

AN ASSESSMENT OF TOTAL QUALITY
MANAGEMENT IN THE FINANCIAL SERVICES
OF UNITED KINGDOM AND BRAZIL :
A Framework for Implementation is Proposed
Employing Quality Function Deployment

by

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Abstract

There is currently worldwide interest in the implementation and effectiveness of the quality management movement in financial service organisations. Especially the effect Total Quality Management (TQM) has upon transforming an industry which is in a state of considerable structural change, and in which the competition is intense.

The first stage of the research involves the assessment of the status of TQM in banking organisations in the UK and Brazilian financial services sector. A questionnaire was used to investigate the perception of branch managers concerning the implementation and major issues of TQM within the financial services industry in the UK and Brazil. Structured interviews with senior managers in charge of planning and developing the quality initiatives in the organisations surveyed were performed to investigate the strategies and models of the TQM implementation.

The collection of data in this study was conducted in two parts:

- (1) In 1995 the fieldwork in the UK was carried out, this involved a survey questionnaire with branch managers of fifteen High Street financial service organisations and a set of interviews within two of the organisations surveyed.
- (2) In 1996 the Brazilian fieldwork was carried out. This involved the survey questionnaire with branch managers of ten High Street financial service organisations and a set of interviews within seven of those organisations surveyed.

The analysis of the data obtained enable the identification of the current approaches to the implementation of TQM; the effects of TQM in the financial services sector in the UK and Brazil; and the current strategies applied and conceptual methods used for implementing TQM in those organisations.

The second stage of the research presents the development of a TQM implementation framework employing the Quality Function Deployment (QFD) methodology. This has been designed to assist in the selection and formulation of the most comprehensive TQM implementation approach for a banking organisations in both countries. The framework was designed as a proposal document to be used by quality practitioners, top managers of organisations and quality management researchers who are implementing TQM.

AN ASSESSMENT OF TOTAL QUALITY MANAGEMENT IN THE FINANCIAL
SERVICES OF UNITED KINGDOM AND BRAZIL: A FRAMEWORK FOR
IMPLEMENTATION IS PROPOSED EMPLOYING QUALITY FUNCTION
DEPLOYMENT

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Chapter 1: Introduction

1.1 - Introduction

As the world economy becomes more and more global, technology evolution has forced organisations and governments around the world to being more committed than ever before into improved competitiveness by increasing earning via productivity and raising standards of quality in services and products. The financial service industry is transforming itself. Increased competition from non-traditional institutions, new information technologies, declining processing costs, the erosion of product and geographic boundaries, growth of customers' knowledge, demand for better quality product and services and less restrictive government regulation have all played a role.

The former methods of gaining and growing business have changed, and new models of management have been called for to cope with the new business environment. These new models call for financial services top managers to be far more knowledgeable about their competitors and customer's needs and expectations within the market segment that they wish to approach. Additionally, this new business environment has required strong leadership, commitment for quality, and total employees involvement in the business strategy in order to differentiate one bank from another and from the so called non-banking competitors.

As a result, as has been the case in many other industries, quality has become a predominant strategy for the financial service sector. Banking organisations have been applying Total Quality Management (TQM) which is a management paradigm built on a philosophy of never ending quality improvement that includes methods and tools embracing management commitment, employee involvement, cross functional management and strategic planning. Application of the principles of TQM is proving attractive to major financial services organisations in UK and Brazil, in the expectation

that this will help them to deliver a better quality service, cope with the competition and achieve greater customer satisfaction.

This chapter begins with a presentation of the background and purpose of this study (Section 1.2). This is followed by a description of the research aims and structures (Section 1.3) adopted for this study. Then, in Sections 1.4 and 1.5 the scope and research contribution are highlighted. The last section of this chapter, Section 1.6, lays out the organisation of chapters for the whole thesis.

1.2 - Background to the Research

Throughout the 1980's and 1990's there has been increased growth in the awareness and use of quality improvement activities. The importance of quality management has been increasingly recognised mostly in the manufacturing sector. Reichheld and Sasser (1990) emphasised the cost of poor quality in service industries and suggested that improving quality by reducing defects can boost profits from 25 to 85 per cent in financial service organisations.

The total quality 'movement' can be identified as one of the key management issues to appear in the 1980's. This is manifested by the emergence of quality 'gurus' and their followers such as Juran, Deming, Crosby, Feigenbaum, Ishikawa, Tagushi, Garvin (in the US) and Oakland in the UK. The proliferation of articles, seminars, books and the accumulating empirical evidence of the relationship between perceived quality, customer value and market share, has ensured that the quality issue has moved to the top of the management agenda in many US and European countries, and in the 1990's in South American countries followed (Phillips et al., 1983; Zeithaml, 1988; Smith and Bender, 1990).

TQM philosophy, with specific regard to the financial service sector, has been relatively neglected in terms of empirical research and it is a more recent phenomena than in manufacturing. The whole question of the problems faced and benefits resulting from implementing TQM in financial service organisations is under researched. Further, banking organisations are facing problems in understanding a holistic TQM approach and how it can be implemented successfully.

There are a large number of consultants, all offering different methods of implementation, varying from the methods of Juran, Crosby and Deming to their own approaches. It is likely that the confusion over what is precisely the TQM philosophy, which method of implementation to use and the lack of sufficient guidelines to assist in this process have contributed to the number of disappointing TQM results.

The research described in this thesis, which is funded by CAPES - Ministry of Education and Culture - Brazil, intends to assess and describe the TQM process in the banking sector in the UK and Brazil. It is the first and largest academic research conducted concerning quality management in the Brazilian financial service sector. The motivation for this study can be greatly attributed to the researchers previous management experience in the Brazilian banking institutions, as well as to his previous research experience with TQM in financial services organisations (Longo, 1994), which became the pilot work for this study.

1.3 - Aims and Structure of the Thesis

The two majors aims of this research were:

- To analyse the strategic approach and the perceived effects of present Total Quality Management (TQM) programmes used by the financial services in the UK and the Brazilian banking sector (described in Chapters 2, 5, 6 and 7).
- To develop a framework in order to assist top managers and quality management academic practitioners to enhance the implementation of TQM programmes. To help

them understand quality management, its advantages and pitfalls, with a formulation of a comprehensive approach for implementing a holistic TQM in financial service organisations (described in Chapters 3, 8, and 9).

In order to achieve these aims, the research hypotheses aimed to assess current TQM programmes were defined (described in Chapter 2). A broad literature review, was carried out covering everything from Quality Management Paradigms to the most advantageous quality tools such as Quality Function Deployment (QFD). This review provided the theoretical background for the proposed enhanced TQM framework. The diagram below (Figure 1.1) illustrates the logical structure of this research.

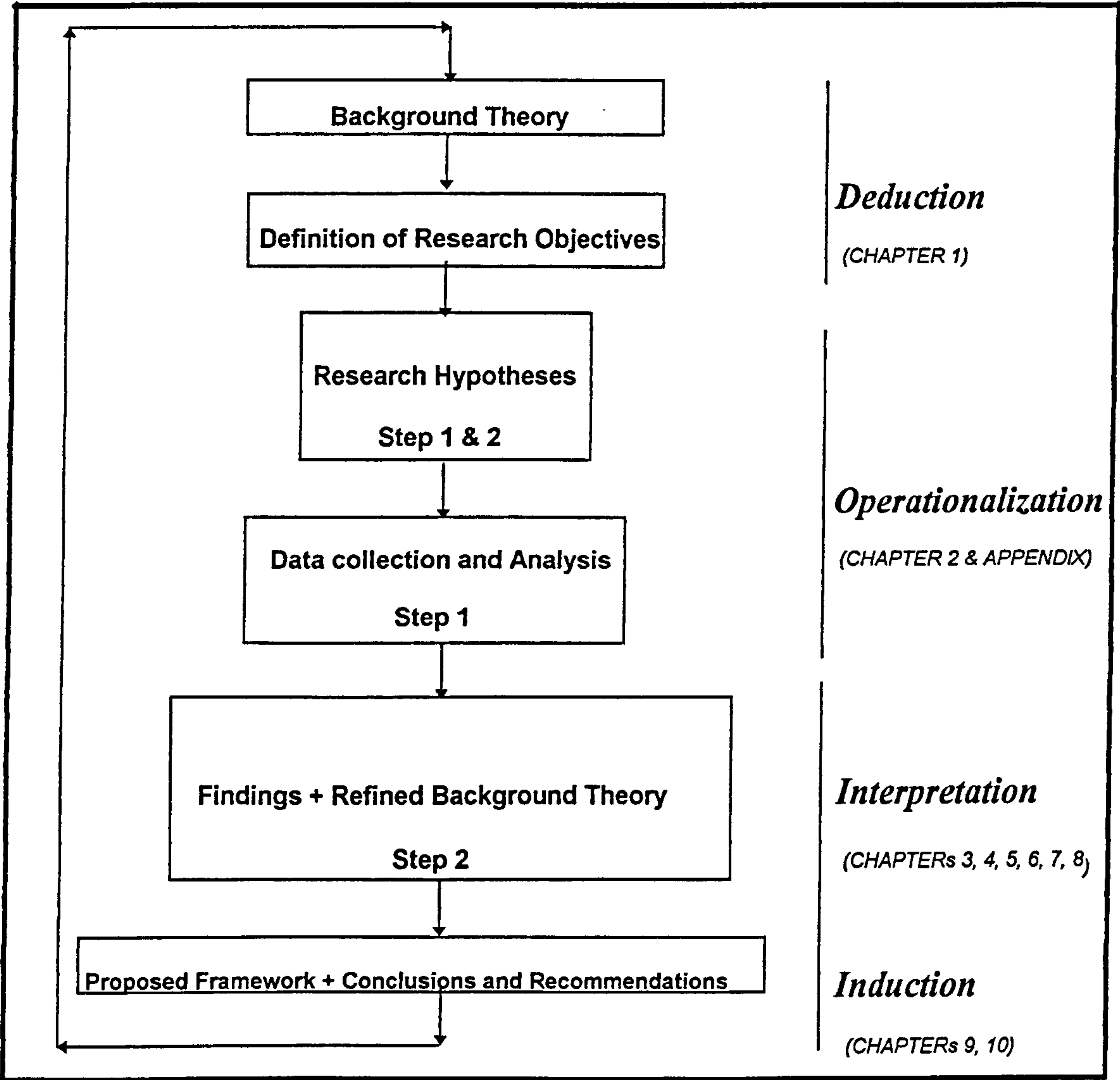


Figure 1.1 - Research Structure

1.4 - Scope of Research

In the UK financial service sector, the implementation of quality management has become imperative for organisations in order to cope with the competition and to retain the increasingly sophisticated financial consumer.

In Brazil, after a long period of high inflation and economic instability, the financial service sector is in an era of transformation, in which the companies have to readapt to work in a country with stable economic growth and low inflation. Thus, the quality management movement has been implemented as the one way in which organisations can try to gain a competitive advantage aimed to deal with the emerging middle class with an appetite for better quality financial services. As well as the international competition, which has already arrived with the entrance of new powerful players in the Brazilian banking retail sector, such as HSBC as well as the recent expansion of Lloyds TSB operation in the country.

This research will empirically investigate the TQM movement in the UK and Brazilian financial service organisations. Building upon the literature and existing concepts of quality management, two pieces of fieldwork, composed of a questionnaire and interviews were conducted. The idea was to assess and compare the strategies for the implementation of TQM and to examine the perceived effects within the branch network of the retail banking sector in both countries. The findings from the fieldwork provide further understanding of TQM as it has been implemented in the financial service organisations.

Further, a comprehensive framework is proposed for the implementation of a holistic TQM philosophy for this sector and to provide the necessary recommendations for enabling top managers, academics, and quality practitioners to enhance TQM implementation in this industry.

1.5 - Research Contributions

This study has as its main contributions to the area of quality management the following:

- (1) The majority of research on 'quality' has been overwhelmingly conducted in organisations from developed countries such USA, major European countries or in Japan. TQM studies carried out in the so called developing countries, usually assess the effectiveness of the quality management implemented in multinational organisations which exist in these countries. In this research, however, the TQM process will be empirically assessed as it is implemented in the Brazilian organisations (private, government, and foreign owned) and compared with the UK.
- (2) This research also provides a framework to implement TQM in financial service organisations. It can be applied in the financial services sector in both countries in any type of organisation. The framework is prepared to enable organisations to undertake a more holistic approach to the TQM philosophy when implementing quality management initiatives. This framework employs Quality Function Deployment.
- (3) This study is the largest empirical survey examining TQM in the Brazilian financial service sector and the first to compare quality management strategies between UK and Brazilian banking organisations. This has become increasingly important from the Brazilian point of view after HSBC and Lloyds TSB made a heavy investment into the Brazilian retail banking sector.
- (4) This study includes an extensive literature review in the field of quality management as applied to financial services and suggests the use of specialised tools such as QFD to be applied in this industry. This will be useful for development of the theory of TQM in the financial services sector.

be applied in this industry. This will be useful for development of the theory of TQM in the financial services sector.

(5) Finally, this research contributes to the literature on quality management by comparing the TQM movement in the UK and in the Brazilian banking sector. These insights will be useful, in particular, for the development of a theory of the effects of quality management and globalisation in the financial service sector.

1.6 - Organisation of the Thesis

This thesis is divided into ten chapters. This chapter, Chapter 1, presents the introduction, background, scope, aims and main contributions of the research. The contents of the subsequent chapters are outlined in the following paragraphs:

Chapter 2: The chapter provides an overview of the thesis and the research hypotheses. The methodology and research development are discussed. The techniques, advantages and limitations of questionnaires and interviews carried out in the UK and Brazil are also described. The fieldwork has been utilised to gain the empirical data, both quantitative and qualitative, used during this study.

Chapter 3: This chapter reviews the quality management literature. From the discussion of concepts and definitions of 'quality' to the views of the so called 'quality gurus' (Deming, Juran, Crosby). The evolution of quality management from statistical tools and quality control to the TQM philosophy and its elements, are presented and discussed. Additionally, quality in the manufacturing and financial services are compared and the implementation of TQM in the financial service organisations are discussed.

Chapter 4: The study involves fieldwork in Brazilian financial service organisations. It is important to provide some background descriptions of the social and economic issues in the country. Thus, a brief description of relevant social and economics topics in Brazil is given.

Chapter 5: In this chapter, quality management process in the UK financial services is discussed. The findings of the questionnaire and interview survey conducted to assess the status of TQM in the UK banking sector are presented and analysed. The perceived effects and strategies used for implementation of TQM programmes are discussed.

Chapter 6: An overview of Brazilian financial service from the inflation era to the current steady economic environment is presented. The Brazilian financial services quality management movement are discussed. The findings of the questionnaire and interview survey conducted to assess the status of TQM in the Brazilian banking sector are presented and analysed. The perceived effects and strategies used for implementation of TQM programmes were discussed.

Chapter 7: In this chapter the findings of the fieldwork in the UK and Brazil are compared. The TQM process, its majors effects and the strategies adopted for implementation are discussed. Also, three of the most used conceptual models, identified in the fieldwork analysis, to implement quality were evaluated.

Chapter 8: In this chapter the QFD methodology is presented, from the QFD conceptual definitions to a description of the core QFD matrix process. The methods for implementing QFD are also shown and the benefits and potential difficulties for using this tool in the financial service sector are discussed.

Chapter 9: In this chapter the TQM framework to implement quality initiatives in the financial service organisations, employing the QFD methodology is proposed. A brief discussion of the current approaches to TQM in this sector is presented. The necessary organisational changes that need to be carried out in order to enable organisations to achieve a TQM cultural environment are discussed. Finally the framework and its components are fully described and a critical evaluation stressing advantages and limitations is presented.

Chapter 10: This chapter summarise the findings and conclusions of this study. Finally, it ends with suggestions and recommendations for potential research that could be followed up from this study

Chapter 2: Research Development and Methodology

2.1 - Introduction

The first stage of this project consisted of developing a research approach in order to satisfy its aims. The overall aims are to assess and to evaluate the TQM process in the UK and the Brazilian financial services and to develop a framework to assist in the formulation of the most effective holistic TQM programme for this industry. To achieve these aims the following areas needed to be investigated:

- Current approaches to TQM implementation
- The effects of TQM in financial service organisations in the UK and Brazil
- The current strategy applied and methods of implementing TQM in those organisations
- New tools to facilitate a more holistic approach for TQM in financial services.

This chapter describes the research hypotheses and techniques used to achieve the research aims. The chapter is divided into the sections described below.

2.2 - Research Hypothesis

To ensure that the research aims are achieved, the following hypotheses are assessed throughout the research:

(1) The effectiveness of TQM programmes implemented in the financial services sector is directly related to the strategic approach, organisational environment, education programme, measurement procedures and degree of programme communication.

(2) There is an absence of a conceptual model to implement TQM in the financial services sector.

In order to test the hypothesis concepts a research strategy comprising the following methods have been used:

- Literature Review - to present the theoretical background, to lay the foundations of the analysis used, and to attempt to formulate an explanation for the conclusions drawn.
- Questionnaire Surveys - questionnaire surveys were conducted to elucidate standpoints from branch managers of financial service organisations. Especially with regard to collecting their perceptions of the TQM processes implementation.
- Interview Surveys - interview surveys with senior managers of the organisations involved in the questionnaire surveys. In order to identify key strategic issues for TQM, its implementation and the conceptual models used.

It is important to note that apart from the specific functions stated above, findings from each research technique played an important supplementary role. Analogies or differences arising from a comparison of these techniques may explain or highlight more critically the issues involved.

The objective of this research is not to search for conclusions based on statistical generalisations. Rather, the findings from this study are to enhance our understanding of the subject of implementing a TQM philosophy in financial service organisations. The design developed for this study is aimed towards capturing sufficient information to assess the hypotheses stated above and to achieve the research aims.

2.3 - Research Techniques

Although the research was primarily based on the quantitative approach for collecting empirical data, it does not advocate the exclusive use of either the extreme quantitative or qualitative techniques. The empirical data were mainly gathered in the two fieldwork periods (first in UK then in Brazil). The survey methods used were questionnaires (quantitative data) and interviews (qualitative data).

Unlike social science research in the community, organisational research often entails substantial negotiation to obtain access to firms and their members. This is not to say that research in the community is easier, but that the bounded nature of an organisation imposes an additional layer between organisational researchers and their subjects (Bryman, 1989).

There were many concerns to be taken into consideration. Many organisations are resistant to being studied, possibly because they are suspicious about the aims of the research. Further, those persons who act as 'gate keepers' between the research and the organisation (usually fairly senior managers) are likely to be concerned about the amount of their own and others time that is likely to be consumed by the investigation. Additionally there are the financial constraints which cannot be avoided in any academic research.

Thus, a period of 3 months was dedicated to negotiating with Brazilian and UK institutions in order to establish the sample population for the fieldwork. An invitation letter was sent to 15 High Street financial service organisations in the UK and in Brazil. The contents of the letter provided an explanation of the research objectives. Also a copy of the questionnaire was sent in order to develop trust and understanding from the companies invited.

There was a mix of results in both countries. In the UK though the companies did not oppose to the questionnaire being sent to their branches, only two organisations agreed to participate in the interviews. In Brazil, ten organisations replied positively, the other five refused to participate in both interviews and the survey questionnaire. However, even in those organisations which initially agreed to participate, when the interview was carried out, only seven companies were able to attend. The experience demonstrates some of the difficulties which exist in collecting real data in organisational research.

The fieldwork findings (presented in Chapters 5,6,and 7) enabled the realisation of the first aim of this research, the assessment of the current situation of the TQM process in the financial service sector in the UK and Brazil. Additionally some of the most popular models for the implementation of TQM were reviewed. This reinforced the research hypothesis, that there is a lack of a conceptual framework to apply TQM in the financial services sector. A refined literature review was performed in order to present the conceptual TQM tool (Quality Function Deployment) which will support the framework presented for implementation of TQM in the financial services (Chapters 8 and 9).

2.4 - The Preliminary Literature Review

To understand the concept of quality management applied today in almost all business sectors, one needs to turn back to the past and look for the beginning of these thoughts, which can be said to be the theoretical foundations of the TQM philosophy.

The preliminary literature review underlined the work and thoughts of the so called quality gurus (Deming; Juran; Crosby, and so on). It outlines the quality movement's evolution from Japan, via manufacturing sector in the West in the 80's, to the service industry movement in the 90's. Also reviewed was the quality movement in Brazil and the TQM philosophy as applied in the financial services sector and its elements (Chapters 3 and 4).

The idea was to collect as much information as possible in order to prepare the theoretical foundation on which the fieldwork in the UK and in the Brazilian banking sectors were to be based. The empirical data collected could, thus, enable an assessment of the research hypotheses.

2.5 - The Fieldwork

The first stage of the fieldwork involved a review of research methods in organisations (Greene and D'Oliveira, 1982; Pagano, 1994; Rossi et al, 1983; Reaves, 1992; Bryman, 1989; Gill and Johnson, 1991 and Oppenheim, 1992) and general research used to assess the TQM processes in the manufacturing and service industries. After brainstorming sessions with the authors supervisor and informal talks with quality academics and practitioners, a survey method was decided. This was composed of a questionnaire (quantitative data) and an interview (qualitative data). This method has advantages and disadvantages (Adams and Schvaneveldt 1991; Nachmias and Nachmias

1976 and Bryman 1989), however, attempts have been made to reduce the disadvantages. These attempts are shown in Sections 2.5.2 and 2.5.3 (Planning and design of questionnaire and Interview surveys).

2.5.1 - Planning the fieldwork Strategy

The fieldwork was planned following the framework illustrated in Figure 2.1. A descriptive survey was chosen in order to assess the attributes required to accomplish the research aims. A descriptive survey is concerned primarily with addressing the particular characteristics of a specific population, which, in this case, are managers of the UK and the Brazilian financial service organisations, either at a fixed point in time, or at varying times for comparative purposes. As such, they do not share the emphasis in analytic designs upon control of variables, but they do share a concern to secure a representative sample of the relevant population (Gill and Johnson, 1991).

In financial service organisations, the TQM philosophy starts and finishes in each branch. The branch gets the customers requirements, passes it across the company's channels of communication to the top managers, who will then design the solution by making a strategic plan that will meet the customers needs. This plan should involve all members of the organisation and then return to the branch, empowering managers and staff to offer the required quality products and services.

The degree of communication, commitment, customer care, training and participation in the strategic planning process are the key issues to the accomplishment of the TQM aims. In order to assess the status of TQM and the strategies for implementation used in financial services in the UK and in the Brazilian banking sectors, the fieldwork was divided as shown in the following sections.

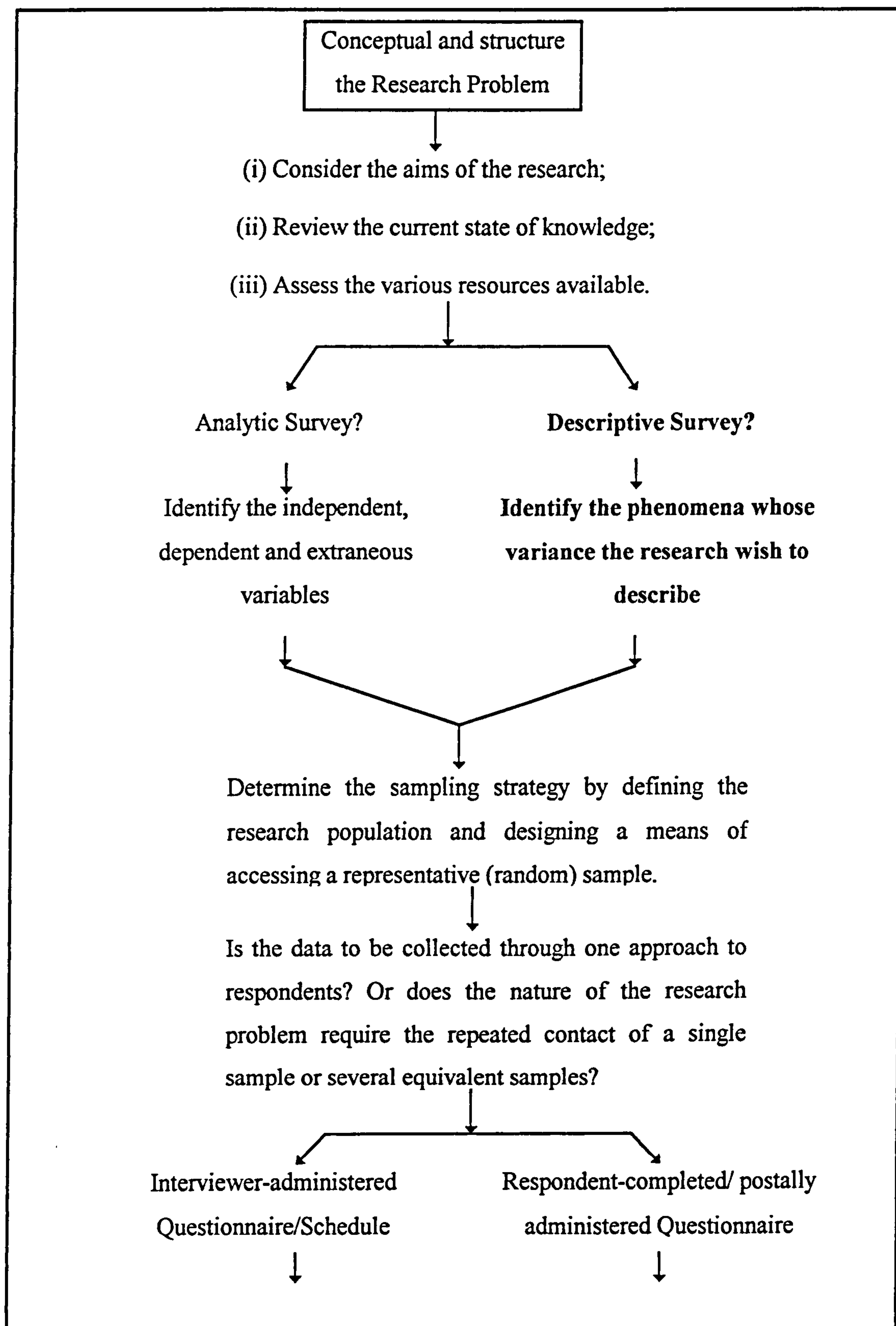


Figure 2.1 - A Summary for Planning a Survey (Gill and Johnson, 1991)

2.5.2 - Planning and Designing the Questionnaire Survey

The design of the questionnaire (Appendixes 2 and 4) was based on the questionnaire originally used in the author's MBA dissertation (Longo, 1994) and questionnaires developed by other researchers were studied to provide ideas on question presentation and ease of data collection (Wilkinson, Redman, and Snape, 1993; Radovilsky, Gotcher and Slattsveen, 1994; Oakland and Beardmore, 1995). In designing the questionnaire the following stages were undertaken:

- Questions were devised to satisfy the information requirements for achieving the research aims. The survey was performed in October 1995 in the UK and April 1996 in Brazil.
- A questionnaire completion time of 30 - 40 minutes was decided upon. This allowed a comprehensive questionnaire to be completed whilst still encouraged a high response rate. The proposed completion time was estimated from the pilot questionnaire.
- Questions were reviewed by the authors supervisor, quality management experts and bank managers during the pilot process.
- Careful consideration was employed to translate the questions from English into Brazilian Portuguese. Brazilian academics and practitioners were consulted to review the questions prepared and several adjustments were made to ensure respondents had similar understandings of the issues raised in the questionnaire. The understanding of the terms used in the questionnaire by British managers were also tested in the pilot process.

- The Questionnaires were piloted in the UK and Brazil. Respondents were stimulated to give their opinion on the pilot such as level of understanding of the questions, time of completion, and willingness to participate in the final version of the research. The response to the pilot work was considered satisfactory. Questions were revised . With reliable data from the pilot questionnaire study, the expected number of questionnaire returns could be calculated and an understanding of the expected spread of responses for each question obtained.
- The questionnaire was designed in such a way that enabled the data provided to be presented in a suitable format for the statistical techniques which were to be used.
- Two types of scale were used during the data analysis. Nominal scale, in which a variable is measured in terms of two (or more) qualitatively different categories, e.g. 'male' and 'female'. And, interval scale, which also contains two or more categories that allow for a more detailed differentiation of variables. There is some degree of ordering involved with the different points on the scale, indicating the quantity being measured and the distances between the points representing equal quantities of the measured variable, e.g. scale of 1, 2, 3, 4, and 5 where point 5 is the most important.
- Particular attention was paid to the quality of the overall presentation of the questionnaire, its conciseness and the attractiveness of the design in order to evoke a higher completion. A suitable covering letter and a stamped, addressed envelop for its return were included.
- Ethical issues have been considered and all companies to be surveyed were consulted, in order to obtain consent and agreement, before undertaking the fieldwork. The confidentiality of companies and managers participating in the survey was agreed. The final questions employed were presented to the organisations for consideration before starting the fieldwork.

- The final versions of questionnaires were posted to the branch managers (selected randomly) of the companies which agreed to participate in the survey. To make completion as easy as possible, besides the covering letter, a page was attached to each questionnaire describing its purpose. The response rate could have been better monitored by posting a reminder letter few weeks after the initial questionnaire, but financial constraints prohibited this procedure from being carried out.

The questionnaire has been designed to focus on assessing the perceived effects of TQM in the banking sector from the point of view of branch managers, who are the agents of quality in financial service organisations. They deliver the TQM message to the whole work force, manage the process and get the feedback from the external customer. They are the link between the TQM plan and execution. The main objectives of the questionnaire are:

- To review the usage of TQM in the UK and the Brazilian banking sectors;
- To assess branch managers knowledge and understanding of the companies strategy towards TQM;
- To evaluate branch managers perception about key issues related to the implementation of TQM, such as: Barriers, Changes, Drivers, Effects and Measurement Procedures.

In order to perform these objectives the questionnaire was divided into five sections:

Section A - Personnel Characteristics which were classified as: age; sex; years of service among respondents. Also in the case of the Brazilian sample the type of organisation e.g. private, governmental or multinational banks.

Section B - Organisational Structure which identify branch size and management level.

Section C- Analysis of Communication which identifies level and degree of communication among hierarchical levels up/down from branch managers. Also it assesses the level of knowledge about the companies TQM strategy among branch managers.

Section D - Analysis of the TQM Approach, which assesses the perception of respondents about the issues raised such as: implementation, changes, barriers, principal reasons to implement and major effects.

Section E - Assessment Procedures which covers the way companies measure customers satisfaction and how TQM improvements are measured.

The respondents were asked to grade to what extent they perceived the statements raised in each issue discussed in fixed choice questions over the Sections B to E on a five point scale. Also there were questions about the respondents profiles and company ownership (Section A) and two open-end question (Sections C and D) aimed to allow respondents to express, in their own words, the critical success factors and their companies strategy mission towards quality. The findings and analysis are shown in Chapter 5, 6, and 7.

Questionnaire Response Rates.

(A) The UK Sample - A response rate of 33 % (49 managers from 160) was recorded.

(B) The Brazilian Sample - A response rate of 25 % (100 managers from 400) was recorded.

The higher response rate for the UK sample was probably due to a number of reasons. Some of them might be that the UK sample involved branches in the North East of England where the University of Newcastle is located and the research may have a strong appeal for local respondents. Furthermore, when this survey was carried out in Brazil, the financial service sector was at a most turbulent moment. Three of the biggest retail banks had been closed or taken over by better run competitors which might have reduced the willingness of branch managers to expose their views.

Points to Consider Prior to Analysis

There are some inherent weaknesses to the questionnaires. When analysing the questionnaires it is important to bear in mind the following:

1. The results may be affected by the position of the respondent. Although it was addressed to branch managers it is almost impossible to be sure who the respondents were. For example did a branch manager delegate the work to a manager who had more responsibility for TQM programme. This person's views may be biased because of his/her commitment to the programme.
2. Individuals who are most interested in the questionnaire are likely to respond. This is likely to cause a response bias, with the more highly developed quality companies responding.
3. Respondents may tend not to answer questions which would show them or their company in a negative way.

In the chapters discussing the analysis of the questionnaire results consideration is given to these factors. The response data from both samples was analysed using Minitab version 9.2 for Windows. The output was predominately in the form of frequency distributions (inferential statistics) and analysis of variance. Results relevant to this thesis are described in Chapters 5, 6, 7, and Appendix 5.

Inferential statistics are techniques that use sample data to make general statements about a population (Gravetter and Wallnau, 1985). ANOVA is a statistical technique that is used to test the differences among two or more sample means (in this survey it is used to test differences among groups of companies sampled means - μ_{G1} , μ_{G2} , μ_{G3}). There are two possible inferences using ANOVA. The *null hypothesis* (H_0 : $\mu_{G1}=\mu_{G2}=\mu_{G3}$) for this test states that there is no significant difference among the sample means. Or the *alternative hypothesis* (H_1 : μ_{G1} , μ_{G2} and μ_{G3} are not all equal) states that at least one mean is different from the others. When the decision from the ANOVA is the alternative hypothesis (H_1), it is necessary to apply a post hoc test such as the Tukey test, which can determinate exactly which sample means are significantly different and which are not (Gravetter and Wallnau, 1985; Levin and Rubin, 1991)

Furthermore, the Brazilian sample analysis was divided in three groups (Table 2.1). It was observed from the interviews that companies strategic approaches differed by organisational environment. It could be evidence of how a change process differs between companies in the same industry, by possessing different corporate cultures. Kotter and Heskett (1992) argued that when the cultures are our own, they often go unnoticed-until it is tried to implement a new strategy or programme which is incompatible with central norms and values. Then the power of culture is observed, first hand.

Thus, though it was not previously planned in the development of this research, for the purpose of the data analysis, the questionnaire and interview responses, will be

assembled in three different groups of corporate cultures, categorised by ownership. This classification is sought to help the understanding of the TQM process strategy, its implementation and effects in the Brazilian banking industry.

Answers were grouped together from members of companies within the same organisational environmental background. The results were correlated between the different groups in order to determine whether there were any relations among them.

Table 2.1 - Classification of Banks in the Brazilian Sample

Group 1	Savings and Clearing banks under the majority control of the Brazilian Federal Government
Group 2	Retail banks owned by private Brazilian residents
Group 3	Private banks under the majority control of foreigners

2.5.3 - Planning and Designing the Interview Survey

The interviews provided an insight into the organisations strategies towards quality initiatives. In this research a structured interview was used. It relied on a set of questions addressed to a target group of senior managers in charge of the quality management process in the banks participating in the questionnaire survey. The main objectives were:

- To assess the financial service strategic approach towards quality initiatives;
- To evaluate how and why financial service organisations are engaged in the implementation of TQM in the UK and in Brazil;

- To compare the strategy planned by quality specialists in the company headquarters with the view perceived from quality practitioners in the branch networks;
- To review the current approaches for the implementation of TQM;
- To investigate which organisational characteristics influence the effectiveness of quality activities.

The interviews were carried out at the headquarters of the organisations. They were composed of open-ended questions that were asked in the same way to each person interviewed. The open-ended questions were chosen to allow the respondents freedom to answer, in their own terms, the issues raised.

The idea was to probe into the richer information produced and give the respondents a sense of being engaged in a real conversation about the quality management process in both the UK and Brazil banking industry. There is good evidence that people enjoy talking (Adams, 1958; Converse and Schuman, 1974), and this is a real advantage of the interview as a data gathering device (Adams and Schvaneveldet, 1991). Additionally it helps in establishing the needed rapport between the interviewer and respondent, in order to reduce bias in the interview (Hibberd and Bennett, 1990).

The Brazilian interviews were all recorded and translated from Brazilian Portuguese to English. In designing the structured interview the following stages were undertaken:

- Questions were designed based on the information required to achieve the research aims.

- A time of 1 hour and 30 minutes was set for each interview, but in Brazil there were quite a few which took a little longer. This interview time allowed a comprehensive structured interview to be conducted and was acceptable to the interviewee.
- Questions were reviewed by the author's supervisor, and then submitted for comments to company managers who had agreed to be interviewed. The idea was to create an environment of trust between researcher and interviewee and get some feedback about questions that might have been misunderstood.
- The interview was not piloted. After each interview few minor changes were made in order to use a more comprehensive terminology. Neither questions or the order the questions were posed was changed.
- The interviews were carried out in September 1995 in the UK and during May and June 1996 in Brazil.

Almost all interviewees were either responsible for the quality and productivity department in their organisation or senior managers of human resources or organisation and methods departments. As stated previously (Section 2.3), in the UK there were only two interviews and in Brazil there were 14 (Table 2.2).

Table 2.2 - Interviews Sample Size

Company	Interviews
UK	2
Brazil Group 1	5
Brazil Group 2	6
Brazil Group 3	3

Prior to an interview each company was reminded of the proposed time and date by phone. Information was primarily tape recorded although some information was recorded by taking notes during the interview. The notes were used for validation purposes, when the tapes were difficult to understand. If there was some information still unclear it was validated by a follow up phone call.

2.6-Comparing TQM "Best Practice" and Developing a TQM Framework

Once the fieldwork findings had been analysed and presented, the evaluation of TQM "best practices" adopted in the UK and the Brazilian financial services could be performed. The objective was not to compare the UK and the Brazilian banking sectors. Rather the primary objective of this research was to assess what was the status of TQM in the banking sector in both countries and evaluate the strategy of implementation used. Finally a refined review was carried out into the most commonly used conceptual quality models applied in financial services organisations surveyed, in order to assess their effectivenesses and weaknesses.

Therefore, a fully assessment of the research hypotheses was accomplished. However there is still the final aim of the research to be achieved, the development of a TQM framework for implementation in financial service organisations.

The essence of TQM is that it is a holistic concept. In practice however, this form of full TQM is likely to be difficult to achieve (Wilkinson and Witcher, 1993). Although the fieldwork findings confirmed that most organisations are running a TQM programme, no best practice has been identified. In fact, most existing TQM programmes studied are only partially fulfilled.

The problem relies on how to develop, plan and implement such a holistic approach which demands vertical integration, effective communication systems and total commitment from top managers to all members of the organisation. The fieldwork findings suggest these points to be the major weaknesses in this industry towards the implementation of TQM.

One of this research aims is to propose a more effective framework for TQM in this sector. In order to support the implementation of such a holistic approach a methodology called Quality Function Deployment (QFD) is employed (QFD is presented in Chapter 8). It is not used as one more quality programme to be applied. Rather, it is a basic TQM tool that is employed to facilitate the implementation of the TQM framework proposed in Chapter 9.

2.7 - Summary and Conclusions

In this chapter the research hypotheses and methodology are presented. The hypotheses are assessed throughout the research by the utilisation of the following methods. First a preliminary literature review, which is the foundation for the theoretical background of quality management in which this research is developed. Secondly a summary description of the methodology, plan and development of the fieldwork composed of interviews and survey questionnaires carried out in the financial service organisations in the UK and in Brazil. The analysis and the comparison of TQM "best practice" identified in the fieldwork and the refined literature review is mentioned. Finally it outlines the TQM framework to be proposed.

Chapter 3 - Total Quality Management

3.1 - Introduction

In this chapter a review of the theoretical foundation for a management philosophy known as total quality management (TQM) is presented. It begins with the quality concepts and definitions as described in the literature going onto a review of the TQM philosophy, its evolution and basic elements. The holistic role of quality management, its major elements, and the differences in the way to approach these in the financial service sector, is also discussed.

3.2 - Quality Concepts

In today's business environment, regardless if it is a manufacturing or service industry, a government enterprise or a philanthropic organisation, "*Quality*" is the management buzzword. Managers, consultants and academics are spreading the quality philosophy and its elements throughout the world. The once, so called, Japanese management style, has become a cornerstone and a guiding force to achieve competitive advantage in virtually every business sector.

Quality has been defined in the literature in several ways, some of these are presented in Table 3.1. Most definitions of quality relate to the products and services produced or offered by organisations. The multiplicity of meanings for quality results in an ambiguity as to what it is meant when the term is used. The Oxford dictionary defines quality as a distinguishing characteristic or attribute; degree or standard of excellence; having or showing excellence or superiority. The quality of a product or service can be outlined as characteristics, attributes, or standards of excellence or superiority of the product or service offered.

Quality, therefore, relates to the perceived features which a service or product may have. These features will be measured by customers, who will compare the product or services characteristics based on their needs, expectations and value. Then, they reach a judgement that is rarely neutral. Thus in this research a basic definition of quality is offered: *"quality of a service or product is meeting customer needs and expectations at a price which they are willing to pay"*.

Table 3.1 - Some Definition of Quality

Source	Quality Definitions
Deming, 1986	"Quality can be defined only in terms of the agent....In the mind of the production worker, he produces quality if he can take pride in his work... [and] quality to the plant manager means to get the numbers out and to meet specifications"
Juran, 1988	"Quality is 'fitness for use'"
Crosby, 1984	"Quality has to be defined as conformance to requirements"
Feigenbaum, 1983	"Quality is the total composite product and service characteristics of marketing, engineering, manufacturing and maintenance through which the product and service in use will meet the expectation by the customer"
ISO 8402, 1986	"Quality is the totality of features and characteristics of a product or service that bear upon its ability to satisfy stated or implied needs"
Lewis, 1989; Moore, 1987; Creedon, 1988	"Quality is consistently meeting or exceeding customer's expectations"
MacDonald and Piggott, 1990	"Quality is delighting the customer by continuously meeting and improving upon agreed requirements"
Collier, 1990	"Quality is the distinctive tangible and intangible properties of a product and/or service that are perceived by the customer as being better than the competition"
Ansell, 1993	"Quality is conforming fully, without error, to the customer's requirements"

3.3 - The Importance of The Contextual Meaning of Quality

It is clear that much of the usage of the word "quality" is misleading and it serves to confuse and obscure its true meaning. For example the myth that quality is a luxury; quality is expensive; quality is something for which the customers are prepared to pay a premium, because "high" quality incurs extra costs to the manufacturer or service provider. On the contrary, evidence from the Profit Impact of Market Strategy (PIMS) database, (as reported by Buzzel and Gale (1987), Phillips et al. (1983) and Lucas (1986) among other writers), find no direct correlation between relative quality and higher cost, and concluded that the opposite is often the case (Lascelles and Dale, 1993).

The meaning of "quality" is contextually related to its usage or application (Dotching and Oakland, 1994; Garvin, 1988). Its meaning in a service organisation will not be exactly the same as in a manufacturing one. Hence, "quality" must be understood with reference to the type of organisation, the level it is referred to, and to whom it will be applied.

A common understanding and vision of what is meant by "quality" can help an organisation to focus its "quality improvement" efforts. Defining "quality" is not only important from the semantic point of view but, more importantly, it is required to direct employees' efforts towards a common objective. Ghobadian et al. (1993), discussed that the common vision of quality is arguably more important in service organisations. And presented "quality" in five generic categories and their relevance to service organisations (Table 3.2).

Table 3.2 - Five Categories for Quality in Service Organisations
(Ghobadian et al., 1993)

<i>(1) Transcendent</i>
Here "quality" is defined as innate excellence. The product or service will have unequalled properties. Under this definition much of Plato's philosophy analysis of beauty is transferable to the subject of quality. However, this definition of quality has little practical application because prior identification of determinants of quality is not possible. Implicit in this definition of "quality" is the relationship between individuals salience and perceived quality. The presence of this relationship has important implications for goods and service quality.
<i>(2) Product led</i>
Here "quality is defined as the units of 'goodness' packed into a product or service. Thus, a "quality" service will contain more units of 'goodness' than a lower "quality" service. This definition relies on the quantification of the services units of 'goodness' or tangible attributes. In practice, however, it is not easy to clearly identify services attributes, let alone quantify them. In addition, 'goodness' is not absolute but relative to a particular circumstance involving customer's demands and expectations against "service quality" perceived. Interestingly, many people perceive that "quality" is somehow synonymous with "attributes".
<i>(3) Process or supply led</i>
In this approach, "quality" is defined as 'conformance to requirements'. the definitions of quality proposed by Crosby and Taguchi fall within this category. These definitions lay emphasis on the importance of the management and control of supply side quality. The focus is internal rather than external. Such a definition is useful for organisations which perceive their problems as lying within the transformation or engineering process. Alternatively, this definition might be useful in organisations producing either standard products or services, or where the output can be classified as a commodity. Organisations offering standard service involving low or short customer contact, may find this definition useful.
<i>(4) Customer led</i>
Here the focus is external. "Quality" is defined as 'satisfying customer's requirements' or 'fitness for purpose'. The definitions of "quality" put forward by Deming, Juran, Feigenbaum and Ishikawa fall within this category. This approach relies on the ability of the organisation to determine customers' requirements and then meet these requirements. A ' <i>customer led</i> ' definition implicitly encompasses the ' <i>supply led</i> ' approach. This is because customer's requirements are built into the service at the design stage, but it is at the transformation stage that the degree of conformance is determined. The ' <i>customer led</i> ' definition is probably most appropriate for organisations offering high-contact, skill-knowledge-base, or labour-intensive services. Most of the "service quality" definitions fall within this category.
<i>(5) Value led</i>
"Quality", here, is defined either as the cost to the producer and price to the customer or as meeting the customer's requirements in terms of quality, price, and availability. The approach implies that there is a trade-off between "quality", "price", and "availability". The purchaser evaluates quality, price and availability within the same decision algorithm. Implicit in this approach is the importance of clear market segmentation and greater focus in the provision of service. This definition of "quality" can be adopted by most service organisations.

