,V 2	V 3,V 3	V 2,V 2	V 2,V 1	V 1,V 1
0.000	0.000	0.000	0.000	0.000
V 6,V 6	V 6,V 1	V 6,V 2	V 6,V 3	V 6,V 4
0.000	0.000	0.000	0.000	0.000

V 6,V 5
0.000

DISTRIBUTION OF STANDARDIZED RESIDUALS



	RANGE			FREQ	PERCENT
1	-0.5	-	--	0	0.00%
2	-0.4	-	-0.5	0	0.00%
3	-0.3	-	-0.4	0	0.00%
4	-0.2	-	-0.3	0	0.00%
5	-0.1	-	-0.2	0	0.00%
6	0.0	-	-0.1	5	33.33%
7	0.1	-	0.0	10	66.67%
8	0.2	-	0.1	0	0.00%
9	0.3	-	0.2	0	0.00%
A	0.4	-	0.3	0	0.00%
B	0.5	-	0.4	0	0.00%
C	++	-	0.5	0	0.00%
	TOTAL			15	100.00%

EACH "*" REPRESENTS 1 RESIDUALS

TITLE: rcsfab6
03/22/00 PAGE : 5
EQS/EM386 Licensee: ln WONG YUK LAN □□□Serial #: E5720771417991
MAXIMUM LIKELIHOOD SOLUTION (NORMAL DISTRIBUTION THEORY)

GOODNESS OF FIT SUMMARY

INDEPENDENCE MODEL CHI-SQUARE = 3714.939 ON 10 DEGREES OF FREEDOM

INDEPENDENCE AIC = 3694.93897 INDEPENDENCE CAIC = 3644.37113
MODEL AIC = -3.45741 MODEL CAIC = -18.62776

CHI-SQUARE = 2.543 BASED ON 3 DEGREES OF FREEDOM
PROBABILITY VALUE FOR THE CHI-SQUARE STATISTIC IS 0.7764
THE NORMAL THEORY RLS CHI-SQUARE FOR THIS ML SOLUTION IS 2.560.

BENTLER-BONETT NORMED FIT INDEX= 0.999
BENTLER-BONETT NONNORMED FIT INDEX= 1.000
COMPARATIVE FIT INDEX (CFI) = 1.000
BOLLEN (IFI) FIT INDEX= 1.000
McDonald (MFI) FIT INDEX= 1.001
LISREL GFI FIT INDEX= 0.998
LISREL AGFI FIT INDEX= 0.988
ROOT MEAN SQUARED RESIDUAL (RMR) = 0.024

STANDARDIZED RMR = 0.012
ROOT MEAN SQ. ERROR OF APP.(RMSEA)= 0.008

ITERATIVE SUMMARY

ITERATION	PARAMETER ABS CHANGE	ALPHA	FUNCTION
1	0.822782	1.00000	5.38603
2	0.588955	1.00000	2.35644
3	0.128034	1.00000	0.58395
4	0.055086	1.00000	0.05684
5	0.010268	1.00000	0.00604
6	0.000127	1.00000	0.00597

TITLE: ECSIMODEL
03/22/00 PAGE : 6
EQS/EM386 Licensee: ln WONG YUK LAN □□□□□Serial #: E5720771417991
MAXIMUM LIKELIHOOD SOLUTION (NORMAL DISTRIBUTION THEORY)

MEASUREMENT EQUATIONS WITH STANDARD ERRORS AND TEST STATISTICS

```
PVALUE  =V4  =    .571*V1    + .106*V2     + .509*V3     + 1.000 E4
                  .020         .089          .082
                35.088         6.92          8.23

OCUSSAT =V5  =    .866*V4    +  .149*V3    + 1.000 E5
                  .031         .028          .023
                21.001         8.610         5.357

LOYALTY =V6  =    .509*V5    +  .134*V3    +  .303*V1    + 1.000 E6
                  .026         .022          .043
                 3.564        42.464        22.17
```

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MAXIMUM LIKELIHOOD SOLUTION (NORMAL DISTRIBUTION THEORY)