The importance of "quality" is not in its meaning as a term, but its value as a system. Quality is being seen more and more as a system involving every aspect of the business, whether defined as a trait or as an outcome. However, the tough part of quality is not recognising its power or effect, but how to achieve it on a daily basis in every aspect of a business.

The quality imperative of any organisation does not mean tampering with the organisations main goals and targets, but it has to do with how to improve the management of the system it comprises. Regarding the concept of an organisation viewed as a system composed of humanware, software and hardware, providing services and products to clients, with due care to the interactions between consumers and clients, both internal and external to the organisation. Total Quality Management (TQM) is such a philosophy which evolves from improving the competitiveness, effectiveness and flexibility through planning, organising and understanding each activity, and involving each individual at each level (Oakland, 1993). In order to understand this concept fully, it makes sense first to learn from the pioneering work of Deming, Juran and Crosby, the so called 'quality gurus'.

3.4 - The Quality Gurus

A guru was originally a mystical teacher, to whom people went in order to have their thinking and their lives transformed. The word then came to describe any thinker or teacher who introduced transforming ideas. Quality is a such a system of thought and thus it has its share of gurus. Three in particular (Deming, Juran, Crosby) stand out although there are others such as Feigenbaum, Ishikawa, Taguchi who are not far behind. Their pioneering work and thoughts are the theoretical foundation of TQM.

3.4.1 - W. E. Deming

The TQM philosophy emerged under Deming's guidance, many regard him as the father of what is now known as TQM. Interestingly, Deming's quality management philosophies were first developed in the US before the World War II. He became particularly interested in the work of statistician Walter Shewhart, and believed that his principles could be equally applied to non-manufacturing processes. He applied Shewhart's concepts to his work at the National Bureau of the Census. This led to six-fold productivity improvements in some process. As a result, Deming started to run statistical courses to explain his and Shewhart's methods to engineers, designers, etc., in the US and Canada (Bendell, 1993).

Deming believed quality management should be shared among everyone in an organisation. Perhaps most significantly, Deming recognised that most quality problems were system-induced and were therefore not related to workmanship (Berk and Berk, 1993). Deming's work only saw limited application in the US prior to World War II. After the war Deming was sent to Japan as an adviser to the Japanese, as they were rebuilding their industrial base. He became involved with the Union of Japanese Scientists and Engineers (JUSE) which invited him to lecture to the Japanese on statistical methods.

Deming's message to the Japanese reflected his statistical background. However, his lectures and work extended considerably beyond statistical methods. He encouraged the Japanese to adopt a systematic approach to problem solving, which later became known as the Deming cycle of continuous improvement (Oakland, 1993) or PDCA (Plan, Do, Check, Action), Figure 3.1.

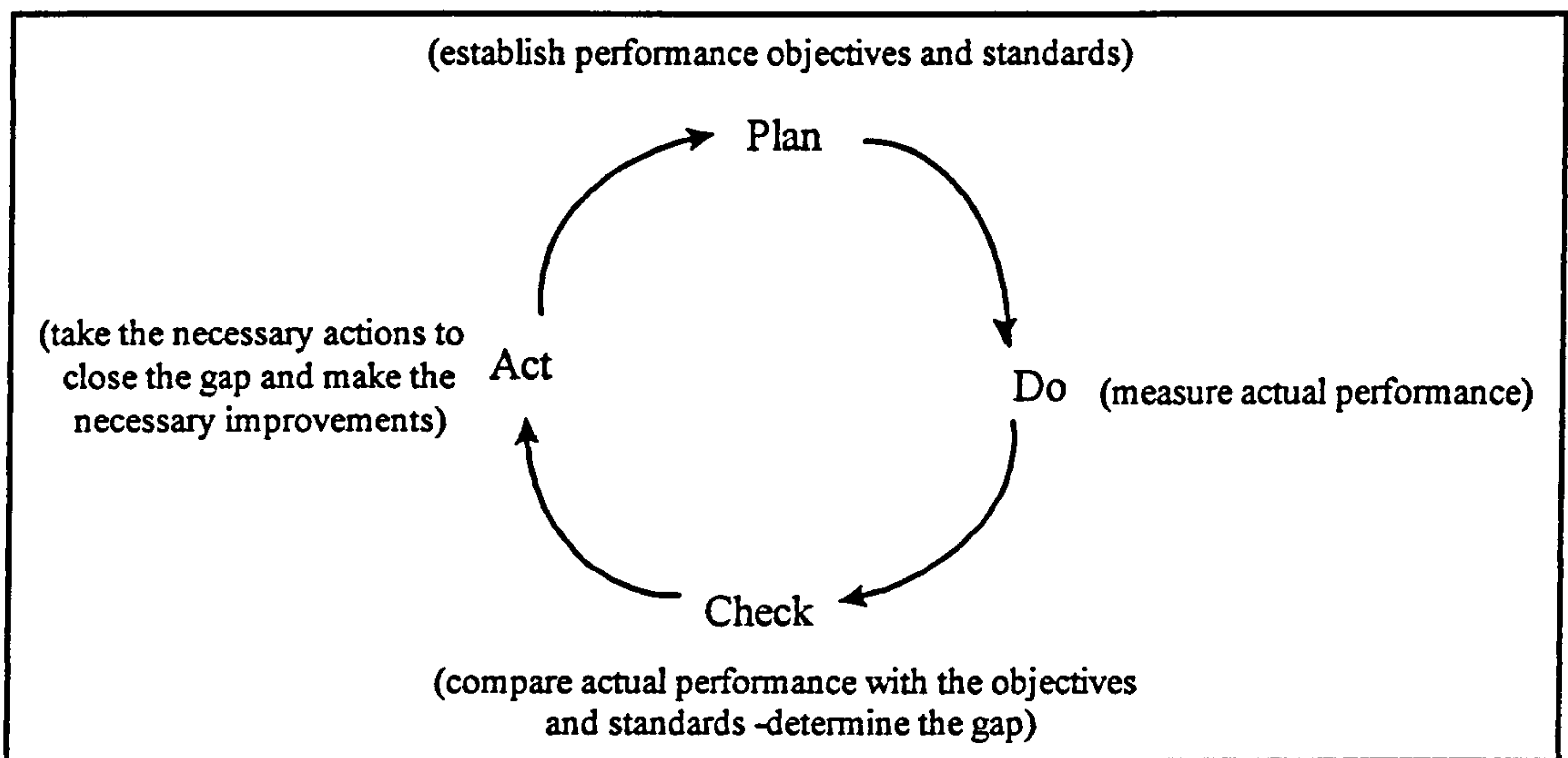


Figure 3.1 - The Deming Cycle - PDCA (based on Oakland, 1993)

Deming's work in Japan has been identified as putting Japan on the road to leadership in international business and industry. But only in the 1980's has his work been recognised in the US and other nations of the West. Deming's work in the US attempted to make major changes in the style of Western management. This was however more management-based than statistically-based. Much of this was captured in his book *Out of the Crisis* (1986).

Deming (1986) emphasised that as a result of a foreign expert's visit in the summer of 1950, the following quality chain reaction (see Figure 3.2) became engraved in Japan as a way of life. Once management in Japan adopted this chain reaction, everyone there had one common aim, namely, "*quality*"; as described:

The production worker in Japan, as anywhere else in the world, always knew about this chain reaction; also that defects and faults that get into the hands of the customer lose the market and cost him his job.

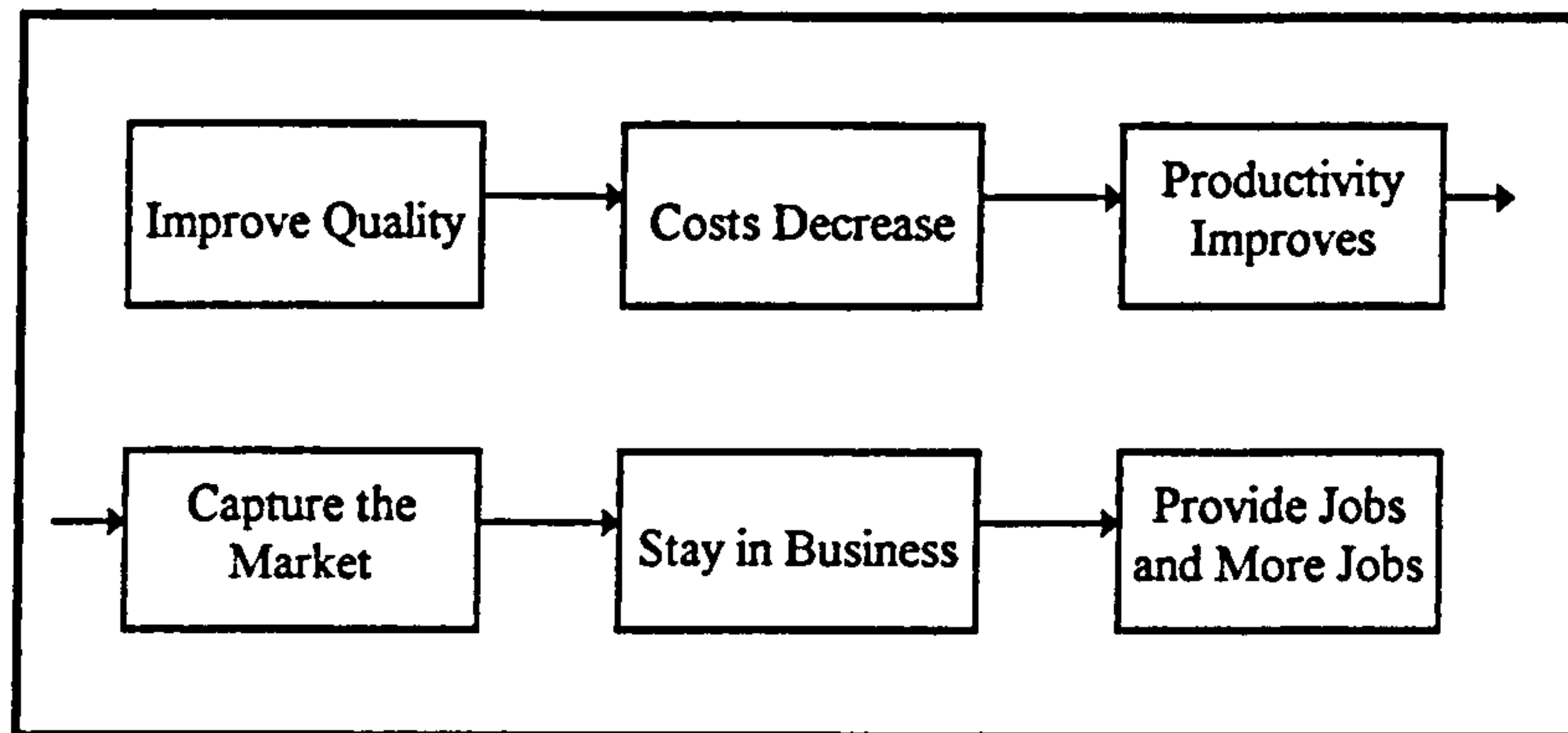


Figure 3.2 - Deming's Quality-Chain (Deming, 1986)

Deming's prestige in the West had to some extent to wait for American industry to experience the impact of Japanese quality and investigate its source (Fox, 1993). Deming's prescription for improved quality, productivity and competitive position is based on 14 points (Deming, 1986). It is important to understand that the 14 points, which sometimes Deming calls obligations, are a way of thinking rather than writing on tablets of stone. From time to time Deming himself changes the phraseology to make them clear (Wille, 1992). The 14 points apply everywhere; from small organisations to large ones, in the service industry as well as in manufacturing (Deming, 1986).

The Deming's 14 Points

1. *Create constancy of purpose* towards improvement of product and services, with a coherent plan to become competitive and stay in Business.
2. *Adopt the new philosophy*, that historically accepted levels of delays, mistakes, workmanship defects, etc. are no longer tolerable. Top management must acknowledge their responsibilities, and accept the role of leaders in instituting change.
3. *Cease dependence on mass inspection*. Instead of reliance on large scale end-of-line inspection, use SPC to obtain evidence of built in quality. Quality has to be built into the product or service in the first place based on statistical evidence.

4. *End the practice of awarding business on the basis of price.* The fourth point ends the practice of awarding contracts to suppliers solely on the basis of price tag. Instead, include considerations of quality, and eliminate suppliers who cannot provide statistical evidence of their quality.
5. *Find the problems.* Deming's fifth point is never to be content with things as they are, never to give up seeking for better systems of operating, improve constantly and forever every process for planning, production and service. It stresses that management's job is to continually improve these processes, and in so doing continually decrease costs.
6. *Institute modern methods of training.* Training is absolutely fundamental to the Deming philosophy, because new skills are required to keep up with the continual changes that the quality process promotes.
7. *Institute modern methods of supervision.* The seventh point concerns leadership; leaders are there to help people to do better jobs. They are responsible for putting the system right where necessary. Deming believes that management are accountable for up to 94 per cent of the potential improvements (Bendell, 1993).
8. *Drive out fear,* this is a matter of getting away from the 'us and them' approach of confrontation between superiors and others. Quality will not be achieved where people come to work of necessity, but hate every moment of it. So by driving out fear, everyone can work effectively for the company.
9. *Break down barriers between departments.* This point concerns removing existing barriers between departments and staff. People in different areas such as research, design, back-office operation or branches must communicate and work in teams to overcome problems that they may encounter with products or services. Traditionally

people have tended to work in their own little fortresses, often fighting their fellow employees instead of the competition.

10. *Eliminate numerical goals.* It proposes the elimination of slogans, posters or other exhortations to the workforce to do better. Here, Deming took a different approach to Crosby who runs zero-defect days and does go in for sloganising. Such exhortations only create adversarial relationships, as the bulk of the causes of low quality and low productivity belong to the system and thus lie beyond the power of the work force.

11. *Eliminate work standards* that prescribe numerical quotas; substitute leadership. Deming was against all measuring methods that pay bonuses when certain quotas have been reached. If the target is too high, it may give the workers something very difficult to achieve, and it will only be achieved by corner cutting, lowering standards and ignoring the quality requirements.

This elimination of arbitrary numerical targets, quotas and bonuses is one of the most controversial of Deming's points. There are a lot of pressures for what is called 'performance management based on financial incentives'. This is called into question by the Deming approach (Wille, 1992).

12. *Remove barriers* that rob employees and people in management of their right to pride of workmanship. This implies, abolition of the annual merit rating (appraisal of performance) and of management by objectives. Again, the responsibility of managers and supervisors, must be changed from stressing quantity to quality.

13. *Institute a vigorous programme of education and self-improvement.* Deming makes the point that it is not enough just to have good people, but people who are improving, through education. Education to Deming means personal improvement, personal development.

14. *Put everybody in the company to work to accomplish the transformation.* It clearly defines top management's permanent commitment to ever improving quality and productivity. Define management's obligations to implement all of these principles. Create a structure in top management that will push the preceding 13 points every day and take action in order to accomplish the transformation.

Deming had also produced a list of 'deadly diseases' of Western management, among which he included emphasis on short-term profits and short-term thinking, and management by using only visible figures with no recognition that the unknown or the unknowable ones may be important.

3.4.2 - Joseph M. Juran

Like Deming, Juran was invited to Japan in the early 1950s by JUSE. He arrived in 1954 and conducted seminars for top and middle-level executives. His lectures had strong managerial flavour and focused on planning, organisational issues, management's responsibility for quality, and the need to set goals and targets for improvement. Juran emphasised that quality control should be conducted as an integral part of management control (Bendell, 1993). Juran's reputation as perhaps the top quality guru rests on:

- His massive textbook, *Quality Control Handbook*, which is still the standard reference book on quality worldwide;
- His contribution to the quality achievements of Japanese industry;
- His lectures and training courses conducted by the 'Juran Institute' throughout the world.

Juran is probably the most celebrated US expert on quality assurance. He defines quality briefly and succinctly, as 'Fitness for use', and acknowledges that the fitness is as

judged by customers, for the specific use they intend (Fox, 1993). Wille (1993) argued that Juran was probably the first of the gurus to emphasise that quality was achieved by communication, management and people. Like Deming, Juran emphasises that massive training is essential and has to involve the whole workforce, that senior management have to be committed, and that improvement has to be continual. Juran developed his quality message around the following ten steps:

1. Create awareness of the need and opportunity for quality improvement.
2. Set goals for continuous improvement, preferably with key success factors enumerated.
3. Build an organisation to achieve goals by establishing a quality council, identifying problems, selecting a project, appointing teams and choosing facilitators.
4. Give everyone training in tools and techniques as well as an understanding of the quality approach.
5. Carry out projects to solve quality problems.
6. Ensure that regular progress reports are given.
7. Show recognition for success at all levels, staff and senior management, to indicate that the process is being undertaken.
8. Communicate results back to staff and senior management to indicate that progress is being undertaken.
9. Keep a record of successes, so that improvements can be demonstrated.
10. Incorporate annual improvements into the company's regular systems and processes and thereby maintain momentum.

Juran expresses his essential message to managers through the three basic quality-related processes: quality planning, quality control and quality improvement which have become known as the Juran trilogy (Table 3.3). It begins with quality policies and goals. It goes on with plans to meet them. Then it provides resources which enable progress to be evaluated and action taken. Finally it motivates and stimulates people to believe in, meet goals, and improve on them.

Table 3.3 - The Juran Trilogy Process

Quality Planning :	The process for preparing to meet quality goals
Quality Control :	The process for meeting quality goals during operations
Quality Improvement :	The process for breaking through to unprecedented levels of performance

Juran (1964) puts forward the idea that managers can manage by using "breakthrough" or by using "control". He describes "breakthrough" as '*organised creation of beneficial change*'. He means that when managers realise that the present levels of performance (productivity, quality and waste) are not acceptable. Action is taken to identify what the chronic causes are, and then steps are taken to eliminate them. By "control", on the other hand, Juran means attempting to maintain performance levels as they are, as if they are a means within specification. Juran states that there are times when "control" is needed but managers must always be looking to achieve "breakthrough" (Hassan, 1996).

The quality improvement process perceived by Juran is an organised, step-by-step approach to breakthrough and its benefits (Fox, 1993). Juran (1988) warns that there are no shortcuts to quality and is sceptical of companies that rush into applying Quality Circles, particularly since he doubts their effectiveness in the West. Juran, like Deming, believes in statistical quality control. He estimated that about 15 per cent of quality

problems (variation) in a company are due to special causes which means that they may involve the workers. In general, he views that 85 per cent or more of the quality problems are down to the management dealing with system. Juran believes that, as with Japanese industry, long-term training to improve quality should start at the top management level.

3.4.3 - Philip B. Crosby

Crosby is arguably the clearest, certainly the most entertaining writer and speaker of the three gurus (Fox, 1993). He is less academic than Deming and Juran in his approach to total quality, but just as effective. Crosby is well known in relation to the concepts of "do it right first time" and "zero defects". He considers traditional quality control, acceptable quality limits and waivers of sub-standard products to represent failure rather than assurance of success.

Crosby (1979) defines quality as conformance to requirements which the company itself has established for its products based directly on the customers' needs. Crosby believes that, since most companies have organisations and systems that allow deviation from what is really required. Manufacturing companies spend around 20 per cent of their revenues doing things wrongs and doing them over again. According to Crosby this can be up to 35 per cent of operating expenses for service companies.

Despite having developed his views about achieving quality in a practical industrial environment, Crosby's books do not deal in any depth with specialist quality assurance techniques. His main concern is the meaning of quality and its attributes, and how, by coming to a common understanding of what quality is, people can work together to achieve it rather than disrupt each others efforts through misunderstanding (Fox, 1993).

In principle, most of Crosby's messages harmonise with the other two gurus, but his approach is less rigorous. Crosby does teach continuous improvement. His aim is to secure zero defects which is sometimes thought impractical. However, by zero defects he means defects as perceived by the customer. Deming and Juran would criticise this by saying that it tends to rule out the possibility of going beyond what the customers know they want. In a sense 'zero defects' is not good enough (Wille, 1993).

Like the other gurus, Crosby has his steps and points. He lists four new essentials of quality management, which he calls 'the Absolutes' (Crosby, 1984):

1. Have a definition of quality, understood by everybody, as part of a common language facilitating communication: Quality has to be defined as conformance to requirements, not as 'goodness' nor 'elegance'.
2. Have a system by which to manage quality and performance standards which is unambiguous: The system for causing quality is prevention, not appraisal.
3. The performance standard must be "Zero Defects", not "that's close enough". In other words, organisations must not plan errors into our operation, like the company that one year said it was 'going to halve fatal accidents'.
4. The measurement of quality is the price of non-conformance to requirements. That is, all the expenses of doing things wrong from the customer's perspective.

Crosby has developed fourteen steps to a quality improvement programme, he sees the zero defect process as comprising these 14 stages below:

Step 1 is to make clear management commitment to quality. This stresses the need for a visible and obsessive concern for quality and the need for a clear quality policy.

Step 2 is to set up quality improvement teams with representatives from each department. This is needed to guide the process, help it along and to make creative contributions to quality improvement.

Step 3 is to set in place quality measurements to provide a display of current and potential non-conformance problems. Quality must be measured before it can be improved. The measurement facilitates include objective evaluation and corrective action.

Step 4 is to determine the cost of quality and explain how to use it as a management tool. Crosby's components of overall cost of quality are: scrap; rework; warranty; service apart from regular maintenance; inspection labour; engineering changes; purchase order changes; software corrections; audit and other costs of doing things wrong. Knowledge of the cost of quality is an impetus to quality improvement.

Step 5 is to raise the level of quality awareness and the personnel concern for the company's quality reputation for all employees. This concern with the provision of a method of raising quality awareness so that everyone has an operational definition of conformance to requirements.

Step 6 is to take corrective action on the problems raised in the previous steps. The root causes must be found and corrected before a problem will go away for ever.

Step 7 is to plan a "zero defects" programme. This phase plans the conversion of the quality improvement programme into the theme of zero defects which is to do it right the first time.

Step 8 is to train supervisors actively to carry out their part in the total quality improvement process. By supervisors Crosby means all managers from the chairman on down the line.

Step 9 is to hold a zero defects day to create an event that will let all employees know through a personal experience that there has been a change. The idea here is to show that management is prepared to commit itself to a goal of zero defects in front of the assembled workforce and other witnesses.

Step 10 is goal setting and encouraging individuals and groups to set improvement goals. Zero defects is the final goal, but for realism and to provide milestones against which to measure progress, intermediate targets and dates must be set. This phase helps people learn to think in terms of meeting goals and accomplishing specific tasks as a team.

Step 11 is to encourage employees to communicate to management the difficulties they have in achieving their improvement goals in the error-cause removal campaign. It is not a suggestion system. The idea is for the employees to know that their problems can be heard and answered. Crosby believes that once employees learn to trust this communication, the total quality programme can go on forever.

Step 12 is to recognise and appreciate all those who participate in the programme. Award programmes have to be established to recognise those who meet their goals or perform outstanding acts. Employees' contributions to error removal must be recognised and celebrated.

Step 13 is to establish quality councils to communicate on a regular basis. These councils are the best source of information on the status of programmes and ideas for action. They also bring the quality professionals and team chairpersons together on a regular basis.

Step 14 is to do it all over again to emphasise that total quality programmes never end and that they are indeed a journey not a destination. Repetition makes the programme perpetual. Crosby stressed that if quality is not ingrained in the organisation, it will never happen.

Whether academics and practitioners agree with Crosby in detail or not, he has succeeded in creating a popular awareness of quality on a grand scale in US and Western companies.

3.4.4 - Comparing the gurus view

The three gurus views and approaches are summarised in Table 3.4. While there are differences in views, all three gurus are really talking about top management having the major responsibility for quality improvement in the organisation.

From their thoughts and prescriptions quality is based on top management's commitment, employee participation and clear communication of quality objectives. It must be measured and controlled towards continuous improvements. Quality is a process not a programme or a scheme to be applied. The combination of the gurus prescriptions and actions towards quality, plus the expanded quality management theories, provide guidance and theoretical foundations for the total quality management (TQM) philosophy.

Table 3.4 - The Quality Gurus Views Compared (based in Oakland, 1993)

	Deming	Juran	Crosby
Definition of Quality	A predictable degree of uniformity and dependability at low cost and suited to market	Fitness for use	Conformance to requirements
Senior management responsibility	Responsible for 94 % of quality problems	Less than 20 % of quality problems are due to workers	Responsible for quality
Performance standard/motivation	Quality has many 'scales'. Use statistics to measure performance in all areas. Critical of zero defects	Avoid campaigns to 'do perfect work'	Zero defects
General Approach	Reduce variability by continuous improvement. cease mass inspection	General management approach to quality- especially human elements	Prevention, not inspection
Quality process structure	Fourteen points for management	Ten steps to quality improvement	Fourteen steps to quality improvement
Improvement basis	Continuous to reduce variation	Project team approach set goals	A 'process', not a programme; improvement goals
Teamwork	Employee participation in decision-making; break down barriers between departments	Team and quality circle approach	Quality improvement teams; quality councils
Cost of quality	No optimum-continuous improvement	Quality is not free; there is an optimum cost	Cost of non-conformance; quality is free
Use of statistical methods	Statistical methods of quality control must be used	Recommends statistical methods, but warns that it can lead to 'tool-driven' approach	Rejects statistically acceptable levels of quality

3.5 - Why The Japanese

Unlike the UK, the Japanese have approached quality from another perspective. While techniques and principles have been learned from American experts like Deming and Juran, perceptiveness, emphasis and applications have differed. The Japanese approach could be described as an integrative process involving the development, design, production and after-sales service of quality products and services (McManus, 1994).

Deming (1982) described the four forces that caused the explosion in Japan's industry:

1. Japan's Statisticians; Japan's statisticians might become their country's most important resource. He believed a number of Japanese statisticians acquired some appreciation of what the construction of statistical methods of quality control might make to the Japanese industry.
2. The Union of Japanese Science and Engineering; this union, known by its initials, JUSE, was formed in 1947 by Kenich Koyanagi, its aim being the reconstruction of Japan. The courses given by JUSE to Japanese executives contained lectures with Deming, Juran and Feigenbaum and thus they started the quality revolution in Japan. Also it was in JUSE that the whole of Japan's statistical control methods used in the industry were developed.
3. Teaching of techniques; The first series of lectures commenced in June 1950, with the teaching of elementary, powerful statistical methods. Four hundred engineers took these courses in the summer of 1950. The content of the courses, and the method of teaching, opened up new ways to build statistical knowledge into the education of engineers.
4. Conferences with top management; the subject of these conferences was the responsibility of management to institute constancy of purpose towards service, to improve the system through all stages of production, and to manage the use of statistical quality technology company-wide, from procurement of materials to consumer, consumer research, innovation, and redesign of product.

In 1954, when Joseph Juran was invited by JUSE to come to Japan to give some lectures about his ideas, the great difference that he found, in comparison with the same lecture that he gave in the US, was that in Japan the audience were only CEO's and top managers from the largest manufacturing companies in Japan, instead of only the middle managers that used to attend to his lectures in the US.

Juran (1988) emphasised that there are six main points used by the Japanese to launch their quality revolution, they are outlined in Table 3.5. Juran stressed that each of these actions were unprecedented in industrial history, he then refuted the idea that the Japanese quality revolution was only a result of the early American gurus' thoughts. It was primarily a function of those he called the heroes of the Japanese quality revolution: *'the Japanese Managers'*.

Table 3.5 - Juran's Principles of Japanese Quality Revolution

The senior executives of Japanese companies took personal charge of managing for quality.
The executives trained their entire managerial hierarchies in how to manage for quality. (The seed courses for training were the lectures that Juran gave in 1954).
Japanese companies went into quality improvement at a revolutionary pace and maintained that pace year after year.
The companies trained their engineers to use statistical methods for quality control. (The seed courses for this training were Deming's lectures in 1950)
The companies provided their work forces with the means to participate in quality improvement. The method that they came up with was a Japanese invention: The Quality Control Circles.
The companies enlarged their business plans to include quality goals. This concept is more recent in origin, but it has been growing, and the trend seems irreversible.

In Japan, it is common for top managers to provide leadership in the quality function. Top managers have the required training and are quite familiar with the underlying concepts and methods. They see quality as the source of competitive advantage, and clearly demonstrate its importance by their leadership. With chief

executives responsible for the quality function, there is no question of conflict of authority, and quality is seen as a company wide concern.

A major difference between the Western and Japanese approaches to quality lies in the setting of goals. While the Western approach to quality still seems to focus on meeting standards which remain static, the Japanese go one step further in continually revising their standards (McManus, 1994).

TQM in Japan is based on principles borrowed from the West but adapted to meet the needs and strengths of the Japanese business environment. Also a number of social-cultural factors support the TQM philosophy (Fox,1993) such as: lifetime employment; pay increases based on length of service; company-based trade unions; complete identification of employees with the firm and its objectives; respect for age and seniority and heavy emphasis on training throughout a worker's career. Quality is therefore seen not as the responsibility of quality specialist, but as that of all the organisation's members.

This section concludes that, what in the West used to be called a Japanese total quality management philosophy, was in fact started in the West by Deming, Juran, Crosby and their followers. It succeeded better in Japan much more as an effect of the Japanese's top-management's commitment, clear definition of purpose and determination to do right the first time than an exceptional Japanese's culture trait. Thus everything that occurred in Japan's industrial environment (goods and services) would be transferable, with some modifications, to a Western industrial environment.

3.6 - TQM Concepts

TQM is a management philosophy which emphasises a number of concepts such as customer focus, continuous improvement, defect prevention, and recognition that quality responsibility is shared by all the organisation's members (Berk and Berk, 1993).

There is still no universally recognised definition of TQM, but authors write of TQM as a form of business management for the whole organisation (Wilkinson and Witcher, 1993; Oakland, 1993)).

TQM is regarded as an integration of various processes characterising the behavioural dynamics of an organisation. An organisation is referred to as a total system (socio-technical), where all the activities carried out are geared towards meeting the requirements of customers with efficiency and effectiveness (Lakhe and Mohanty, 1993).

TQM has been viewed as the quest for progress and continual improvement in the areas of cost, reliability, quality, innovative efficiency and business effectiveness. However, TQM may also be viewed functionally as an integration of two basic functions: total quality control and quality management.

Customer satisfaction, employee satisfaction, product or service quality assurance in all its stages, and continuous improvement and innovation, are the main ingredients of total quality control. Whereas quality management is a way of planning, organising and directing, that will facilitate and integrate the capabilities of all employees for continuous improvement of services and products in an organisation to attain quality. Thus, TQM is a philosophy which brings all members of an organisation together to ensure product and service quality, improve organisational environment and attain customers needs.

3.7 - TQM Development

The evolution of quality towards TQM is the outcome of four major eras of development as outlined by Garvin (1988). He illustrates the evolutionary process where quality has moved from an initial stage of inspecting, sorting and correcting standards to an era of developing quality manuals and controlling process performance. The third stage was to develop systems for third party certification, more comprehensive manuals

including areas of organisation other than production, and the use standard techniques such as SPC. The present and fourth era is primarily strategic in nature and is based on continuous improvement as the driving force.

Dale et al. (1990), argued that TQM is the evolution of quality management (Figure 3.3), which after twenty years of simple inspection activities has been replaced or supplemented by quality control, quality assurance has been developed and refined and the most progressive companies are now working towards TQM. This emphasises that the quality management discipline has moved from a technical-orientation to a managerial orientation. Further, they described that TQM requires that the principles of quality management should be applied in every branch and at every level of the organisation. TQM characteristics are the application of good practice quality management principles to the whole company, as popularised by the quality gurus, mainly the ideas of Deming (1986), Juran (1988) and Crosby (1979).

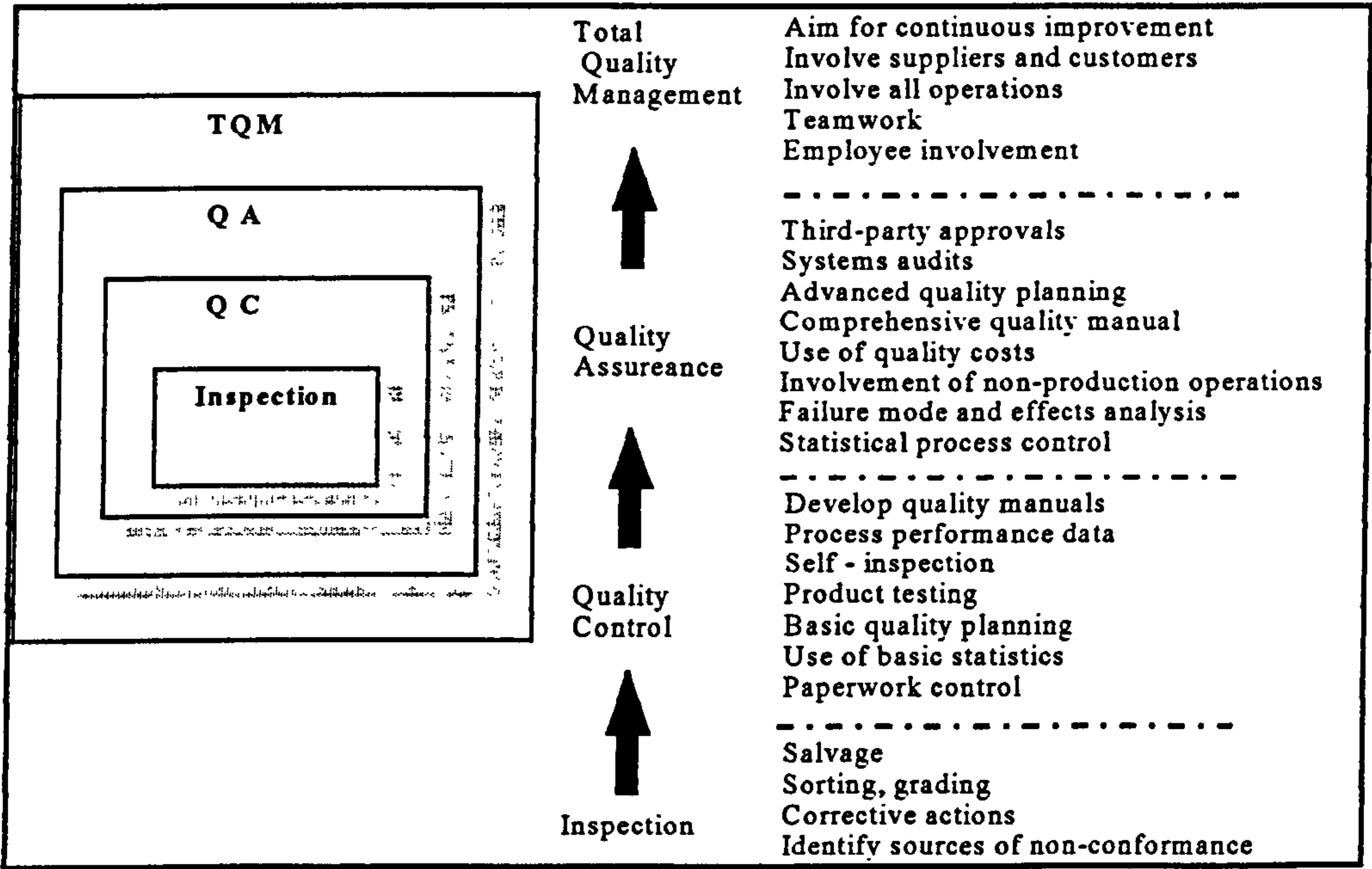


Figure 3.3 - The Evolution of Quality Management (Dale and Plunkett, 1990)

3.8 - The Critical Success Factors

There are some conditions for driving an organisation's long-term quality improvement programme required in implementing the TQM philosophy (either manufacturing or service). These are known as 'the critical success factors' (CSFs). The idea of the CSFs is to identify a small number of key requirements that are such that if these are measured as being satisfactory towards the evolution of the TQM process, the organisation generally will be regarded as being successfully on its path for continuous improvement (Oakland, 1993; Porter and Parker, 1993; Bendel et al., 1993; Saraph et al., 1989).

Porter and Parker (1993) identified eight CSFs in the TQM implementation process that are common to successful TQM programmes. These are outlined below:

(1) *Necessary management behaviours* ; management should set an example by managing quality as a key strategic issue and supporting continuous improvement.

(2) *A strategy for TQM implementation*; the TQM activity must be incorporated into the organisations' business strategy and a means for continuous improvement established.

(3) *Organisation for TQM*; TQM requires an organisational structure which demands and harnesses the full potential of the workforce. A team structure provides the means for involvement and the power for quality improvement.

(4) *Communication for TQM*; communication provides the means of raising quality awareness, involvement, thus reinforcing the message.

(5) *Training and Education*; these should cover all employees as part of an ongoing process, with the scope and depth tailored to suit each group's needs.

(6) *Employee involvement*; until everyone is involved in the process of quality improvement, there is a major cost of lost opportunity being carried by the organisation.

(7) *Process management and systems*; a key part of any total quality strategy is the management of processes. A documented quality system, as part of a total quality strategy, contributes to this by managing the organisations' processes in a consistent manner.

(8) *Quality technologies*; such as SPC, quality costing, benchmarking, etc., provide the techniques to identify opportunities and solve problems. They enable continuous improvements and reductions in variation to be achieved.

There are many empirical studies to identify the TQM CSFs and they contain almost similar or comparable findings (Saraph et al., 1989; Black, 1994, Porter and Parker, 1993, Berry, 1990). However, the most important thing to be understood by organisations is that the CSFs are the few vital requirements that must be effectively attained for the successful implementation of TQM.

3.9 - TQM Elements

TQM is receiving global acceptance and every organisation tries to follow and implement TQM. However, Sink (1991) feels that this rush to show the world that the TQM philosophy is being practised by organisations is made without proper understanding of TQM concepts. Dale and Lightburn (1992) also claim that not all companies are willing to embrace the fundamentals of TQM. It is argued that there is a considerable number of companies who are using all the popular quality management tools and techniques, however, these techniques, procedures and systems are used in a superficial manner. The main reason for such a situation is the lack of management commitment to the basic principles of TQM.

The TQM philosophy in its holistic approach, as described previously, it embraces both technical and behavioural aspects of an organisation as well as the environment surrounding the organisation. Wilkinson and Witcher (1993) argued that it is vital for organisations to realise the notion that TQM is holistic in its approach. They summarise TQM as three major requirements, as outlined in the following:

- **Total (Participation of Everyone)**, TQM requires continuing improvement and getting things right first time. Since most quality solutions are outside the control of any one individual or function, there is the need of team work and the maintenance of good relationships.
- **Quality (Meeting Customer Requirements)**, TQM requires customer-agreed specifications which allow the supplier to measure performance and customer satisfaction. Individuals and teams need to use quality tools and systems to facilitate measurement and problem solving.
- **Management (Enabling Conditions for Total Quality)**, TQM requires leadership and total commitment from senior management. They must ensure that an appropriate infrastructure exists to support a holistic and not a compartmentalised approach to organisational management.

In order to be able to achieve holistic TQM, they prescribe four critical elements, which are first and primary *leadership, teamwork, tools and internal marketing*. The overlap of these elements are shown and three secondary elements are added: *processes, policy and external customers*. They argued that all these elements must be fused together for the holistic TQM. In this research these elements are expanded to ten elements (Figure 3.4) and are described below. The intention is to describe the TQM theoretical background in which the research has been developed.

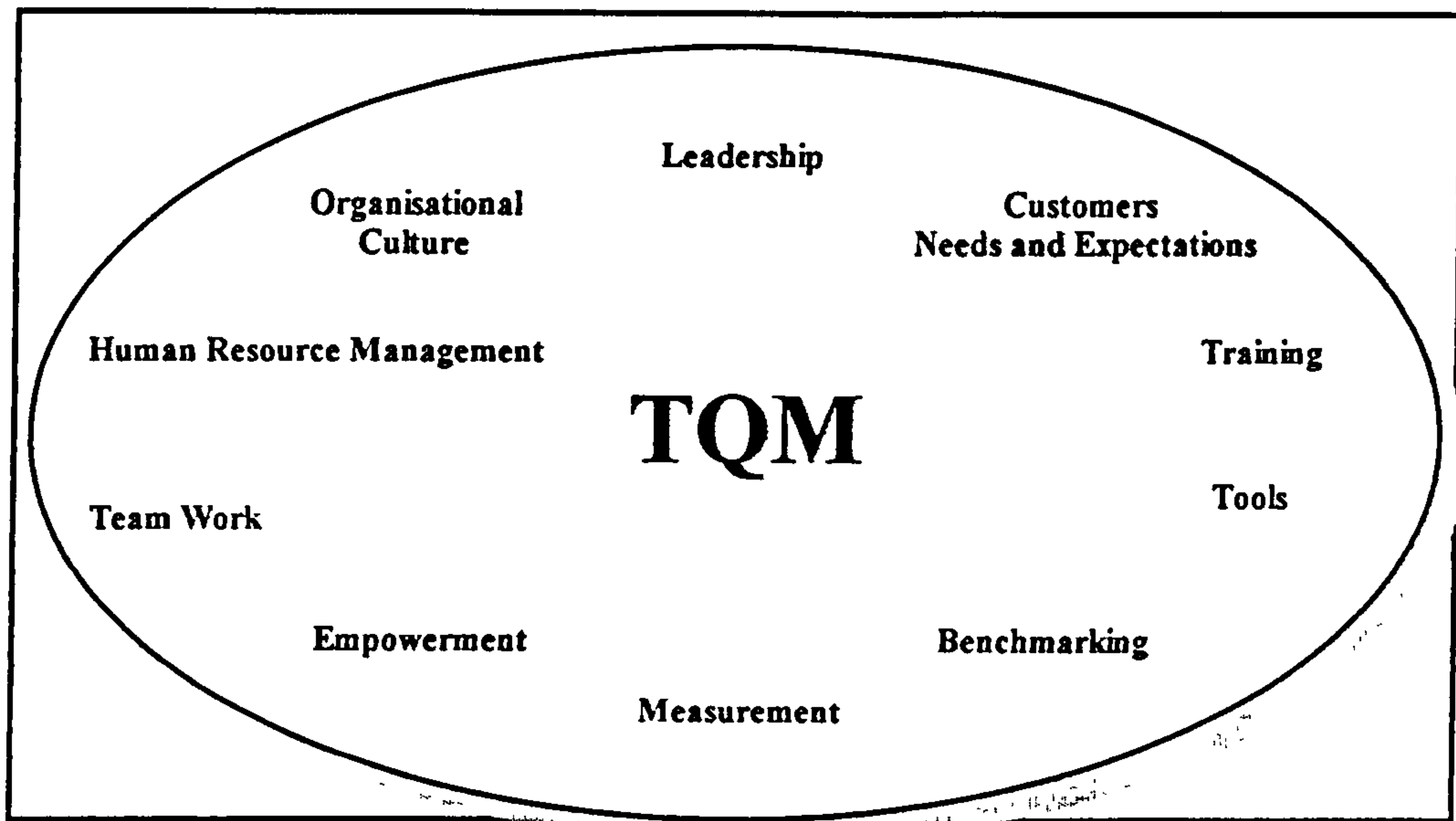


Figure 3.4 - The Ten Elements of TQM

3.9.1 - Organisational Culture

Many authors define organisational culture as the values of unconscious feelings of good and evil; beautiful and ugly; normal and abnormal (Schein, 1985; Hofsted, 1980 and Morgan, 1997). Organisational culture is not so much what the organisation is, but more what its members think it is. Basically, culture is the collective consciousness of an organisation (Lascelles and Dale, 1993).

Garvin (1984) pointed out that even organisations in the same industry might define quality in different ways. These different definitions of quality are rooted in the culture of the organisation or part of it and in national culture. In this way organisational culture dictates what people do (and what they do not do), what people perceive as good and bad quality. In other words, organisational culture is a control mechanism for the daily routines and the daily execution of TQM tasks.

Donk and Sanders (1993) suggested that, regarding quality management, it is essential to know the organisation's culture for at least two reasons. Firstly, it is a starting

point for formulating a quality management policy and selecting an appropriate way of implementing it. In some cultures it will be obvious that the approach of Juran or Crosby will yield success, while in other cultures the approach of Deming will be needed. Thus, the knowledge of the existing organisational culture provides information on where changes are needed and where they are not. Secondly, investigation of the organisation's culture from the perspective of quality gives opportunities for activities in other management areas, such as human resource management or organisational development, to support quality management and to change the organisational culture in an integral way.

Morgan (1997) offers the view that organisational culture has enormous implications on organisational analysis and effective management. This helps us to see that organisations are, in essence, socially constructed realities that are as much in the minds of their members as they are in concrete structures, rules, and relations. He also stressed organisational cultures influences on the TQM movement:

"...the 'total quality' and 'customer service' movements that dominated managerial thinking and practice in the 1980s and 1990s have sought to create a cultural change in management at large. The various theories and techniques advocated by these movements offered new mind-sets and new values for doing business. Their implicit aims were to create a kind of 'cultural revolution' that would replace the old bureaucratic way of life with a focus on a new 'customer and quality driven' business logic. For example, many organisations succeeded in revolutionising and reinventing themselves through the values of 'quality' and 'customer service'. But, it is estimated that as many as 70 per cent of the firms that set off on this new path were unsuccessful, largely because they failed to replace the bureaucratic logic governing the old mode of operation. Their quality programme became no more than a programme. Despite all the money and effort that was spent, they failed to dent the dominant culture and the political dynamic that often supports it...."

It shows that the challenge of creating new forms of organisation and management is very much a challenge of cultural change. Therefore, the creation of a TQM corporate culture is not just about inventing new slogans or acquiring a new leader. It is about investing in what amounts to a new way of life. It means, for an organisation to be effective in implementing TQM, top management need to transform prevailing organisational mind-sets and political patterns. Otherwise their TQM attempt will become no more than programmes which, sooner or latter, will die away.

3.9.2 - Leadership

Leadership is about quality committed senior management. It is this which must ensure that the principles of TQM are fully implemented, continually sought and improved in practice (Wilkinson and Witcher, 1993). Deming, Juran and Crosby emphasise the crucial role of leadership in quality management. The principal job of managers is not control, it is making sure that workers do what they have been empowered to do.

Leadership involves setting clear goals, involving subordinates to work towards those goals, and providing systems and resources to reach the goals. Oakland (1993) argued that successful quality based strategy depends very much on effective leadership. The effective leadership starts with the Chief Executive's vision, capitalising on market or service opportunities, continues through a strategy that will give the organisation competitive advantage, and leads to business or service success. Together, effective leadership and TQM result in the organisation doing the right things, right first time and every time. Further he offers five requirements for effective leadership:

(1) Top managers developing and publishing clearly documented corporate beliefs and objectives; a mission statement towards quality objectives.

(2) Developing clear and effective strategies and supporting plans for achieving the mission and objectives.

(3) Identifying the critical success factors (CSFs) and critical processes.

(4) Reviewing the management structure. Directors, managers and other employees can be fully effective only if an effective structure based on process management exists.

(5) Empowerment, encouraging effective employee participation. Leaders must develop effective communications up, down and across the organisation. And then take effective action on what is communicated.

3.9.3 - Customer Needs and Expectations

Fulfilling the customers needs and expectations is the key to the TQM philosophy. The organisation's recognition of the need to identify customer's requirements and to design products and services to meet them is crucial for quality processes.

In the financial services industry it often depends on the way in which the service is provided rather than on the features of the product. For instance, a marketing department can develop a very effective new product, which offers a higher interest rate and less risk than other products. However, if the account opening procedures are extremely cumbersome, resulting in delays to the customer and a lack of understanding, then customers satisfaction will be low and it will not meet their requirements for an efficient and simple service (Ansell, 1993).

In considering customer's needs, expectations and the degree to which they are satisfied, there is a need to identify the customer, who can be internal or external to the organisation. Then, ascertain that their requirements are fulfilled by promoting a chain

reaction, in which the customer supplier relationship is achieved right first time every time both inside and outside organisation.

The benefits of making sure that the customers (internal and external) requirements are met at every stage are enormous in terms of improving competitiveness, reducing costs, and eliminating rework. The understanding of customer's needs and expectations are the core element of the TQM philosophy.

3.9.4 - Human Resource Management

Perhaps the most important key to TQM implementation is human resource management (HRM). However, most research has been sceptical about the extent to which HRM is taking root in the TQM process (Wilkinson, Snape and Allen, 1990; McCabe, Knights and Wilkinson, 1994).

Most companies define 'quality' in terms of customer service and improving the functional or relationship issues between staff and customers. This necessitates considering the human resource issues (McCabe, Knights and Wilkinson, 1994). Recruiting, selecting and training procedures should be modified to provide a work force oriented to and capable of co-operatively understanding customers needs, creating value, and improving value systems.

In adopting a TQM philosophy, organisation's job descriptions should define each employee's responsibility for improvement, not just task performance. Cross-training in job task and quality tools such as the seven new quality management tools, statistical tools and team building are essential. Further, all managers and staff must learn to work together, deal with customers, breakdown barriers between functions, and continuously improve all aspects of the organisation so as to deliver the planned quality goals.

Seddon (1989) suggested that in many organisations TQM programmes are initially received with some enthusiasm by the workforce, but that this soon wanes as disillusionment sets in. He claims that this is due to management's preoccupation with the *'hard'*, measurable aspects of the programme, such as costs and production performance, and the relative neglect of the *'soft'* aspects such as customers perception and employee commitment. This is where HRM does appear to be most relevant for TQM implementation

The emphasis in HRM is on commitment, self-control and trust (Wilkinson, Snape and Allen, 1990). In a TQM environment, human resource development programmes should not be tailored to certain aspects of training and education. The programmes must be based on comprehensive development of human resources. In other words training and education should not be concentrated only on skill development or task-oriented improvement, but a balance of the attention should also be given to the psychological and motivational aspects of the organisation's employees. Oakland (1993) stated that:

"...TQM is concerned with moving the focus of control from outside the individual to within; the objective being to make everyone accountable for their own performance, and to get them committed to attaining quality in a highly motivated fashion. The assumptions a director or manager must make in order to move in this direction are simply that people do not need to be coerced to perform well, and that people want to achieve, accomplish, influence activity and challenge their abilities..."

The companies top management must use HRM functions to redefine the culture and convince all the organisations members that the TQM philosophy is not another fad. At the same time managers and staff must be appropriately rewarded for their contributions to focus work on the quality goals. So that there will be continuous commitment and motivation for improvement. Therefore, the management of human resources is considered to be a key element for a successful TQM implementation (Deming, 1986; Crosby, 1984; Wilkinson, Snape and Allen, 1990).

3.9.5 - Training

An organisation's members need to be trained on prescriptions, methods and concepts of quality (Deming, 1986; Crosby, 1984). Juran (1993) stated that Japanese executives trained their entire managerial hierarchies on how to manage for quality, was one of the major factors for their quality revolution.

Oakland (1993) argued that the need for integrated quality training occurs at four levels of the organisation: senior management, middle management, first level supervision, and all other employees. He also stated that:

"...Training is the single most important factor in improving quality, once commitment is present. Quality training must be objectively, systematically, and continuously performed..."

Tollinson (1992) has indicated that introducing TQM calls for a training strategy which integrates training, basic skills improvement and job skills, since they are interdependent. It follows that the effective use of TQM tools will be dependent not only on individuals' knowledge of these tools but also on their fundamental knowledge and understanding of their jobs (Oakland and Waterworth, 1995).

Brown (1992) described four areas to be covered by any TQM training strategy. Firstly, awareness programmes are needed simply to inform people what TQM is, how it can be introduced and what it can do. Secondly, cultural changes need to develop appropriate attitudes and values relating to quality. Thirdly, people need to be equipped with tools and techniques of quality improvement, so that quality improvement teams can be established and function effectively. A fourth area is the provision of training in job roles, equipment use and so on, so that employees may identify improvement opportunities.

Oakland and Waterworth (1995), argued that the quality improvement skills required for an organisation's members could not be obtained from conventional quality training programmes and courses. They offer a framework of TQM training (Figure 3.5) which has been used successfully by the European Centre for TQM within many organisations from both the manufacturing and service sectors.

Training is an essential element of TQM, however, training programmes can be a failure and a waste of companies resources if they cannot focus on an understanding of quality requirements and knowing the methodology required to attain them. It must involve all members of the organisation starting from top management, who have to be the quality leader. Training should thus try to develop a common vision for quality among all an organisation's members and then promote the cultural changes towards the TQM philosophy.

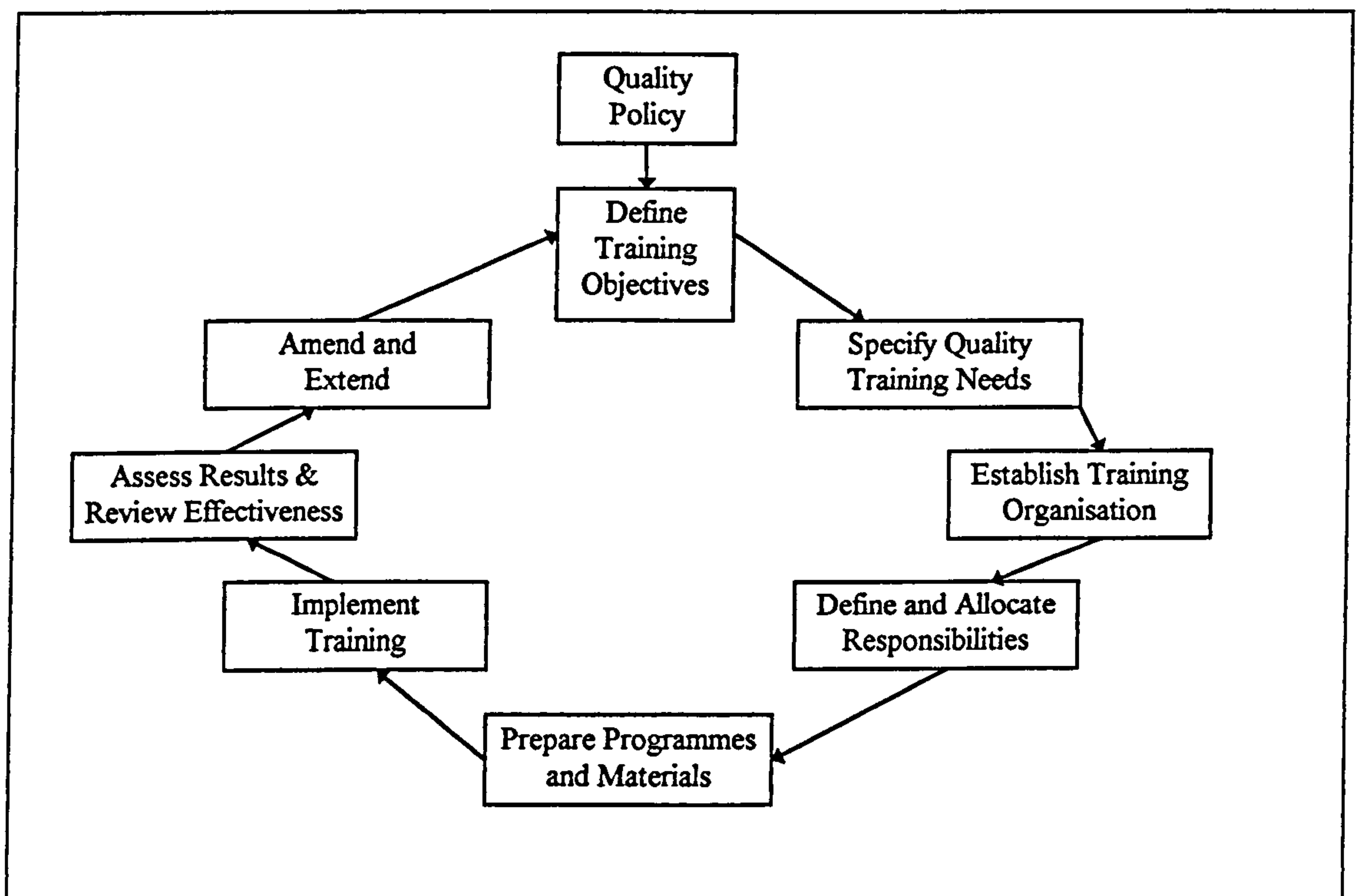


Figure 3.5 - The Quality Training Framework (Oakland and Waterworth, 1995)

3.9.6 - Team Work

Team working is the key to success in every organisation. Teams are a useful ways of determining issues, involving those who must indicate solutions, and they are crucial to the management of continuous improvement, or driving forces for successful TQM (Wilkinson and Witcher, 1993).

Teamwork throughout any organisation is an essential component of the implementation of TQM, for it builds trust, improves communications and develops interdependence. The use of the team approach offers many advantages over allowing individuals to work separately (Oakland, 1993):

- A greater variety of complex problems may be tackled by the pooling of an organisation's expertise and resources.
- Problems are exposed to a greater diversity of knowledge, skill, experience, and are solved more efficiently.
- Problems that cross departmental or functional boundaries can be dealt with more easily, and the potential/actual conflicts are more likely to be identified and solved.
- The recommendations are more likely to be implemented than individual suggestions, as the quality of decision making in 'good teams', is high.

Teamwork is one of the most powerful tools for solving problems and meeting continuous improvement objectives. However, teams must be based on real tasks, and self-destruct when their purpose is achieved. Otherwise, they become self-serving and superficial. Further, teamwork membership has to be flexible and related with no vertical or hierarchical constraints. Leadership, empowerment and training are crucial for

teamwork success. Wilkinson and Witcher (1991) suggested five main kinds of teamwork for TQM success:

(1) Manage a process (autonomous work groups).

(2) Review progress and solve problems (quality improvement teams, problem solving teams or corrective actions teams).

(3) Facilitate TQM (councils, steering and departmental liaison committees - these should be merged into existing organisational infrastructure where possible).

(4) Ensure that product/service design and conformance are oriented to the external market (quality function deployment).

(5) Involve to determine the relevance of quality to operations (quality policy deployment).

3.9.7 - Empowerment

A fundamental TQM principle is that employees must be empowered to deliver quality services and products to customers first time and every time. However, many organisations mixed up empowerment with employee involvement. Employee involvement means that every employee is regarded as a unique human being (not just a cog in a machine), and each employee is involved in helping the organisation to meet its goals. It means that employees and management recognise that every member of an organisation is involved in running the business.

Empowerment is a somewhat different concept. It means that in addition to involving an organisation's members in running the business, top managers have to

recognise that many problems or obstacles to achieving organisational goals can be identified and solved by employees. Therefore, empowerment means that organisations recognise this ability, and provide all an organisations members with the tools and authority required to continuously improve their performance. It means that management states its expectations about employees ability to recognise and solve problems, and empowers them to do so.

As employees become more empowered in their work, the feeling of ownership and responsibility becomes more meaningful. The act of empowering employees provides evidence of management's trust. For many organisations, such steps are clearly a change in the culture. With empowerment comes the need to redefine the basic roles of upper management, middle management, and the work force. One model under consideration at a bank is outlined below (Juran and Gryna, 1993):

Upper management should act as shapers and coaches. As a shaper, it should create, communicate, and support the organisation's mission. As a coach, it should help when asked but avoid entering into day-to-day problems of middle management.

Middle management should not only run its area of responsibility but work as a group to integrate all parts of the organisation. In addition, it must support the work force by eliminating obstacles to progress.

The *work force* is the primary producer of the output for customers. Its closeness and knowledge about its work means that it should use its empowerment to determine how the work can best be done.

3.9.8 - Benchmarking

The TQM philosophy consists of a process of never ending continuous improvement. It focuses on continuous improvement of the internal business process, to better meet customer requirements. The addition of benchmarking provides a complementary external dimension that can accelerate improvement and galvanise change (Hutton and Zairi, 1995).

Benchmarking is the process of identifying, understanding and adapting outstanding practices from within the same organisation, or from other businesses, to help to improve performance. This involves a process of comparing practices and procedures to those of the best, to identify ways in which an organisation can make improvements. Thus new standards and goals can be set which, in turn, will help better satisfy the customer's requirements for quality, cost, product and service (Cook, 1995).

Benchmarking like many other processes, relies upon the first steps being correctly executed. This requires a systematic approach. Cook (1995) offers six discrete steps to an effective benchmarking process:

- (1) Identify and understand an organisation's processes. This stage involves gaining an in-depth knowledge of the organisation's processes in order to fully understand its operation and the key factors which determine its success.
- (2) Agree what and who to benchmark. The organisation may already have a perception of potential benchmarking partners. However, it is important at this stage to clearly identify what and who to benchmark through a careful analysis of the options available.
- (3) Collect data. There are a variety of methods for collecting data from benchmarking partners. This can come about through the direct exchange of information or through desk

research. However the information is gathered, its quality will directly reflect the appropriateness of the questions asked.

(4) Analyse data and identify gaps. Once data has been collected, both quantitatively and qualitatively, it is possible to establish best practice and identify the gaps between the organisation's performance and the performance of the benchmarking partners who provide the highest standards. In this way differences can be established and a plan of action for improvement developed.

(5) Plan and action improvements. The action-planning stage of the benchmarking process involves generating ideas on how improvements can be made and putting forward ideas for implementation. The communication of the results of the benchmarking exercise to other parts of the organisation is critical in order to make them aware of the need for changes.

(6) Review the benchmarking processes. As the pace of change increases dramatically in the commercial world, so best practice will change. The process of undertaking benchmarking should be never-ending and part of the culture of continuous improvement.

Benchmarking generates an outward perspective that surpasses traditional competitive analysis by providing a deep understanding of the process and skills that create superior performance. It not only to identify performance gaps, but also to provide an approach for the organisation to close these gaps by dramatic, rather than incremental improvements in process performance (Hutton and Zairi, 1995). Generally there are four types of benchmarking, which can be undertaken by an organisation:

1. Internal benchmarking; this involves measuring and comparing company data on similar practices from other parts of the organisation. One branch office with another, for example. Internal benchmarking creates an environment of two-way

communication and sharing within the organisation. It also overcomes any problems of confidentiality and trust.

2. **Competitive benchmarking;** this type of benchmarking is against direct competitors. It aims at comparing specific models or functions with main competitors. This is often easier for larger industries than smaller ones. The advantage of this type is the direct comparison with main competitors. The disadvantage, however, is the difficulty with which information on processes is obtained and comparison with competitors may not point to best practice.
3. **Non-competitive benchmarking;** it is possible to benchmark a process by measuring and comparing: a related process in a non-competitive organisation, a related process in a different industry; and an unrelated process in a different industry. In this way, improvements can be identified and adapted to the organisation. This type of benchmarking compares specific functions or process with the best in a non-competitive industry. It is a positive approach, but because it is only related to specific processes, it may not be of benefit to other operations in the business organisations concerned.
4. **Generic or best practice benchmarking;** this approach involves learning from best practice organisations, the leaders of the process being benchmarked. This is the ultimate in terms of benchmarking applications. This approach applies to all processes of business operation. It encourages the continuous effort of comparing functions and processes with those which are the best in class.

Benchmarking is such an important element of the TQM process, basically because it allows organisations to make a commitment to continuous improvement by establishing objectives based on industry best practices for meeting internal and external customer's requirements.

3.9.9 - Tools

When data collection and analysis for the purpose of quality improvement became popular in the early 1980s, considerable attention was focused on Japan's "seven tools for quality control". Imai (1986) lists the seven tools as Pareto diagrams, cause and effect diagrams, histograms, control charts, scatter diagrams, graphs, and check sheets.

These tools can be very helpful provided they are used appropriately. Too often, a tool for data analysis is used for its own sake, out of the context of systematically building knowledge and taking action for improvement. This may be done in the mistaken belief that the tool is able to lead the user to ask the right question about the process. Unfortunately, no tool is able to provide a rationale for analysis, or provide a substitute for thought. Even if the environment encourages use of particular tools, tools can be misused if they are not integrated into a framework of theory that provides guidance on their appropriate use.

The TQM process requires tools and methods that can be applied to improve performance. Defining and understanding these, helps to identify and resolve quality problems effectively and efficiently. Here, some of these tools and systems are presented. This list is by no means exhaustive but it covers the TQM theoretical approach for financial service organisations adopted in this research.

- **The seven new planning tools.** These new tools include: affinity diagrams; relations diagrams; tree diagrams; matrix diagrams; matrix data analysis; process decision programme charts; and arrow diagrams. These tools were developed by the Japanese to collect and analyse non-qualitative and verbal data, particularly from sales, marketing, design and development activities. They are typically used when employing quality circles and QFD methods. The seven new planning tools are described briefly in Chapter 8.

- **Quality Function Deployment (QFD)** is a key TQM tool that systematically analyses customers' requirements in order to develop them into product, service and business operations. QFD is driven by what the customer wants, and, for this reason, the QFD methodology is often described as deploying the voice of the customer. QFD is fully reviewed in Chapter 8.
- **Quality standards** are essential tools for industry and commerce and provide the basic ingredients for competitive and cost-effective business operation. Ansell (1993) argued that applying ISO 9000 (or BS5750) in financial service organisations resulted in a number of major internal changes such as: (1) establishment of professional management standards with the development and maintenance of controls; (2) identification of duplication and wastage through the preparation of end-to-end procedures; (3) ensuring contingency and multi-skilling through using procedures and training to enable staff to undertake a wide variety of tasks; (4) motivating and involving staff in driving towards the achievement of an externally assessed standard; (5) avoiding complacency and introducing a programme of continuous quality improvement and cost reduction.
- **Quality Circles.** A quality circle may be defined as a group of workers doing similar work who meet voluntarily at a regular time in a normal working day under the leadership of their supervisor. The aims are to identify, analyse and solve quality-related problems, also recommending solutions to management (Oakland, 1986). Where the introduction of quality circles is carefully planned, members are given training in problem-solving techniques and where the company environment is supportive, they can be highly successful. The benefits fall into two categories: measurable savings and improvements in the attitudes and behaviour of people (Juran and Gryna, 1993). However, if the organisation fails to provide sufficient support, either from management or in terms of resources for operation and training, the

quality circles initiatives may fail (Brennan, 1992). The consequences of failure can be quite costly for the organisation. When TQM tools such as quality circles are used badly it may ultimately do more harm than good.

- **Business process reengineering (BPR).** Hammer and Champy (1993) offer a formal definition of reengineering: *"Reengineering is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed"*. In other words, BPR deals with eradication of old processes by rethinking and redesigning business processes towards improving organisational performance. TQM philosophy dictates that organisation must have a never ending continuous improvement performance culture. Thus, organisations should be able to integrate BPR with the TQM philosophy, and should reap the rewards of integrating continuous improvement and reengineering of processes (Zairi and Sinclair, 1995). Indeed, TQM as such is an umbrella philosophy that it allows the adoption of any tool or method which can promote continuous improvement.

3.9.10 - Measurement Procedures

A successful quality programme depends on having the appropriate measurement procedures. Traditional performance measures based on cost-accounting information provide little to support TQM, because they do not map process performance and improvements as seen by the customers. Measurement is important in identifying opportunities and comparing performance both internally and externally (Oakland, 1993).

Ansell (1993) pointed out that without measurements quality is just a warm feeling and a costly overhead. TQM is a philosophy in which continuous improvement, customer focus, employee empowerment and supplier involvement lead to enhanced organisational performance. Therefore, TQM requires the addition of new diagnostic

measurements to ensure that the total quality process is working. Some of these measurement tools are:

- *Customer surveys*, which are essentially used to establish customer needs and expectations;
- *Employee surveys*, which provide management insights necessary to empower employees and improve the organisational culture;
- *Analysis of complaints*, which are an effective way of monitoring if the quality of services and products have been delivered to customers in conformity with design. However, it will not always guarantee that customers will complain about poor quality, thus, this may compromise the reliability of this tool
- *Suppliers assessments*, these are important to measure the performance of suppliers because a significant number of defects or failures in the organisations' products or services may be coming from outside of the organisation.

In addition to these, benchmarking and QFD can be added to the TQM measurement process. Further, organisations, which are in a more advanced stage of the TQM process, can apply self assessment models such as the European Quality Award model (EQA) and the Malcolm Baldrige National Quality Award (MBNQA). These processes of self evaluation have been widely used by service and manufacturing organisations.

A survey by McCabe, Knight and Wilkinson (1994) identified that there are a number of techniques employed to measure quality improvements in the UK financial services, such as customer questionnaires, monitoring the number of complaints and marketing research. Measurement is a fundamental element of TQM, it should not be

used just as a communication medium or to provide members of the organisation with encouragement. It has to promote management action when the processes measured start to go in the wrong direction, and to prioritise the distribution of resources emphasising on continuous improvement.

3.10 - TQM and Organisation Changes

TQM success is very often directly related to an organisations ability to create an environment that empowers and challenges its members to change and improve their performance continually. However, achieving the level of cultural change required by TQM is not an overnight process. Such a change must be planned and carefully implemented.

Lascelles and Dale (1993) identified six majors change forces ("trigger forces") which play a significant role in the process of organisational change for quality improvement: the CEO; demanding customers; competition; the need to reduce costs; a restart situation and a greenfield venture which may be defined as a new company or a new operational direction for an existing company. These trigger forces can be categorised as catalysts of change (competition and costs), change agents (demanding customers and chief executives) and change opportunities (greenfield ventures and restart situations).

It is well known that an organisation's members are often resistant to changes. This is especially true in the case of transformational change such as the one promoted by the TQM philosophy. In this context many factors come into play, such as fear of the unknown, habit, the possibility of economic insecurity, threats to social relations and failure to recognise the need for change (Almaraz, 1994 and Nadler, 1988).

Strebel (1994) suggested that organisational changes based primarily on the change drivers, ignoring the force of resistance are as prone to failure as those dealing primarily with the forces of resistance, ignoring the change drivers. The importance of the forces of change and resistance were pointed out in the 1940's by the psychologist, Kurt Lewin who suggested that change is a three stage process (Table 3.6) whether individual, group or organisational level is concerned (Strebell, 1994; Dale and Cooper, 1992).

Table 3.6 - Lewin's Three-Stage Process for Change (Dale and Cooper, 1992)

<i>Unfreezing</i>
Before any change can take place, the established methods and patterns of behaviour must be broken down. People may be unaware of these established procedures until their attention is directed to them, and only then may their effectiveness be challenged. This demonstration of current ineffectiveness is essential for change to take place. People will willingly become involved in a change process only when they have accepted the need for change. The early activities of an organisational change programme are usually designed to bring about this unfreezing.
<i>Change</i>
Once current behaviours and attitudes are unfrozen, it is possible to work on the change process. This can be done using any of the following interventions: strategic planning activities, goal setting, coaching and counselling, team building (including the development of cross-functional teams), techno-structural changes, a formal programme of TQM education and training, etc.
<i>Re-freezing</i>
For people to operate effectively, their behaviour must be reasonably stable. An individual or organisation in a state of constant change will achieve little. This means that the new behaviour must be allowed to stabilise. Usually people are very good at doing this for themselves. All that is needed is time for re-freezing to occur naturally. Sometimes activities are included towards the end of a change programme that are designed to enable participants to look forward and review the effects of the planned changes. If these are perceived as beneficial, this review will aid the change process.

A successful organisational change is started with the mission statement, analysis of the critical success factors and understanding the key issues of the change process. Some of the obstacles to TQM implementation and resistance to change may be overcome through education, communication, participation, leadership and senior management's commitment. The change processes should be carefully planned and must start from the top and move to the bottom of the organisation involving all the organisation's members in the process.

3.11 - Quality From Manufacturing to Financial Services

In the 90's quality has become a reality in the service industries. The service organisations top managers became sensible to what their partners in the manufacturing sector discovered in the 80's. The service organisations' senior managers realised that "quality" was not just an invigorating slogan but the most profitable way to run a business. Reducing defects can lengthen the customers' relationship with the company, profits will then rise considerably. As the quality revolution in manufacturing had a profound impact on the competitiveness of companies, the quality revolution in service will create a new set of winners and losers. The winners will be those who lead the way of managing towards zero defections (Reichheld and Sasser, 1990).

Nevertheless, it is important to consider some relevant questions about the different environments (internal and external), between service and manufacturing industries, when considering quality management in financial services. For example, the difference between managers and supervisors; supervisors and shop-floor workers; or managers and shop-floor workers in a manufacturing environment. They are members of different groups and the integration among them has to be achieved as an initial condition to start any TQM programme.

In a financial company the internal situation is entirely different. Managers and staff are more closely related. The job descriptions are often developed with the real possibility of the staff member becoming a manager as a natural evolution of their career in the company. Thus in financial services, the staff members perceive themselves much closer to the management team than in the manufacturing sector.

Furthermore, in manufacturing processes the raw materials and final products are accountable and controlled. This enables total quality control before the customer accesses the goods. In financial services, the degree of intangibility of the service delivered and intense face to face contact between employee and customer during the process itself, make the organisation unable to control the quality performance of the service delivered before it is accessed by the customer. Thus, it can be said that the primary raw material in the financial service industry is the customer and the primary resource is the employee. Another area of difference is the use of statistical techniques on individual product/services. Manufacturing goods can have a statistical tolerance level imposed. However, in a banking service the money transaction must be absolute. This means that no mistake can be tolerated by the customers, all transactions must be 100% accurate.

Finally, one fundamental difference is that the customer is normally both the supplier and the buyer of financial services. One obvious example is a financial transaction where a customer pays in cheques and credits at one end of the system and these are processed through to ensure that the customer accounts are appropriately credited at the other end.

3.12 - TQM in The Financial Services Sector

Services industries in the 1990's are competing in an environment characterised by increasing customer awareness and expectations of quality. These are enhanced by

sophisticated delivery systems resulting from technological advances. Corporate responses encompass increased efficiency, more focused product and market strategies, and an emphasis on quality of service (Lewis, 1991).

Meanwhile, the financial service sector has seen the proliferation of new players which has changed the whole face of financial retailing in the space of 10 years. As a result, the standards customers expect of a financial supplier, whether it is a bank, building society, insurance company or a high street retailer now moving into the sector, have risen and this process is likely to continue.

These have forced financial services' organisations to offer high quality services and products as a way to gain competitive advantage for attracting and keeping their customers. However, to achieve a high level of the product and service quality it requires that financial service organisations understand the nature and scope of product and service quality in the minds of their customers (expectations). A company can achieve a strong reputation for quality only when it consistently meets customer expectations.

Berry et al. (1990) study imperatives of quality in the service industries. They identify five principal dimensions which customers use to judge a company's quality services:

- *Tangible*. The appearance of physical facilities, equipment, personnel, and communication material;
- *Reliability*. The ability to perform the promised service dependably and accurately;
- *Responsiveness*. The willingness to help customers and to provide prompt service;
- *Assurance*. The knowledge and courtesy of employees and their ability to convey trust and confidence;

- *Empathy*. The provision of caring, individualised attention to customers.

Knowing what the customers expect is, of course, only part of the quality process. Another part, which Leblanc and Nguyen (1988) suggested as the most important factor for service quality in banking institutions, is actually satisfying customers by meeting their expectations. Customer satisfaction in a financial service organisation may depend on a four-tiered structure of products and services: (1) goods and services offered by the bank; (2) customer service; (3) physical and technological facilities for customers access to goods and services; (4) the manner in which managers and staff provide services (Schwartz, 1989; Gardiner and Mitra, 1994). Ideally customers should be satisfied at all four levels.

By adopting the TQM philosophy, financial service organisations can achieve all four levels described above simultaneously. Further, a well implemented TQM process will not only enhance the organisations' relationship with its customers, but will also promote employees motivation and, ultimately, shareholders with a conviction of the value of their investment.

The issues stated above seem to be sufficient reasons for top managers concerned about the needs of implementing TQM in financial services. It may have already been implemented in some organisations, but is this quality process a real symbol of the quality revolution within financial services, or is it just a fashion style adopted from the manufacturing sector? Whatever it is, there is a clear indication that a sensible TQM programme, based on a financial service environment, has to take off.

3.13 - Summary and Conclusions

This Chapter started by describing quality concepts and definitions from the literature (Sections 3.2 and 3.3). A comprehensive definition of quality was offered: *"quality of a service or product is meeting customer needs and expectations at a price which they are willing to pay"*. It was argued that the meaning of "quality" for any organisation depends upon its usage and application. The most important is that "Quality" has to be approached as a system involving every aspect of the organisation.

It was outlined that a common understanding of the meaning of "quality" can help an organisations' members to focus the company quality improvement processes. In this context five generic definitions of quality and their importance in the contextual environment of services industries were presented.

In order to introduce the theoretical foundation of quality management the ideas and prescriptions for quality improvements as advanced by the quality gurus (Deming, Juran and Crosby) were also discussed (Section 3.4). In Section 3.5 the Japanese total quality revolution was outlined. Evidence shows that the Japanese quality process was not only based on cultural traits but the result of positive leadership toward quality improvements, senior management commitment, clear objectives and employee involvement. Then it was argued that it can be adopted by any Western organisation in either manufacturing or the service sector.

The management philosophy of TQM is based on quality as presented in Sections 3.6 and 3.7. It is shown that TQM is an integration of processes involving all an organisation's processes and members to be driven by customers requirements and a focus on the never ending search for continuous improvement. TQM is argued to be an evolution from technical quality control based on inspection activities, to a more holistic

and strategic approach adopted in the 1970's in Japan; in the 1980's in the Western manufacturing sector and in the 1990's in service industries.

In Section 3.8 the critical success factors were discussed and some empirical findings from the literature were presented. It is argued that TQM success is directly related with the definition, measurement and fulfilment of the CSFs.

Although the literature on quality management offers insights into the concept of quality and the development of the quality movement, the TQM philosophy is still in a very early stage. The concepts and elements of TQM have been somehow misunderstood and the holistic TQM approach needed has been seldom applied. In Section 3.9 a holistic TQM philosophy and its main elements were presented and discussed, and it was suggested that organisations should embrace TQM as a holistic system involving soft issues such as organisational culture as well as hard issues such as techniques and tools. Therefore, transforming and changing organisations towards a never ending continuous improvement philosophy.

The critical elements needed to implement a holistic TQM process include organisational culture; leadership; customers needs and expectations; human resource management; training; team work; empowerment; benchmarking; tools and measurement procedures. Thus TQM is about transforming an organisation by promoting changes in businesses operations and the company environment. These issues were analysed and described in Section 3.10.

Finally, in the Section 3.11, the service sector quality movement was discussed and the major comparison between financial services and the manufacturing sector was analysed. Then in Section 3.12, it was argued that deregulation, increased competition from inside and outside of the industry and the raising of customers demands for quality brought the TQM philosophy into the financial service sector.

Quality seems to be the most critical success factor to get competitive advantage in this even tougher competitive industry. However, empirical studies are needed to generate more knowledge and understanding of the TQM movement in the financial service industry. Furthermore, it can provide the opportunity, to better understand the TQM philosophy's strengths and weaknesses in this industry, channelled towards developing a more comprehensive and holistic approach for quality management in the financial services sector.

Chapter 4 - A Brief Profile of Brazil

4.1 - Introduction

Since the research was carried out in Brazilian organisations, it is relevant to outline some information about the country. This chapter presents a general description of the social and economic background of Brazil as well as discussing the introduction of the national quality programme in the 1990s. A summary of the Brazilian financial service sector, its evolution and development are also included.

The chapter begins with a general description of the social and economic background of Brazil (Section 4.2). Then, Section 4.3 looks at the major economic factors and the political development as well as outlining regional differences. In Section 4.4 some Brazilian statistical data are presented. Section 4.5 follows with a summary of the national quality programme. Finally, Section 4.6 describes the Brazilian financial service system.

The material presented in this chapter is almost entirely composed of current literature published about Brazil in newspapers and magazine surveys (Financial Times, 10 June 1997; The Economist, 20 April 1996; Exame Magazine, June 1996); as well as academic books and articles about society, business and quality management processes (Scheneider, 1996; Page, 1995; Macedo Soares and Chamone, 1994).



Figure 4.1 - Map of South American (Microsoft Encarta, 1996)

4.2 - Geographic, Politic and Economic Background

Brazil is a vast, triangular country facing the Atlantic ocean on the east, bounded on the west and south by five neighbours (Uruguay, Paraguay, Argentina, Bolivia and Peru) and by five others to the north (French Guiana, Suriname, Guyana, Venezuela and Colombia), see the South American map Figure 4.1. With nearly 3.3 million square miles, its area is 48 per cent of the land-mass of the South American continent and could almost contain Europe. Most of the people of Brazil live near the Atlantic Ocean. About 80 percent of the population lives within about 320 km of the Atlantic coast. The country, which was once a Portuguese dependency, became an independent republic in 1889. It is a nation of huge natural resources such as gold, gems, metals, oil, rivers and water-falls.

Usually, when people talk about Brazil the buzz-words are: football; coffee; carnival and now more fashionably, preservation of the Amazonian rain forest. Seldom is

it realised that Brazil is ranked fifth in the world in both population and territory. Its Gross Domestic Product (GDP), exceeds US \$760 billion, making the country the globe's ninth largest economy. Making up nearly half the South American landmass, being twice the size of Mexico, Brazil constitutes most the vast Amazon basin. Not only is Brazil territorially almost the size of the United States or China, and the Amazon by far the world's greatest river, but it also has an extremely diverse resource base, including most of the minerals required by modern industry; produces a wide variety of agricultural crops; and comes close to being world leader in livestock production.

Brazil's vastness is matched by its diversity. Its population of at least partial African descent (roughly 70 million) is substantially greater than that found in North America including the Caribbean or that of any African country except Nigeria. Yet with nearly 90 million, European-descended Brazilians match the population of Mexico. Brazil has two of the world's largest cities, São Paulo and Rio de Janeiro, lying in close proximity to each other. In the entire Southern Hemisphere these are rivalled in size only by Buenos Aires and Jakarta, globally these cities are in a league with Tokyo, London, New York, and Mexico City. But huge as they are, these mega-metropolises account for but one-sixth of the country's population. Brazil has also another eighteen urban centres of between 780,000 and 3.8 million inhabitants.

With a population of more than 155 million people (census 1996), Brazil is politically and economically divided into five distinct regions (South; Southeast; Centre-west; Northeast and North) composed of 26 states and the Federal District. The states, in descending order of population, are São Paulo, Minas Gerais, Rio de Janeiro, Bahia, Rio Grande do Sul, Paraná, Pernambuco, Ceará, Pará, Maranhão, Santa Catarina, Goiás, Paraíba, Espírito Santo, Piauí, Alagoas, Rio Grande do Norte, Amazonas, Mato Grosso, Mato Grosso do Sul, Sergipe, Rondônia, Tocantins, Acre,

Amapá, and Roraima. The federal district includes Brasília, which replaced Rio de Janeiro as the national capital in 1960.

Brazil is a very urbanised country. Whereas it was 36 per cent urban in 1940, the late census of 1996 designated a rate of more than 76 per cent urbanisation, with over 54 per cent of its population residing in cities of 100,000 or more inhabitants. The largest city is São Paulo, the centre of Brazilian industry, with a population of 16.3 million. Other leading cities, include Rio de Janeiro, the former capital of the country and a commercial/tourism centre (9.9 million persons); Belo Horizonte, an impressive industrial pole, trailing only São Paulo and Rio de Janeiro in this regard (3.8 million persons); Salvador, a port located in a fertile agricultural region (2.7 million persons); Brasília, the capital (1.7 million persons); Recife, chief commercial city of the Northeast region (3.1 million persons); Curitiba (2.2 million persons); Porto Alegre, an Atlantic port (3.3 million persons); Belem, a chief port on the lower Amazon River (1.4 million persons); and Manaus, located at the centre of Amazon rain forest with a port on the Negro River (1.3 million persons). An understanding of Brazil's national life requires familiarity with the most important of its cities.

Brazil's rivers supply the world's greatest hydroelectric generating potential and are being incorporated into the country's transportation system. Their pollution may constitute a more serious environmental peril for Brazilians than the far more publicised destruction of rain forests. The Brazilian coast has played a crucial role in shaping the country. A majority of the states capitals are ports, and there are a half dozen other important ports serving inland capitals. This collection of harbours constitutes a major asset for a country which is becoming increasingly integrated into the global economy.

Brazil is such a diverse country that generalisations about it run a serious risk of being averages that mask great variations. Brazilian society, economy, and political processes must be viewed against a backdrop of the distinctive characteristics of its major regions (see map Figure 4.2). Thus it is necessary to outline some demographic and economic characteristics among these regions.



Figure 4.2 - Map of Brazil Regions and States (IBGE,1997)

- **The Southeast Region.** This is the economic heart of the country. The states of São Paulo, Rio de Janeiro and Minas Gerais in the Southeast region contain the greatest concentration of population, over 63 million persons, are heavily urbanised and economically active. They concentrate nearly 62 per cent of the Brazilian GDP and have over 70 per cent of its industry.

- **The South region.** Composed of three states that have 15 per cent of the country's population inhabiting less than 7 per cent of its area, but producing 16.7 per cent of the nation's GDP.
- **The Centre-West region.** It is inland from the economic and demographic heartland of Brazil. It is a fast developing region comprising just over a quarter of the country's area, but with less than 5 per cent of its population and 6.3 per cent of the GDP. Larger than Mexico, this region stretches from the edge of Brazil's southern plateau up into the lower portion of the Amazon basin.
- **The North region.** Above the Centre-west frontiers lies the immense North region with two-fifths of Brazil's area but less than 6 per cent of its population and producing 3 per cent of the GDP. Dominated by the Amazon river, it contains a few important urban centres, but these are widely spaced. The North region comprises 1.85 million square miles of the Amazon basin. Although much international concern surrounds the preservation of the Amazon's rain forest, Brazil currently destroys only 0.3 per cent of its forest yearly. A rate far below than the rate of deforestation of Brazilian neighbours Peru or Ecuador, and only a fraction of the rate prevailing in Brazil during the 1980s. Yet because this region contains two-fifths of the world's remaining tropical humid forest, close attention will continue to be paid to the policies for a rational balance of development and conservation pledged by the Brazilian national government.
- **The Northeast region.** This region covers 18 per cent of the country's area with nearly 29 per cent of the nation's population. This nine state region was once the heart of colonial Brazil, but has long been sunk in depression brought on by outdated agriculture combined with periodic droughts. Indeed, it contributes under 13 per cent of Brazil's GDP and has but 6 per cent of the country's industry to go along with 20 per cent of its agriculture.

4.3 - Brazilian Economic and Politic Development

Once a predominantly agricultural nation, Brazil experienced rapid industrial growth in the 1960s and 1970s, so that by the 1980s it had a diversified modern economy. Great quantities of iron ore and coal are mined, and the output of steel, chemicals, and motor vehicles has increased substantially.

Sustained growth has brought a deep change in the relative importance of agriculture, industry and service sector, with the latter two coming to overshadow the long-dominant agrarian sector. Following these economic developments the country's quality of life has been improving through the past decades as can be seen in Table 4.1. At the same time, however, chronic inflation and a foreign debt of about US\$119 billion, smaller only than Mexico among the developing nations, poses severe economic problems.

Table 4.1 - Brazilian Demographics Getting Better Through the Time
(The Economist, 1996)

	1960	1970	1980	1990
Life expectancy in Years	52	53	61	67
Infant mortality, per thousands	118	117	88	60
Clean Water, per cent of households	-	31	52	71
Electricity, per cent of households	-	46	66	86
Television, per cent of households	-	23	55	73
Adults aged 20+ with primary education	-	20	26	41
Per cent of electorate that actually voted	24	31	46	55

In the late 1980's, after nearly three decades of military government (1964 - 1985), Brazil started to be ruled by a democratically elected president. In 1985 Mr. Tancredo Neves was selected by the Chamber of Deputies as Brazil's first civilian president in 21 years; he died before taking office, being replaced by the Vice President, Mr. José Sarney.

Faced with resurgent inflation and a huge foreign debt, Mr Sarney imposed an austerity program that included introducing a new unit of currency. However, despite a first year of success, Mr. Sarney's economic programme did not have any major long term effects. A new constitution providing for direct presidential elections was enacted in October 1988, and Mr. Fernando Collor de Mello, of the conservative National Reconstruction Party, was elected president in December 1989. His drastic anti-inflation programme contributed to Brazil's worst recession in ten years, and allegations of financial corruption further eroded his popularity. The major contribution of Mr. Collor's administration might be the economic openness and deregulation, and the start of the Brazilian privatisation programme.

In September 1992 Mr. Collor was impeached by the Chamber of Deputies, and Vice President Mr. Itamar Franco became Acting President until the 1994 elections. An economic stabilisation programme, called the Real Plan, was introduced at the end of 1993 under Mr. Franco's administration. A combination of favourable political, economic and historical circumstances made it possible for the Brazilian government to lay the ground work for a long-term attack on three decades of high inflation (see Figure 4.3). The country's debt was restructured and reduced in April 1994 on an agreement with the debtor banks. Then in July 1994 Brazil's new currency, the Real, was launched. This has lead to a sharp drop in inflation, from about 50 per cent a month to less than 15 per cent a year .