VARIANCES OF INDEPENDENT VARIABLES

```
                        V                              F
                       ----                           ----
V1  -IMAGE              .069*I
                        .021 I                              I
                      14.595 I                              I
```

```
                                  I                              I


 V2   -SEXPERIE                .206*I                              I
                               .110 I                              I
                             14.595 I                              I
                                    I                              I




V3   -PQUALITY                 .019*I
                               .045 I                              I
                             14.595 I                              I
                                    I                              I

  TITLE:    ECSIMODEL
  03/22/00        PAGE :   8
  EQS/EM386 Licensee: ln WONG YUK LAN □□□□Serial #: E5720771417991
  MAXIMUM LIKELIHOOD SOLUTION (NORMAL DISTRIBUTION THEORY)

  VARIANCES OF INDEPENDENT VARIABLES
  ----------------------------------

                                    E                              D
                                   ---                            ---

 E4   -PVALUE                  .268*I                              I
                               .018 I                              I
                             14.595 I                              I
                                    I                              I
 E5   -OCUSSAT                 .089*I                              I
                               .006 I                              I
                             14.595 I                              I
                                    I                              I
 E6   -LOYALTY                 .067*I                              I
                               .005 I                              I
                             14.595 I                              I
                                    I                              I
```

EQS/EM386 Licensee: ln WONG YUK LAN □□□□Serial #: E5720771417991
MAXIMUM LIKELIHOOD SOLUTION (NORMAL DISTRIBUTION THEORY)

STANDARDIZED SOLUTION: R-SQUARED

PVALUE =V4	=	.570*V1	+ .102*V2 + .509*V3 + .507 E4		.829
OCUSSAT =V5	=	.873*V4	+ .147*V3 + .248 E5		.749
LOYALTY =V6	=	.506*V5	+ .297*V1 + .126*V3 + .209 E6		.991

E N D O F M E T H O D

1

Execution begins at 22:42:10.17
Execution ends at 22:42:10.45
Elapsed time = 0.28 seconds

APPENDIX XII

BUSINESS EXCELLENCE SURVEY 1999 IN RETAIL BANKING SECTOR

PURPOSE

The purpose of this survey is to determine your perceptions of the extent to which your bank practices TQM critical success factors and their effect on organizational excellence. The measurement items in this survey are by no means an attempt to assess individual banks but to model and measure relationship between critical success factors and service excellence. It is aimed to establish an industry-wide measure of critical success factors of retailing banks and service excellence.

Thank you for your valuable contribution to the success of this endeavour.

Instruction
To take this measure, we need you to answer a series of questions according to how you feel and how you rate the extent to which your bank practices.

Section 1: Critical Success Factors and Business Excellence

I. Leadership (ELEAD):
Strategic planning(SP)

	Very Small 1	2	3	4	5	6	7	8	9	Very Large 10
Senior management sets comprehensive quality plans and goals.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Senior management have a strategic quality planning process for detailing how the bank can enhance performance though quality.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Senior management analyses and determines our core competencies and prioritizes quality improvement activities.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

II. Leadership (ELEAD):
Management Commitment to quality (MCQ)

	Very Small									Very Large
	1	2	3	4	5	6	7	8	9	10
Our senior management considers that quality										

	1	2	3	4	5	6	7	8	9	10
can improve business performance	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Our senior management participates and supports in quality improvement process.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Our senior management sets goals for long term quality improvement.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

III. Leadership (ELEAD):

Communication (COMU)

	Very Small 1	2	3	4	5	6	7	8	9	Very Large 10
Senior management uses methods to show their quality commitment.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Senior management opens channels of communication & rewards the champions of quality.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

IV. Customer Focus:
Commitment to Customer Satisfaction (CCS)

	Very Small 1	2	3	4	5	6	7	8	9	Very Large 10
Bank consistently offers products & services that create customer value.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank engages in market research activities to determine customer needs.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank's practices & procedures consistently focus on delivering customer satisfaction.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

V. Customer Focus: Commitment to Staff Satisfaction: (CSS)

	Very Small 1	2	3	4	5	6	7	8	9	Very Large 10
Our bank is a good place to work.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank understand staff needs through numerous channels.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank commits to support & satisfy our needs.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

VI. Customer Focus: Commitment to customer Relations (CCR)

	Very Small 1	2	3	4	5	6	7	8	9	Very Large 10
Bank performs customer segmentations based on customer needs rather than products.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank eager to build life-long relationships with customers.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

VII. People-based Management: People Make Quality (PMQ)

	Very Small 1	2	3	4	5	6	7	8	9	Very Large 10
Bank aligns process management teams to improve service quality.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank provides resources for staff to improve effectiveness and efficiencies of service.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