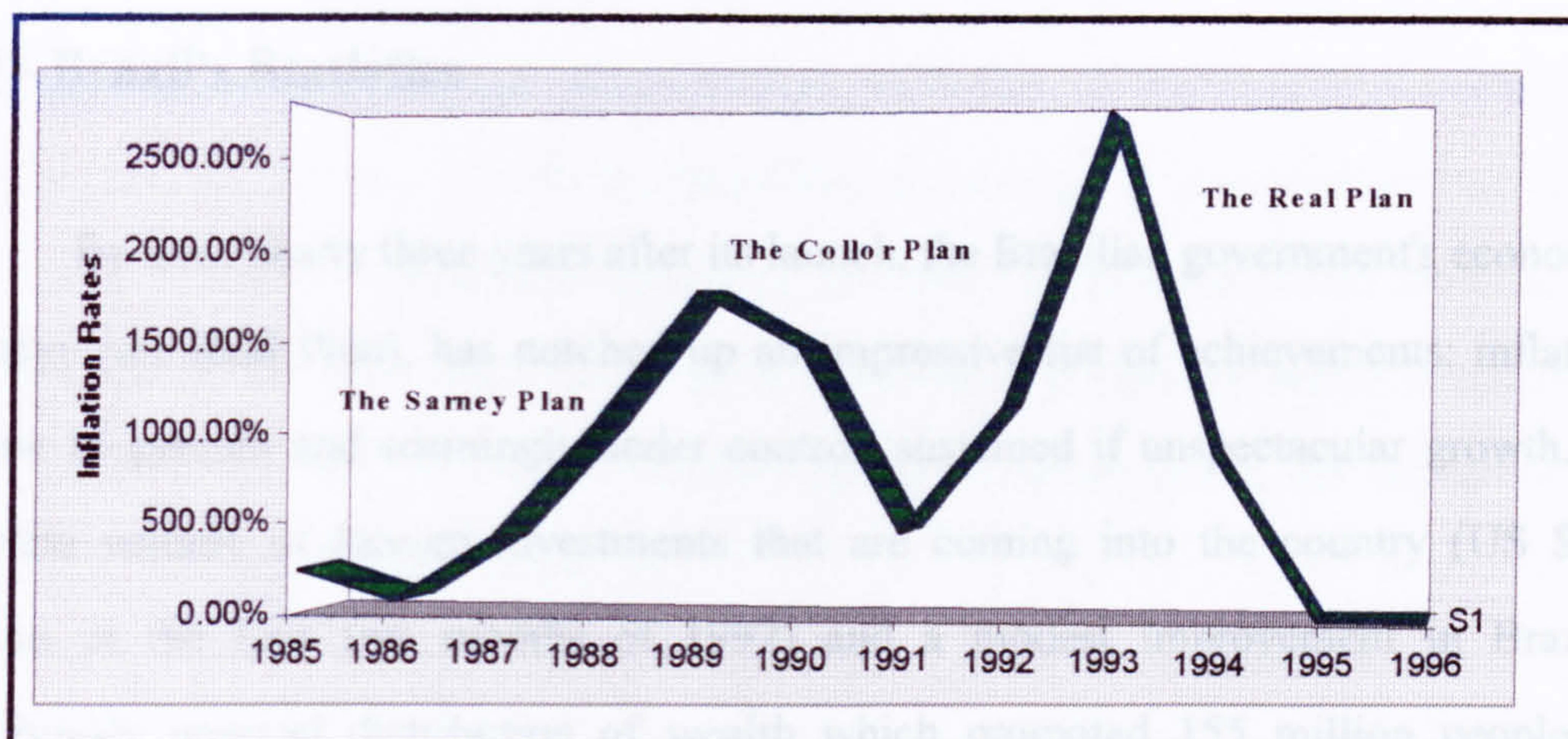


Figure 4.3 - The Real Plan Effect Over Brazilian Inflation (IBGE, 1997)

Mr. Fernando Henrique Cardoso, a social scientist and former finance minister, responsible for much of Brazil's economic recovery during Mr. Franco administration, won the November 1994 presidential elections, winning twice as many votes as his nearest challenger. In December 1994, former president Mr. Collor was acquitted of the corruption charges, but remains banned from Brazilian politics until the year 2000. In January 1995, Brazil joined Argentina, Paraguay, and Uruguay in the formation of the Southern Cone Common Market (MERCOSUL). The total GDP of Mercosul will be close to US\$1.5 trillion by the end of this century. To highlight the importance of Mercosul in Brazil's international trade, in 1995, the total of trade between Brazil and other Mercosul countries reached US \$13.1 billion. A figure which is well beyond the US\$ 3.6 billion in 1990 (see Figure 4.4).

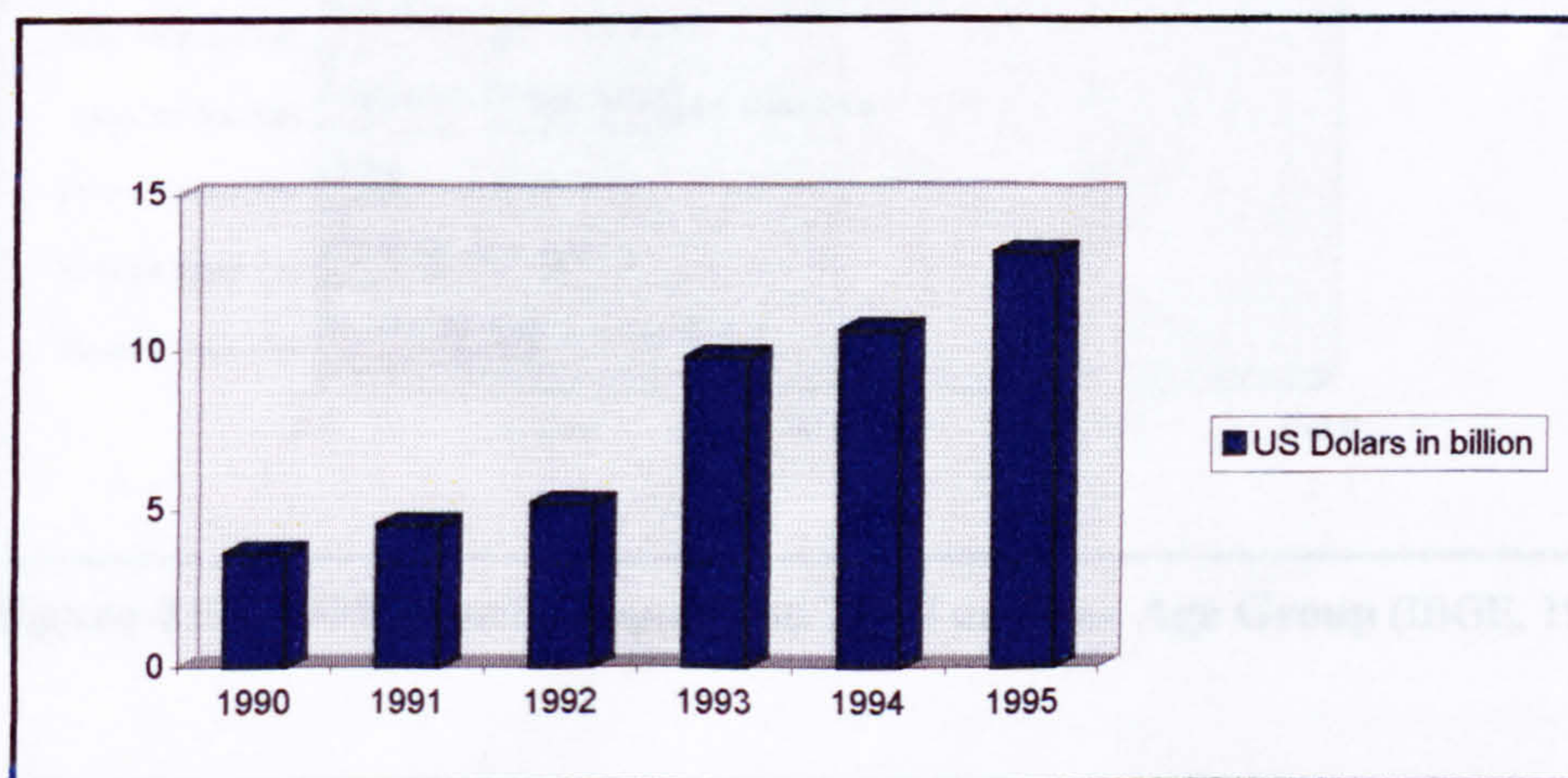


Figure 4.4 - Brazilian Trade with Mercosul Countries (BACEN, 1997)

4.4 - Brazil's Statistics

By now, nearly three years after its launch, the Brazilian government's economic strategy (the Real Plan), has notched up an impressive list of achievements: inflation below 15 percent and seemingly under control, sustained if unspectacular growth, an impress volume of foreign investments that are coming into the country (US \$5.9 billion in the first five months of 1997) and a modest improvement in Brazil's notoriously unequal distribution of wealth which promoted 155 million people to emerge from subsistence and become consumers for the first time in two decades. Below are some of the official statistics of Brazil's population, economic growth, education and income.

Population: By 1995 Brazil's population passed the 156 million mark, increasing by 2.6 million a year. Demographic growth is lowest at the bottom of the age pyramid, reflecting sharply declining fecundity rates. Yet Brazil still has a young population, with 38.7 per cent below the age of seventeen, and 74 percent under forty (Figure 4.5).

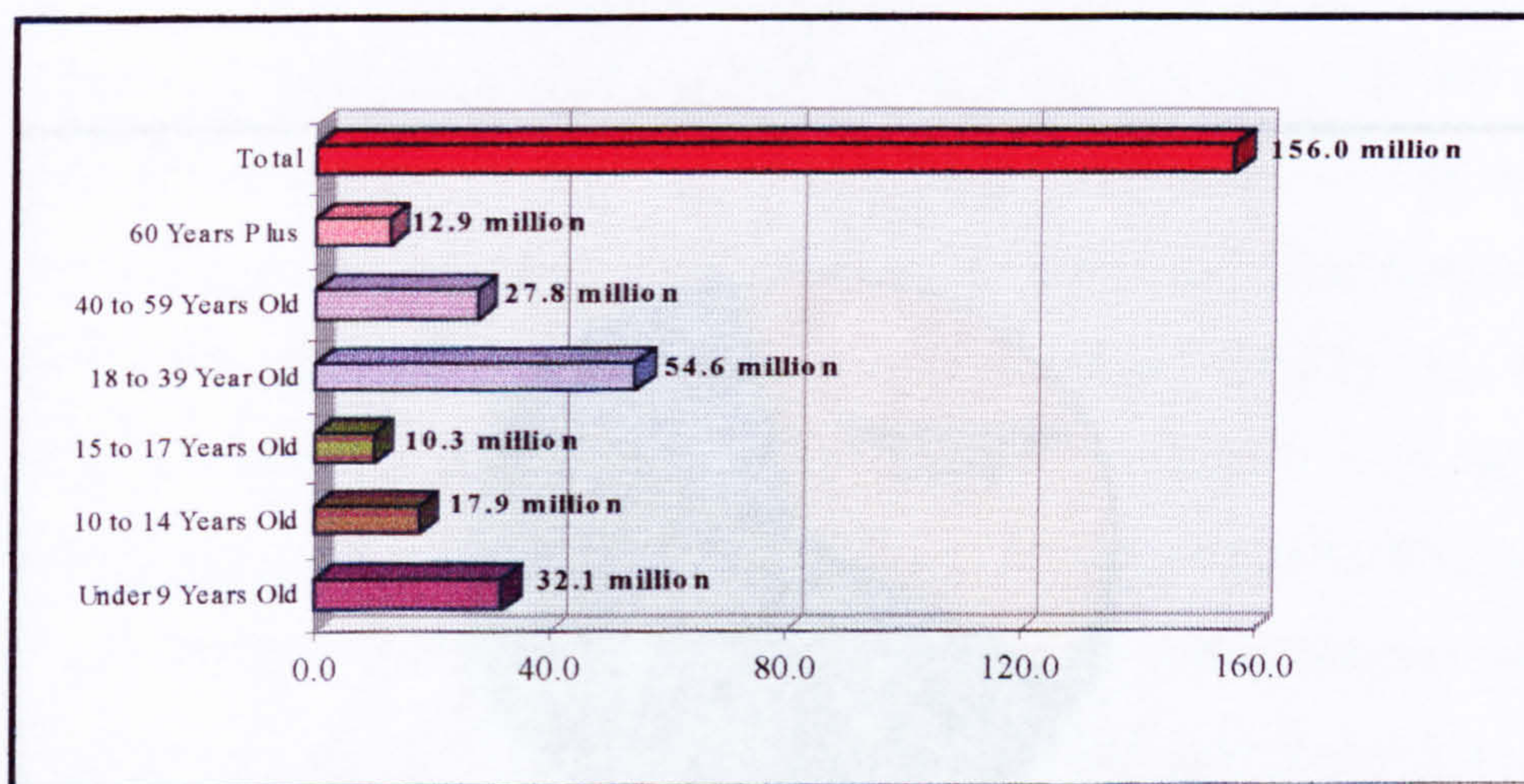


Figure 4.5 - 1995 Brazil's Population Total and Per Age Group (IBGE, 1997)

Economic growth and GDP distribution: according to the Brazilian Institute of Geography and Statistics (IBGE) the Brazilian economy grew at an average rate of 4.7 per cent in the four years period from 1993 to 1996. In the same period the GDP per capita grew for the first time since 1988 (Figure 4.6). The services sector in the 1990s represented nearly half of Brazil's GDP (Figure 4.7), which shows the importance of this sector for the countries' economy.

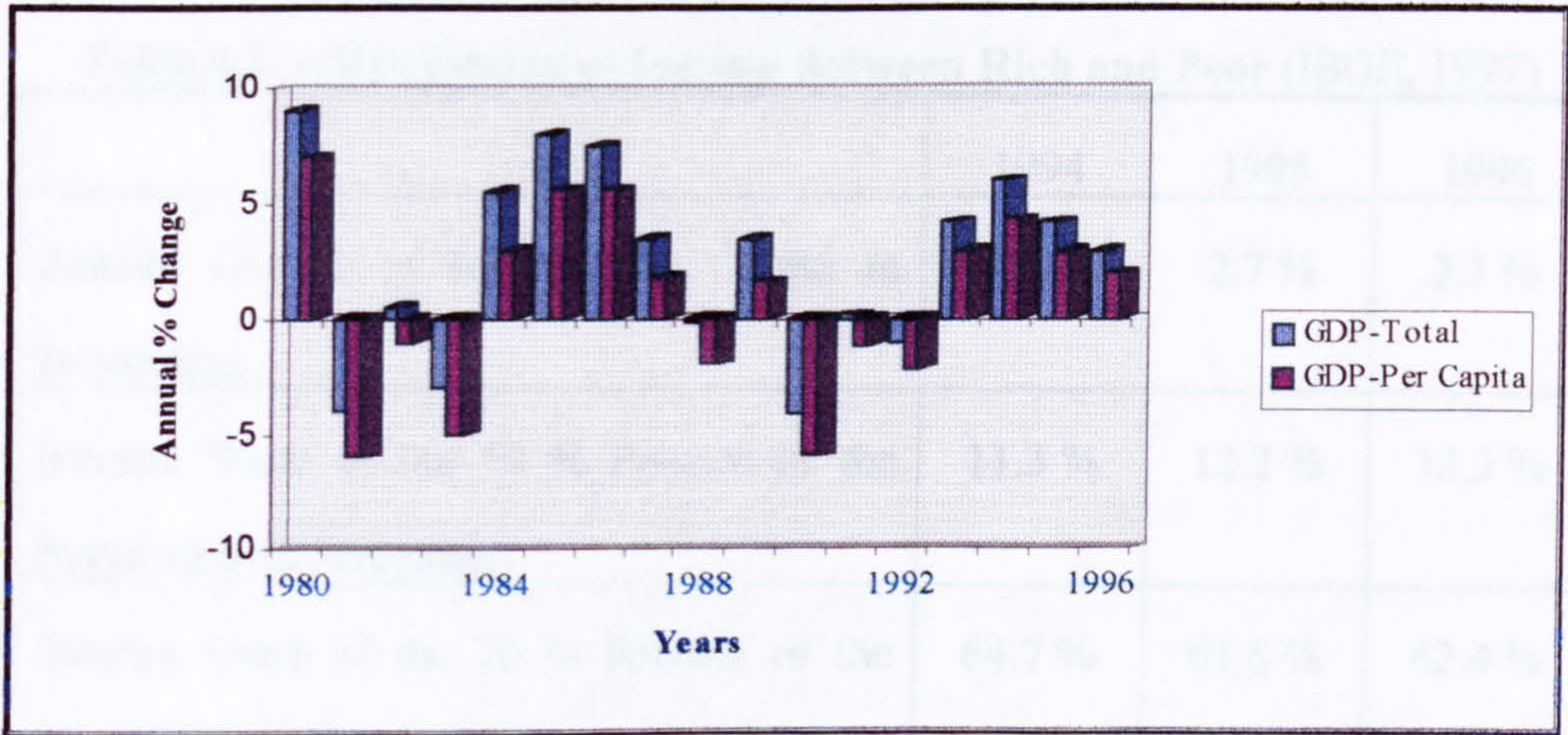


Figure 4.6 - Annual GDP (Total and Per capita) Growth (IBGE, 1997)

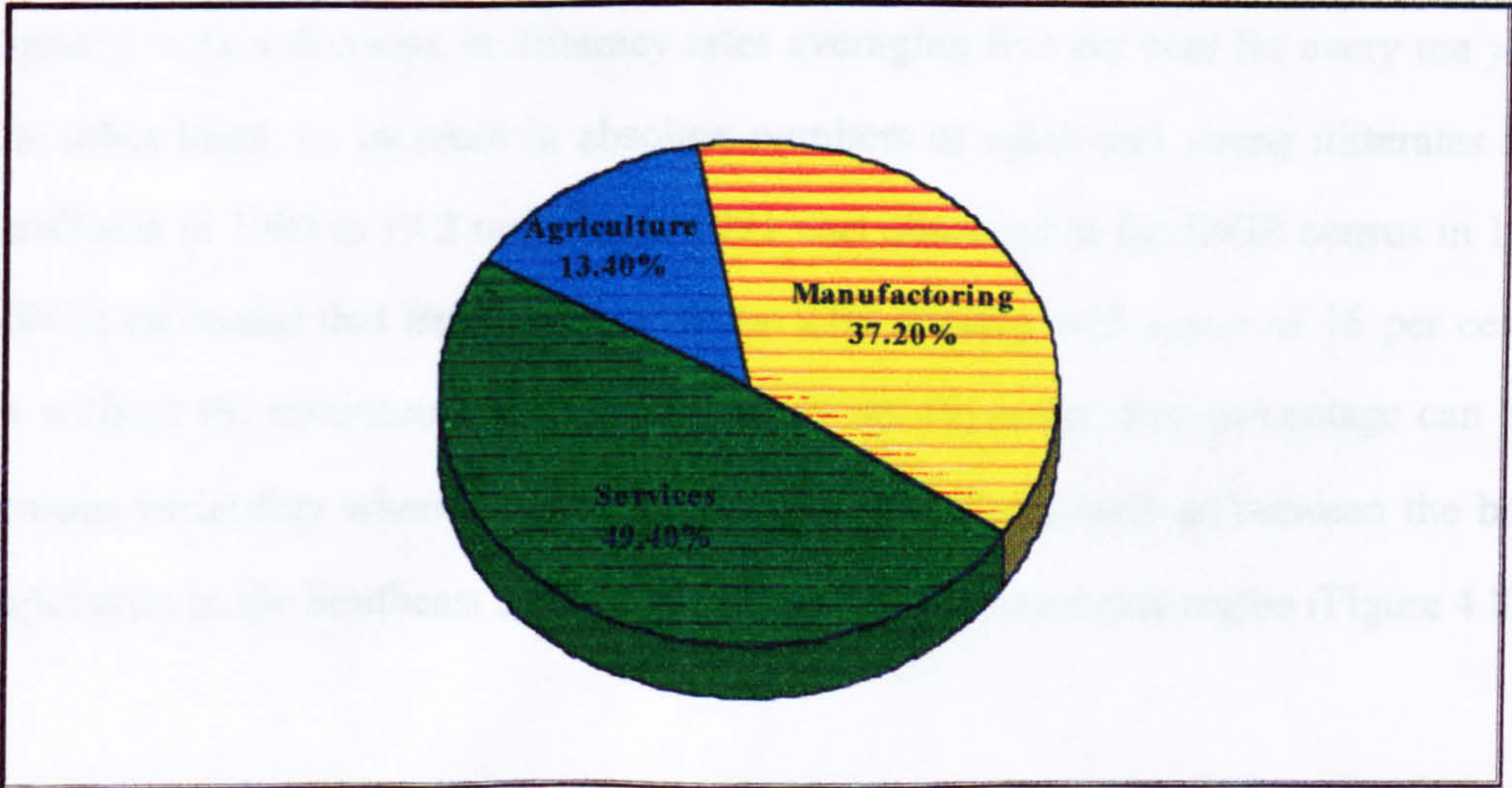


Figure 4.7 - 1995 GDP Distribution per Sector (IBGE, 1997)

Distribution of Wealth: The Real Plan is promoting a change in the pattern of income distribution in Brazil. It allowed, not only the continuation of growth of per capita income, but also a decline in social inequality, since 50 per cent of the poorest section of the population gained 1.2 per cent and 20 per cent of the richest section of the population lost 2.3 percentage points of their participation in total income (see Table 4.2). Lowering inflation and growth in per capita income bring about less social inequality and decline in poverty. However, the income distribution of the country is still far from ideal.

Table 4.2 - Distribution of Income Between Rich and Poor (IBGE, 1997)

	1994	1995	1996
Annual Growth in Income Per Capita in percentage	4.3 %	2.7 %	2.7 %
Income Share of the 50 % Poorest of the Population in Percentage	11.3 %	12.2 %	12.3 %
Income Share of the 20 % Richest of the Population in Percentage	64.7 %	62.6 %	62.4 %

Education: Literacy levels have advanced slowly in the country since the beginning of the century, with a decrease in illiteracy rates averaging five per cent for every ten years. On the other hand, an increase in absolute numbers of adult and young illiterates from 18.7 millions in 1980 to 19.2 millions in 1991 was observed in the IBGE census in 1991. The IBGE estimated that Brazil will enter the 21st century with a rate of 16 per cent of adults without the minimum ability to read or write. However, this percentage can have enourmous variability when considering regional variations, such as between the better off population in the Southeast and the population of the Northeast region (Figure 4.8).

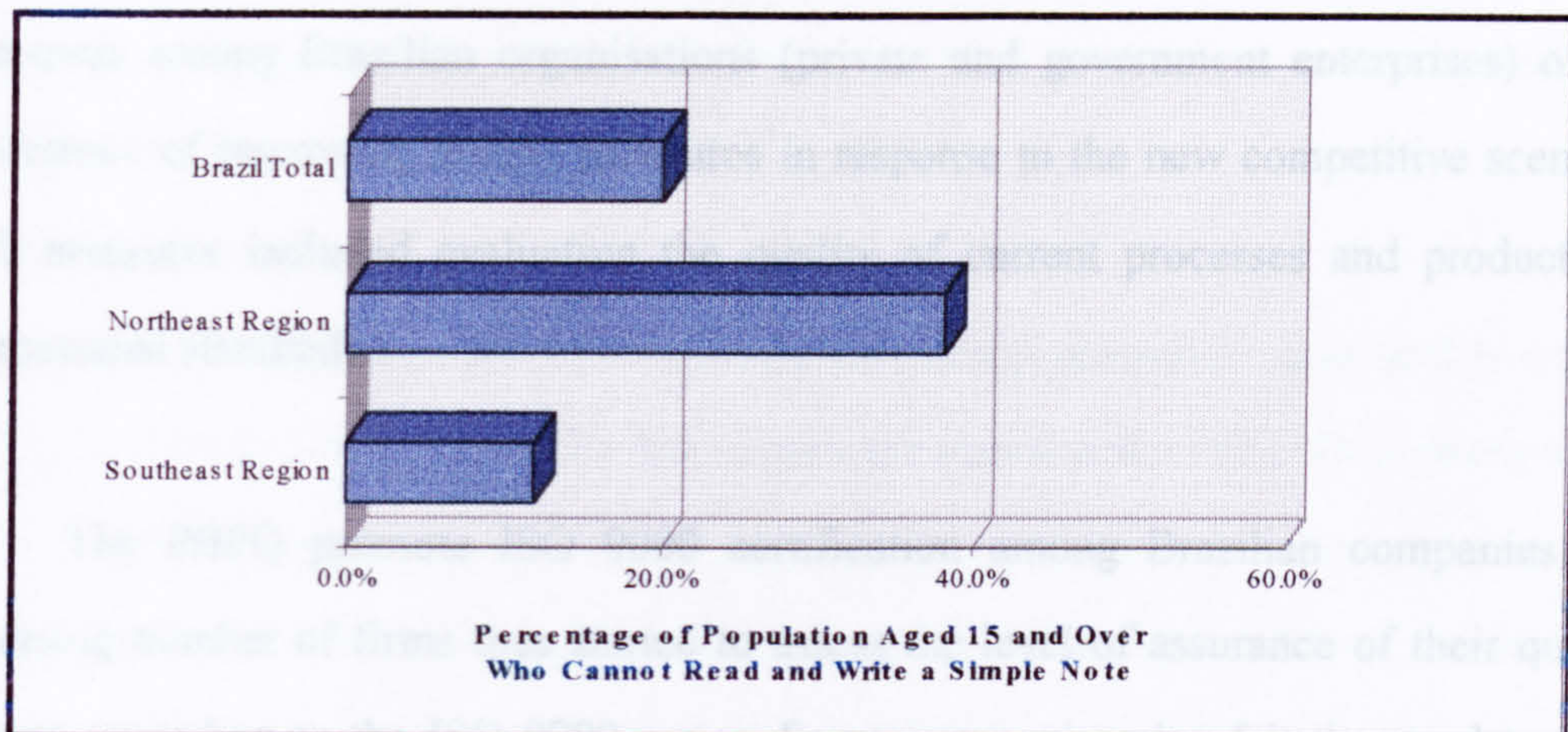


Figure 4.8 - Level of Literacy in Brazil (IBGE census 1991)

4.5 - Quality Management in Brazil

In the 1990s the Brazilian business scenery is rapidly changing. Trade barriers are falling, the Mercosul agreement has aided the country in improving its competitiveness. Increasing economic liberalisation and government deregulation marked the beginning of the decade. The improvement achieved by the Real Plan raised the power of consumers, who are now demanding better value and quality for their money. At the same time, world market globalisation has brought fiercer competition for all national productivity sectors. The necessity of improving Brazilian quality goods and services to cope with this new global environment is urgently required.

It has become more evident that ensuring "total quality", in the sense of completely satisfying customer's requirements has become crucial for many industries' competitiveness. In some cases, it is a question of survival. Not being certified according to the ISO 9000 standards, for example, is a major obstacle to trade with Brazil's largest export market, the European Union.

Therefore, in November 1990, the Brazilian Government launched the Brazilian Programme of Productivity and Quality (PBPQ). Initially, the priority was to create an

Technology in the US. They provided relevant training material, case studies and other significant literature.

The FPNQ made a point of following new developments in other quality awards, both at home and abroad. In 1993 a few items were added to the PNQ. These were mostly concerned with current critical issues in Brazil's organisational environment such as leadership; human resource development and management. It continued, however, to base the PNQ almost entirely upon the Malcolm Baldrige Award. The main reason was that this award had been constantly improved since 1991 and incorporates new, significant, criteria from other awards.

Although the PNQ has been competed for a reasonable number of Brazilian companies the first three winners have been multinational organisations. Finally in 1996 the first Brazilian company won (see Table 4.3). It is important to realise that all four winners have their activities mostly based in the service and financial service sectors. This shows how the service sector has become increasingly important in Brazil, both in terms of participation in the GDP and the quality standards of products and services delivered to customers.

Table 4.3 - The Brazilian National Quality Award Winners

Companies	Sector	PNQ Year
IBM Brazil	Manufacturing/Services	1992
Xerox Brazil	Manufacturing/ Services	1993
Citibank Brazil	Financial Services	1994
SERASA	Financial Services	1995

4.6 - The Brazilian Financial System

The Brazilian financial system has evolved greatly in size and complexity during the post World War II period. The first important step was the creation of the Superintendency of Money and Credit in 1945 to bring together components of a rudimentary central bank function. The establishment of the Brazilian Central Bank in 1965 further rationalised the system. But not until 1986 when the Bank of Brazil, a banking organisation with thousands of shareholders but with a majority of voting shares in the hands of the federal government, lost its role as fiscal agent of the monetary authorities.

In the 1990's Brazil has a large and sophisticated financial sector that provides a wide range of services. The National Monetary Council (NMC) which is composed of members of the Ministry of Finance and Planning and members of the directorship of the Central Bank establishes the overall policies for the financial system, such as monetary and credit policy, and regulates banks and other financial institutions..

During the past three decades many important private banks have expanded their activities. Moreover, Brazilian states have established their own banks, in many cases setting up development banks as well. Before the Real Plan got a grip on inflation in 1995, even the most inept Brazilian banker could make a comfortable living by simply playing the distorted markets and financing the budget deficit. There was no need to worry about credit assessment or efficiency.

But with inflation under control and economic stability, banks had to learn to make money in a stable environment, which meant coming to grips with lending. Brazil's largest private banks, such as Itaú and Bradesco (the two largest Brazilian private banks), have adapted well, but many smaller rivals found themselves stranded with no idea how

to assess lending risk. As did some of the state owned banks, whose traditional role as instruments of state development policy is fading fast. Since then, several mergers have taken place and some of the state-owned banks are preparing to be privatised. These mark the start of the transformation of Brazil's financial system.

In March 1997 the NMC put down the legislation barrier that prohibited any new entry of foreign banks and imposed a freeze on any increases in foreign participation in the ownership of existing Brazilian financial institutes. The final step to achieve a global and competitive banking system was in place. Subsequently, in April the HSBC, the world's second largest banking group took over "Banco Bamerindus" Brazil's fourth largest private bank and Lloyds TSB, the largest British retail bank have bought out the consumer-banking arm of a Brazilian affiliate. The entry of such major international players may encourage other foreign banks to take a hard look at the market, which suggests domestic banks will face even tougher competition on price, service and quality.

4.7 - Summary and Conclusions

This chapter began with a profile of Brazil's geographic, economic and political development. Then, a historical description of economic and political developments were shown in order to explain how and why the quality movement has been initiated by the Brazilian government in early 1990's. These descriptions are important to understand the context and current developmental stage of the country.

In the brief summary of Brazilian demographic data shown in Section 4.4, it can be observed that there are huge contrasts among the sectors in Brazil's economy, population distribution, educational level and distribution of wealth. Nevertheless, these trends seem to improve with the new economic environment brought about by the Real Plan, since 1994.

Finally, a briefly description of the Brazilian financial service sector was presented in order to establish how a stable economy, deregulation, customer demands and the new international competitors have been transforming the Brazilian banking sector.

Chapter 5 - Assessing TOM in the UK Financial Services

5.1 - Introduction

Collard (1993) argued that until comparatively recently, with the exception of a few major organisations, British industry and commerce did not have a strong reputation for high quality standards. This can be illustrated by the growth of import substitution from Japanese or German producers who became synonymous with high quality. Managers often blamed poor performance on workers. They often ignored one crucial point, which is their responsibility to control and improve the quality objectives. The resistance to change and employee behaviour has to be considered. Especially middle management, who often resisted changes to do with working practices on the grounds that they have been trying to 'run a tight ship' for years. It is difficult for them to accept that quality standards are not as high as they might be expected.

In the UK banking industry management practices had, in a number of ways, been out of step with advances in much of the wider UK economy. For most of the post-war period the industry enjoyed steady growth and high profitability. It was an industry that was cartelised and regulated. The banks offered life-time employment, structured careers and paternalistic welfare-oriented personnel policies. Above all, the banking scene had been one of order, predictability, hierarchy and bureaucracy (Storey, 1995).

5.2 - The 80's

However, this scenary has been changing drastically since the late 1980's. Deregulation, competition and more demanding customers have created an environment significantly different from that which existed only few years before (MacDonald, 1995).

New players have arrived in the market, these included overseas specialist, for example HSBC and non-financial specialist such as M&S (plastic card and loans) and Virgin (PEP). As well as new technological trends which in the future could bring more powerful players such as Microsoft. In the face of this increasing non-traditional competition, together with the reduction of profit margins, banks have attempted to redefine their businesses in several ways.

During the same period the industry invested heavily in computers, specialist software and other forms of automation. The technological revolution changed the channel of delivery of the financial service industry, nevertheless, there was little sign that these investments provided any sustained competitive advantages for any sector. Which meant that automated systems were a sort of basic standard in the industry, but it did not mean that companies could be differentiated by them.

5.3 - The 90's

Thus in the 1990s, banks are not preserving employment security, on the contrary, they have started to shed labour in a quite significant manner. Branch closures and other forms of restructuring have taken place. Automatic pay increases have been replaced with contingent performance and profit-related pay. The paternalistic welfare cultures are being displaced and new competitive sales-oriented policies and values are being installed.

Many of the larger clearing banks in the UK have decided that success in the future entails building a comprehensive range of products in a number of financial sectors. They have re-examined their core business and attempted to define their key franchise in order to attract customers, increase profitability and reduce costs.

Ironically, customers view banks with quiet suspicion, they see banking services more as a necessity rather than a valued service industry. Bank workers have become demoralised and demotivated by the spectre of redundancy and loss of status. Additionally in the early 1990s, the return on capital rate was poorer which caused great concern among shareholders.

5.4 - The "Quality" Changes

The financial services industry in the UK is, at present, in a period of turmoil and of major structural changes. The external environmental changes are in turn pressuring the major organisations to re-examine their organisation structures and business strategies with the need to seek structures, strategies and systems which are more suitable to the new dynamic conditions. The pressures for better management of innovations, customer services, culture changes and process efficiencies are growing (Longbottom, and Zairi, 1996).

Therefore, the banking industry needs to change, but not only changes in technology and market segments. They also need to introduce a quality philosophy change (Figure 5.1) in order to improve their relationship with customers, employees and shareholders in a dynamic and unstable environment.

Top management are required to look inside and promote the cultural changes necessary. Whilst accepting that all banks have similar products or they can rapidly copy a new product launched in the market by competitors. Top managers have to realise that the only way they will differ from their competitors will be by promoting a new cultural environment, where well trained and motivated employee teams can provide high quality products/services to be delivered to customers. This will result in reducing costs and raising companies profitability, which will enhance shareholders happiness.

Total quality management (TQM) can be the effective way to attain this cultural change. The TQM philosophy has a vital role to play in helping to effect cultural change; it questions all activities and enhances standards of performance. The UK financial company which accomplish its TQM goals will succeed in this tough and dynamic market environment.

ASPECTS OF MANAGEMENT	'OLD' QUALITY CULTURE <i>(appropriate for stable, controlled environment)</i>	'NEW' QUALITY CULTURE <i>(appropriate for dynamic, competitive environment)</i>
Objectives	International Banking and Support Services	Global Financial Services
Key Tasks	Lending and deposit taking	Providing financial expertise and appropriate products
Promotion and Power	Seniority, 'family' connections, lending record	Expertise, business development record
Structure	Centralised and bureaucratic on national basis with varying autonomy on geographic lines	Co-ordinated internationally with autonomy for 'businesses'
Planning	Short term and procedure driven	Long term and strategy driven
Decision Making	Defined by rule-book and central control	Defined by agreed strategy and budgeting limits
Relationships	Status as defined by grading branches vs. departments	Teamwork across branches/departments to service specific markets
Appraisal Systems	Annual, based on performance vis-à-vis colleagues	Annual, plus intermediate reviews of performance against goals
Staff Attitudes	Procedure-centred	Customer-centred
Employment	From school to grave as a right	Depends on performance against objectives
Quality Approach	Systems improvement and friendliness	Relationships improvement via empowerment and effectiveness

Figure 5.1 -Quality Cultural Change in the UK Financial Service
(Based on Lynch, 1994)

5.4.1 - Quality is the Key

Effective competitive pressures, and increasingly discerning customers, made it apparent that a new strategy was needed to enhance financial services competitive edge. The whole industry needed to be customer-driven. The companies' management needed to restore the level of trust between them and their customers. The new market environment is dictated by looking at customer requirements. These will influence the ways in which financial service organisations deliver service and especially how they distribute resources to meet customers' future needs.

Traditional competitive product attributes such as price, interest rate or speed of credit are easily and quickly copied by competitors. These only offer short-term marketing advantage. However if service is perceived as excellent it can offer a much greater competitive marketing edge (Henderson, 1992). Largely because positive service differentiation means having to improve all the "people" aspects of business - training, education, motivation and attitudes. Not just those aspects where managers and staff have a direct interface with the customer but also in the internal relationship which exists among them in the day to day life of the organisation . Of course, this is much more difficult to achieve and duplicate.

Therefore, sustainable long-term competitive advantage may only be possible by improving the functional aspects of the business, especially those relating to the quality of customer services (Howcroft and Hill, 1992).

5.4.2 - Top Management Commitment

The key to the quality revolution is to have the companies senior executive taking personal charge of managing for quality (Juran, 1988). The TQM philosophy will promote business efficiency and effectiveness only if it is spread effectively throughout

the organisation. To achieve this, the TQM programme must be a strategic decision which can be taken only by the top management of the organisation.

In the UK financial service industry it is no different. In companies which have successfully applied TQM programmes, the top management played the fundamental role of setting the quality vision and moving forward the process. Sometimes this is almost seen as 'the flavour of the month' by the company management team. It is the typical behaviour of those who will resist change that the programme is attempting to promote. These attitudes and behaviour can only be overcome by top management commitment towards the aims of the programmes.

This commitment can be seen in companies which have successfully implemented their TQM programmes, such as the Prudential Assurance Co.. Hereby the board of directors sponsored the programme and senior experienced middle managers were assigned to the project team to facilitate the process. Or in the Abbey National where after establishing their vision, one quality group, which was composed of five top managers and two senior managers, was set up in order to dedicate itself towards the development of the TQM programme (Tanner, and Alliston, 1993; Clark, 1992, Smith, 1993).

There is still a long way to go in order to achieve the high quality standards desired by customers in the service provided by financial companies in the UK. Undoubtedly it will take a strong will among top managers in the industry towards improving the relationship between providers and consumers in the market. This certainly strengthens the idea that the financial service industry in the UK is moving towards accomplishing the quality revolution achieved by manufacturing industries in the 1980's.

5.4.3 - Marketing Demands

The increasing sophistication of the marketing initiatives being undertaken by financial service organisations, and the emergence of a much better informed financial journalism in the popular media, have raised an environment where customers are more knowledgeable and more demanding than ever before. The UK market is already heavily banked, about 74% of the adult population hold a current account in some financial company.

In order to keep their customers and attract new ones it is necessary to establish the needs and expectations of those whom the financial companies seek to serve. Thus the main point of the industry strategy has to be customer driven and of course this is the first aim of the TQM programme.

Howcroft (1991) commented that the essential difference between the traditional approach to customer service and the approach that is currently emerging in the UK financial service has been the realisation by senior management of the bank-customer relationship. The primary objective being to enhance customer perception of quality of service actually received and thereby to equate them with customer expectations.

Financial companies have carried out several market research projects towards discovering customer expectations about the banking service provided in UK. Since then, an information technology (IT) revolution has been seen in the sector with increasing numbers of services provided by ATM and plastic cards. The telephone bank is now a reality and new schemes such as Midland First Direct have been identified in a recent survey (Customer Association, 1995), with a very high customer satisfaction rate.

However, there are many pit falls in this process. Customer's expectations can differ in many ways, for example a client seeking a cash transfer transaction can perceive

speed and accuracy as the key of a quality service. On the other hand, a customer looking for a mortgage adviser, can perceive quality service as more time spent with them and courtesy of attendance.

Companies have improved their service providing a quick and accurate service to customers in the UK banking sector. They are reengineering internal processes and benchmarking competitors and other service industries in order to achieve excellence in service quality delivered. There is still a high level of dissatisfaction among consumers, who often complain about the intangible part of the services provided, such as: overall administration efficiency; helpfulness in dealing with mistakes and handling enquiries and how the organisations treat them as customers (Consumers Association Survey, 1995). Thus, it can be seen that there is a long way to go towards customers overall satisfaction in the UK financial services.

5.4.4 - Employees Needs

The other very important issue which top managers in financial services need to look after is the recognition that any attempts to improve customer service is dependent upon improving and developing the skills of the people within the organisation.

Oakland (1995), has identified a unity throughout and beyond all organisations, whether they be manufacturing concerns, banks, retails stores, etc. There are a series of quality chains of customers and suppliers that may be broken at any point by one person or process not meeting the customer's (internal or external) requirements. This can jeopardise the whole organisational efforts towards delivering a final 'defect free' product or service to consumers.

Improving service quality by enhancing the mechanical part of the services provided and new product development are not enough for one organisation to promote a

long term customers perception of quality distinction among its competitors. Like financial innovations, this can be quickly replicated by competitors. Therefore, this will only sustain short term advantage. In the long-term the competitor using successful replication will make it increasingly expensive and difficult to maintain a significant level of competitive superiority.

Top managers have to identify and fully understand the needs and expectations of the organisation's members (management team and staff). The ability to meet the customers requirements is vital, not only between company and external customer, but within the organisation via internal customer/supplier relationships.

5.5 - Quality Initiatives

In the 1990's TQM has become a reality in the financial service industry. Usually the TQM programme has been called by different names, for instance Prudential's "Way of Life" (Clark, 1992). The main reason for companies adopting their own name might be towards promoting a total commitment among organisation members in order to distinguish the unique objectives of the company TQM programme.

During the 90's the UK financial companies struggle to convince consumers that the new industry, built upon a total quality concept, has emerged with 'zero defect' and fulfilled the expectations of quality of services which will be delivered as a new industry standard. In reality, however, some surveys carried out by consumer associations over the years, have revealed there is still a low perception of service quality among consumers.

The Sunday Times article by Oldfield (5Th Feb, 1995) stated that each year 8 million people consider changing their banks, though only 500,000 actually do. This is because of the fear that the bank will make so many mistakes that the switch is not worth

the effort. Also it is said that the number of customers holding a second account is constantly increasing for the same reasons.

There is a positive perspective for quality processes in the UK financial service industry if top management are still committed to long term never ending improvement, which TQM is about to promote. For instance the great questions are, is it possible to consolidate the quality process in an industry in which the orientation to the short term result is the principal characteristic of its companies? Or will TQM be just one more management myth that can raise small improvements for the customer, job losses for organisation members and short term earning for shareholders?

Perhaps, to answer these questions with a reasonable degree of confidence is premature at such an early stage of TQM implementation. What can be done is to analyse the status of organisations quality initiatives approaches. This might help to understand how some of these questions can be answered.

Wilkinson et al. (1995), have drawn some evidence for the use of quality initiatives in the UK financial services. There is a clear uptake of quality initiatives in financial service organisations, with a wide spread adoption of some quality initiatives in almost 91 per cent of them. Many organisations do not identify any single or most important initiative, but emphasise an overall approach.

Altogether, a cyclical pattern is identified in the introduction of quality initiatives. For example in the 1980's the cycle began with customer care and service quality, which were superseded (although not entirely replaced) by TQM. Business process reengineering (BPR) is now said to be the most popular quality initiative. Quality management appears to be a complex phenomenon: companies are adopting parts of some and aspects of other quality initiatives, enjoying different rates of success throughout the organisation.

Research by Longbottom and Zairi (1996) suggests that TQM is not yet well established in the UK financial services, with only a small number of organisations taking on TQM as an overall part of their strategy. Organisations which focused on the hard/tangible elements of TQM had achieved greater progress with its implementation and, thus, improved performance. The research also identifies a number of specific issues (Figure 5.2) for financial services which were considered to add to the difficulties of TQM implementation.

Factors	Descriptions
Leadership	Involve board and chief executive officer in quality activities (hands-on/ownership). Improve awareness and skill levels.
Empowerment and prevention principles	Reconcile these principles with command and control cultures, audit and inspection-based procedures.
Human resources practices	Align human resource policies and practices with TQM.
Process orientation	Broader and deeper understanding of process orientation.
Performance measurement	Move towards balanced performance measures.
Drive out fear	Implementation against background of substantial rationalisation, delayering, restructuring.
TQM techniques	Address expertise deficiency within the industry.
Implementation	Increase the emphasis on implementation. Focus on hard/tangible elements and measures.
Supplier relations	Examine relations, broaden and deepen to include agents, professional contacts and service providers involved in process chain.

Figure 5.2 - Key Issues and Barriers to TQM Implementation,
(Longbottom and Zairi, 1996)

5.6 - Findings from the Fieldwork in the UK Banking Sector

The management of quality has been widely regarded as a major innovation in UK management practice since the late 1980's. Although some writers see it as merely the latest in a long line of management fashions, others believe it to be much more fundamental (McCabe, Knights and Wilkinson, 1994).

The financial services sector has proved no different. The KPMG management consulting survey within 80 major UK financial institutions found that 80 per cent of participants had adopted a "quality initiative" (IRS Employment Trends, 515, 1992). Several researchers have suggested that TQM had been largely applied in the UK banking organisations.

Thus, in order to assess the strategy of implementation and current status of TQM programmes adopted in the UK financial services organisations, questionnaires and interviews were carried out in September 1995. Although, the interviews had been conducted in only two organisations, the results together with the questionnaire findings provided useful insights, for this research project, into the current position of TQM within the UK financial services sector.

The Questionnaire Survey

A postal self-completion questionnaire (Appendix A) was sent to 160 branch managers of the biggest clearing banks and building societies in the Northeast of England. Completed questionnaires were received from 49 managers representing a response rate of 33%. This rate is considered satisfactory in representing the trends of the region. The main objectives of the questionnaire, as described in Chapter 2 were:

- To review the usage of TQM in the UK banking sector;
- To assess branch managers knowledge and understanding of the company strategy towards TQM;
- To evaluate branch managers perceptions about key issues related to TQM implementation such as: Barriers, Changes, Drivers, Effects and Measurement Procedures.

The Interview Survey

The interview survey was planned to identify an organisations strategy in implementing and developing the TQM programmes in the UK financial services. A structured interview was used, it was addressed to senior managers responsible for planning "quality initiatives" in the headquarters of the companies involved in the questionnaire survey. Although, fifteen leading financial service organisations had been formally invited to participate only two companies (one major clearing bank and one former Building Society) accepted an invitation to participate in the interviews.

The main objectives of the interview were:

- To assess the financial service strategic approach towards quality initiatives
- To evaluate how and why the UK banks are engaged in implementing TQM
- To compare the strategy planned for quality specialists in company headquarters with perceived view from quality practitioners in the branch network.

5.6.1 - Findings and Discussions

The interview and questionnaire survey findings are presented below. The data set from the fieldwork is illustrated in two types of tables. One type display the response rate in percentages, and the other the answers' mean (μ) and standard deviation (σ). The inferential statistics were calculated using Minitab and the complete survey worksheet is presented in Appendix B.

RESPONDENTS PROFILE

The majority of respondents titled themselves as middle managers (Table 5.1). A relatively high percentage of respondents were female (24 per cent), but findings suggest that branch management is still a male predominated work environment.

Altogether, more than 50 per cent of the respondents had + 20 years of service. This suggests that management careers had a long term prospect in the UK banking industry. In terms of branch sizes there was a good balance among respondents.

Table 5.1 - Respondents Profile

Management Level		Gender		Number of Respondents	
Senior	12 %	Male	76 %	N = 49	
Middle	65 %	Female	24 %		
Junior	23 %				
Years of Service		Education		Branch Size	
+20	51 %	Master	0 %	Large	32 %
11 - 20	29 %	Bachelor	17 %	Middle	28 %
4 - 10	20 %	Certificate	83 %	Small	36 %
0 - 3	0 %	Other	0 %	Other	4 %

TQM Usage

TQM Implementation. The majority of companies surveyed had implemented TQM (Table 5.2). McCabe et al. (1994), argued that, in general, in the UK financial services TQM was seen as a foundation stone or as an umbrella concept under which other "quality initiatives" sat and were integrated with each other. It is interesting to note that the respondents did not see themselves, or top managers, as being responsible for delivering quality services to customers. The majority of respondents identify all employees as being responsible for delivering quality services to customers (Table 5.3).

This suggests a positive relationship between an organisations environment and the quality philosophy. Perhaps, it could be seen as lack of commitment from management to take responsibility for the quality process, but interviewees confirmed that all the organisations members are expected to be responsible for quality services and products. They also confirmed that top managers have been the major "quality initiative" drivers. It was perceived that all interviewees pronounced "quality initiatives" as an established activity. Only one company considered the planning of such as a business strategy.

The results in Table 5.4 confirm that TQM programmes are still at an early stage in the UK financial services. More than half of companies started their programme between 1992 - 94. Many authors considering successful organisations using TQM learned that it takes a long term management commitment to achieve the benefits of such an approach. This might be the greatest future challenge for top managers in the financial services industry towards getting rewards from current TQM programmes.

Table 5.2 - TQM Programme in UK Banks

Issues	Response Rates
Implemented	67 %
Planned	6 %
Discontinued	2 %
Without TQM	8 %
Unknown	17 %
Total respondents (N) = 49	

Table 5.3 - Main Responsibility for Quality

Issues	Response Rates
Top Managers	15 %
Line managers	20 %
All Employees	65 %
Total respondents (N) = 37	

Table 5.4 - Time of TQM Implementation

Years	Response Rates
Less than 1	8 %
1 to 3	54 %
4 to 6	19 %
6 Plus	19 %
Total respondents(N) = 37	

Quality Standard Certificate. The survey findings (Table 5.5) reflect how quality standard certificates such as BS 5750 or ISO 9000, whilst very popular within the UK manufacturing sector, are perceived to be less relevant to the banking sector.

Table 5.5 - ISO 9000/BS5750 in UK Banks

Issues	Response Rates
With Certificate	23 %
Planning	16 %
No Certificate	16 %
Unknown	29 %
No Response	16 %
Total respondents (N) = 49	

Knowledge & Understanding of TQM Strategy

This section presents respondents knowledge of mission strategy and the degree of upwards and downwards communication in their work environment. The overall idea was to collect perceived emphasis on TQM goals in the company mission strategy and to assess the scale with which these goals were known and communicated throughout the company hierarchical levels.

Mission Strategy Knowledge. As can be seen in Figure 5.3 branch managers in the UK financial services seem to know and communicate the companies mission to staff members. This is perfectly consistent with the TQM philosophy.

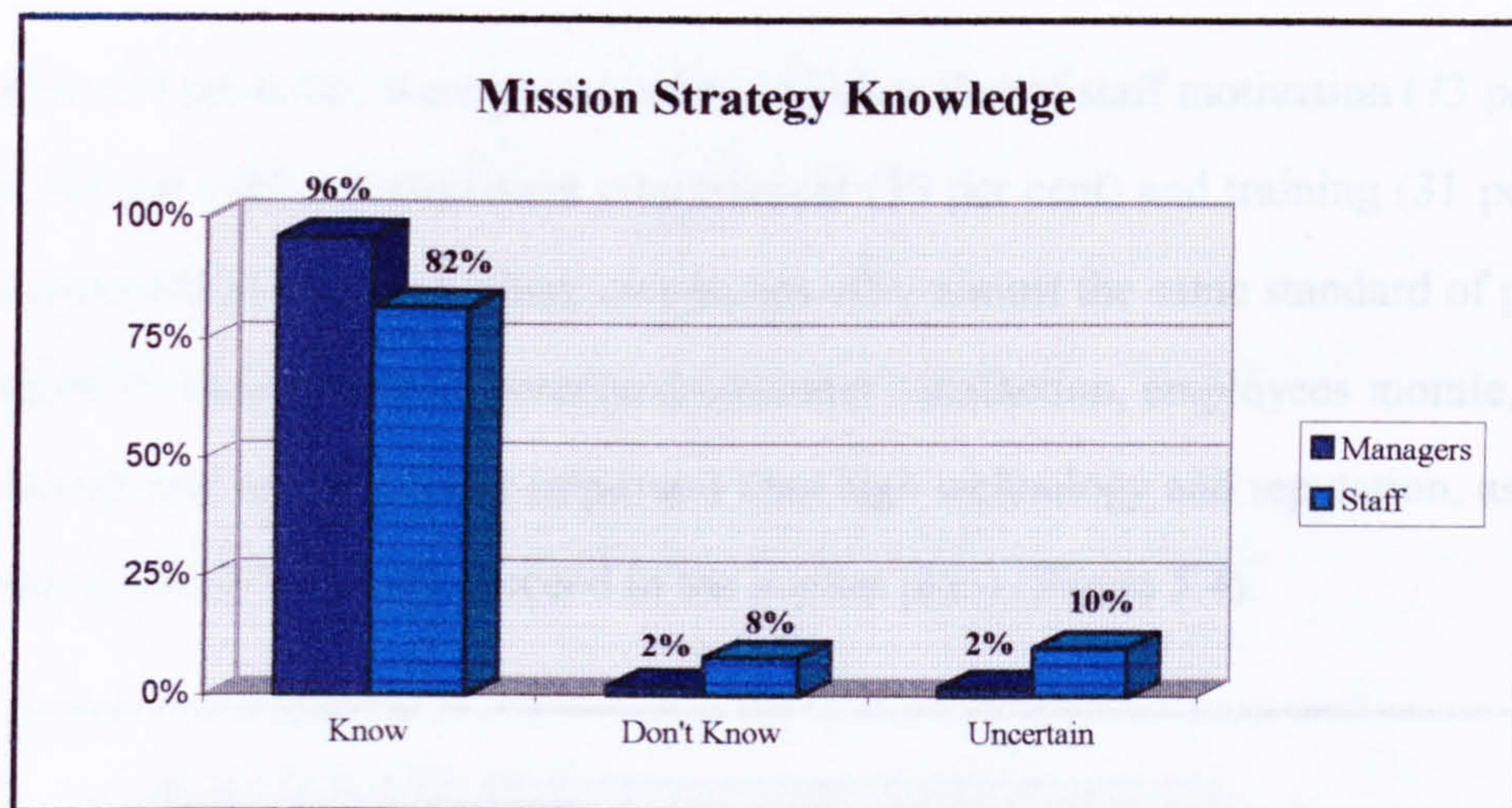


Figure 5.3 - Mission Strategy Knowledge

Upwards and Downwards Communication. The findings (Table 5.6) suggest that managers are somehow doubtful about the effectiveness of companies upwards communication. However, it seems not to prejudice the flow of downwards communication. This could be considered as a positive reinforcement of the perceived good management and staff communication of the mission strategy knowledge shown above.

Table 5.6 - The Communication Flow Grade

Issues	Mean (μ)	SD(σ)
Upwards	3.020	0.878
Downwards	3.571	0.791
Total responses (N) = 49		
Scale used from 1 to 5, where 1 is mostly ineffective and 5 is mostly effective		

Evaluation of TQM Approach

Managers were asked to define the six key success factors for their organisation. There was a clear view among branch managers that customer satisfaction (79 per cent) is a key to improving business performance. It was noticed that technology (30 per cent) and

reputation (24 per cent), were perceived to be below that of staff motivation (73 per cent), quality (64 per cent), management commitment (39 per cent) and training (31 per cent). This is expected in a market where companies offer almost the same standard of products or services. Branch managers perceived customer satisfaction, employees morale, quality and commitment as being more important than high technology and reputation, as factors that predict which bank will succeed in the market place (Figure 5.4).

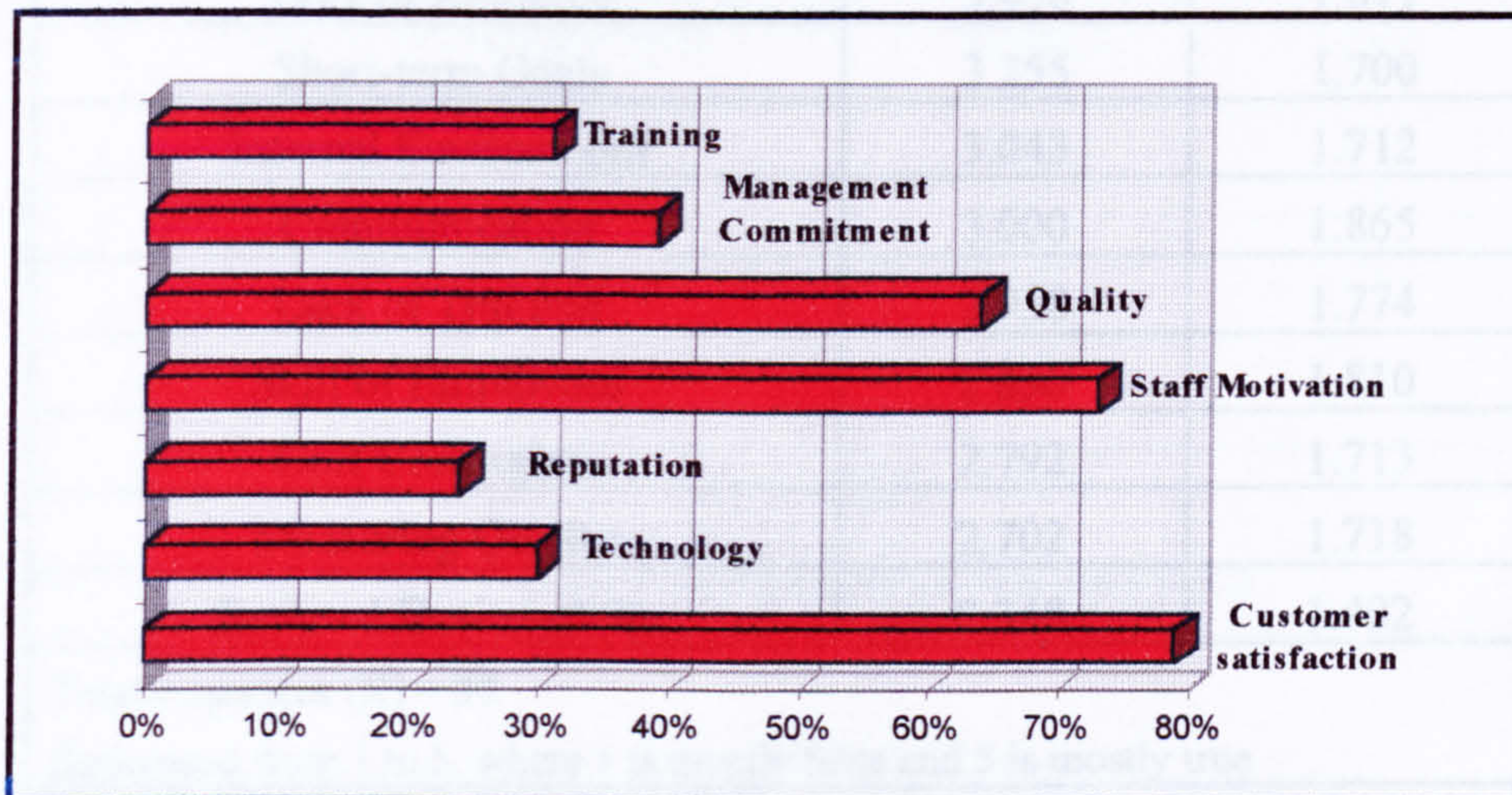


Figure 5.4 - The Key Success Factors Perceived

The major barriers to TQM. Managers regard the lack of resources, short-term goals, internal environment and communication as principle boundaries to TQM programmes (Table 5.7). This is evidence of a market place in which management and staff are under increasing pressure to achieve short-term results.

Resistance to change could increase among managers trying to protect themselves from what they see as a new fashionable way to raise profitability and cut jobs. Managers interviewed believed that failure to persuade top management to commit themselves to a TQM programme, and the internal environment, were major barriers to be overcome in their companies quality initiatives. There was a great concern among them with the management of short term goals and communication systems, being these the crucial issues to accomplish the TQM aims.

On the other hand, when they were asked about the lack of resources, which are a major concern among managers in branches, they suggested it was usually an excuse for the non-accomplishment of targets. Rather than managers accepting that they can be more effective in delivering quality services to customers, with the same level of resources.

Table 5.7 - Major Barriers to the Implementation of TQM

Issues	Mean (μ)	SD(σ)
Lack of Resource	3.458	1.611
Short-term Goals	3.255	1.700
Internal Environment	3.043	1.712
Communication	3.000	1.865
Lack of Training	2.958	1.774
Skill of Employees	2.830	1.810
Cost Constraints	2.792	1.713
Measuring Quality	2.702	1.718
External Environment	2.348	1.402
Total responses (N) = 37		
Scale used from 1 to 5, where 1 is mostly false and 5 is mostly true		

Changes needed to achieve TQM goals. In Table 5.7 it can be seen that communication and management styles are key issues to be changed. There is no way in which quality can be achieved if top management cannot communicate their message throughout the organisation. The new management style has to be brought within the TQM philosophy with a well planned training programme.

The managers interviewed added that organisation's structure had become flatter in order to empower managers and staff . This could enable them to take initial actions towards customer needs.

Table 5.8 - Major Changes in Order to Achieve TQM Goals

Issues	Mean (μ)	SD(σ)
Communication	3.837	1.812
Management Style	3.558	1.919
Educational Programme	3.182	1.821
Leadership	2.909	1.927
Design of Product/Service	2.907	1.950
Measurement Procedures	2.524	1.916
Branch Design	2.273	1.619
Customer's Segmentation	2.024	1.351
Total responses (N) = 37		
Scale used from 1 to 5, where 1 is mostly false and 5 is mostly true		

The TQM drivers. The interviewees commented that banks conducted several consumer surveys before starting the quality programme. As a result of these surveys the major aims of the TQM programmes were aimed at improving the so called "hard" issues, such as quick telephone answering, length of the queue in the branch, speed of service in the branch and speed of the turnaround of correspondence as well as reducing costs. The improvement of these issues were the key to achieving customer expectations, reducing costs and beating the competitors. It was also expected to promote quality awareness among management and staff, in order to keep current customers and attract new ones.

Financial companies have improved the mechanical part of the services provided. Still, there is a high level of dissatisfaction among consumers about the intangible issues, such as: overall administrative efficiency; helpfulness in dealing with mistakes and handling enquiries and how the organisations treat them as customers (Which? October 1995).

The managers surveyed perceived that the competitive pressures, customer demand for quality and a desire to reduce costs were the major reasons for applying TQM (Table 5.9). Perhaps because branch managers are under such pressure to achieve short term goals, in order to beat their competitors, that they see those as the first results derived from the TQM programme.

Table 5.9 - Majors Factors Leading to Implement TQM

Issues	Mean(μ)	SD(σ)
Competitive Pressures to Improve Service/Product Quality	4.744	0.938
Customer Demand for Quality	4.579	1.154
Competitive Pressures to Reduce Cost	4.211	1.510
Enthusiasm of Top Management	3.737	1.639
Total responses (N) = 37		
Scale used from 1 to 5, where 1 is mostly false and 5 is mostly true		

The Majors Effects. The data confirmed that the TQM programmes could raise quality awareness among an organisations' members, and raise customer satisfaction (Table 5.10). The key issue might be that once customer satisfaction is raised, customers become more demanding for quality services. Thus top managers must be aware that the growth and profitability promoted will not be sustained unless quality management programmes are maintained. The findings showed positive links between quality, profitability, cost effectiveness and team work.

On the other hand, the data also shows a lack of employee morale, which can be easily equated with the number of redundancies taking place in the industry followed by further job cuts, often initially announced by top management in the press. There is also

evidence that TQM is not so effective in reducing labour turnover or absenteeism, as shown in Table 5.10.

Table 5.10 - Major Effects of Implementing TQM

Issues	Mean (μ)	SD(σ)
Increase Quality Awareness	4.474	0.922
Raise Customer Satisfaction	4.447	0.891
Increase Number of Customers	4.108	1.197
Increase Profitability	4.105	1.034
Reduce Defect Levels	3.974	1.000
Improve Cost Efficiency	3.789	1.044
Improve Team Work	3.757	1.011
Increase Employee Morale	3.237	1.101
Reduce Labour Turnover	2.658	1.097
Reduce Absenteeism	2.421	0.948
Total responses (N) = 39		
Scale used from 1 to 5, where 1 is mostly false and 5 is mostly true		

How Important TQM Has Been for Your Company. Most of the managers (87 per cent) rate TQM programmes as being important for their organisations. This is a very positive view concerning the improvements that TQM programmes can lead to in financial services. Managers interviewed pointed out that quality management should become a way of life. It has now become a standard in the financial service industry. Financial companies cannot stay in business without fulfilling the quality products or services that are expected by customers. Cowling and Newman (1995) suggested that

quality is a "hygiene" factor for service organisations, but it cannot guarantee differentiation or competitive advantage.

Table 5.11 - Perceived Success of TQM Programmes

Issues	Response Rates
Major Importance	56 %
Minor Importance	31 %
No Effect	8 %
Minor Deterioration	5 %
Major Deterioration	0 %
Total of responses (N) = 39	

Measurement Assessment

A key aspect in the implementation of a TQM programme is that of measuring customer satisfaction and quality improvements. However, defining and measuring quality, particularly in the service sector, is often viewed as a complex, difficult, and elusive aspect of quality management (Redman et al., 1995).

In this section it is intended to discover how the UK banking organisations are measuring customer satisfaction and quality improvements in their branch network. Here managers were asked to mark what were the main ways to measure customer satisfaction and quality improvements in their companies.

Measuring Customer Satisfaction. Financial service companies surveyed seem to have almost standard procedures to measure customer satisfaction. The mystery shopper, market research, customer contact and market share seem to be the most popular ingredients in the menu of options (Table 5.12).

What has to be answered is how effective is the action taken after the company measures its results. Interviewees stated that the measurement procedures are used to monitor and improve the quality process. It is also used to evaluate branch managers and staff for premium, promotion or "to take any emergent action" if necessary.

Table 5.12 - Measuring Customers Satisfaction

Issues	Mean (μ)	SD(σ)
Mystery Shopper	4.796	0.841
Market Research	4.673	1.107
Customer Face to Face Contact	4.250	1.578
Market Share	4.061	1.688
Number of New Accounts	3.333	1.950
Number of Accounts Closed	2.917	2.019
Total responses (N) = 49		
Scale used from 5 to 1, where 1 is not measured and 5 is major determinate		

Measuring Quality Improvements. The main quality indicators used are customer feedback and the number of complaints (Table 5.13). This is consistent within the TQM leading factors presented, however, findings also suggested that very little attention had been paid to quality costs which is also one of the major TQM drivers found.

Nevertheless, it is important to outline that customers do not always provide feedback or complain about bad services, which does not mean that they are satisfied. On the contrary, they may never go back to the bank in question, and they may tell a large number of people how bad that bank is. Some literature says that only 11 per cent of dissatisfied customers complain. Thus, how effective the UK clearing banks have been in improving quality using the results of these procedures is a further area to be researched.

Table 5.13 - Measuring Quality Improvements

Issues	Mean (μ)	SD(σ)
Customer Feedback	4.745	0.988
Complaints	3.958	1.750
Quality Costs	3.128	1.837
Total responses (N) = 49		
Scale used from 5 to 1, where 1 is not measured and 5 is major determinate		

Interview Findings Summarised

Although only two top managers gave interviews, the data obtained from the interviews are summarised below. Interviews were conducted in the headquarters of two leading financial service organisations in UK. Table 5.14 shows the profile of the managers interviewed.

Table 5.14 - Interviewees Profile

Company	Interviews	Management Level	Years of Service	Gender	Area
Clearing Bank	1	Senior	+ 11	Male	Quality
Former Building Society	1	Senior	+ 11	Male	Quality Management Programme Development

Interviewees stressed top management's strong commitment towards achieving the quality philosophy in their organisations. The two companies invested heavily in training and external consultancy, which they hire in order to help them in the planning and implementing of the quality management programmes. Increase efficiency in the branch network and cut overall costs, were their major quality drivers.

Both companies applied TQM programmes aiming to improve the tangible elements of their services and products, and to focus on customers expectations detected in their market research. Altogether, they had applied several quality initiatives (customer care, BPR, Benchmark, ISO 9000/BS5750) under the umbrella of the TQM programme. They used different models for implementation and measurement procedures, such as: Gap Analysis, EFQM, Crosby 14 steps, and Balance Business Scorecard.

Although interviewees emphasise top management commitment within current TQM programmes, only the manager from the former Building Society confirmed that TQM was part of an overall company business strategy. On the other hand, the interviewee from the clearing bank said. *"...our TQM programme is a supportive measure, but it isn't a mission strategy..."*

The strengths found were top management's commitment (stronger in the former Building Society), programmes focused on tangibles issues, intensive training (again it was considered stronger in the former Building society). The weakness was that the TQM programme apparently was not engaged in the business strategy as suggested by the interviewee of the clearing bank.

Apparently in the companies surveyed, there is a lack of understanding of the TQM philosophy for service organisations, which may have lead to a broader use of consultants and quality models, some of them being adopted from the manufacturing sector. There is, also, a strong emphasis on short term financial gains against a long term TQM strategy.

5.8 - Conclusions

In this chapter a review of the quality movement in the UK financial services is shown. The findings from a survey in the banking sector in the Northeast of England investigating the status of TQM programmes in the UK banking sector have been presented and discussed.

The evidence shows that TQM is a reality in the UK banking sector. However it is in an early stage and seems to be applied as a scheme to raise customers emergent needs, cutting costs and achieving short term results rather than a programme engaged in the companies business strategy.

The two interviewees confirmed that their organisations had applied a variety of quality initiatives such as Customer Care, BPR, ISO 9000/BS 5750, etc.... The type of quality initiative applied is a function of the short term objectives needed. Interviewees suggest that TQM is an umbrella where other initiatives are implemented in order to achieve the current business goals. Furthermore, this suggest an absence of a conceptual model to facilitate the implementation of TQM in banking organisations.

Short-term goals, communication and training programmes are still a great problem to be overcome. Managers and staff may not believe that top management are really committed to a TQM programme. Instead, they believe that it is 'the flavour of the month', which is used to cut jobs and increase profitability. Top management must engage companies quality programmes into their business strategy in order to overcome these barriers.

The reality is that, whatever the objectives of the TQM programmes are, it can increase quality awareness among customers and the organisations members. As a result of this, customer and employees expectations are raised. The absence of a more strategic continuous and progressive TQM programme can jeopardise the companies market position in the future.

The question is: are the top managers in the financial service industry committed to promote quality programmes as a strategic matter in the UK market? If not, the long term effect of these schemes could be at risk. The companies may not survive in this

highly competitive environment. In a market where mergers and company restructuring are taking place, making the right strategic decision now may be the only way to survive in the future. What has yet to be seen is who will be have a place in this future.

Chapter 6 - Assessing TOM in the Brazilian

Financial Services

6.1 - Introduction

In Brazil there are all traditional types of financial institution, such as wholesale banks, investment banks, retail and savings banks. Considered one of the world's most sophisticated retail markets, Brazil is one of the few countries in the world with "same day cheque clearing" (The Banker, 1994). The Brazilian banking sector has peculiar characteristics. Banks owned by states and federal government account for almost 60% of the sector and the number of (all types of) banks exceed 200. From these the top 30 banks accumulate 90% of the market share.

During the last three decades many important private (Brazilian and Foreign owned) banks have expanded their activities. Moreover, Brazilian states established their own banks, in many cases setting up development banks as well. Overall, the banking sector represents a very large part of the Brazilian economy, corresponding to at least 8% of the Gross Domestic Product, while for countries in developed economies it represents around 4%.

As in the UK, Brazilian banks are national institutions. At the end of 1992 some 216 banks operated 17,000 branches around the country with the Bank of Brazil (Brazil's largest bank under the majority control of the federal government) had 2,500 and 'Caixa Economica Federal' the Federal Savings Bank, owned by the federal government, another 1,800. Also part of the financial system were over 1,700 offices of insurance companies and roughly 2,300 firms and branches linked to stock and securities trading. The financial sector's profitability was a healthy 14.2 percent in 1990 and will be even higher by 1993 (Schneider, 1996).

6.2 - The Inflation Era

From the early 1980's until the middle of 1994, Brazilian banks have been making money from inflation, earning the so called 'float'. In the days of wildly rising Brazilian prices, inflation was the bankers best friends.

Through their branch network they offered services of various kinds free of charge to attract deposits, in order to earn a 2% a day of income 'float'. This was the gross return rate of a transaction that takes a day to be debited from a customer's account for an average inflation of approximately 45% per month .

Thus, Brazilian banks were serving the market through large branch's with 550,000 employees, handling more than 550 million transactions monthly (Graça, 1993).This large number of bank transactions, combined with the need for intensified speed of financial operations due to high inflation rates (Figure 6.1), led banks to develop computer systems that enable them to clear cheques twice daily.

These have made information technology (IT) a fundamental source of competitive advantage for the banking sector in the last 10 years. It was primarily used to improve service quality, but with the high inflation economy, bank service automation became a strategy to reduce operation costs and increase the number of transactions within the branch network.

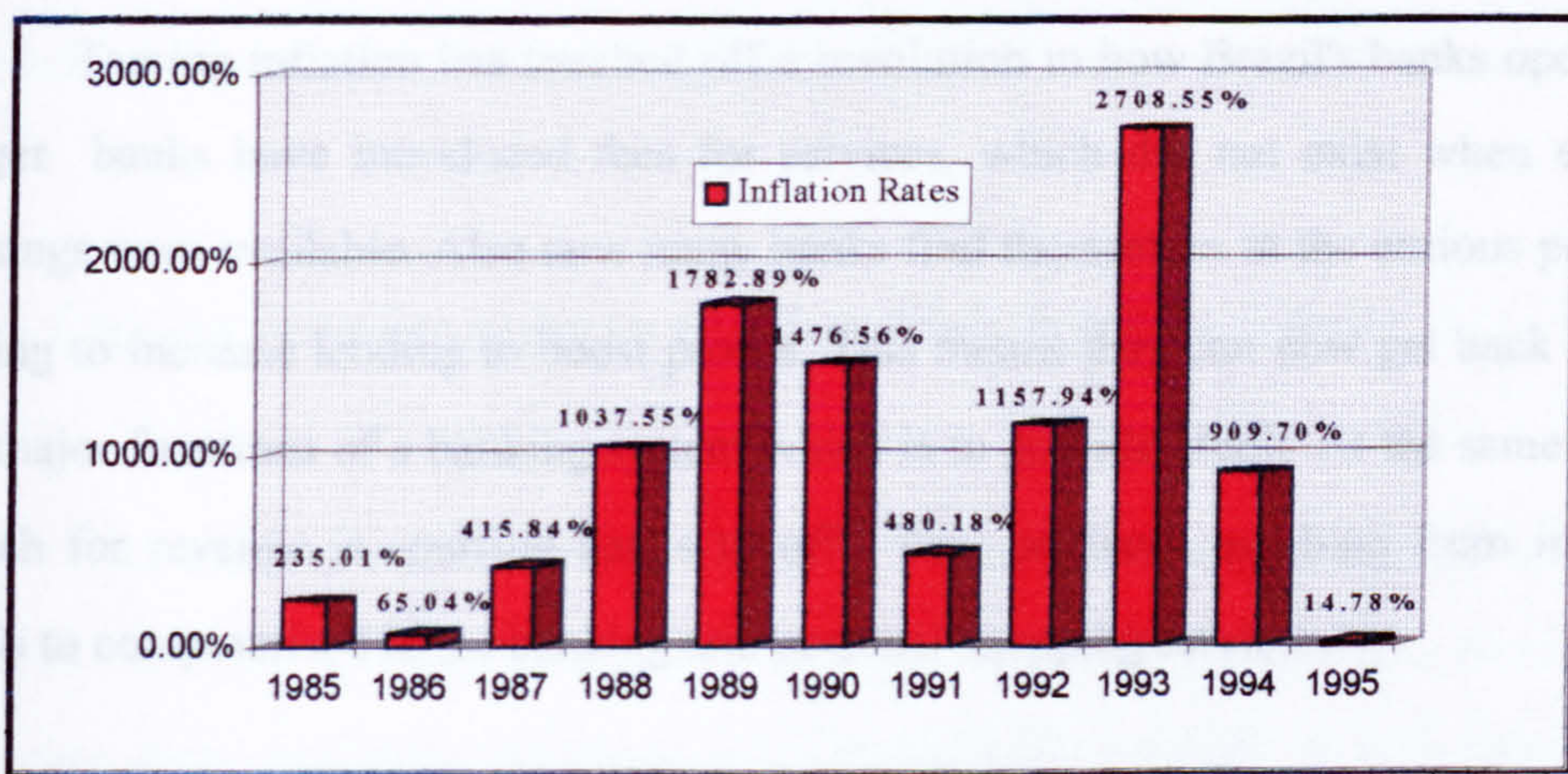


Figure 6.1 - Brazilian Inflation Rates, data from Exame Magazine (1996)

6.3 - The New Economic Time

In 1993 the Brazilian government launched the extremely successful anti-inflation plan called "Plano Real". As a result, inflation was reduced from 45% per month in June/94 to 15% a year in June/96. For the bank industry this meant the direct loss of inflation-related earnings or "float" income. Analysts indicate that float income which accounted for 40% of the gross margin in early 90s fell to 2.9% in 1995 (Figure 6.2) in the industry (The Banker, 1995).

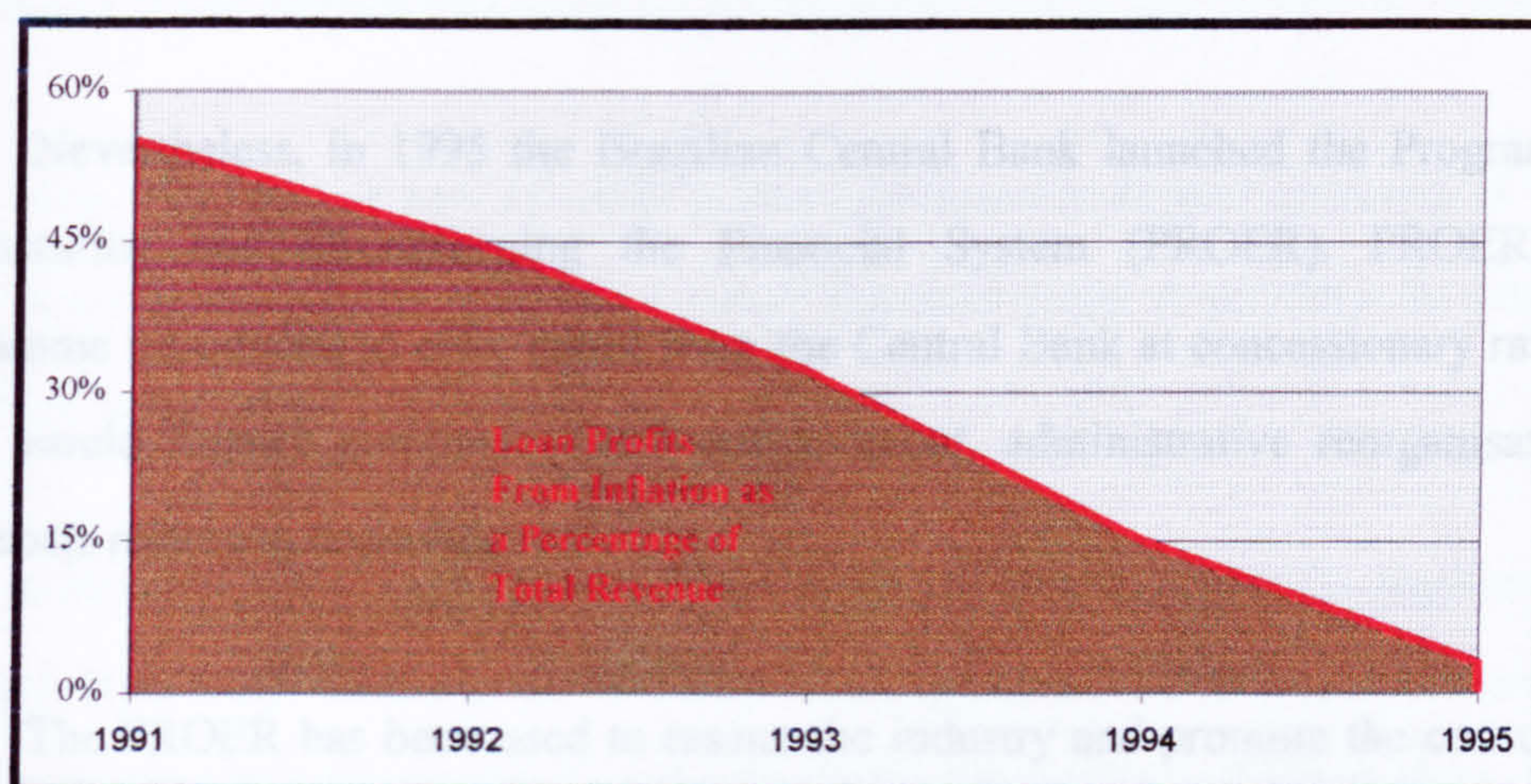


Figure 6.2 - Inflation as a Percentage of Total Banks Revenues,
(Business Week, 1995, data for largest 17 banks)

Taming inflation has touched off a revolution in how Brazil's banks operate. The bigger banks have introduced fees for services, which did not exist when easy float earnings were available. Also now many banks find themselves in the curious position of having to increase lending to boost profits. This means they can now get back to one of the major functions of a banking system which is to provide credit. At the same time, the search for revenue is spurring banks to offer new products, anything from investment funds to computerised home banking and personal shopping services.

"To survive and succeed, the banks are going to have to reinvent themselves and many are" stated Ira A. Jackson senior vice president for external affairs of Bank of Boston whose Brazilian Branch ranks number fifteen among the country's commercial banks (Business Week, 1995).

However, not all banks were ready for this tougher environment. Some banks have been hit hard by the transition. By the middle of 1996 almost all state and federal government owned banks were in some financial difficulties. Two of the top 10 privately owned banks were reported to have been liquidated and/or taken over by their better run competitors.

Nevertheless, in 1995 the Brazilian Central Bank launched the Programme for Restructuring and Strengthening the Financial System (PROER). PROER was a programme introduced to offer credit from the Central Bank at concessionary rates. This credit would finance companies staff retrenchment, administrative reorganisation and other costs related to consolidations.

The PROER has been used to rescue the industry and promote the consolidation and the health of the banking system. Furthermore, leading state banks, such as Banespa in São Paulo and Banerj in Rio de Janeiro, after a year under intervention, made fresh starts in 1996. Also the Banerj privatisation plan for 1997 was announced by government authorities. This might mark the beginning of privatisation of the state owned banks in Brazil.

6.4 - Quality Management in the Brazilian Banking Sector

The industry has weathered the abrupt loss of its largest income source. The difficult transition towards traditional lending and banking services now faces a critical challenge to its credibility and image with international investors, its own depositors and corporate clients.

Brazilian banks are in the midst of a revolution which will force bankers to promote changes needed for the industry to leap into the next century, more efficient and competitive than ever before. Tens of thousands of bank employees have been made redundant and some informed observers believe that up to 15 per cent of all retail branches in Brazil may close by the year 2000 (The Times, 9th-Dec-1996).

New technology, including the greater use of automatic payment facilities like direct debits, on-line personal computer links and telephone banking should help ease the transition for at least some of the retail banks' approximately 40 million customers (24 per cent of current population).

More than 90 per cent of those customers currently depend on personal visits, at least twice a week, to bank branches for their financial needs. A privilege for which they often have to queue for half an hour or more.

Although there is very little evidence from the literature about the implementation of formal TQM programmes in the Brazilian banking sector, it is known that many banks had been improving efficiency and productivity through quality initiatives since the early 1990's. In a survey involving 90 banks published by a Brazilian bank magazine (BancoHoje, 1993) it is shown that 18 per cent had implemented a formal TQM programme since 1992 and 22 per cent were planning to implement one in the next 12 months.

Perhaps, because in 1993 inflation earnings were the major source of revenue for the banking sector, only a small part of the industry started to apply TQM. Now, driven by a new economic environment, a bank has to provide services with higher quality at a competitive price in order to keep and increase market share. Top managers are under increased pressure from shareholders to recover the return rates of inflationary

times. And customers are now empowered by Brazil's stable economy, which enables them to shop around to get the best value for their money.

Thus, the readjustment of retail banks to new conditions is only one aspect of the transformation that Brazil's banking and financial services are going through. The biggest banks are moving towards a broader approach to quality, implementing TQM programmes and/or obtaining ISO 9000 certificates in order to have customer recognition of their value as quality service providers. Furthermore, Longo (1994) surveyed 24 bank managers in Brazil, and found that 46 per cent of the organisations had implemented formal TQM programmes. The majority implemented it less than three years previously.

In this contest, foreign owned banks seem to take the lead, and then in 1994 Citibank Global Consumer Bank - Brazil became the first bank to be awarded The Brazilian National Quality Award. National private and federal government owned banks are implementing their own TQM programmes too. Thus, a new market environment, where the competition among companies are based upon the quality of services and products, seems to be taking place.

6.5 - Findings from the Fieldwork in the Brazilian Banking Sector

In order to assess the strategy adopted by financial service organisations in these new market environment discussed above and analyse the current status of TQM in the Brazilian banking sector, an interview and a questionnaire survey were carried out in the period from April to June/1996 in Brazil.

Brazilian banking authorities use different systems for categorising banks, for example, by size, by number and location of branches, and by ownership. For the purpose of this fieldwork analysis, respondents were divided into three company groups classified by ownership as follows:

- Group 1 - Clearing or Saving banks owned by federal government
- Group 2 - Private banks owned by Brazilian residents
- Group 3 - Private banks owned by foreigners

The questionnaires and interviews with sample size, participants profiles and majors findings are presented and discussed in detail subsequently.

The Questionnaire Survey

A postal questionnaire survey was undertaken of branch managers in the largest bank retail service organisations in Brazil, predominantly in the cities of São Paulo and Rio de Janeiro. A total of 100 responses were collected from a sample distribution of 400, representing a response rate of 25 per cent. This response rate is considered representative for the population surveyed. The main objectives of the questionnaire survey was:

- To review the usage of TQM in the Brazilian banking sector;
- To assess branch managers knowledge and understanding of the companies strategy towards TQM;
- To evaluate branch managers perception about key issues related to TQM implementation such as: Barriers, Changes, Drivers, Effects and Measurement Procedures.

The data analysis (Appendix 5) are illustrated in two types of tables. One type displays the response rate in per cent per group of companies. The other display presents means (μ) from analysis of variance (ANOVA) and Tukey test - 95% confidence

interval, which was used to verify the significance of difference among groups of responding companies. The findings and analyses are discussed below.

RESPONDENTS PROFILE

The majority of respondents titled themselves as senior or middle managers (Table 6.1). As would be expected from this management level, more than 80 per cent of respondents had 11 years or more of work experience in their companies. A relatively high percentage of respondents was female (24 per cent), however, it is quite a modest figure considering that females account for half of the work force employed in the industry.

Altogether, most of respondents had a University degree, 14 per cent a certificate or a college equivalent degree and a couple had Master's degree. In terms of branch size there was a great variety among respondents, but more than 80 per cent were located at a middle or large sized branch. The concept of size is not very well defined. Managers considered that volume of business, revenue and number of clients are criteria to classify the size of a branch.

Table 6.1 - Respondents Profile

Management Level		Gender	
Senior	74 %	Male	76 %
Middle	26 %	Female	24 %
Years of Service		Number of Respondents	
+20	27 %	Group 1 - N = 34	
11 - 20	56 %	Group 2 - N = 46	
4 - 10	13 %	Group 3 - N = 20	
0 - 3	5 %	Total - N = 100	
Branch Size		Education	
Large	38 %	Master	3 %
Middle	47 %	Bachelor	83 %
Small	13 %	Certificate	10 %
Other	2 %	Other	4 %

TQM Usage

The results shown in Table 6.2 suggest that TQM has been adopted for the majority of the largest companies within the Brazilian retail banking sector. However, 23 per cent of respondents from companies in group 1 claimed that the TQM programmes had been discontinued.

This could be an indication of a failure in the programme implementation. On the other hand, it confirms the evidence from the interview surveys, in which, interviewees from companies of group 1, pointed out that the TQM programme had been stopped for several months because of changes in top management, which had resulted in changes of business strategy towards quality initiatives. Nevertheless, the new top management after reviewing the company's strategy have decided to continue the programme.

This kind of policy can quite damage the overall quality process in a company, by raising scepticism due to lack of integration and organisational focus on quality and loss of credibility for the TQM programmes (Oakland, 1995).

Table 6.2 - TQM Programme in Brazilian Banks

Issues	Group 1	Group 2	Group 3
Implemented	74 %	78 %	95 %
Planning	3 %	2 %	-
Discontinued	23 %	7 %	-
Without TQM	-	9 %	-
Unknow	-	4 %	5 %
Number of Responses	34	46	20

Therefore, organisational resistance to change becomes even stronger after a programme is interrupted. The restart can be seen as just an attempt to make up a solution to cover up top management failures to deliver the right strategic changes as perceived by companies members.

While survey findings indicate that multinational banks (group 3) seem to be fully committed to applying TQM programmes (95 per cent). A considerable percentage (16 per cent) of Brazilian privately owned banks (group 2) had discontinued or not applied TQM programmes at all. That companies from group 3 had an enthusiastic approach to TQM can be easily explained. They have a small participation in the Brazilian banking sector (as compared with companies of groups 1 and 2), which reduced the problems to be overcome after the reform of economic trends in Brazil.

Additionally, multinational companies can afford to use advanced technologies, to skim the best talents on the market, and to provide the necessary training. They also received tested methodologies from their corporate headquarters (Macedo-Soarez and Charmone, 1994). As well as, the existing quality reputation among customers which create ideal conditions to promote the changes needed.

On the other hand, companies in group 2 have had many structural problems to overcome in this new economical environment. For example, sharp reduction of inflation income, size of operation, organisational restructuring to cope with the new marketing demands, job losses, and many other issues exposed previously in this chapter. Thus, top managers from companies in group 2 may be waiting a little longer than their competitors of groups 1 and 3 before launching such major process changes.

The banking industry has been regarded as a very high technological and innovative business in Brazil. However, applying TQM programmes are something new in the market (Table 6.3). Almost 70 per cent of companies surveyed had started it 5 years ago (1992/3).

Perhaps, in foreign owned banks (group 3) the quality process is in a more mature or advanced stage. This may occur as a function of these companies following corporate headquarters global strategy, such as, CitiBank's global service quality systems - giving its customers “a total world-wide banking experience” (Kin and Kleiner, 1996). Rather than a local strategy adopted to cope with changes in the market environment.