VIII. People-based Management: Teamwork (TEAM)

	Very Small 1	2	3	4	5	6	7	8	9	Very Large 10
Bank uses action teams to solve local problems.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank has a flexible structure for affective staff communication & accomplishments of quality objectives.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

IX. Management by Fact (MBF): Integrated process (IP)

	Very Small 1	2	3	4	5	6	7	8	9	Very Large 10
Bank prioritizes critical process for improvement in order of importance and resources commitments.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank has systems of designing innovative process, products and services.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Our bank can be visualized as a web of process linked together as a system.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

X. Management by Fact (MBF): Process Management (PM)

	Very Small 1	2	3	4	5	6	7	8	9	Very Large 10
Bank has appropriate methods for measuring quality of the processes.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank has performance measurements to improve its products and services.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

XI. Management by Fact (MBF): Information Management & Analysis(IMA)

	Very Small 1	2	3	4	5	6	7	8	9	Very Large 10
Bank collects a wide range of complete & accurate data for decision making.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank facilitates learning & sharing of information to achieve quality improvements.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

XII. Continuous Improvement: Prevention (PREV)

	Very Small 1	2	3	4	5	6	7	8	9	Very Large 10
Bank has methods to prevent problems from arising.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Processes are designed to prevent potential problems.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank has active customer and employee suggestion schemes.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

XIII. Continuous Improvement: Culture of Continuous Improvement (CCI)

	Very Small									Very Large
	1	2	3	4	5	6	7	8	9	10
Bank analyses trends in customer satisfaction for quality improvements.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank has regular review and conscious reinforcement of services standards.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank reward and license right sales and service behaviours.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

XIV. Business Excellence (BE): Deliver Customer Value (DCV)

	Very Small									Very Large
	1	2	3	4	5	6	7	8	9	10
Customers are satisfied with their relationships with us.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Customers are satisfied with our products and services.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank is able to create distinctive resource that will have great value to our customers whenever and whoever they may be (e.g. online banking & internet presence).	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

XV. Business Excellence (BE): Build Stockholders Value (BSV)

	Very Small									Very Large
	1	2	3	4	5	6	7	8	9	10
Bank has strong financial performance (e.g. ROE, CIR, LDR).	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank has comparable performance with world market leaders.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

XVI. Business Excellence (BE): Corporate Citizenship (CC)

	Very Small									Very Large
	1	2	3	4	5	6	7	8	9	10
Bank maintains prudence & high credibility (e.g. strong credit ratings).	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank leads new trends & development in retail banking e.g. electronic distribution	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Bank participates in community care & development activities (e.g. develop expertise of local staff, voluntary services).	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

XVII. Business Excellence (BE): Employee Relations (ER)

	Very Small 1	2	3	4	5	6	7	8	9	Very Large 10
Bank maintains good relations with staff and staff union	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Bank has many long-service caliber staff.	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Section 2: Background Information (The following items are for statistical information only)

1. What is your bank's name?

☐ Chase Manhattan Bank
☐ Citibank
☐ Standard Chartered Bank
☐ HongKongBank (HSBC)
☐ Hang Seng Bank
☐ Wing Lung Bank
☐ Bank of East Asia
☐ Bank of China Group (BOC)
☐ Local Chinese Bank
☐ Other Banks

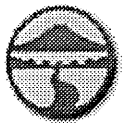
2. About you as a contact person: (You can also simply attach your business card here)

a. What is your name? _____
b. What is your job title? _____
c. What is your office address? _____
d. What is your office phone number? _____
e. What is your fax number? _____
f. What is your e-mail address? _____

3. How long have you been working with this bank?

_____

END OF QUESTIONNAIRE. THANK FOR YOUR VALUABLE INFORMATION.



Customer Satisfaction Index

Dear BANK Customer,

Banking activities are now an integral part of most of the people life. Every BANK strives to provide their customer with the ultimate quality in efficiency, reliability and service. We randomly select a number of customers and invite them to let us know their feelings about the bank/branch services. As one of them we would very much appreciate your co-operation in completing this questionnaire.

Section 1: Choice of Banks

Q1) Which of the following is your primary bank?