Table 6.3 - How Long Since TQM Has Been Applied

Years	Group 1	Group 2	Group 3
Less than 1	-	11 %	5 %
1 to 3	94 %	61 %	40 %
4 to 6	6 %	7 %	35 %
6 Plus	-	7 %	15 %
No Response	-	15 %	5 %
Number of Responses	34	46	20

To have a quality standard certificate became quite a market requisite in Brazilian industry. In the banking sector it is not different, almost 60 per cent of all banks had one, or aimed to have an ISO certificate (Table 6.4). Multinational banks (group 3) are the clear front runners with 95 per cent of respondents confirming that they had an ISO certificate or an equivalent Brazilian Quality Standard certificate.

Perhaps this is a good sign that Brazilian bankers are taking seriously the quality management process. However, the awareness of having a quality standard certificate has been used as a powerful source of propaganda aimed towards increasing market share. Hence, undoubtedly, the certification is a good move towards achieving a quality philosophy. But it cannot be considered as strong evidence that Brazilian Banks are committed to promote changes towards implementation of a TQM philosophy as yet.

Table 6.4 - Quality Certificate in Brazilian Banks

Issues	Group 1	Group 2	Group 3
With Certificate	-	61 %	85 %
Planning	29 %	9 %	5 %
No Certificate	68 %	13 %	-
Unknow	3 %	2 %	-
No Response	-	15 %	10 %
Number of Responses	34	46	20

Knowledge & Understand of TQM Strategy

Delivering consistently good quality service is a difficult task for any organisation. An effective communication system, which can deliver through all organisational levels strategic quality management goals, is one of the most important factors for achieving TQM goals. In this section respondents were asked about their knowledge of the mission strategy and the degree of upwards and downwards communication in their companies. Also they were asked which channel of communication was most used to communicate the company's goals.

The overall idea was to collect the perceived emphasis of the TQM goals in the companies mission strategy and to assess the scale with which these goals were known and communicated throughout the company hierarchical levels.

As can be seen from Figure 6.3, though the majority of managers from companies in group 1 knew the companies mission strategy, only 35 per cent assumed that members of staff have this knowledge. In groups 2 and 3 this knowledge rises in both managers and staff.

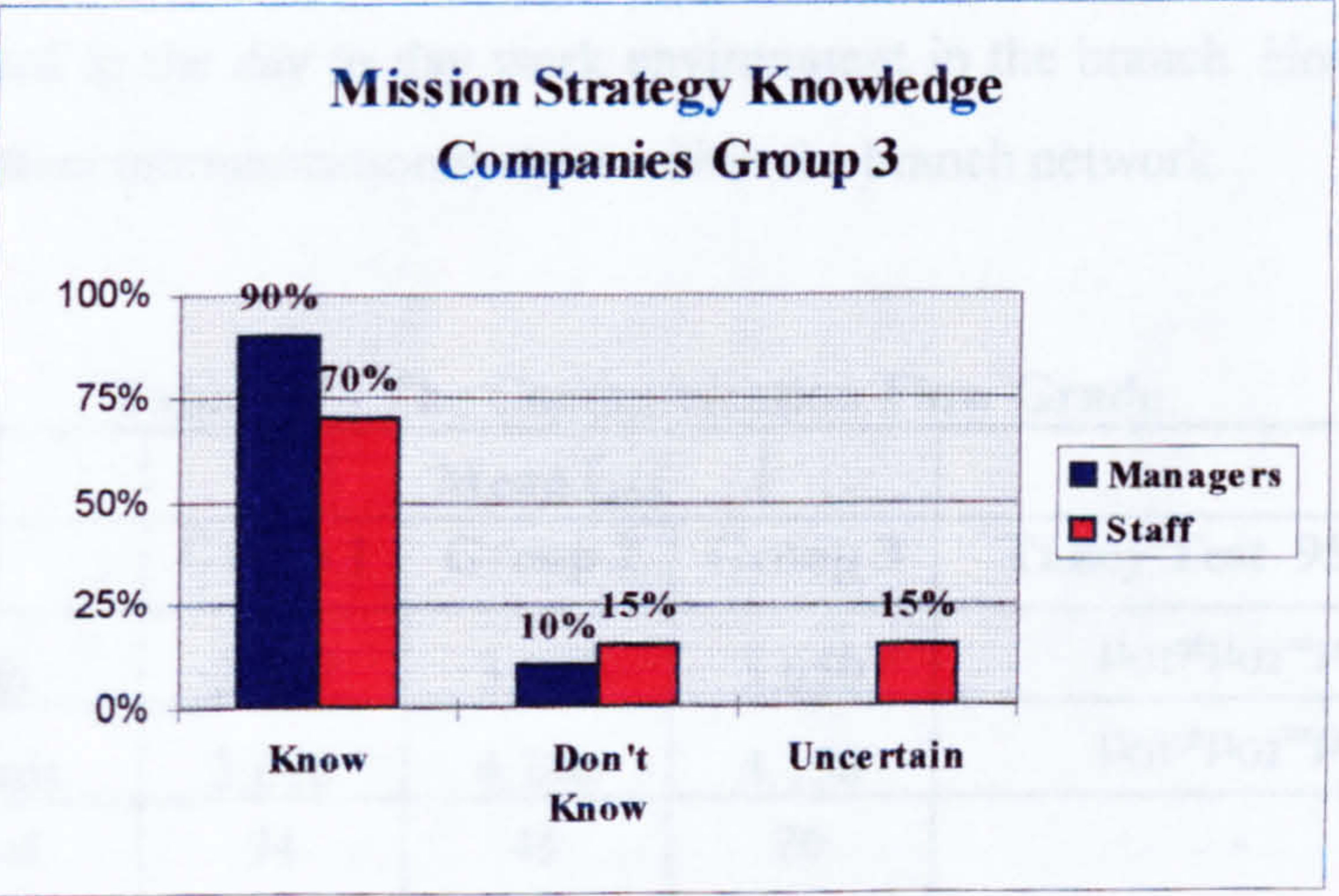
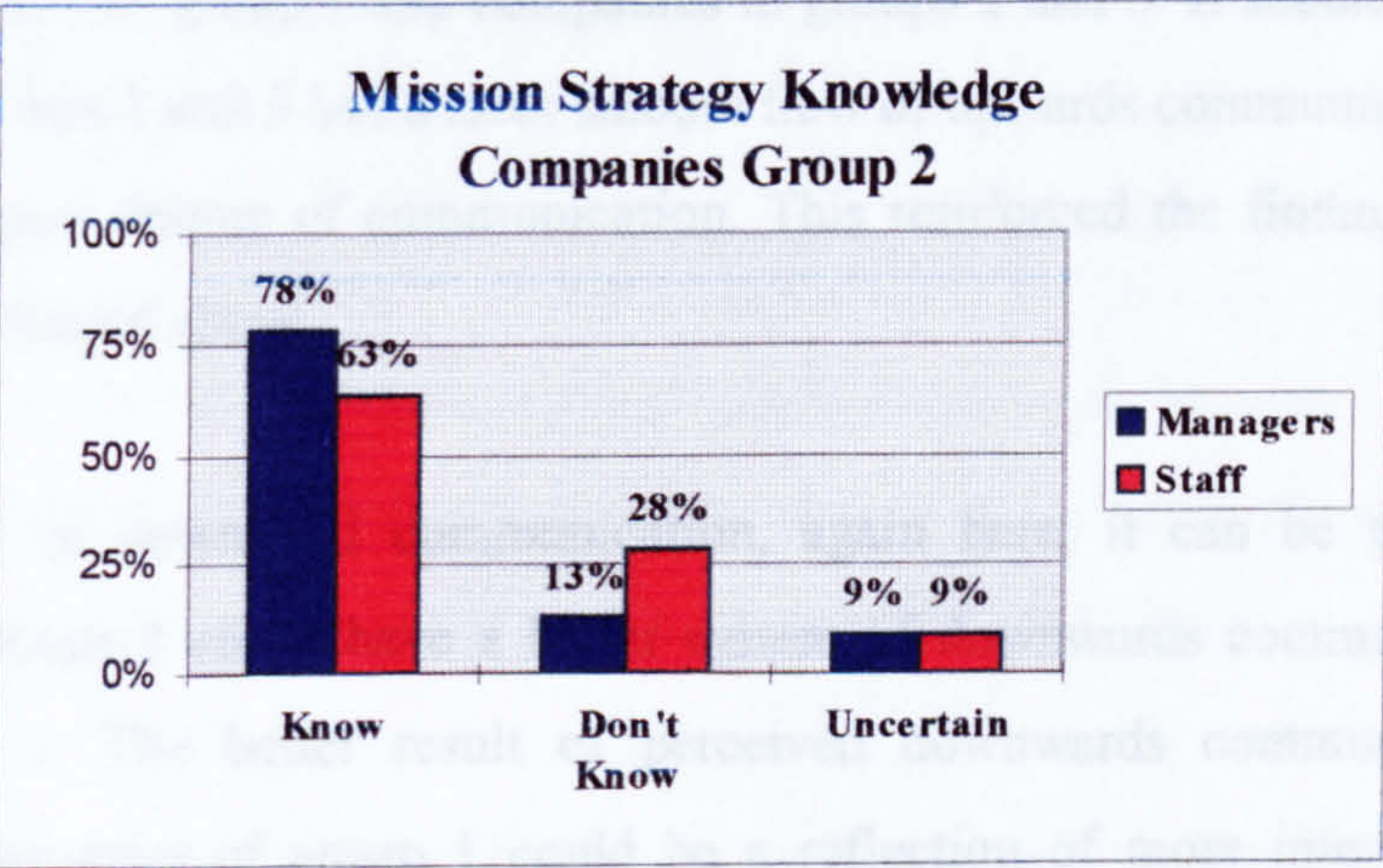
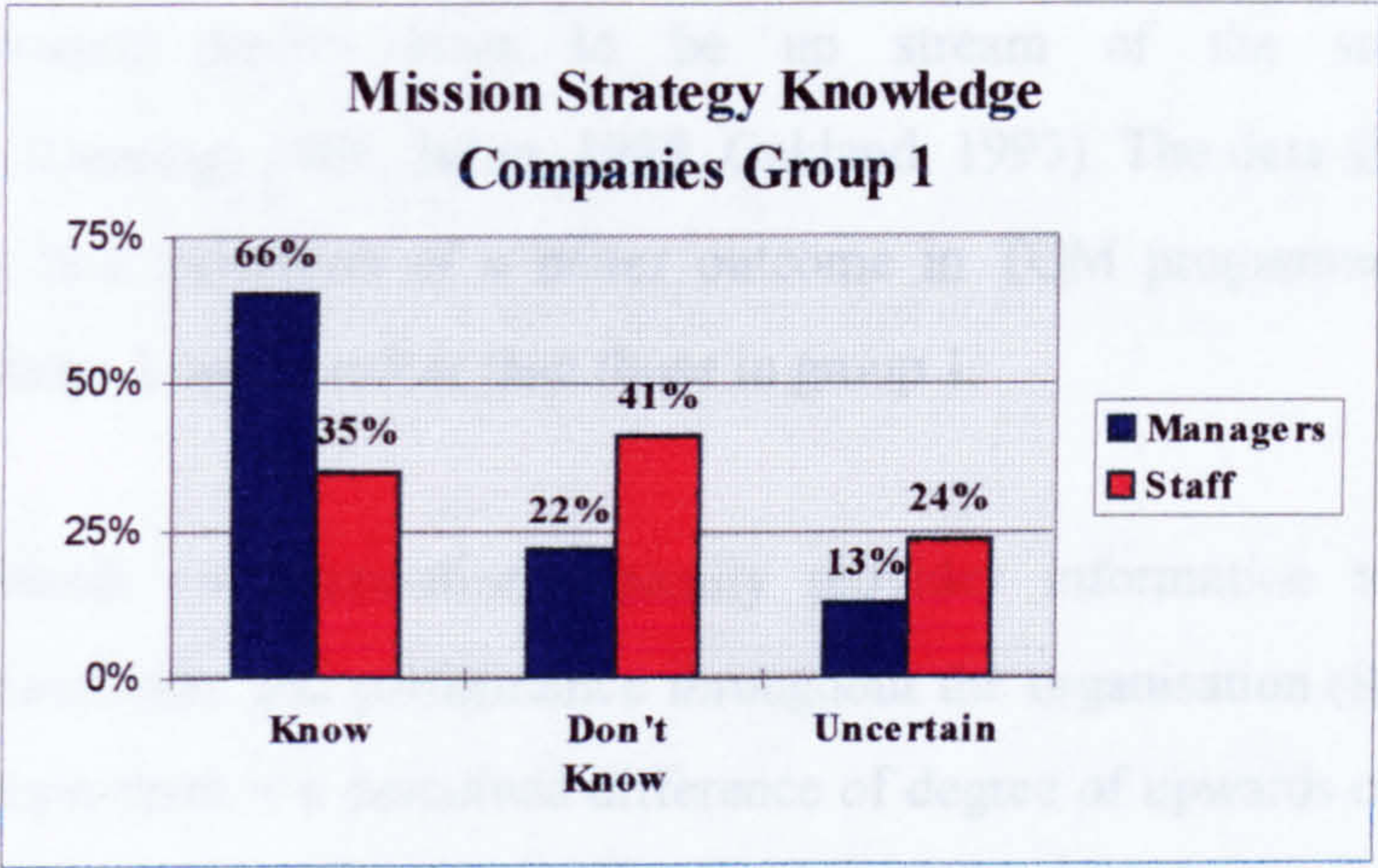


FIGURE 6.3 - Mission Strategy Knowledge

Considering that top management given a clear communication of the company's mission aims towards quality have to be up stream of the successful TQM implementation (Deming, 1986, Juran, 1988, Oakland, 1993). The data shown in Figure 6.3 may be the first indication of a better outcome in TQM programmes adopted by companies in groups 2 and 3, rather than those in group 1.

The upwards communication typically provides information to upper level managers about activities and performance throughout the organisation (Read, 1962). In the research sample there is a perceived difference of degree of upwards communication between companies in group 1 and companies in groups 2 and 3. It should be noted that companies in groups 2 and 3 had a clear smooth flow of upwards communication and that group 1 had a poor degree of communication. This reinforced the findings on mission strategy acknowledged above.

In terms of downward communication, again here, it can be perceived that companies in groups 2 and 3 have a better system of downwards communication than those in group 1. The better result of perceived downwards communication from managers in companies of group 1 could be a reflection of more integration among managers and staff in the day to day work environment in the branch. However, it does not indicate a better communication system within the branch network.

Table 6.5 - The Communication Flow Grade

	Mean (μ)			
Issues	Group 1	Group 2	Group 3	Tukey Test 95% CI
Upwards	2.677	3.889	3.650	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Downwards	3.618	4.200	4.150	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Number of Responses	34	45	20	-
Note: Scale used from 1 to 5, where 1 is mostly ineffective and 5 is mostly effective				

Respondents were asked to mark which channels of communication were used to announce company's goals, new schemes, etc. There were six options; *Email*, *Management Brief*, *Company's Newsletter*, *Circle of Quality Control* and *Other*. The scale used was from 1 to 5, where 1 is for never used and 5 is for mostly used.

As can be seen in the Figure 6.4, banks in group 1 seldom use written communication, to announce their current and new projects or goals. Further more, since not all members of staff have Email facilities, the results suggested that top management employ branch managers as the major source of communication of company' objectives through the branch network.

In fact only in group 3 are there some suggestions that channels of communication are available to all members. Though group 2 appears to have the same initiatives, yet they seemed to be less used. There was no hard evidence of the use of Quality Circles and no respondent indicated any other communication channel being used.

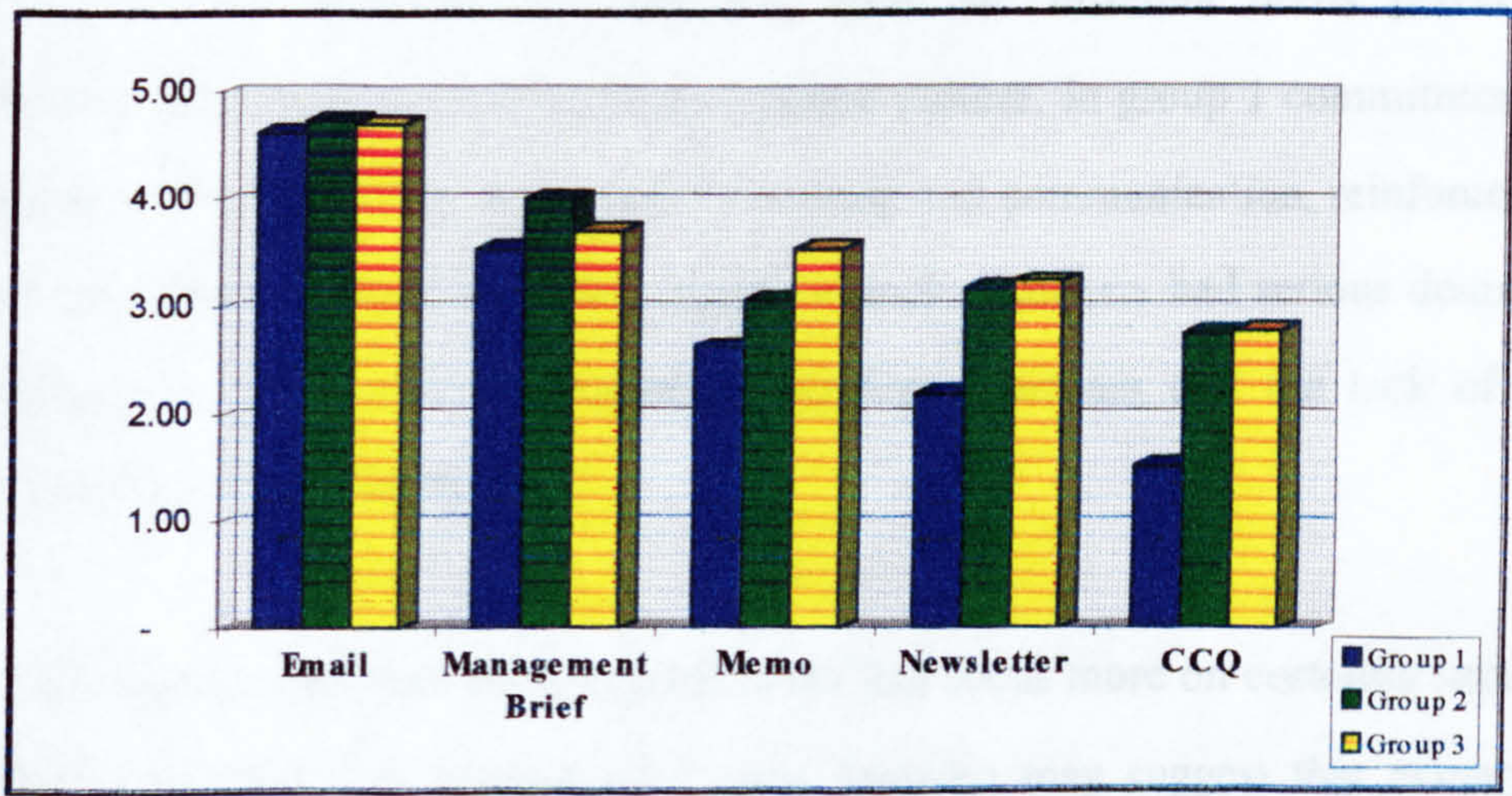


Figure 6.4 - Channels of Communication Used

Evaluation of TQM Approach

Critical Success Factors (CSFs), the next step was the identification of the CSFs, a term used to mean the most important subgoals of a business or organisation (Oakland, 1995). Managers were asked to state what were the six CSFs for their organisations. The answers are shown in Table 6.6.

Table 6.6 - Critical Successful Factors

Group 1	Group 2	Group 3
Commitment (58 %)	Customer Satisfaction (50 %)	Quality Product/Service (40 %)
Information Technology (54 %)	Quality Product/Service (42 %)	Clear Objectives and Goals (28 %)
Training (46 %)	Information Technology (36 %)	Reputation (33%)
Communication (42 %)	Training (33 %)	Customer Care (32 %)
Motivation (35 %)	Clear Objectives and Goals (28 %)	Team Work (28 %)
Clear Objectives and Goals (27 %)	Communication, Recognition, Commitment and Reputation (25 %)	Commitment (27 %)

As can be observed in Table 6.6, there are different needs perceived for respondents depending on their distinct corporate culture. In group 1 commitment of top management and employees, improved IT, training and communication, reinforces survey findings described above. These may suggest branch managers had serious doubts about top managers commitment to companies TQM programmes and the lack of a clear communication about quality aims.

The group 2 answers show organisations that focus more on customer satisfaction and quality progress. The support of IT and Training may suggest that managers are aware of a relationship between high technology and staff skills towards delivering quality services to customers (internal and external). Finally, in group 3, managers seem to stress the importance of quality to their companies' success. This can represent a step forward in the quality process in relation to other groups. No managers in group 3

identified IT, training and communication as critical for success although they are critical for those in the groups 1 and 2.

The management's perception of an organisational environment towards instilling a TQM philosophy can be a good indicator of how effective the quality message has been delivered throughout the company. Managers were asked to grade their perception about five issues associated to the TQM process (Table 6.7).

Table 6.7 - Management Perception of Organisational Environment

Issues	Mean (μ)			Tukey Test - 95% CI
	Group 1	Group 2	Group 3	
People are Regarded as a Major Asset in Your Company	2.706	3.826	3.800	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Customer Satisfaction is the Aim of Branch Managers	3.794	4.543	4.400	$\mu_{G1} \neq \mu_{G2}$
Product/Service are Designed with High Quality to Customer	2.706	3.891	3.800	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Managers have had a Satisfactory Training	2.765	3.891	4.050	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Your Motivation at Work is High at the Moment	3.265	4.043	4.350	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Note: Scale used from 1 to 5, where 1 is mostly false and 5 is mostly true				

As can be observed in Table 6.7, there are distinct differences of perception between managers from companies in group 1 and companies in groups 2 and 3 upon the issues examined.

Although to pursue customer satisfaction seemed to be a priority for all respondents, a more enthusiastic response is perceived from managers in groups 2 and 3. The results indicate a priority for those in groups 2 and 3 in providing high quality standards in product/service, training programmes and achieving customer satisfaction. Also in these groups, recognition of human resource values are strongly perceived from respondents.

It is interesting that the high priority attached to these issues suggested that in these companies (groups 2 and 3) top management realise how valuable are customers and employees. They seemed to know that it is important that customers have their requirements consistently satisfied and it can only be achieved if all the organisations members are prepared and committed to it. This shows a potential empathy with the TQM philosophy in these companies and reinforces the CSFs stressed above. Perhaps the low profile found from group 1 responses indicate that top management had not committed themselves to the TQM philosophy as yet. The motivation level difference between managers from group 1 and groups 2 and 3 might be a good representation of the results which top management should expect from an effective (or ineffective) TQM implementation.

The Barriers to TQM programmes. In this question managers were asked how they perceived the difficulties that may prevent progress or implementation of a TQM programme in their organisation. There were 13 different issues stated and respondents marked a grade from 5 to 1 (Table 6.8). Where 5 is for mostly important and 1 is for mostly irrelevant.

The major obstacles to quality programmes range from external environment to lack of commitment from managers in companies of group 1. In groups 2 and 3 it ranges from short-term goals to lack of communication.

There is an evident struggle to overcome barriers in companies of group 1. The survey findings (Table 6.8) show that in almost all the issues raised there are still some circumstances that need to be satisfied in order to achieve the aims of TQM programmes. On the other hand, managers from groups 2 and 3 perceived only a couple of issues (emphasis on short term goals; other projects priorities; lack of resources; external environment) raised, as issues to be overcome to fulfil the TQM programmes.

Table 6.8 - Majors Barriers to Implement TQM

Issues	Mean (μ)			Tukey Test- 95% CI
	Group 1	Group 2	Group 3	
Lack of Resources	3.818	3.044	2.700	$\mu_{G1} \neq \mu_{G3}$
Emphasis on Short Term Goals	3.265	3.372	3.350	$\mu_{G1} = \mu_{G2} = \mu_{G3}$
Lack of Communication	3.588	2.622	2.950	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Other Projects Priorities	3.875	3.289	3.200	$\mu_{G1} = \mu_{G2} = \mu_{G3}$
Internal Environment	3.794	2.978	3.105	$\mu_{G1} \neq \mu_{G3}$
External Environment	4.147	3.205	2.700	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Lack of Commitment from Top Managers	3.324	2.909	2.500	$\mu_{G1} = \mu_{G2} = \mu_{G3}$
Lack of Commitment from Branch Managers	3.235	2.773	2.500	$\mu_{G1} = \mu_{G2} = \mu_{G3}$
Lack of Commitment from Staff	3.618	2.977	2.550	$\mu_{G1} \neq \mu_{G3}$
Number of Responses	33	45	20	-
Note: Scale used from 1 to 5, where 5 is for mostly important				

As it would be expected, external environment is one of the greatest barriers for companies in groups 1 and 2. These companies have been badly affected by the new economical environment reported previously. It seems logical that top management have been very careful with any change management programme because of the evident fragility of the Brazilian market.

However, it is important to notice that the external environment affects these companies in different ways. For companies in group 1 it has removed their advantage of being selected government account holders. For companies in group 2, besides a reduction of revenue it has created a lack of confidence among customers as to their financial soundness.

On the contrary, as the Brazilian population perceived that multinational banks (group 3) are less affected by the country's policy and economy, they tend to look at these banks with more confidence as they provide more safety for their money than the

companies of group 2. Thus companies from group 3 took this opportunity as a competitive advantage to increase their market share.

Paradoxically, in all companies surveyed, conflict with other project priorities and emphasis on short term goals, seemed to be a common difficulty to be overcome. This may suggest that although top management have intended to apply TQM, this has not been established as a priority in the companies' business strategy yet.

In addition, TQM programmes appear to suffer from a lack of communication, commitment from top management and staff for companies in group 1. The lack of resources is a common barrier for companies in groups 1 and 2, and internal environment is a common barrier for companies in groups 1 and 3.

Altogether, the data suggested that companies in group 3 are at a most advantageous stage towards breaking down the barriers to implementing a TQM programme, and in group 2 the situation appears to be at a crucial stage which may determine if the TQM philosophy will take off or not.

Companies in group 1 on the other hand, seemed to be living in a very confused and distressed internal environment. Managers could not perceive top management commitment to TQM. As a result of this, they did not commit themselves nor tried to persuade members of their staff towards a TQM philosophy.

Changes needed to achieve TQM goals. In order to review the changes needed to achieve TQM goals, respondents were asked to mark how important this was for their companies on eight possible change issues. In Table 6.9 the six major changes marked are presented. Although managers from all companies seemed to agree on the major changes needed, there is a difference in the order of importance among the three company groups.

Table 6.9 - Majors Changes to Achieve TQM Goals

	Mean (μ)			
ISSUES	GROUP 1	GROUP 2	GROUP 3	Tukey Test - 95% CI
Leadership	4.000	3.619	3.158	$\mu_{G1}=\mu_{G2}=\mu_{G3}$
Educational Programme	4.294	3.857	3.789	$\mu_{G1}=\mu_{G2}=\mu_{G3}$
Management Style	3.676	3.667	3.316	$\mu_{G1}=\mu_{G2}=\mu_{G3}$
Communication System	3.912	3.366	4.105	$\mu_{G1}=\mu_{G2}=\mu_{G3}$
Design of Product/Service	3.853	3.190	4.053	$\mu_{G1}=\mu_{G2}=\mu_{G3}$
Measurement Procedures	3.697	3.238	3.000	$\mu_{G1}=\mu_{G2}=\mu_{G3}$
Number of Responses	33	42	19	-
Note: Scale used from 1 to 5, where 1 is mostly false and 5 is mostly true				

In group 1 training, leadership and communication are the three major concerns. This may suggest that in group 1 managers perceived top management failure in delivering the fundamental concepts of TQM methodology to support them in the implementation of the programme.

In group 2 training, management style and leadership have been the most emphasised changes needed. These changes may suggest that managers perceived the need of shifting their own attitudes and style to achieve TQM goals. This is one more indication of the transformation stage which these companies are following towards a quality process.

In group 3 there is an emphasis on changes such as the communication system, the design of products/services and the education programmes. These may indicate a perceived need from managers of improving upon the current quality standards. This is a ideal response within the TQM philosophy.

Majors factors leading to the implementation of TQM. Managers were asked about what had led their companies to implement TQM (Table 6.10). There is a strong

agreement among almost all company groups as to the reasons which led them to implement TQM in the Brazilian market. This is an indication that the industry, as a whole, is driven towards quality management in order to pursue the same key issues.

Table 6.10 - Majors Factors Leading to Implement TQM

	Mean (μ)			
Issues	Group 1	Group 2	Group 3	Tukey Test - 95% CI
Customer Demand for Quality	4.531	4.375	4.947	$\mu_{G1}=\mu_{G2}=\mu_{G3}$
Competitive Pressure to Reduce Costs	3.844	3.825	3.368	$\mu_{G1}=\mu_{G2}=\mu_{G3}$
Competitive Pressure to Improve Service/Product Quality	4.333	4.525	4.5789	$\mu_{G1}=\mu_{G2}=\mu_{G3}$
Enthusiasm of Top Managers	2.939	3.250	3.579	$\mu_{G1}=\mu_{G2}=\mu_{G3}$
Number of Responses	32	40	19	-
Note: Scale used from 1 to 5, where 1 is mostly false and 5 is mostly true				

Customers demand for quality, competitive pressure to reduce costs and quality improvement of services and products have been the major drivers for TQM programmes in Brazil. A Harte and Dale (1995) study, in professional services organisations, argued that when cost reductions or competition were the main motivators for introducing TQM initiatives, it appeared to be unsuccessful. Although it is not clear if this was due to the motivation for introducing TQM or some other factors. From the evidence collected in this study, the authors suspect that cost reductions as a motivator is a strong indication of lack of management commitment to TQM.

Brazilian organisations seem to seek quality initiatives as agents of competitive advantage and, further more, as a way towards surviving in this new and very tough competitive environment. However, it still has to be seen if top managers are really committed to the long term perspective, which a TQM philosophy needs. Otherwise it will be only another short term alternative scheme to pursue market share which will lead to its eventual abandonment.

The major effects of implementing TQM. A number of benefits derived from adopting TQM programmes can be predicted. These include promoting a focus of vision, developing a common language, staff ownership, improvement of processes, increased motivation, improved senior management commitment, long term approach and a team spirit which helps to breakdown organisational barriers (McCabe, Knights and Wilkinson, 1994).

In this survey, as would be expected by now, there is evidence of the different TQM programme effects between company groups, as seen in Table 6.11. There is a different level of achievement perceived among groups 1, 2 and 3. Customer satisfaction, quality awareness and improvement of quality standards are, quite clearly, the major effects perceived by respondents.

The perceived raised level of customer satisfaction may indicate a positive relationship between organisational vision and customer expectation. However, there was no evidence to demonstrate this, from the customers point of view. But this kind of relationship can add value to process improvement and push the TQM philosophy forwards.

The establishment of the desired quality standards to be achieved in a TQM programme must be the first task of top management to be communicated to the company's members. The improvement of perceived quality standards indicate a sense of purpose and progress realisation for those companies.

Promoting quality awareness among members of organisations and customers helps managers and staff to recognise the business they are in. This can increase a necessity to change and a collective sense of purpose towards quality goals.

Overall, the data shown in Table 6.11 indicates a positive effect perceived in the majority of issues raised among the managers in companies in groups 2 and 3. It is important to notice that a reduction of labour turnover and absenteeism were seen as uncertain or ineffective in all the companies surveyed.

Table 6.11 - Major Effects of Implementing TQM

Issues	Mean (μ)			Tukey Test - 95% CI
	Group 1	Group2	Group 3	
Improve Quality Standard in Product/Service	3.344	4.475	4.474	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Raise Quality Awareness	3.687	4.450	4.421	$\mu_{G1} \neq \mu_{G2}$
Increase Employee Morale	2.677	3.775	3.789	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Raise Team Work culture	3.129	4.225	4.316	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Reduce Labour Turnover	1.839	3.225	3.158	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Reduce Absenteeism	1.178	3.162	2.944	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Improve Cost Efficiency	2.935	4.050	4.053	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Reduce Defect Levels	3.094	4.125	4.316	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Raise Customer Satisfaction	3.687	4.500	4.632	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Increase Number of Customer	2.548	4.200	4.105	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Increase Profitability	3.000	4.250	4.105	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Number of Responses	32	40	19	-
Note: Scale used from 1 to 5, where 1 is mostly false and 5 is mostly true				

Nevertheless, the data indicated a poor effect of TQM programmes upon companies in group 1. This suggests that the effectiveness of a TQM programme is directly related to the way in which the programme and its goals are implemented

throughout the company. This means that TQM effectiveness is directly related to a good communication system and to clear company objectives and goals aimed to TQM.

Managers were asked how important TQM has been for their companies. The results shown in Table 6.12 clearly indicate a positive accomplishment of TQM in groups 2 and 3. In group 1, the findings indicate that the programme did not cause any positive impact to the company performance, and thus, it is not clear if TQM has been important or not, for companies in this group.

There are obvious limitations in establishing the success of quality initiatives through self assessment; nevertheless, doing so provides some useful insights into how these techniques are perceived to be progressing by practitioners (Wilkinson et al., 1996).

Table 6.12 - Perceived Success of TQM Programmes

	Means (μ)			Tukey Test 95% CI
	Group 1	Group 2	Group 3	
TQM Success	3.677	4.575	4.368	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Number of Responses	34	40	19	-
Note: Scale used from 1 to 5, where 1 is mostly failed and 5 is mostly important				

Measurement Assessment

In this section it was intended to discover how banks in Brazil were measuring customers satisfaction and quality improvements in their branch networks. Here managers were asked to mark what were the main ways to measure customer satisfaction and quality improvements in their companies. They gave a grade for each issue ranging from 1 to 5, where 1 was for not measured and 5 for a major determinant.

Measuring customer satisfaction. The most used methods to measure customers satisfaction are shown in Table 6.13. From the six issues to be graded, market share seemed to be the major concern of all companies surveyed. Besides market share and internal audit, there is a great distinction between measurement procedures adopted in companies in groups 2 and 3 and those adopted in companies in group 1. Market research, which is a world-wide tool used to measure consumer behaviour, seemed to be seldom applied in group 1.

The mystery shopper does not appear to be used in the Brazilian bank sector yet. However, managers interviewed in some companies in group 2 suggested that there is a plan to implement this scheme in the near future. While, in group 2, increasing customer numbers seem to be more important than their reduction, and so they measure customer satisfaction, in group 3, these are perceived in the reversed order. This might suggest that managers in group 3 are more concerned with the long term relationship with customers, which is perfectly consistent with the TQM philosophy, than the ones in group 2.

Table 6.13 - Customer Satisfaction Measured By.

Issues	Mean (μ)			Tukey Test - 95% CI
	Group 1	Group 2	Group 3	
Market Research	3.312	4.600	4.900	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Mystery Shopper	1.323	3.158	2.684	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Increasing Number of Customers	2.871	4.268	3.778	$\mu_{G1} \neq \mu_{G2}$
Reduction of Customers	2.935	3.605	4.412	$\mu_{G1} \neq \mu_{G3}$
Internal Audit	2.613	3.000	3.105	$\mu_{G1} = \mu_{G2} = \mu_{G3}$
Market Share	4.313	4.565	4.700	$\mu_{G1} = \mu_{G2} = \mu_{G3}$
Number of Responses	32	42	19	-
Note: Scale used from 5 to 1, where 5 is major determinant				

Quality improvements. In terms of measuring quality improvements (Table 6.14), all companies seemed to ignore quality costs, which was quite a surprise since competitive pressure to reduce costs was one of the leading factors for the implementation of TQM programmes. The fact that companies paid attention to customer feedback and analysis of complaints, suggested a bigger management concern in seeking customers satisfaction. These procedures have been more used in groups 2 and 3 than in group 1, probably as a result of the better implementation of the TQM programmes.

Table 6.14 - Quality Improvements Measured

Issues	Means (μ)			Tukey Test - 95% CI
	Group 1	Group 2	Group 3	
Customer Feedback	3.970	4.628	4.800	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Complaints	3.970	4.545	4.800	$\mu_{G1} \neq \mu_{G3}$
Quality Costs	2.667	3.256	3.300	$\mu_{G1} = \mu_{G2} = \mu_{G3}$
Number of Responses	33	43	20	-
Note: Scale used from 5 to 1, where 1 is not measured and 5 is major determinate				

The Interview Survey

The interview survey provided an insight into Brazilian's banks strategies towards quality initiatives. The interviews were carried out at the headquarters of their organisations in the cities of São Paulo, Rio de Janeiro, Brasilia and Curitiba.

Findings and Discussion

The data obtained from interviews were evaluated and analysed under the primary objectives described in Chapter 2. Fourteen managers in senior positions have been interviewed (Table 6.15). Interviewees were mainly from the departments of quality and productivity, with the exception of those in companies of group 2, that do not have a

formal TQM programme, who either were from O&M (organisation and methods) or human resource departments.

Table 6.15 - Interviewees Profile

Companies	Interviews	Management level	Years of Service	Gender		Quality Initiatives	
				male	female	TQM	ISO*
Group 1	5	Senior	+ 11	80 %	20 %	100 %	-
Group 2	6	Senior	+ 11	83 %	17 %	40 %	80 %
Group 3	3	Senior	+ 5	33 %	67 %	100 %	50 %
* In companies without ISO, managers interviewed suggested that they were planning to apply for an ISO certificate in the near future.							

Usually, only companies with formal TQM programmes had quality departments, which are engaged in planning and developing quality initiatives. In multinational banks (group 3) they usually have a director of quality and productivity. In companies of groups 1 the department of quality reported to market or commercial department, and in group 2 the quality and productivity departments are under the human resources directorship.

Overall, TQM and ISO certificates are the most popular quality programmes adopted by the companies surveyed. However, not all the companies which had applied TQM programmes, had yet achieved an ISO certificate. This may suggest that companies engaged in formal TQM programmes prefer to achieve TQM aims before reaching out for an ISO certificate.

It is interesting to notice that BPR and benchmarking had seldom been used. Managers interviewed argued that BPR programmes, had been postponed because it had caused a more negative impact on the companies internal environment than any process improvement.

It was perceived that top management in the largest banks were making efforts to engage their companies in the quality process. The multinational banks take the lead in

implementing TQM, which was, in most cases, the result of the parent company's global strategy.

National private banks followed suit and, by the middle of the 1990's, most banks had applied for an ISO certificate. The federal union or state banks had been implementing TQM programmes since 1992/93, but the evidence is that, after 2 years, these programmes had arrested or slowed down.

A fear to implement a formal TQM programme was perceived in some banks surveyed in group 2. In these organisations, managers suggested that, in Brazil, it is very difficult to promote a formal TQM programme in a large bank. In their vision, TQM demands a holistic approach and long term commitment in order to achieve its goals. These requirements are incompatible with the Brazilian market current trends, for them.

Although, these companies did not discard the possibility of implementing a TQM programme in the future, it was felt that this has to be as a result of the implementation of an ISO certificate in all services and products. These are their top management's long term commitments towards quality initiatives.

The general view is that TQM is at a very early stage in the Brazilian banking sector (an average time of implementation of three years in companies in groups 1 - 2 and five years in companies in group 3). The question is not whether, but how and why, Brazilian companies have been approaching quality initiatives. These issues and the others, discussed in the interviews, are subsequently detailed in depth.

How Quality Initiatives Have Been Applied in The Banking Sector in Brazil

Managers from companies in group 1 believe that the private sector is one step forwards in applying quality initiatives in the Brazilian financial services. Only now

federal and state owned banks have really started to engage in a serious development programme to implement TQM. Hence an interviewee observed;

... "The quality movement in Brazil started in 1990. First , with the multinational banks such as Citibank, Bank of Boston and Sudameris. In 1992 was the time of some national private banks e.g. Unibanco, Bamerindus and finally in 1993 we started our programme"....

Managers recognised that there are fundamental problems to be overcome in order to enable their companies to achieve the desired quality aims. These are cultural problems, resistance to change, lack of understanding of the TQM philosophy, and lack of commitment among directors and employees. Some remarks below can illustrate these points.

...Our bank lags behind others in implementing a TQM programme. There is an intention to create an awareness and motivation among organisation's members towards quality initiatives. However, there is a lack of basic conceptual quality philosophy, such as the identification of who are our customers....

...We might have a cultural problem which relates to resistance to change and a lack of long term commitment. Our CEO has established that the TQM aims and results have to be achieved in the short term, otherwise it should not be undertaken...

...There are some members of the directorship who doubt if the TQM programme could bring benefits in terms of financial results to the company...

There is clear evidence of conflict of opinions in top management about the benefits which TQM programmes could bring to companies in group 1. This might be a major step backwards in achieving the desired quality in these companies .

In spite of that, these companies had applied TQM using a variety of models such as; Japanese 5S, SERVQUAL and MBNQA on which the Brazilian National Quality Award is based. In order to support the TQM programmes, they adopted heavy training programmes. The training programmes involved almost all employees in the business front line (branch network).

In group 2, there is a very interesting contrast of opinion and approach among the companies surveyed. In companies, with a formal TQM programme, quality is perceived as a way to increase competitiveness, growth and profitability in the short term, as well as having a clear long term strategic vision towards promoting a never ending TQM philosophy.

In companies without formal TQM programmes, however, there are indications of a lack of understanding about quality philosophies. Quality initiatives promoted in these companies seemed to be short term schemes concerned only with the promotion of customers confidence in order to increase sales and market share. Thereby, it might be abandoned at any time, leading to employees and customers disillusionment resulting in the loss of this short term growth in the future.

Considering those companies in group 2 which are engaged in a formal TQM programme, it could be perceived that top management had tried to involve all the organisation's members from the board to the clerks, all with the same vision of quality. Usually these companies had a structured quality department and a master plan endorsed by the company's board which embraced the TQM programme aims.

In these companies managers interviewed believed that the Brazilian Banking sector had become aware of the needs of quality initiatives four years before. This was the time when the government started to put in place policies which clearly, for them, would put an end to the era of inflation in Brazil. Also there is a strong perception among them

that, from now on, the quality of service and products will be the competitive differential factor in the Brazilian market.

One participant stressed;

"... Even Bradesco, the biggest player in our market, started to look into quality and has already got an ISO certificate for several products and services..."

However, they recognised that there are some problems to be overcome, such as: to motivate employees in the front line (branch network) in order to delivery quality service standards as it was planned, and resistance to change from managers and staff. The industry has been cutting jobs and closing branches since 1990. These actions have left employees feeling very sceptical about new programmes to improve quality and productivity.

"...I believe that in our company a reasonable number of people did not perceive as positive the changes which occurred with the implementation of the TQM programme. These are the people who will resist the process..."

Also, quality specialists have had a tough job in convincing top management about the value added to business performance that the TQM programme promotes. This is needed to get them fully committed to the long term strategy in order to accomplish the TQM aims. This can be illustrated by pin pointing some sentences stressed in the interviews

"...we have a directorship who are committed to the programme and the changes that need to be implemented, but even among them there is a minority who feel that they are losing power and thus, are resistant to this..."

"...to translate quality philosophy into day to day business language is the greatest challenge we have got to deal with..."

Like in group 1, these companies had used a variety of models to implement quality. They seemed to adopt different models for different tasks, each of them suggested by external consultant firms usually hired to help the quality specialist, in the planning and development of the company's TQM programme.

Considering now companies in group 2 without TQM programmes. Although these companies did not implement a formal TQM programme, they have senior managers, usually located in O&M or HR departments, in charge of planning quality initiatives (ISO certificate, Customer Care) which are implemented.

In these companies managers believed that a formal TQM programme is a very expensive process and demands a long term commitment in order to get results in a sector in which short term growth and profitability are still crucial for long term survival. Thus, in these companies, ISO certification is the most popular quality initiative, that top managers perceived as enough to show quality awareness among customers.

"...In the Brazilian manufacturing industry TQM is now a normal procedure. In the service sector it seems to be a new wave, but I do believe that we always have moved towards better quality procedures despite not having a formal programme..."

"...we have been the leader in innovation in the Brazilian banking market for a long time e.g. we were the first to have bank automation in Brazil. However, we did not start the TQM programme, because we understood that a bank of our size could not apply a change process of this proportion in a short term..."

Perhaps, even in these companies, there are some managers that disagree with this short term approach as stressed by one manager interviewed.

... "Quality today is a business necessity. All organisations have to look at the betterment of the quality of their services and products towards customers needs, rather than only looking at increased short term market share and profitability as it was in the past"...

Hence, in these companies, quality initiatives have been based on achieving an ISO standard credential for selected products or services, and training programmes applied exclusively in departments directly involved in these processes.

In group 3, multinational organisations seemed to pursue quality as a long term strategy. Despite the fact they are following the parent companies global strategy, interviewees believed that quality processes are a necessity in terms of consolidation and growth, in the Brazilian banking market.

Usually known for their higher quality standard products and services, the so called upper-class bank, modified its portfolio of services and products in order to market to the Brazilian high income middle class.

... "we are not a popular bank but we don't intend to be seen as an "elite bank" either".... Commented a manager interviewed.

Interviewees showed their companies positive commitment towards TQM. Like Brazilian private banks, multinational banks usually have a department of quality and productivity which define and plan the quality initiatives to be undertaken. Furthermore, some of them had also a manager director, who is an active member of the companies board.

Intensive training programmes, top management commitment, clear strategy towards achieving quality aims and the implementation of TQM programmes based on

their own criteria, instead of a conceptual quality model were the major points perceived in this group. In almost all interviews it could be perceived as a strong commitment towards long term TQM objectives.

Managers emphasised their directors commitment and a clear global company's vision about TQM objectives as critical for a successful TQM implementation. Some remarks from the interviews are selected.

... "In 1987 we created the directorship of quality...this new directorship developed a plan to implement quality in four steps, which started in 1987 and finished in 1994"...

... "first the TQM programme focused on a commitment towards change, both organisational and environmental towards quality goals, which started from the board and spread throughout the management team and all employees"...

... "our programme started in 1992 as a pilot scheme in a few branches. By now we have trained nearly 95% of all our company"...

... "We believe that the quality process is a long term commitment, so we are still working towards improving our processes"...

The Critical Success Factors

There were two prevalent ideas about CSFs for Brazilian banks, among quality specialist in the companies surveyed, concerning customer care and customer services. The majority of interviewees admitted that IT and computer based services are the basic standard in the industry. These do not give a competitive advantage anymore. Automation of branch networks and computer services became a minimum standard to compete in the Brazilian bank sector. This was stressed by several managers.

... "in the 80's and early 90s IT was the most critical success factor to succeed in the banking retail market. Now in the middle 90's we cannot survive without this, but it is not a competitive differentiation any more"...

... "banks in Brazil have almost the same IT standard. Thus the differentiation factor will be the direct contact with customers"...

To define the market segment, to focus on customer needs, the quality of services and to be customer orientated were among the most popular comments from interviewees. However, it is interesting to note that investment in people and development of human resources were also indicated as crucial to success.

Perhaps, this might suggest that top managers are expecting the organisations human resources to be the CSFs for the Brazilian banks to compete in the future. Presented below are some remarks attributed as CSFs from the interviews.

Group 1:

... "to focus on customers needs and satisfaction"...

... "Perhaps, the ability to develop in the best way the companies' human resources, will be the critical success factor for Brazilian banks in the second half of the decade"...

... "the CSF is and will be the ability to have personnel qualified to deliver services with a comprehensive knowledge and quality standard to customers"...

Group 2:

... "companies have to invest in people because organisations with a well trained and motivated work force will be those which will succeed"...

... "keeping customers is the major CSF. Our former CEO used to say that there is no bank without customers. Thus, customers were and always will be the main objective of our business strategy"...

... "the banking sector has been transformed. The CSFs will be the quality in service and products delivered to customers e.g. at the cashier, by telephone and at all company encounters - customers either in the branches or in the back offices where the operation process is executed"...

Group 3:

... "To be customer driven is the basic success factor"...

... "to have a quality service and customer care are the CFSs now"...

... "to satisfy customer needs and to improve our capability to achieve this"...

Quality Message in the Mission Strategy

Although TQM had been applied in companies of group 1, top management seemed to struggle to communicate the quality vision throughout their companies. Interviewees suggested that, despite the existence of a quality statement in the companies business strategy, this was only known by top managers and quality managers at the headquarters.

... "there is a quality mission statement but it is not disseminated beyond the companies board and quality department"... (citation from group 1)

On the contrary, in groups 2 and 3 interviewees from companies, which had applied TQM, observed that the company's quality message was fully communicated throughout all the organisation's levels and customers. Usually top management create a quality slogan which indicates and reflects business strategy towards quality aims. They

believe that this is the best way to make employees and customers aware of the companies commitment to total quality.

In companies of group 2, without a TQM programme, interviewees suggested that though their companies are always looking for improving quality of service and products, the business strategy objectives and directions towards quality initiatives are kept within the level of top management.

TQM Barriers and Changes Promoted

Failure in communication, lack of commitment, resistance to change, organisational culture, company size, and necessity of short term results were among the obstacles most emphasised to quality initiatives.

In group 1, the lack of commitment of the directorship and the cultural environment had been mentioned as major barriers to applying TQM. It was perceived that, in these companies, top management had been the primary source of resistance to change. This can be illustrated in the statements below.

..."it was decided to start the TQM programme in the branch network and then implement it at the company's headquarters. This decision was taken because we believe that if the programme started from the centre and then moved to the branch network it would never be accomplished"...

..."the resistance to change existing among top hierarchical levels is our major barrier to TQM"...

In terms of changes, interviewees from group 1 believed that TQM programmes have not promoted many changes yet. However, they stressed that perceived changes in cross department relationships and employees participation in suggestion schemes adopted after the programme was implemented, had exceeded their expectations.

..."there were changes in terms of communication at the work environment. People in the branch network started to be motivated and took some initiatives"...

..."we need changes in communication, in the organisation's cultural values and to improve the relationship between client and organisation. By this I mean to create an image of the customer as a long term partner instead of a one-way business transaction. I'm afraid, though these changes are heavily desired, none of them has been achieved as yet"...

In group 2, interviewees from companies without TQM programmes, focus on their large size and the necessity of short term results as the major barriers to the implementation of such holistic approaches as TQM.

..."to have a formal TQM programme is out of the question for us. The directorship understand that we are a very big company and the time to accomplish this would be too long for the Brazilian market"...

..."we try to get general knowledge about the TQM programmes. And then we realised that it would take years to get results. Any programme which requires more than one year is too long time for our company"...

When these companies were implementing ISO, interviewees acknowledged that cross department communication, senior management resistance to change and absence of knowledge about quality philosophies were the major obstacles to be overcome. Although they have been quite successful in the process of getting the ISO 9000 credential, only in the departments directly involved, quality awareness among managers and members of staff was created, admitted the managers interviewed.

Interviewees from companies of group 2 with a TQM programme, remarked that the cultural environment, communication system and resistance to change from senior management were still the major barriers.

Managers emphasise that branch managers had been more flexible to changes since they were convinced that it could improve customer relationships and business opportunities as a result. On the contrary, operational areas and headquarters management had been the major agents resisting change. This may suggest poor internal cross department communication. Furthermore, it appears that in these companies the TQM process is in a very early stage, and then, there is still long way to go until all the organisations' member get on with the new quality philosophy as it is applied.

In group 3, interviewees had emphasised that breaking down departmental barriers to assist increasing cross departmental communication, educating people about quality philosophies and make them understand the companies objectives within the TQM programme, were the major obstacles perceived during the programme implementation. As a result of the successful implementation, interviewees stressed integration, change in internal environment (driven towards customers internal and external needs) and the new TQM organisation culture as well as the raising in customer satisfaction, had been the most important changes achieved.

Quality: Leading Factors and Major Effects

Driven by a new economic environment with even tougher competition and an increased customer demand for quality seemed to be the leading factors to quality initiatives in the Brazilian banking sector. Most of managers interviewed suggested that it is a little premature to establish any major effects. Only managers from multinational banks were confident in showing evidence of major improvements as a result of a TQM programme.

In group 1, interviewees seemed not to be very optimistic about the major programme achievements so far. Absence of a good measurement system and short time implementation were blamed. For this they hinted that the TQM programme was led in

order to follow their competitors strategy and because of the necessity to improve cost efficiency to cope with customer demands.

In group 2, it was suggested that quality initiatives were led by customer demand for quality, reduced cost and pressure from competitors in the new economic environment. The major effects mentioned were; customer satisfaction, quality awareness among members of the organisation and reduction of scrap work. Managers interviewed were unable to show any hard evidence of their perceived programme achievements because companies in this group were starting their first quality programme assessment at the time of the interviews.

In group 3, managers pointed out that quality programmes were led by customer demand, improved cost efficiency and to follow up company global strategy. In terms of effects they had some very positive evidence that TQM would promote growth of customer satisfaction, increase number of services and products used per customer, reduce errors and improve quality of working life. They had done a number of market surveys and self assessment procedures which enabled them to evaluate the whole quality process.

Measurements Procedures

Central to any programme of change is the ability to measure its success. Brazilian banks had been measuring quality by focusing on customer satisfaction and growth of market share, however, none of the interviewees suggested calculating the cost of quality. This is a surprise given that overall managers stated that reducing costs was one of leading factors for their quality programme. McCabe, Knights and Wilkinson (1995) survey in the UK financial services found that most companies measure quality by focusing on the customer, only a few calculate the cost of quality. One explanation for

this may be the difficulty in actually apportioning the financial savings to quality initiatives.

Companies have used several means to measure quality improvements perceived by customers. Market research, customer satisfaction survey, market share, customer complaints are among the most popular measurement schemes used. In multinational banks (group 3), however, it was perceived a more proactive and developed approach to measure quality improvements, based on a follow up of the quality level indicators, support service performance indicators, and business performance in comparison to direct competition. These quality indicators (e.g. time to be waited on through phone banking service) were defined in the TQM strategic plan and they were known by all the organisation's members. Hence an interviewee from group 3 pointed out;

... "the analysis of quality indicators and business performance indicators are a point of reference of continuous improvement in our organisation"...

TQM in Brazil a Perspective to the Future

When asked about the future of the TQM philosophy in the Brazilian banking sector, interviewees from all companies considered quality as a way forward in the banking sector. There is still some concern about the economic environment but they believed that in the next two years the financial sector will complete the consolidation process which they started in 1994. Then, customers will recover confidence in the banking sector and organisations which have the quality culture focused on customers' needs will be leading the market. Thus they suggested a commitment to follow the philosophy in the long run, towards achieving total quality in Brazil.

6.6 - Summary and Conclusions

This chapter has reported findings from the fieldwork investigating the TQM status within the Brazilian banking sector. The first three sections provide background information about financial service institutions, market structure and size in Brazil. As well as a summarised description of how inflation trends had transformed the Brazilian financial service industry during the last two decades. The description of the banking sector transition from a steady growth of the industry enjoying easy profitability, earned with inflation related revenues during the 80's and early 90's, to the return of traditional lending and banking services within a tougher competitive market, created in the middle 90's with the end of high inflation era, was provided.

The Brazilian financial service industry quality initiatives started with a heavy investment in IT (middle 80's through the 90's). The objectives were improving the quality of products and services, reducing operational costs and increasing services provided in the branch network. Then in the 90's, companies were implementing TQM programmes and applying for ISO 9000 certificates, which became the most popular quality initiatives in the industry, but evidence suggests that only a small number of organisations (most of them foreign owned banks) are taking on TQM as an overall part of their corporate strategy.

The fieldwork's main findings provided a framework to discuss the key topics below:

- Usage of TQM in the Brazilian financial services organisations;
- Branch managers knowledge and understanding of corporate strategy towards TQM;
- Branch managers perception about key issues related to TQM implementation, such as: Barriers, Changes, Drivers, Effects and Measurement;

- Companies strategy towards quality initiatives;
- How, whether and why companies had implemented TQM;
- Compare TQM strategy planned in the headquarters with perceived effects in the branch network.

The fieldwork findings suggested that multinational banks (group 3) had been the first and most successful companies to apply TQM in the Brazilian financial services. Brazilian banks (private and state owned) started their TQM programmes afterwards, however, private banks (group 2) appear to have made more significant improvements than state owned banks (group 1). Findings also show that, although TQM implementation had delivered some early benefits, programmes had been stopped for nearly a year and restarted after changes in the companies' board. This could cause a loss of momentum among company members and significant costs to the companies involved.

Further findings suggest that some companies from group 2 had been more efficient in applying for an ISO 9000 certificate than implementing a formal TQM programme. However, this seems to be used as propaganda to build a new image rather than an organisations' commitment towards a TQM philosophy. This happens especially in companies in which top management are still somehow doubtful about the benefits of TQM, or even about their companies' capability to implement such a holistic programme. It is interesting to point out that companies which opted to implement TQM prefer to achieve major programme goals before applying for an ISO 9000 certificate.

Other quality initiatives such as BPR and benchmarking are apparently seldom used. BPR has been considered less effective in the Brazilian environment. Several managers interviewed stressed that companies are avoiding any radical processes of

change in order to increase employees commitment, which had been quite low after a long period of instability and job losses which the industry as a whole had in the 90's.

Benchmarking is needed, and however, rarely used. Most of the benchmarking initiatives had been made with non-competitor organisations. Unfortunately, benchmarking within industries such as banking or insurance may be hampered by fear of losing valuable competitive information. In several countries the banking sector is relatively concentrated and tightly knit. Well known firms may be reluctant to reveal and share information because the source may be easily recognised (Drew, 1995). Perhaps, this is an area where foreign owned banks had a competitive advantage. In these companies there is a current internal benchmarking process, which enables Brazilian managers to learn from parent companies previous experiences, and then, they can grasp the TQM philosophy in a more positive way.

Although companies were driven to quality processes for the same reasons, results achieved had been quite different. Survey findings indicate that positive and negative effects perceived in the branch networks are achieved as a function of the strategy of the implementation. Also evidence supports that a clear strategy mission, good communication systems and top management commitment are fundamental prerequisites to successful implementation of TQM programmes.

In conclusion, the research findings show that TQM is a reality in the Brazilian financial services, perhaps, still, in its early stages. Hereby, the questions are not whether but how and why top management have to approach TQM. Clearly there is still a lack of knowledge and understanding about TQM among top managers. Companies have applied several models to implement TQM, some of them specific for manufacturing adapted for the service industry. There is a clear absence of a specific model to implement TQM in financial services. A synopsis of companies assessed in this fieldwork is shown in Table 6.16.

Table 6.11 - Summary of Approaches to Implementation of Quality Initiatives in The Brazilian Financial Services

Organisation	Approach	Strengths	Weaknesses
<p><u>Companies Group 1</u></p> <p>Federal and Savings Banks owned by Federal Government</p>	<ul style="list-style-type: none"> • Mostly change driven towards creating awareness and motivation about quality among employees and promote organisational restructure • Emphasis on short term approach to results through growth of sales with customer satisfaction. • Formal TQM programme based on MBNQA, Japanese model 5S, SERVQUAL. • Quality Department in the Headquarters major function Board advisor in quality management strategic plan 	<ul style="list-style-type: none"> • Motivation of management team in the front line • High investment in staff training • Focus on customer care and quality of service and products 	<ul style="list-style-type: none"> • Alienation of top management outside management team involved in the programme • Lack of commitment • lack of understanding of quality philosophy leading to a wide use of quality models • start plan with high expectations and investment in training in the front line with lack of commitment from the centre, leading to early failure with little benefits
<p><u>Companies Group 2</u></p> <p>Brazilian Private Owned Banks</p>	<ul style="list-style-type: none"> • Total and radical organisational change with a formal defined TQM programme • Formal quality management department in charge of quality initiatives plan and implementation • Quality initiatives based on Japanese model 5S, Crosby 14 steps. • Emphasis on short term results but long term strategy defined with quality aims. • Heavy use of external consultants 	<ul style="list-style-type: none"> • Top management fully committed with quality aims • clear quality objectives in business strategy • high investment in training of management team and staff • focus on changing behaviour through changing activities and procedures rather than more abstracts soft or cultural issues. 	<ul style="list-style-type: none"> • Radical departure from traditional values which may be creating confusion among companies members • Short term purpose may conflict with long term quality strategy • Lack of effective measurement procedures • lack of understanding of quality philosophy leading to a wide use of quality models
<p><u>Companies Group 3</u></p> <p>Foreigners Owned Private Banks</p>	<ul style="list-style-type: none"> • ISO 9000 main quality driver, but not broaden out to full quality programme yet • quality initiatives based in ISO 9000 implementation procedures • focus on customer care and cost reduction 	<ul style="list-style-type: none"> • focus on reviewing and documenting key business process • provides platform of total quality programme 	<ul style="list-style-type: none"> • Major effort to gain ISO 9000 may be seen as an end in itself rather than a step along a longer path to total quality • Alienation of top management outside department involved in the programme
	<ul style="list-style-type: none"> • Approach based on parent company global strategy • Formal TQM programme • quality initiatives based on customer driven changes none specific model used 	<ul style="list-style-type: none"> • Quality management Directorship • customer driven, clear strategy view • Strong board long term commitment • high investment in training of management team and staff 	<ul style="list-style-type: none"> • Process promoted is a function of global strategy, this may constrain local needs • Steady market share, very restrict customer segmentation, may be difficult to evaluate real improvements of quality initiatives benefit
* * COMPANIES WITHOUT FORMAL TQM PROGRAMME			

Chapter 7 - TOM in UK and Brazilian Financial Services: Analysis and Evolution

7.1 - Introduction

The financial service industry is transforming itself globally. Increased competition from non-traditional institutions, new information technologies and declining processing costs, the erosion of product and geographic boundaries, and less restrictive government regulations have all played a role (Crane and Bodie, 1996).

In this process, the traditionally important considerations of providing customers with good services have emerged as important corporate strategies for maintaining and increasing market share. As a consequence, fundamental questions such as how best to achieve a genuine and consistently high quality of customer service within the organisation, and how best to communicate this fact to the market place, have become indicative of the sort of quality issues which banks are currently attempting to resolve (Howcroft, 1993).

The study by KPMG and the University of Bristol (1996) identify that the survival of the UK financial services companies will depend on their ability to transform their organisational structures in order to flatten out management structures and focus on improving the performance of the work force. New, flexible organisations with fewer layers of command, greater customer focus with front line staff focused on and accountable for business performance are emerging to challenge traditional companies.

The Brazilian banks are in a similar situation, top management needs to promote changes in their organisations in order to cope with the new market environment previously described. Today, the quality concept in the Brazilian banking sector is related to the degree of automation a bank achieves.

In a recent interview given to a major Brazilian magazine by a managing director of one of the largest Brazilian private banks it was said that their company rely one hundred per cent on technology to provide quality services to customer:

"in the past customers were queuing in the branches because of the excessive manual service; today though customers are still queuing in our branches, they have the fastest and most highly automated service they could have in the country" (Exame Magazine , April 1997)

Because of the misconception as to what services entail, banks often invest heavily in technology in the belief that it will improve service (David and Higgins, 1988). As financial institutions have tried to improve their efficiency through technology, their products have become more standardised, and the quality of their customised services have decreased. At the same time, on the demand side, there are greater pressures for banking to be more humanised (Coskun and Frohlich, 1992).

7.2 - Comparing TQM in UK and Brazil Banking Sector

The UK and Brazilian financial service sectors are in a period of transition. In both countries, top managers are facing the challenge of changing their companies in order to cope with increasing competition both from existing companies and new entrants; more demanding customers; and the impact of rapid technological progress.

However there are fundamental differences with regard to the characteristics of problems faced by organisations in both countries, for instance while in the UK, companies face the competition of non financial service organisations as new entrants in the market, in Brazil, Brazilian private and government owned banks (Groups 1 and 2) are now facing strong multinational competition with the arrived of HSBC, which took over Brazil's fourth largest retail bank "Banco Bamerindus".

In the UK, the market is heavily banked with three quarters of the population holding a bank account and companies are looking for mergers in an attempt to buy market share (Blanchard and Galloway, 1994).

Brazilian Banks are in a transition war to retain and increase market share within the new economic environment, in a country where only one out of four citizens hold a bank account (Exame Magazine, May 1997). This requires organisations to convince customers that they can provide a quality service and a secure place to put their money.

Additionally, in the UK there is evidence that companies have achieved performance improvements by applying quality initiatives, particularly in those organisations which focused on the hard-tangible elements of TQM (Longbottom and Zaire, 1996). Brazilian organisations are at the beginning of the transformation process. They have large branch networks throughout the country, connected with the most sophisticated IT available but they still have low efficiency in operational services. Compared with the UK banking sector, Brazilian banks operational costs per asset account for 7.8 per cent while it represents only 3.4 per cent in the UK (Revista Exame, April 1997).

This research project has not been designed to compare the UK and Brazilian financial service organisational culture and market environment. Rather the primary objectives of this research are to assess what is the status of TQM in the banking sector in both countries and evaluate the strategy of implementation used. It was intended to obtain knowledge from the UK financial services quality process and combine this knowledge with the relevant information obtained in the Brazilian fieldwork. Hence to have an assessment of the TQM process (pitfalls and improvement gains) in order to develop a framework to enhance the implementation of TQM in the financial services organisations in both countries.

7.2.1 - Characteristics of UK and Brazil Banking Sector

Considering financial services as a standard industry throughout the world, it may be somewhat diversified, per country, in terms of channel of delivery, technology and regulation, but services and products are very similar. Hence, in comparing Brazilian and UK banking sectors, it can be said that they are almost equal in terms of services and channels of delivery.

They offer the same range of services and products to customers throughout their branch network; ATM; telephone banking; and PC-home banking in both countries. The main differences, besides national regulations, are:

- In Brazil there are no Building Societies;
- Brazilian banks have a larger number of branches, though UK banks are much bigger either in terms of assets, tier capital, and performance (see Tables 7.1, 7.2, 7.3, and 7.4);
- In both countries the banking industry is highly technologically orientated, however, it can be said that British banks are more efficient, though Brazilian banks might have more sophisticated IT resources.

Table 7.1 - Strength, Jobs and Employee Performance in the Top Four Banks in Brazil
(Based on The Banker, July 1996)

Company	Tier One Capital (\$ million)	No. of Employees	Profits/Employee (\$'000)	Capital/Employee (\$'000)	Assets/Employee (\$'000)
Banco Bradesco	5,083	52,886	17.33	96.12	637.62
Banco Itaú	3,790	36,636	16.66	103.46	687.66
Banco do Brasil *	3,554	94,669	-44.26	37.54	866.91
Unibanco	2,022	29,468	7.89	67.63	795.07
Note: * Federal government owned bank; Data based on 12/95; all values in US dollars					

Table 7.2 - Strength, Jobs and Employee Performance in the Top Four Banks in UK
(Based on The Banker, July 1996)

Company	Tier One Capital (\$ million)	No. of Employees	Profits/Employee (\$'000)	Capital/Employee (\$'000)	Assets/Employee (\$'000)
HSBC Holdings	21,445	101,070	56.32	212.18	3,477.79
NatWest Bank	11,501	81,800	33.22	140.59	3,187.83
Barclays Bank	11,068	89,600	36.04	123.53	2,920.82
Lloyds TSB Group	7,171	86,983	36.04	82.44	2,637.39
Note: Data based on 12/95; all values in US dollars					

Table 7.3 Top 10 Banks in UK (The Banker, July 1996)

Ranking		UK	Tier One Capital		Assets		Pre-tax Profits		Profits on Av. Capital	
Country	World	Data based 12/95	US\$m	%ch ²	US\$m	Rank	US\$m	%ch ²	% latest	% prev.
1	1	HSBC Holdings	21,445	20.3	351,601	1	5,692	16.0	29.0	29.6
2	18	NatWest Bank	11,501	12.8	260,846	3	2,717	10.1	25.0	25.6
3	24	Barclays Bank	11,068	9.8	261,705	2	3,229	12.0	30.5	29.7
4	42	Lloyds TSB Group	7,171	20.1	229,495	4	2,945	45.7	44.8	37.2
5	54	Abbey National	6,109	6.4	159,870	5	1,590	10.1	26.8	26.3
6	106	Royal Bank of Scotland	3,305	12.7	80,651	6	951	13.2	30.5	29.2
7	118	Standard Chartered	3,013	29.7	60,353	8	1,025	29.6	38.4	36.8
8	122	Bank of Scotland	2,876	24.1	67,606	7	836	21.2	32.2	31.9
9	224	Schroders	1,338	16.0	18,115	9	306	1.0	24.6	27.3
10	259	Robert Fleming Holdings	1,135	13.7	10,353	12	277	-18.1	26.0	38.6

Table 7.4 - Top 10 Banks in Brazil (The Banker, July 1996)

Ranking		Brazil	Tier One Capital		Assets		Pre-tax Profits		Profits on Av. Capital	
Country	World	Data based 12/95	US\$m	%ch ²	US\$m	Rank	US\$m	%ch ²	% 1995	%1994
1	69	Banco Bradesco	5,083	8.0	33,774	2	916	7.0	18.7	21.2
2	92	Banco Itaú	3,790	17.0	25,193	3	610	-29.1	17.4	N/A.
3	99	Banco do Brasil *	3,554	-39.7	82,070	1	-4,190	-956.9	-88.7	7.1
4	169	Unibanco	2,022	107.9	23,429	4	262	-16.8	17.5	35.9
5	215	Banco Bamerindus	1,374	47.2	14,686	6	145	-40.2	12.6	29.2
6	222	Banco Real	1,344	31.8	10,982	7	339	49.0	28.7	N/A.
7	223	BANESP **	1,339	N/A.	22,876	5	371	N/A.	N/A.	N/A.
8	345	BCN	837	43.5	9,384	8	273	36.6	38.5	N/A.
9	347	Banco Mercantil de São Paulo	829	48.8	4,510	14	157	44.5	22.7	23.3
10	493	BancoFrances & Brasileiro	539	19.7	3,134	20	40	-44.0	8.0	18.7
Note: * Federal government owned bank, ** State owned Bank data based in 12/93										

7.2.2 - Research Findings in the UK and Brazilian Banking Sector

The evidence in the current literature suggests that quality initiatives are wide spread throughout the UK financial services (Knights and McCabe, 1996; Longbottom and Zaire, 1996). This research fieldwork findings confirm this and suggest the same trend in the Brazilian banking sector.

The data shown in Table 7.5 suggests that banking organisations implemented TQM for the same reasons in both countries. The strong competitive market, pressure to reduce costs, and customer demands seem to be the quality drivers in this industry.

Table 7.5 - Majors Factors to Implement TQM in UK and Brazil

	Mean (μ)				
Issues	Group UK	Group 1	Group 2	Group 3	Tukey Test - 95% CI
Customer Demand for quality	4.579	4.531	4.375	4.947	$\mu_{UK} = \mu_{G1} = \mu_{G2} = \mu_{G3}$
Competitive Pressure to reduce costs	4.211	3.844	3.825	3.368	$\mu_{UK} = \mu_{G1} = \mu_{G2} = \mu_{G3}$
Competitive Pressure to Improve Service/Product Quality	4.744	4.333	4.525	4.5789	$\mu_{UK} = \mu_{G1} = \mu_{G2} = \mu_{G3}$
Enthusiasm of Top Managers	3.737	2.939	3.250	3.579	$\mu_{UK} = \mu_{G1} = \mu_{G2} = \mu_{G3}$
Note: Scale used from 1 to 5, where 1 is mostly false and 5 is mostly true Group UK = the UK banks; Group 1= Brazilian government owned banks; Group 2 = Brazilian private banks; Group 3 = multinational banks operating in Brazil.					

TQM has been widely adopted in both countries (Figure 7.1), however, Brazilian federal government owned banks (Group 1) have a high discontinuity rate, which reflects the poor implementation process that most of these banks have.

The time of implementation shown in Figure 7.2 suggests that some UK banks and multinational banks (Group 3) in Brazil had started TQM in the early 1990s, but the majority of companies had started in the past three years in both countries. Furthermore, it is confirmed in the current literature that TQM is a new management philosophy in

financial services in both countries, with an average of four/five years in the UK and multinational banks in Brazil, and of three years in the other types of Brazilian banks.

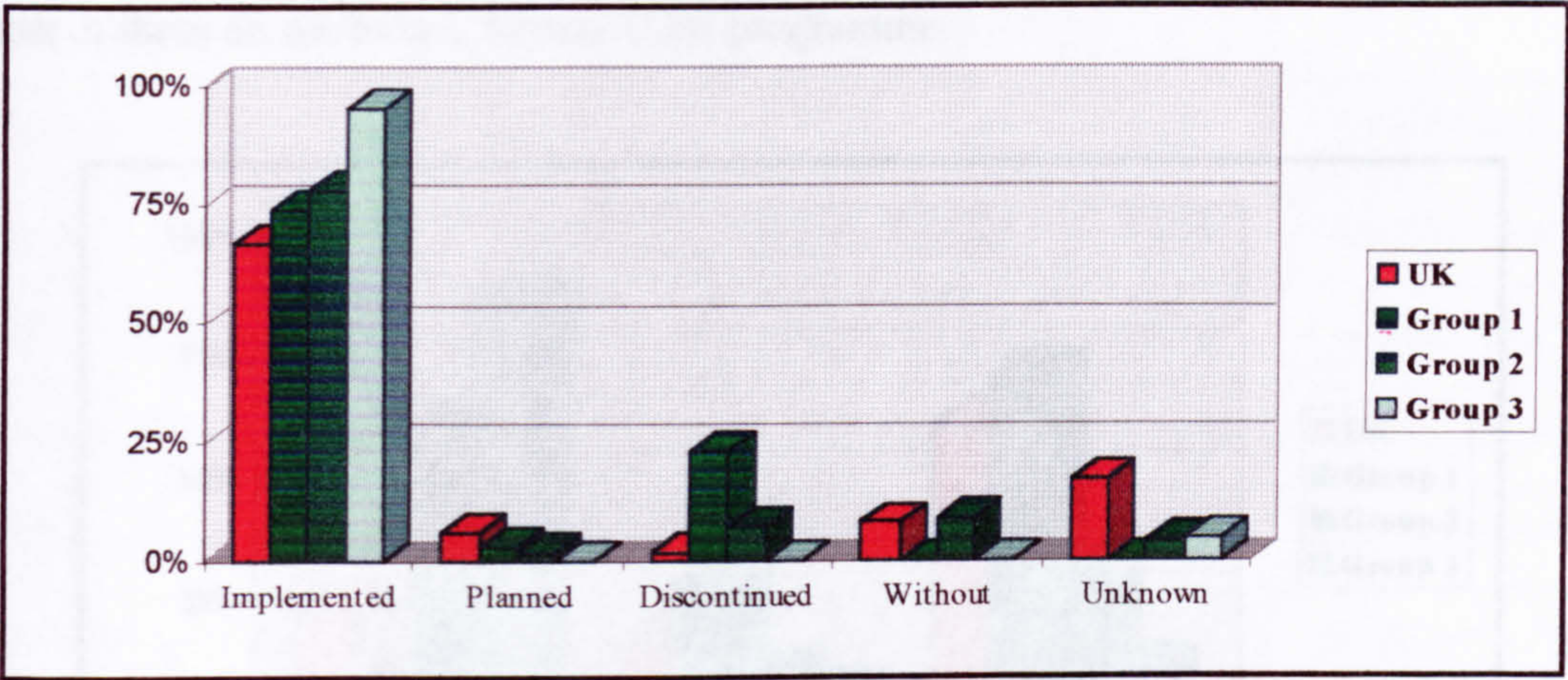


Figure 7.1 - TQM Programmes in UK and Brazilian Banks

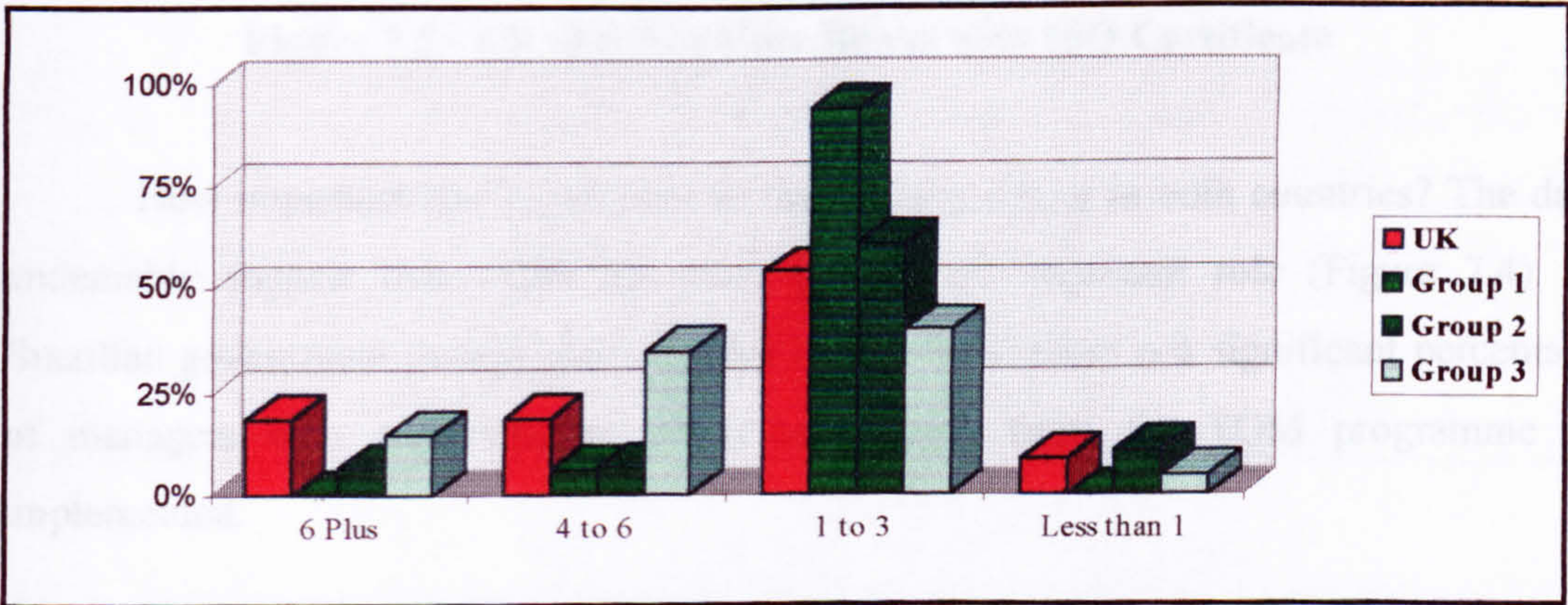


Figure 7. 2 - Years Since Implementing TQM in UK and Brazilian Banks

In terms of quality initiatives, UK banks are more versatile, they have adopted many programmes such as: TQM, BPR, Customer care, Competitive benchmarking, ISO9000/BS5750. Brazilian banks, on the other hand, have to rely on their quality initiatives by investing heavily in IT, TQM programmes and by having a great number of banks with an ISO 9000 certificate (Figure 7.3). The great number of banks having ISO certificates in Brazil, is perceived as a need to seek an international quality standard credential in order to promote an image among customers rather than a real commitment to a TQM philosophy.

Nonetheless, British banks such as Barclays (Harmer, 1993) and Midlands Bank (Ansell, 1993) have successfully applied for an ISO certificate. But none of these have announced this in the media as it has usually been done by Brazilian banks, even when most of them do not have a formal TQM programme.

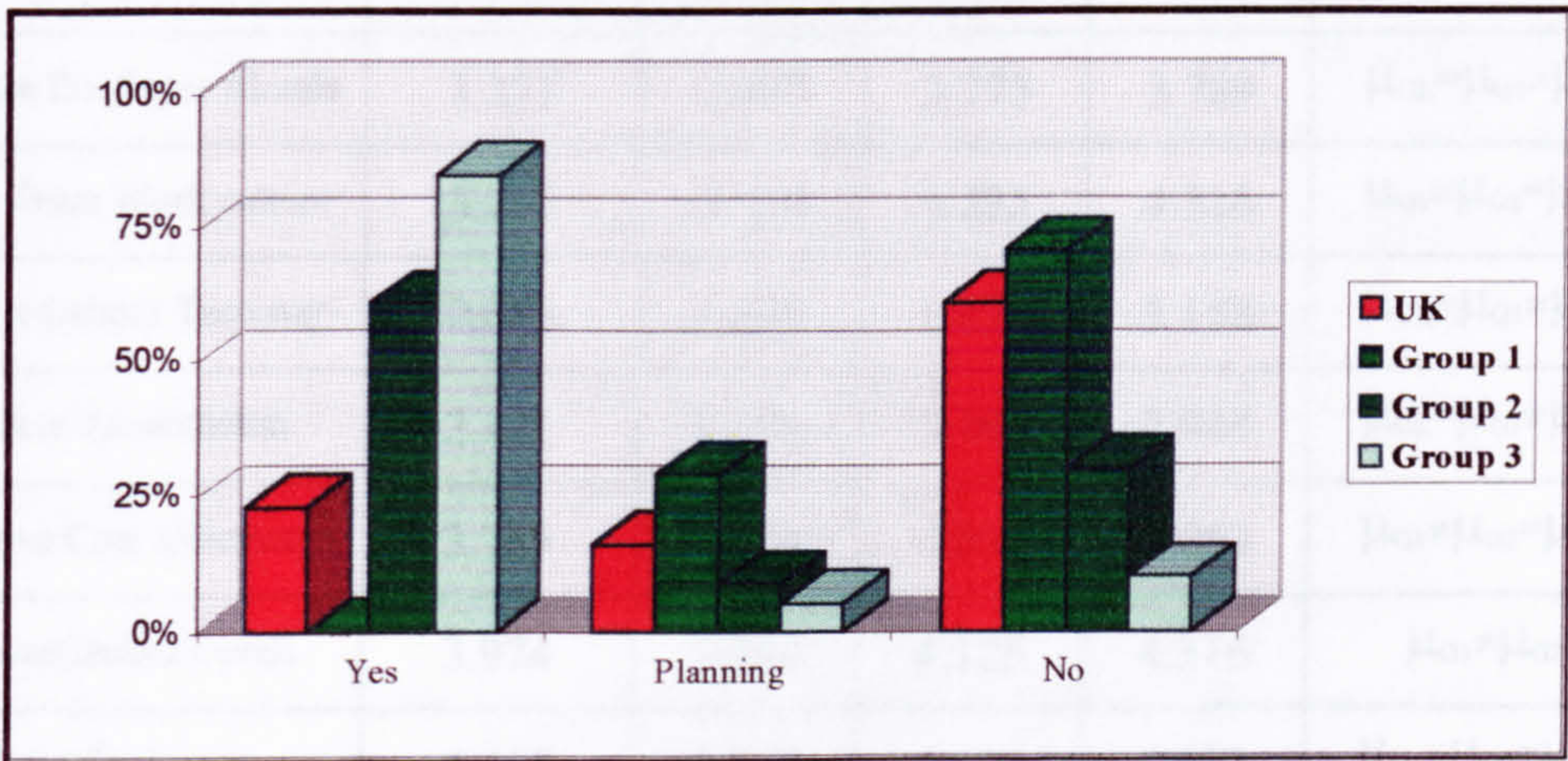


Figure 7.3 - UK and Brazilian Banks with ISO Certificate

How important has TQM been to the banking sector in both countries? The data undeniably suggest that TQM has been playing an important role (Figure 7.4). In Brazilian government owned banks (group 1), however, there is a significant percentage of managers who perceived no effect whatsoever from the TQM programme as implemented.

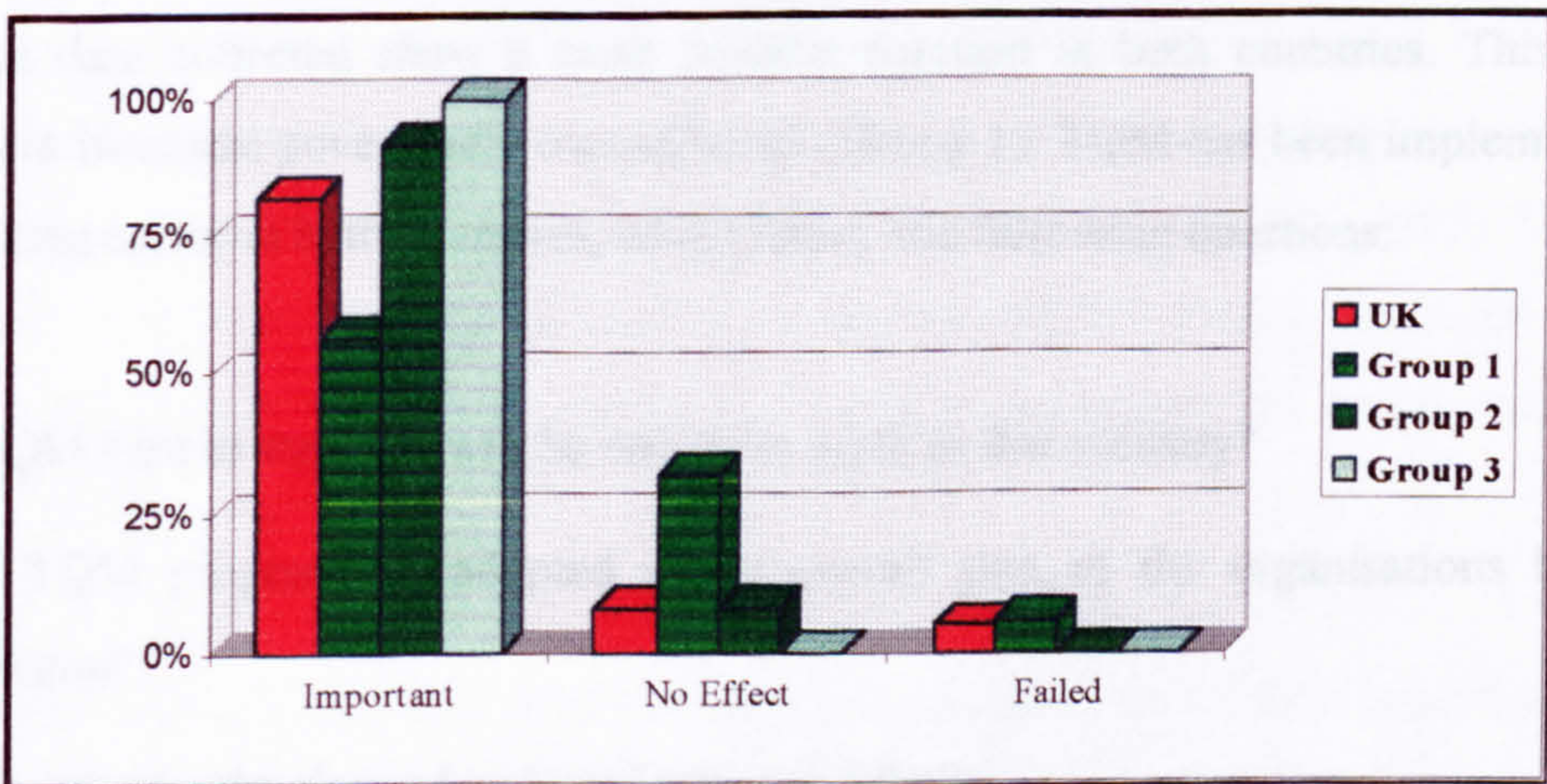


Figure 7.4 - Importance of TQM in UK and Brazilian Banks

Table 7.6 - Major Effects of Implement TQM in UK and Brazil

Issues	Mean (μ)				Tukey Test-95% CI
	Group UK	Group 1	Group2	Group 3	
Improve Quality Standard in Product/Service	N.A.	3.344	4.475	4.474	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Raise Quality Awareness	4.474	3.687	4.450	4.421	$\mu_{G1} \neq \mu_{G2} = \mu_{UK}$
Increase Employee Morale	3.237	2.677	3.775	3.789	$\mu_{UK} = \mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Raise Team Work culture	3.757	3.129	4.225	4.316	$\mu_{G1} \neq \mu_{G2} = \mu_{G3} = \mu_{UK}$
Reduce Labour Turnover	2.658	1.839	3.225	3.158	$\mu_{UK} = \mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Reduce Absenteeism	2.421	1.178	3.162	2.944	$\mu_{UK} = \mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Improve Cost Efficiency	3.789	2.935	4.050	4.053	$\mu_{G1} \neq \mu_{G2} = \mu_{G3} = \mu_{UK}$
Reduce Defect Levels	3.974	3.094	4.125	4.316	$\mu_{G1} \neq \mu_{G2} = \mu_{G3}$
Raise Customer Satisfaction	4.447	3.687	4.500	4.632	$\mu_{G1} \neq \mu_{G2} = \mu_{G3} = \mu_{UK}$
Increase Number of Customer	4.108	2.548	4.200	4.105	$\mu_{G1} \neq \mu_{G2} = \mu_{G3} = \mu_{UK}$
Increase Profitability	4.105	3.000	4.250	4.105	$\mu_{G1} \neq \mu_{G2} = \mu_{G3} = \mu_{UK}$
Note: Scale used from 1 to 5, where 1 is mostly false and 5 is mostly true Group UK = the UK banks; Group 1= Brazilian government owned banks; Group 2 = Brazilian private banks; Group 3 = multinational banks operating in Brazil.					

For those managers who perceived TQM implementation as important (Table 7.6), the data collected show a clear positive reaction in both countries. This is less marked in Brazilian government owned banks (Group 1). TQM has been implemented in the banking sector in both countries, which raises the following questions:

- Is TQM here to stay or it will be one more myth in this industry?
- Are TQM programmes adopted as an overall part of the organisations business strategies?
- How have banks planned and implemented TQM?

The findings from the interview surveys, carried out in both countries, confirmed that, in the UK, banks have applied quality initiatives in order to reduce costs and improve the so called service factory, which means to improve operational process, increase speed in services provided, reduce queues in the branches, etc.