- ☐ Chase Manhattan Bank
- ☐ Citibank
- ☐ Standard Chartered Bank
- ☐ Hong Kong Bank (HSBC)
- ☐ Hang Seng Bank
- ☐ Wing Lung Bank
- ☐ Bank of East Asia
- ☐ Bank of China Group (BOC)
- ☐ Local Chinese Bank
- ☐ Other Banks

Q2) Please rank the most important reason for using this bank's service:

- ☐ Professional services
- ☐ Comprehensive range of services
- ☐ Friendliness
- ☐ Quality of services
- ☐ Services fees (Attractive interest rates & charges)
- ☐ Convenience (Location & Opening Hours)
- ☐ Ability to obtain loans
- ☐ Others (Please Specify: _____)

The following sections relate to your feelings about the bank you mentioned in question 1

Section 2: Retail Banking Products & Services

Q3) Thinking of your overall experience with this bank, all things considered, how would you describe your current experience with this bank's services? Please tick a box from the scale below which best describes how you feel.

1	2	3	4	5	6	7	8	9	10
Very Disappointing									Outstanding
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q4) From your past experience with the Bank, how often things would go wrong?

1	2	3	4	5	6	7	8	9	10
Very Often									Never
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Q5) In relation to the services that you receive from this bank, to what extent have they met your expectations?

1	2	3	4	5	6	7	8	9	10
Fall Short of Expectations									Exceed Expectations
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Section 3: Current Services Performance

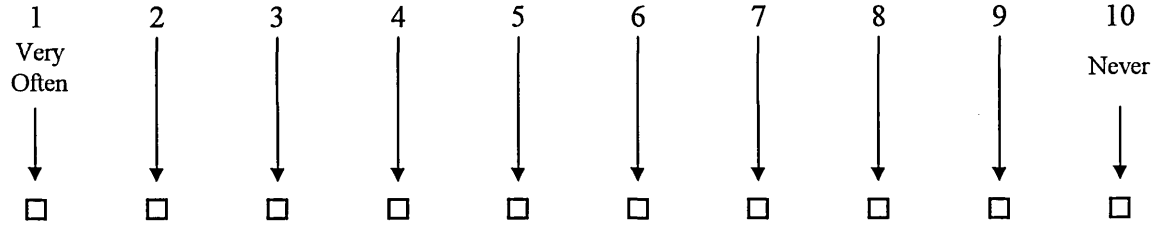
Q6) How would you rate the charges you or your company has paid, in relation to the level of service that you have received from this bank?

1	2	3	4	5	6	7	8	9	10
Very high Charges given Performance									Very low Charges given performance
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

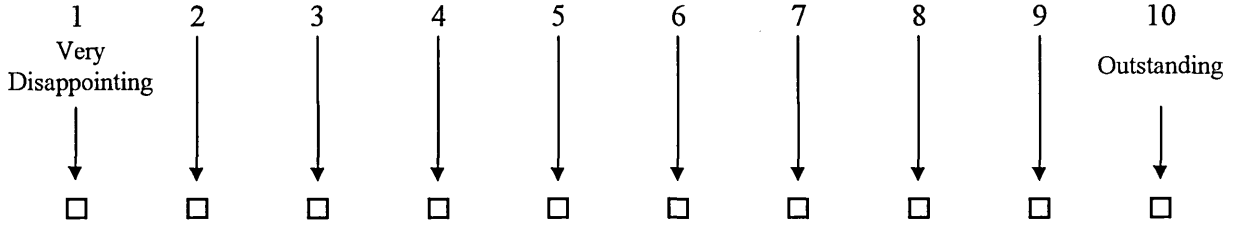
Q7) Please describe your feelings about each of the items listed below with which you have had experience with this bank. Please tick a box under the number out of ten that you rate each service as providing.

	1 Very disappointing	2	3	4	5	6	7	8	9	10 Outstanding
A) Overall Staff Knowledge and Trustworthiness	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
B) Overall Staff Courtesy	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
C) Overall Staff Responsiveness	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
D) Teller Services	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
E) Non-teller staff (branch manager, customer service staff and platform staff)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
F) Automated Teller Machines (All other equipment, facilities and materials associated with the services)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
G) General Services	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
H) Accuracy in handling transactions	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
I) Flexibility of rules and transactions procedures	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
J) Wait in teller lines	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
K) Value/Performance of Overall banking service	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

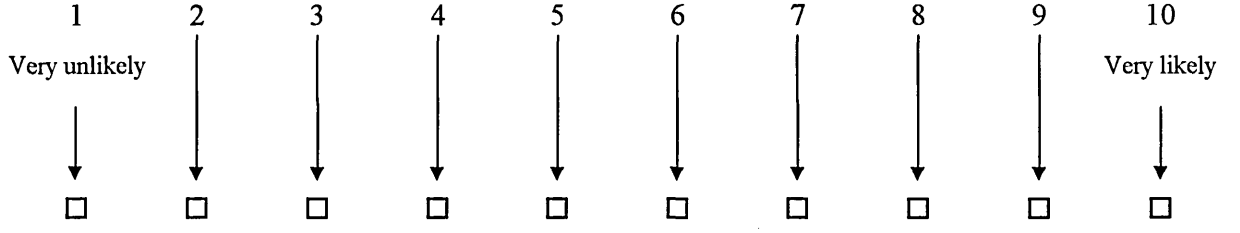
Q8) For the services you used, how often things have gone wrong?



Q9) Thinking of your most recent previous visits in the last 3 months, please tick the box which best describes your overall experience with the bank services.



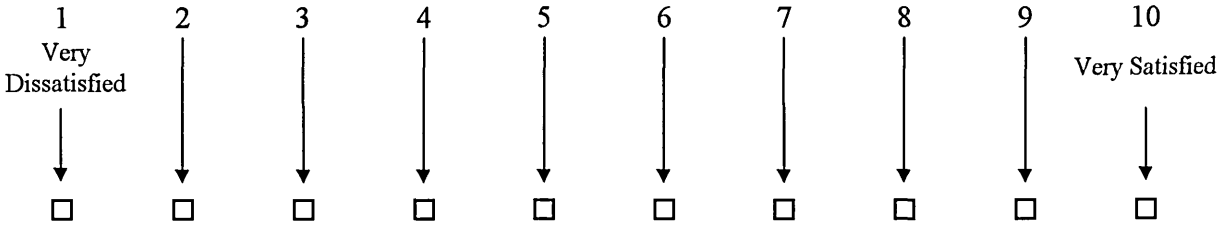
Q10) If other Bank charges for a low price of major services you are using, how likely is that you will continue to use the services of this bank?



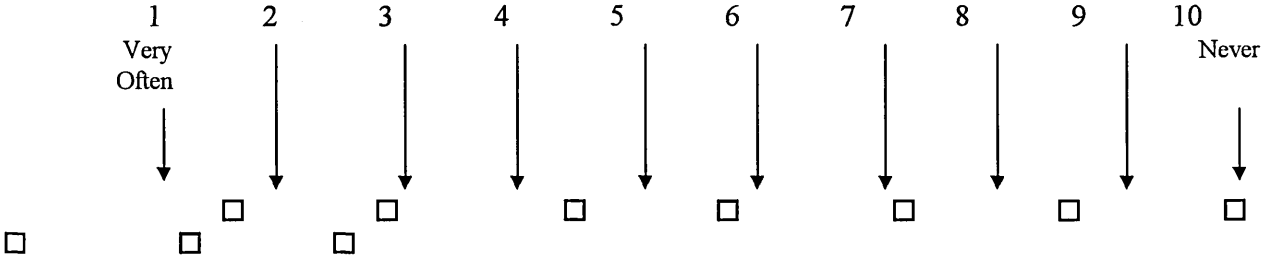
Q11) How long have you been using the services of this BANK?

- ☐ Less than a year
- ☐ 1-3 years
- ☐ 4-6 years
- ☐ More than 7 years
- ☐ Others (Please specify _____)

Q12) In general, how satisfied are you with the services of this bank?



Q13) Have you ever been less than satisfied with this bank's service than expected?



Q14) Broadly, what were these issues about?

_____

_____

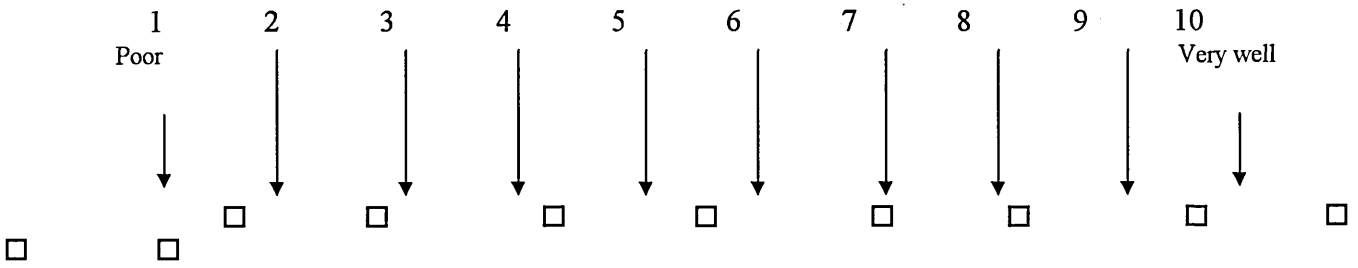
_____

_____

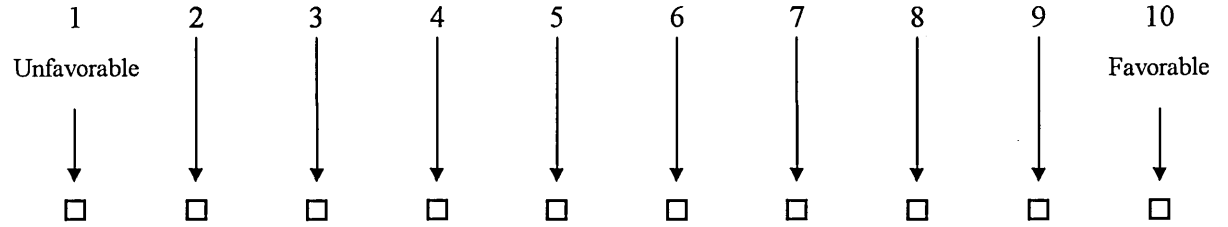
Q15) Did you report the problem to this bank staff?

☐ YES
☐ NO

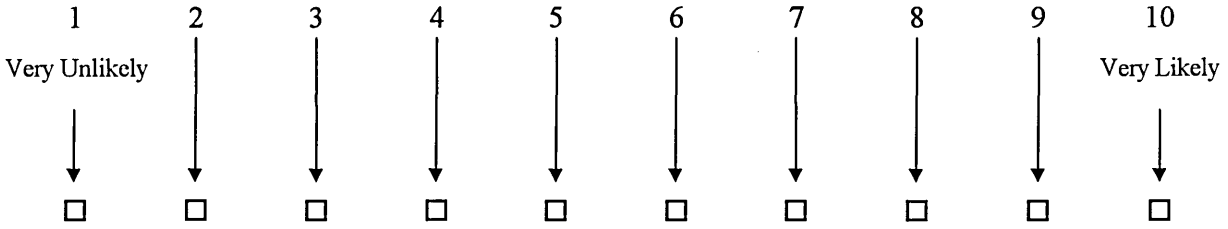
Q16) How well this bank project an image that you would wish yourself to be associated with?



Q17) If you can imagine an ideal BANK, how well do you think this bank compare with this ideal?



Q18) Whenever you think of anything to do with financial services, this bank will be of your first choice.



Q19) Are there any other areas or issues connected with this bank that you would like to make further comments about?

Section 3: Customer background (Confidential)

Q20) What age group are you in?

- ☐ Age under 20
- ☐ Age 21-24
- ☐ Age 25-30
- ☐ Age 31-35
- ☐ Age 36-40
- ☐ Age 41-45
- ☐ Age 46-50
- ☐ Age 51-55
- ☐ Age 56-60
- ☐ Over 60 years old

Q21) Sex

- ☐ M
- ☐ F

Q22) Account Category

- ☐ Current Account
- ☐ Time Deposit Account
- ☐ Credit Card
- ☐ Savings Account
- ☐ Personal Loan
- ☐ Investment in Stocks
- ☐ Others (please specify _____)

Q23) Monthly Income (HK$)

- ☐ 1. Below $ 5,000
- ☐ 2. $ 5,000 - $ 9,999
- ☐ 3. $10,000 - $ 14,999
- ☐ 4. $ 15,000 - $ 19,999
- ☐ 5. $ 20,000 - $ 24,999
- ☐ 6. $ 25,000 - $ 29,999
- ☐ 7. $ 30,000 - $ 34,999
- ☐ 8. $ 35,000 - $ 39,999
- ☐ 9. Below $ 50,000
- ☐ 10. Below $ 100,000

Thank your for your assistance.