Managers interviewed confirmed that quality is here to stay and that no financial company in the UK will survive without it. They suggested that the greatest challenge, once top management are committed to the programme, is to convince people inside the organisation that TQM is not a "flavour of the month" that will soon go away. Also they express a major concern with the fact that employees are sceptical concerning job losses and redundancies that may still happen in this sector.

How is the TQM programme integrated into the UK companies business strategies? In one company quality is at the centre of business strategy with a steering committee composed of directors and senior management whose major function is to support and evaluate the TQM process. On the other hand, the interviewee from a second bank suggested that although top management are very committed to quality and fully supported its application, it is still not an integrated part of their business strategy. In both companies they are using a variety of quality initiatives such as BPR, Benchmarking, Customer Care, and Quality Circles under the TQM umbrella.

Using extensive support from external consultants, the UK banks have applied different schemes and conceptual quality models to assist in the short term objectives they are trying to achieve. The Gap Analysis Model (Parasuraman, et al. 1985), ISO 9000, Crosby's 14 steps and the European Quality Foundation (EQF) model seem to be the most popular theoretical frameworks applied or used as guidelines for TQM programmes among the banks surveyed.

Consultant firms can provide excellent support with their expertise to the company, they usually offer a variety of TQM products and packages. However, not all of them will suit every organisation (Lascelles and Dale, 1993). Wilkinson and Witcher

(1993) argued that consultants tend to give in too easily to pressures from client companies to implement a partial and cut-price approach, ignoring, then, long-term issues.

In Brazil there are four distinct scenarios. First, the government owned banks (Group 1), where TQM programmes are focused on short term results with a heavy training programme adopted for front line management and staff. These banks have quality and productivity departments whose major function are to develop TQM programmes and advise top management about quality issues. There is no top manager directly involved in the TQM programme development process.

A lack of commitment of board directors is perceived towards the programmes long term aims. Interviewees suggested that TQM programmes are not part of the companies business strategies. There are no formal measurement procedures. They had based their quality initiatives on conceptual frameworks such as: Gap Analysis Model; Japanese "5-S"; and MBNQA, on which the National Quality Award is based.

Second, the Brazilian private banks (Group 2) with formal TQM programmes. In these companies the TQM programme seems to be engaged in the business strategies, with top management fully committed to the programme goals. Again the programmes are focused on short term goals but with a clear long term vision. There is heavy use of external consultants and quality initiatives based in Crosby's 14 steps, Japanese "5-S", and ISO 9000. The programme lacks formal measurement procedures. However, some banks are using market research and customer surveys to evaluate customer perceptions of quality improvements. Most of these companies started their programme less than three years ago.

Third, banks in group 2 without TQM, among them the two largest retail banks. Applying for ISO 9000 and investing heavily in IT are the major quality drivers in these organisations. Top management totally uncommitted to any quality initiative besides ISO 9000, which seems to be used as business propaganda and, thus, widely advertised.

Fourth, the multinational banks (Group 3). These are the current quality champions. Citibank was the winner of the third Brazilian National Quality Award in 1994. Generally, these companies are implementing TQM based on parent companies global strategies. Directors are very committed to quality, investing heavily in training, there is a clear business strategy with measurement procedures based on well defined quality indicators and complaint analysis.

Also multinational banks are the only group using competitive benchmarking, comparing with non-banking multinational companies in Brazil . Although multinational banks have made a step forward in terms of quality in the market, they represented a thin slice of the Brazilian banking market share, before the arrival of HSBC (March 1997),. Therefor, they did not represent a competitive threat to the top ten Brazilian retail banks.

In the UK, on the one hand, although top management are, apparently, fully committed to quality programmes, it cannot be said that TQM is a part of all companies business strategies. Ghobadian et al. (1993), suggested that only with a strategic or proactive approach can quality management be used to differentiate the organisations' services. TQM has to lie at the heart of organisations business strategies to gain competitive advantage.

In Brazil, multinational banks have been the first and most successful companies with a strategic approach to TQM programmes. Some Brazilian private and government owned banks followed suite but a lack of commitment from top management (mostly in government banks) and an absence of measurement procedures are restrictions which raise doubts on how effective the TQM programmes have really been. Moreover, the largest Brazilian private banks have based their quality initiatives by investing heavily on IT and applying for ISO 9000, while avoiding any type of TQM programme.

There is evidence to show that the UK banks, the Brazilian multinational and private banks have achieved improvement in performance with their TQM programmes (Table 7.6) .

However, it is also shown that in Brazilian government owned banks some implementations have failed to deliver major effects yet.

Overall, it is perceived that there is a lack of understanding as to how TQM philosophy fits within the industries business strategies. Providing companies short term goals needed in conformity with customer demands in both countries. This is distinguished by the variety of conceptual quality models used, some of which are reviewed in the next section. Most of them used to achieve some short term quality goals and not as a foundation on which companies' TQM programmes should be based.

7.3 - Current Quality Models Applied in Financial Services Sector

Despite the increasing importance of quality services as a competitive factor in financial service industry, quality concepts are not well developed specifically for financial service organisations. In this respect, the banking sector lags behind, in terms of models for embracing philosophies such as TQM and continuous improvement (Cowling and Newman, 1995; Cheng et al., 1996).

Evidence from the fieldwork and current literature shows that UK and Brazilian banks are using several models to improve quality service, most of them are adapted from manufacturing.

The literature about service quality, in this context, is confined to the application of TQM techniques within the environment, as described by Maister (1983) and Schmenner (1986), as a "service factory". In that environment it is well understood that emphasis can be placed on tangibles, standardisation of service is desirable and control against specifications is feasible. Consequently the challenge presented by intangibility, the high levels of adaptation and interaction between consumer and service provider have been comparatively overlooked (Dotchin and Oakland, 1994).

The fieldwork findings revealed several frameworks used by Brazilian and UK banks, some of them adopted from manufacturing and others developed for service industries. In order to analyse the contribution which these frameworks have added to implementing TQM in the financial service industry in both countries, three conceptual models which seem to be the most popular are presented below.

(1) The Gap Analysis Model

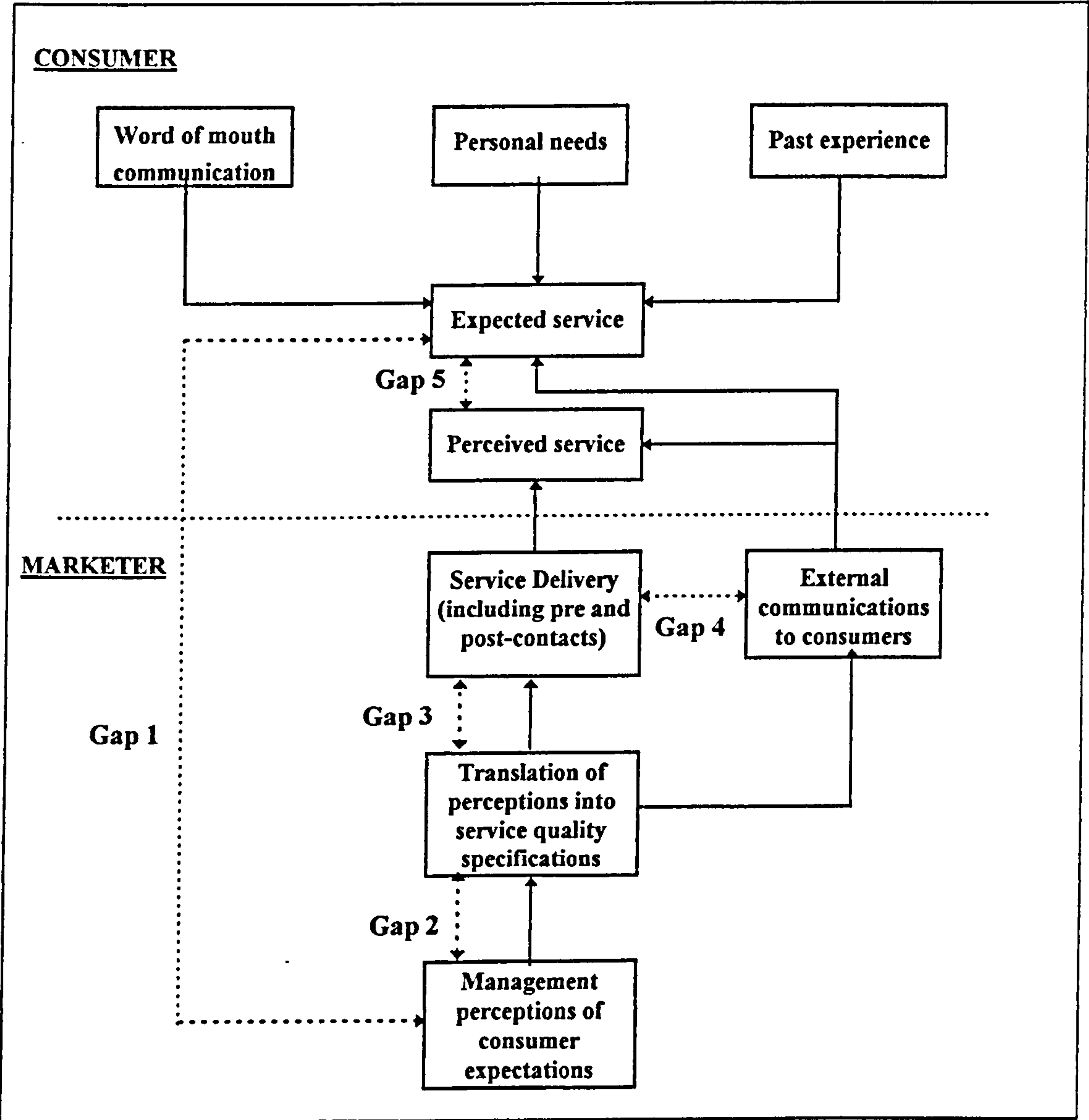


Figure 7.5 - Gap Analysis Model (from Zeithaml et al., 1988)

This model suggested by Parasuraman et al. (1985) shown in Figure 7.5, attempts to show the salient activities of the service organisation that influence the perception of quality. This model is basically customer oriented. Quality is realised by the customer as a comparison between expected and perceived quality after the customer has received the service.

The main thesis of this model is that consumers quality perceptions are influenced by a series of distinct gaps occurring on the marketers side which are pertinent to the delivery of a satisfactory level of service quality. The model seeks to reduce gap 1 to gap 4 to equal or exceed gap 5. These gaps are described briefly below:

- Gap 1 - Difference between consumer expectations and management perceptions of consumer expectations. The reason for this gap is a lack of proper market/customer focus. Management does not understand how the service should be designed, what support or secondary services the customer requires, etc., i.e. what the right quality for the customer is.
- Gap 2 - Difference between management perception of consumer expectations and service quality specifications. This gap relates to aspects of service design, goals setting, task standardisation and extent to which managers believe consumer expectations can be met.
- Gap 3 - Difference between service quality specifications and the service actually delivered. Guidelines for service delivery do not guarantee high-quality service delivery or performance. The service performance gap occurs when employees are unable and/or unwilling to perform the service at the desired level. Teamwork, ability of employees to perform the job, and appropriateness of tools and technology for performing the job are some of prerequisites for reducing gap 3.
- Gap 4 - Difference between service delivery and what is communicated about the service to consumers. Consumers expectations are fashioned by the external communications of an organisation. Therefore, media advertising and other

communications by organisations can affect consumer expectations. A realistic expectation will normally promote a more positive perception of service quality. A service organisation must ensure that its marketing and promotion material accurately describe the service offered and the way it is delivered.

- Gap 5 - Difference between consumer expectations and perceptions of quality of services provided. Perceived quality of service depends on the size and direction of gap 5, which in turn depends on the nature of the four gaps associated with marketing, design and delivery of services.

This model is a diagnostic tool. It can enable management to evaluate the existence of gaps between the organisations and customers perceived service quality attributes. Also it has the potential to assist the management in identifying the relevant key quality factors from the perspective of the customers. The major problems associated to this model are: (1) it is not an easy task to measure all five gaps, usually organisations concentrate efforts in one or two gaps which compromise expected outcomes; (2) though the model can identify a number of variables affecting the organisations quality services, it lacks in prescriptive actions which need to be taken in order to achieve the desired quality standards.

(2) Japanese 5-S Model

The 5-S model is a well recognised Japanese method used to establish and maintain a quality environment in an organisation and is very popular among Brazilian institutions. It consists of five principles: organisation, neatness, cleaning, standardisation and discipline, that represent the key to a total quality environment.

The 5-S stands for five Japanese words: Seiri (Structurise), Seiton (Systemize), Seiso (Sanitise), Seiketsu (Standardisation) and Shitsuke (Self-discipline) (Osada, 1991). In Figure 7.6 can be seen the meaning of each "S" and typical examples.

Japanese 5-S	English Meaning	Example
Seiri 'Organisation'	Organisation is about separating the things which are necessary for each job from those that are not, and keeping the number of necessary ones as low as possible and at a convenient location.	Throw away rubbish
Seiton 'Neatness'	Neatness is a study of efficiency. It is a question of how quickly a person can get the things he or she needs and how quickly he or she can put them away.	Thirty second retrieval of a document
Seiso 'Cleaning'	Cleaning should be done by everyone in the organisation, from the managing director to the cleaner	Individual cleaning responsibility
Seiketsu 'Standardisation'	Standardisation means continually and repeatedly maintaining of organisation; neatness; and cleaning.	Transparency of storage
Shitsuke 'Discipline'	Discipline means instilling the ability to do things the way they are suppose to be done. The emphasis here is on creating a workplace with good habits. By teaching everyone what needs to be done, this process helps people form habits of making and following the rules.	Do 5-S daily

Figure 7.6 - The 5-S Practise (from Ho and Cicmil, 1996)

The implementation of the 5-S model implies acceptance of new daily routines, and introduction of new behavioural patterns that enhance, not only the physical efficiency of working place, but also motivation, job satisfaction and creativity of the employees. It also forms a basis for other quality improvement activities such as ISO 9000, quality circles and its principles, which are the fundamental steps for TQM.

The five stages of the 5-S implementation are:

- Top management commitment
- Draw up a promotional campaign
- Keeping records
- 5-S training
- Evaluation of results

The 5-S can be a very good facilitator to promote quality awareness among all members of an organisation and change internal behaviour if the five stages are achieved. But it is not a framework for TQM implementation in itself.

(3) Quality Certificate Model - ISO 9000

ISO 9000 is the international standard for quality which is identical to the British standard BS 5750. The companies quality management system is independently audited in compliance with the international standard and certification is awarded by an accreditation body such as the British Standard Institute (BSI).

The typical process for implementation is illustrated in Figure 7.7. The key to achieve the certificate is to have a comprehensively documented quality system which covers procedures required for controlling the process, the inspection and handling of non-conforming items and the corrective action that needs to be taken. In addition, it is necessary to ensure that adequate training is carried out and that any statistical techniques used are valid.

The main point is to have a comprehensive quality audit to ensure that adequate procedures are correctly undertaken. Usually organisations use consultants to help with system development.

Finally a detailed formal assessment is carried out independently by a third party. During which the organisational operation of the quality system documented is audited. Then, if the organisation has satisfactorily demonstrated that it is meeting the requirements of the ISO standard a certificate of registration is issued. Implementation of the procedures in the appropriate format required by ISO 9000 can take one to two years and involve a considerable amount of paper work and bureaucracy.

The advantages are that it provides an independent audit of the quality system of that operating unit that the organisation wants to be accredited. A good system can more than pay for itself through reduced costs of scrap, rework, loss of customers due to poor quality, etc. Also it creates motivation and quality awareness among employees.

The main problem in applying ISO 9000 to financial institutions is that the majority of the clauses are written with the manufacturing industry in mind and, thus, need to be interpreted before applying directly to financial institutions.

Additionally ISO 9000 applications are a framework for accreditation of determinate quality standard procedures in the specific operation unit of a bank. It does not follow that a company with an ISO 9000 certificate has a total quality environment or has implemented a TQM programme. Major efforts to gain an ISO 9000 may be seen as an end in itself rather than a step along a greater path to quality (Longbottom and Zairi, 1996).

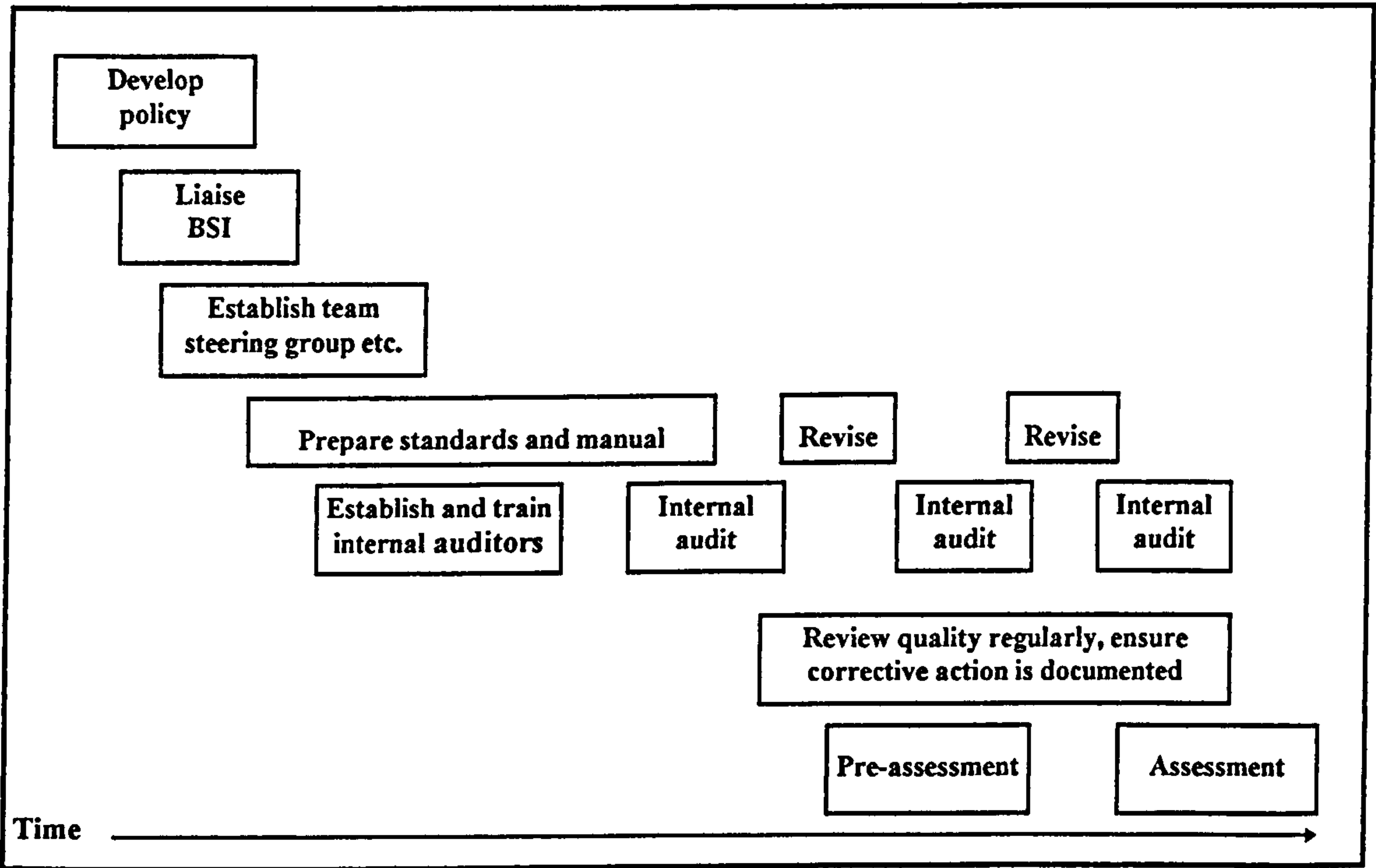


Figure 7.7 - ISO 9000 Typical Process for Implementation (Ansell, 1993)

7.4 - TQM in Financial Services Evolution Needs

Financial services organisations in the UK and Brazil have been applying quality initiatives towards improving services/products delivered to customers and reducing costs through the 1990s. They adopt a variety of quality initiatives and used many conceptual quality frameworks . Each of those used were a function of emergent needs and short term programme targets. The effectiveness of this sort of strategy might suit the short term necessity of the industry but it may be worthless in terms of gaining a competitive advantage.

Obtaining competitive advantage through quality requires banking organisations placing TQM at the centre of their business strategies, as a integral system which acts as an umbrella. Whereby all quality initiatives can be combined and applied in order to improve process, reduce costs, and enhance customers perceptions about quality of both services and products. Therefore a sustainable competitive advantage can be obtained by promoting a never ending improvement environment that copes with the short and long term organisational needs.

The problems are how to develop, plan and implement a holistic approach which demands vertical integration, effective communication systems and total commitment from top managers to all members of the organisation. The fieldwork suggests this is the major weaknesses towards TQM implementation in this industry.

In this context, this research has as one of its main contributions, the development of a TQM system for financial services (Longo and Cox, 1997), which provides a framework to be applied in banking organisation. The TQM system for financial services is presented in Chapter 9.

In order to support the implementation of such a holistic approach a methodology developed in the late 1960s, in Japan, called Quality Function Deployment (QFD) is employed. The "house of quality" (QFD), is a kind of conceptual map which provides the means for inter-functional planning and communications (Hauser and Clausing, 1988).

The QFD methodology (to be reviewed in Chapter 8) is a powerful management tool to help an organisation provide higher quality products and services more efficiently and at a reduced cost. It is great for problem solving, decision making and planning. QFD can be used by both product and service based companies. It is an essential tool in implementing TQM programmes (Guinta and Praizler, 1993).

7.5 - Summary and Conclusions

In this chapter the findings from the fieldwork in Brazil and the UK banking sector are compared. The TQM status, its major effects and the strategic approach adopted for TQM programme implementation are evaluated.

Although there is strong evidence to suggest that managers are willing to achieve the TQM philosophy in both countries, only a few of the managers interviewed confirmed that TQM is part of the companies business strategies. The findings also show that TQM is in its early stage in both countries. Perhaps, in a more advanced stage in UK organisations and multinational banks in Brazil than in Brazilian government and private owned banks.

Overall, findings suggest that top management are struggling in managing the conflict of how the TQM philosophy fits within industry business strategies in order to combine banks short term needs and customer demands. Additionally, most companies surveyed, are using several conceptual frameworks, three of them were described. These models have powerful practical applications, however, evidence suggests that they have been only partially applied. This supports the conclusions that banks are applying these quality initiatives in order to accomplish emergent quality demands and/or improve company's image among employees and customers rather than establishing TQM as an overall management philosophy.

Chapter 8 - Review of Quality Function Deployment

8.1 - Introduction

In the late sixties in Japan, Mitsubishi Heavy Industry (shipping industry) turned to the Japanese government for help in developing the logistic to build a complex cargo ship. The Japanese authorities contracted several university professors to create a system that would ensure that each step of the construction process would be linked to fulfilling a specific customer requirement. Thus, it was born, what is called today, the Quality Function Deployment (QFD).

During the seventies, Japanese companies continuously improved the QFD methodology and became masters at it. From there, it took more than ten years, however, for QFD to reach the west. First employed in the US (mid - 1980s) and now in European countries. In the UK the uptake of QFD is very recent and there are only a few scattered cases of companies trying to experiment with it (Zaire, 1993).

The genesis of QFD is traced to Dr. Yoji Akao, who was chairman of the QFD research committee of the Japanese Society for Quality Control (JSQC) from the early 1970s until the committee's disbanding in 1987, upon the successful completion of the promotion of QFD in Japan (King, 1989).

Professor Akao was involved with the first large scale application of QFD at the Kobe shipyard of Mitsubishi Heavy Industries. After the introduction of QFD in the US, by Dr. AKao and others, the first case studies began to appear in the middle eighties. Since that time, QFD has been used by a wide range of companies, in a varied array of industries including 3M, Eastman Kodak, Aerospace Group, Westinghouse Corporation, AT&T, Bell Labs, Digital Equipment Company, Ford Motor Company, Jaguar and Proctor and Gamble, to name but a few (Bicknell and Bicknell, 1995; Oakland, 1993).

8.2 - Quality Function Deployment Definition

The Japanese name for QFD is '*hin shitsu*' (Quality) , '*ki nou*' (Function) and '*ten kai*' (Deployment). Translating this into English is very difficult because each word has several meanings (Figure 8.1). Perhaps, because of that, QFD has been tagged with a variety of other names, such as "the voice of the customer", "the house of quality", "customer driven engineering", "matrix product planning" and "decision matrix" (Dale and Cooper, 1992).

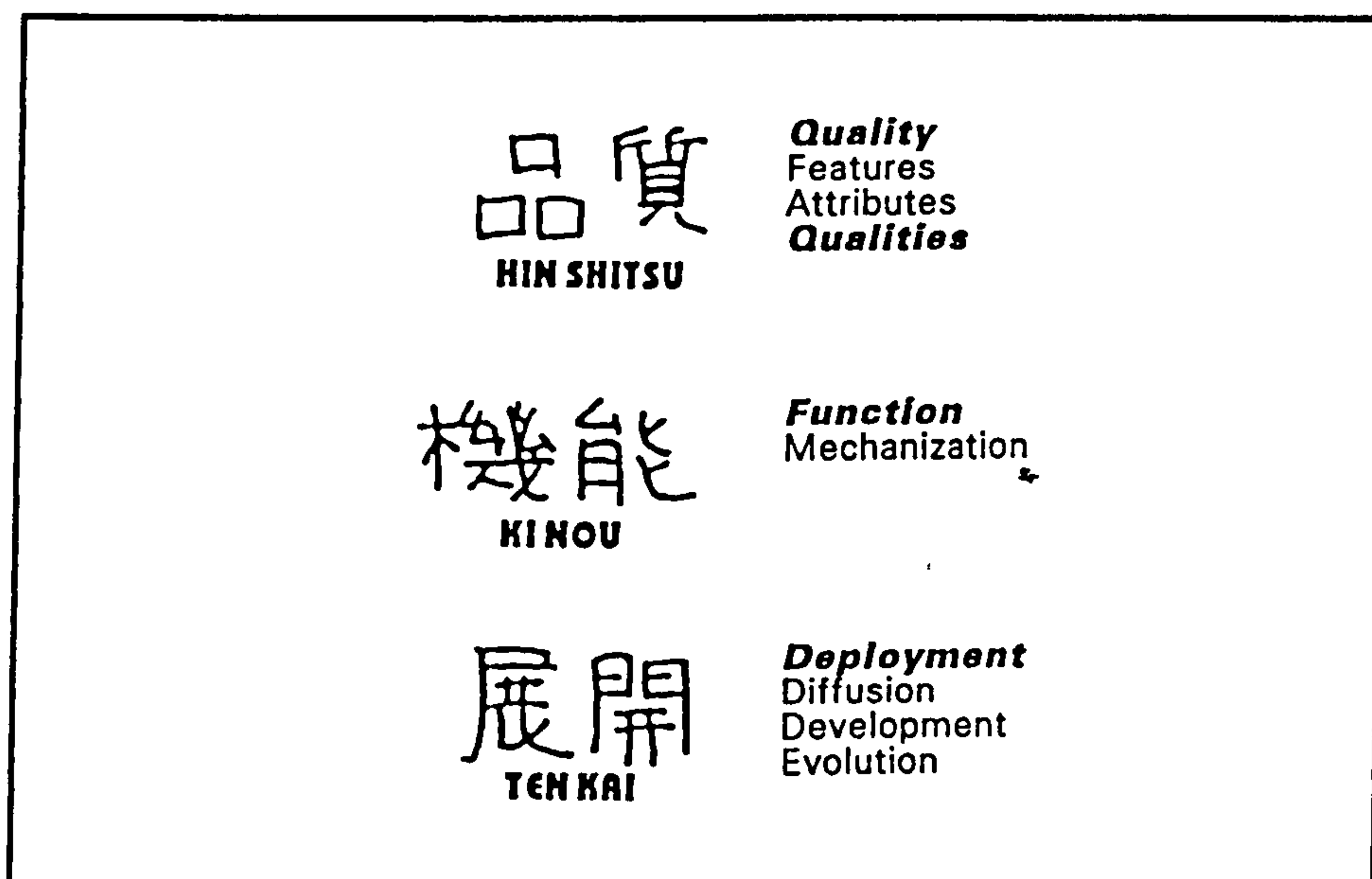


Figure 8.1 - QFD Characters in Japanese

The QFD methodology has been defined in many ways, for instance:

- Voss (1992) defined QFD as a tool and a process toward a company becoming a time - based competitive organisation.
- A system for designing a product or service based on customer demands and involving all members of the producer or supplier organisation (Maddux et al., 1991).
- QFD is the only comprehensive quality system aimed specifically at satisfying the customer. It concentrates on maximising customer satisfaction (positive quality). QFD

focuses on delivering value by understanding the customer's wants and needs, and then deploying these expectations throughout the service process in a visible way (Zultner 1992).

- QFD is a technique or discipline that can improve the process of developing and producing products or services (Adams and Gavoor, 1990).
- Dr Shigeru Mizuno defines the deployment of quality function as the step-by-step deployment, in greater detail, of the functions or operations that form quality systematically and with objective rather than subjective procedures (Mizuno and Akao, 1994)

Perhaps the most concise definition came from Professor Akao (1990), who defined QFD as converting the consumers demands into "quality characteristics". Developing a design quality for the finished product by systematically deploying the relationship between the demands and the characteristics, starting with the quality of each functional component and extending the deployment to the quality of each part and process. The overall quality of the product or service will be formed throughout this network of relationships.

Beyond all these names and definitions it is very important to understand that QFD is not a quality initiative in itself. It is a systematic means of analysing customer requirements and deploying them into product, service, and business operations (Bicknell and Bicknell, 1995).

8.3 - The Quality Function Deployment Methodology

The QFD methodology is quite different from the traditional quality system which aims at minimising negative quality such as defects. With this system the best a company can get is zero defects, which is not good enough, as the absence of a negative does not make it a positive, it is not value (Zultner, 1992). Dr. Deming (1986) suggests that just

because there is nothing wrong with the service does not mean there is anything right with it from the customer's perspective.

QFD focuses on delivering value by understanding the customer's wants and needs, and then deploying these expectations throughout the service process in a visible way. By applying QFD, organisations can add value into services and products delivered to customers using a quality positive approach. Only strong positives can make a service so good that customers boast about it, the true test of delighting customers (Carlzon, 1987).

The QFD methodology is based on the philosophy that products and services should be designed according to customer requirements. There are several types of QFD methods to be used. However, all QFD approaches share common goals such as:

- Drive towards specific means to develop technical requirements,
- Emphasis on setting priorities at each stage of development,
- Consideration of costs, reliability, new concepts or technologies,
- Organisation's ability to produce the service or product,
- Use of additional tools and techniques (e.g. seven new management tools) as appropriate,
- Generate comprehensive documentation of product or service deployed.

What ever QFD method is adopted, the process deployment starts in the core QFD matrix which will be described below.

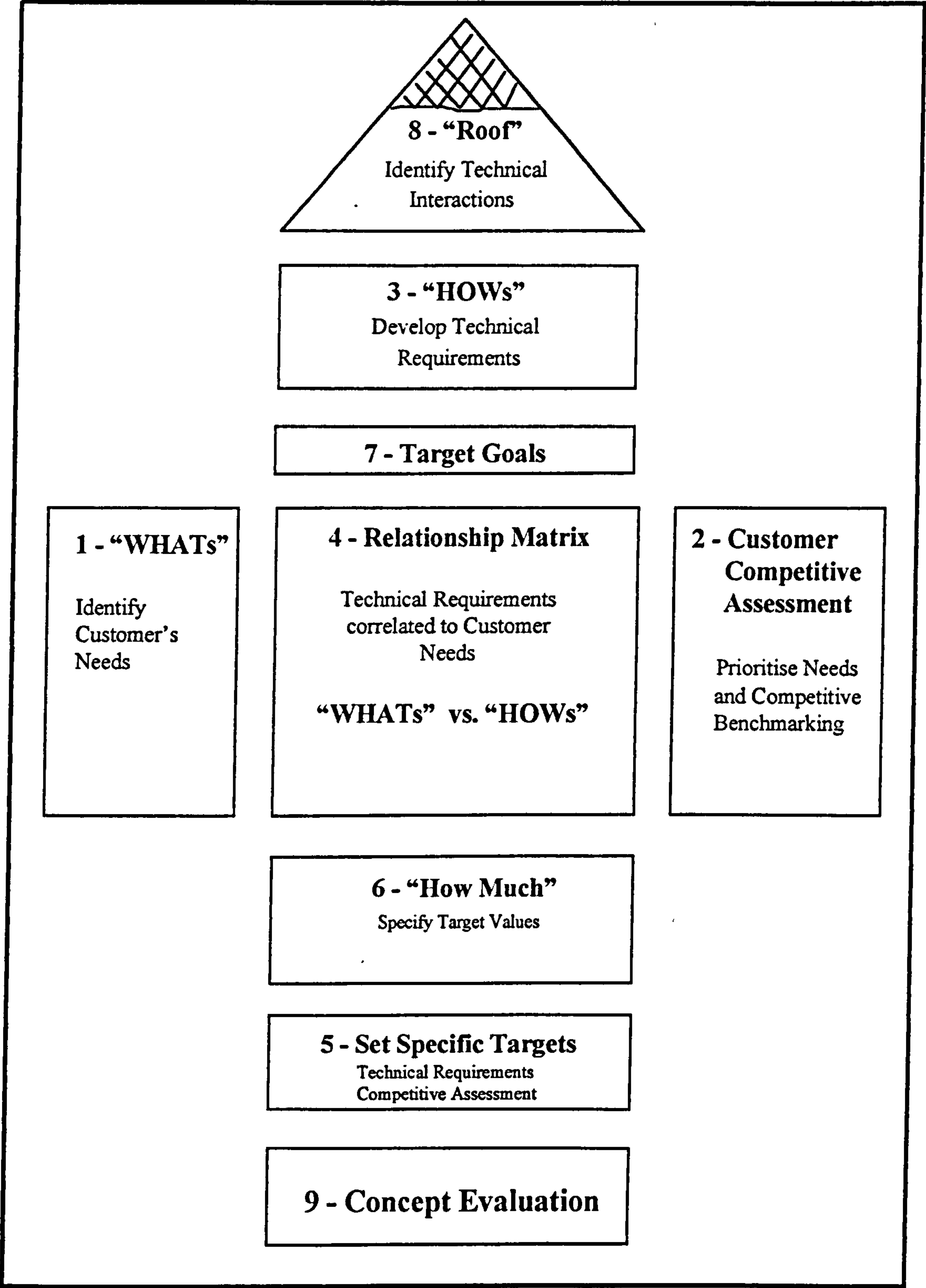


Figure 8.2 - The Core QFD Matrix, "The House of Quality"

The Core QFD Matrix Process

The core QFD matrix is based on a matrix that is sometimes referred to as the "house of quality". The house of quality is used to initiate a comparison of the customer needs with the technical requirements of a product, and is a major feature of the four-phased approach, which is one of the three methods to be described subsequently in this chapter.

The following represents a brief description of the components of the core QFD matrix, numbered in Figure 8.2. This description is based on Bicknell and Bicknell (1995); Guinta and Praizler, (1993) and Akao, (1990).

1 - The "Whats", the QFD matrix begins by identifying customer needs. These are often referred to as the customer requirements ("Whats") and can be one of the most difficult elements of the matrix to construct. Here, customers can be either internal or external to the organisation and their needs may be conflicting. It is essential to determine precisely who is the final customer. Thus, capturing the voice of customers requires skill in the art of listening and understanding their needs in a correct way. The customers needs can be obtained using surveys, focus groups, complaint data (if available), mystery shoppers etc. Then after the data is collected, it has to be translated into customer requirements using management tools such as "Brainstorming"; Affinity Diagrams; and Tree Diagrams.

Starting with "brainstorming" which creates an open environment for creativity, development of customer requirement and technical attributes. Secondly, the affinity diagrams (KJ method) can be applied in order to organise customer needs (identified at the brainstorming section) into groups based on the natural relationship among each other. Affinity diagramming can also assist in eliminating duplicate needs of the customers.

Then, a final tool can be used, the hierarchy diagram also known as tree diagrams. This tree diagrams enables the affinity group of customer needs to be organised into

hierarchy levels such as primary, secondary and tertiary levels. The complete list of customer requirements is transported into the core QFD matrix as the "WHATs".

2 - Customer Competitive Assessment, the main objective of the QFD matrix as used, is to prioritise customer needs and develop competitive benchmarking. It is very unlikely that a company can satisfy all of its customers requirements. Therefore, it is necessary to prioritise the needs that are to be met.

The prioritisation of customer needs is performed by giving importance ratings to the customer requirements ("WHATs"). These ratings are graded on a scale from 1 representing low importance to 5, the highest value, which shows high importance. Importance ratings play a key role in the QFD matrix and are based on customer's perception of a quality product or service identified in the "WHATs". Later, these importance ratings are multiplied by other numbers in the 'Relationship Matix', affecting certain statistical conclusions.

The competitive assessment is performed by benchmarking direct competitors using the "WHATs" as the basis for comparison. It is a highly effective way to identify gaps and conflicts, or to determine competitive position. A scale of 1 to 5, where 5 is best is used.

Preparation of this information could be assisted if specific customer complaints are known e.g. surveys from customer association or industry ombudsmen. The competitive benchmarking identify how the companies customer requirements are ranked in comparison to the competition. It enables an organisation to discover its strengths and weakness and those of its own competitors, in satisfying customer needs. An illustration of a typical customer competitive assessment is shown in Figure 8.3.

		2 -Customer Competitive Assessment							
Customer Requirements		Customer Prioritise Needs (1 to 5)	Competitor "A" Rating (*)	Competitor "B" Rating (□)	Competitive Comparison + Company Rating				
					* - □ Competitors Rating (worst to best)	1	2	3	4
What # 1	➡	3	2	4	*	+	□		
What # 2	➡	2	4	3	+	□	*		
What # 3	➡	4	3	2	□	*	+		
What # 4	➡	3	5	4		+	□	*	
What # 5	➡	3	2	4	*	+	□		

Figure 8.3 - QFD Matrix (Customer Competitive Assessment)

3 - The "HOWs", this step involves translating customer requirements into corresponding technical requirements or characteristics that will be used to satisfy the customers needs. These technical requirements are typically called "HOWs". The "HOWs" consist of processes, facilities and technological resources. These include also people, departments and functions in the organisations.

This part of the QFD matrix uses the organisation's collective knowledge for solving problems requiring different ideas and perspectives. This is the positive cross functional management that QFD methodology is all about. Putting together company members of all department involved in the process deployed, in order to define effective technical requirements ("HOWs"). Here again management tools such as brainstorming and affinity diagrams should be applied. The term 'technical requirement' is used to group products, services and operational requirements that will satisfy the customers needs at the top level of the analysis.

4 - Relationship Matrix, the relationship matrix (Figure 8.4) indicates the impact of each technical requirements ("HOWs") on the customer requirements ("WHATs"). Here the key is to establish whether a relationship exists between every "WHAT" and every "HOW".

These Relationships are determined by asking if a "HOW" can help to achieve a "WHAT". Then, each relationship has to be categorised as strong (●); medium (○); weak (▲); or (blank) for a non-relationship. For each of these categories there is a corresponding numerical value as (●) = 9; (○) = 3; (▲) = 1; and (blank) = 0. The

category attributed to each relationship must come from group consensus based on technical expertise, service knowledge and experience, and customers prioritised needs.

After concluding this stage, the relationship matrix must be reviewed. If there is a column(s) with either a weak or a non-relationship category attributed, this may indicate that the "HOW" does not adequately support the customers requirements. Thus the "HOW" has to be reconsidered and decided if it will be excluded or substituted for one more adequate technical requirement.

4 - Relationship Matrix					
	How # 1	How # 2	How # 3	How # 4	
What # 1	▲		●	○	(●) Strong = 9 (○) Medium = 3 (▲) Weak = 1 () Blank = 0
What # 2	●	○		▲	
What # 3	○	●	○		
What # 4		▲	▲		
What # 5	●			○	

Figure 8.4 - QFD Matrix (Relationship Matrix)

5 - Set Specific Targets, similar to the customer competitive assessment but now it involves technical requirements ("HOWs") competitive assessment. Hence in order to set specific targets the same procedures followed in the customer competitive assessment are used. However, this time it is compared to "HOWs" instead of "WHATs". Often these comparisons can be based upon information gathered from benchmarking of technical requirements against competitors or the industry standard, if available. It enables identification of how well a company and its competitors are capable of meeting the technical requirements. As in the customer competitive assessment, a scale of 1 to 5, where 5 is best, is used.

6 - Target values (Figure 8.5), are quantified objective values that are specified to improve chosen technical requirements ("HOWs"). Each of those objectives must be

competitive in the marketplace onto what extent each "HOW" has to be changed. For that reason, objective value is often referred to as "How Much".

While target goals are indicators for changing the general direction of a technical requirement ("HOW"), target values are quantifiable measurements for each "HOW". These objective values are established according to industry and company standards. Organisation managers should evaluate what the customer wants and what the competitors offer, then decide on the target to be achieved. Each "HOW" must have one objective value.

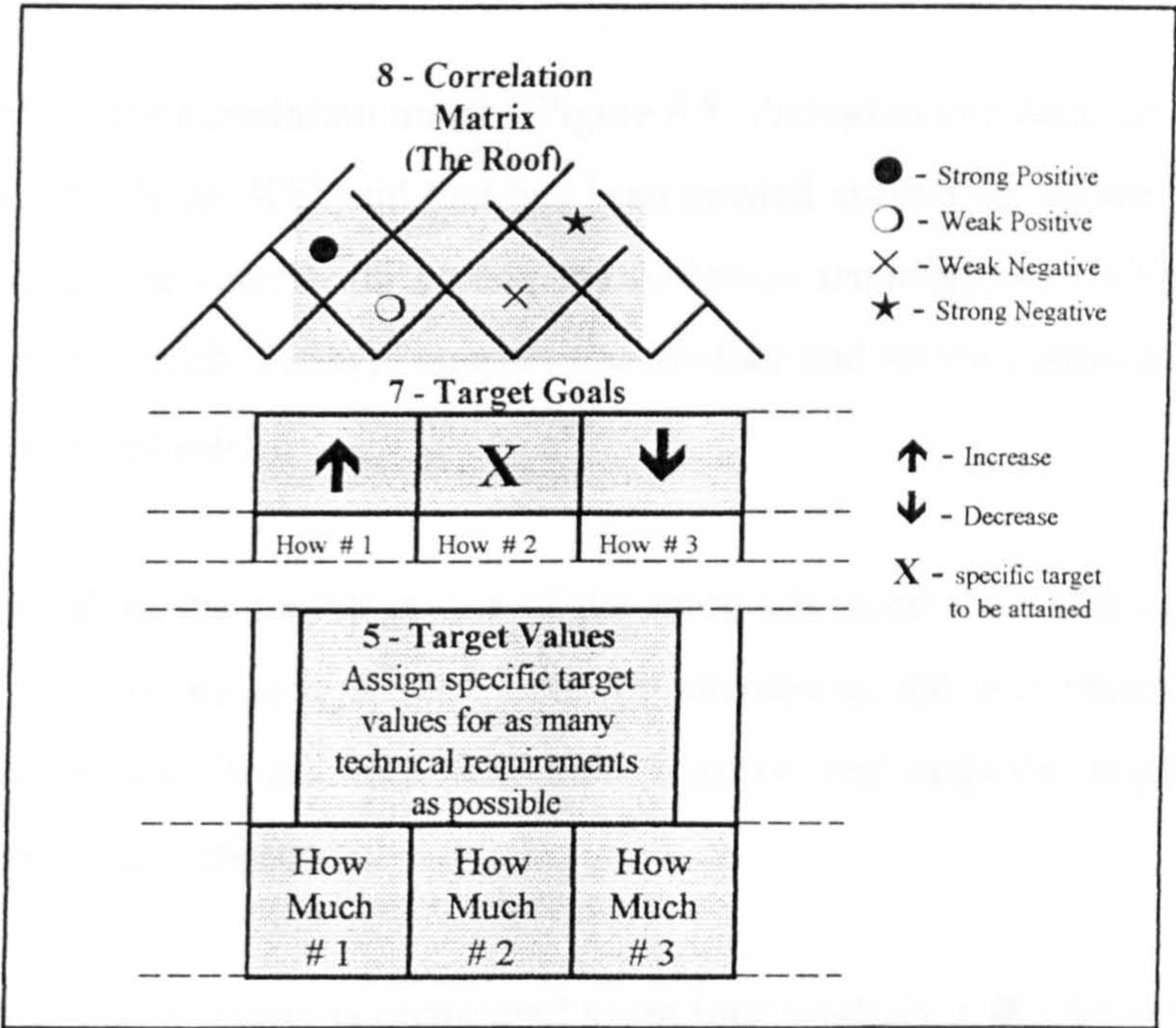


Figure 8.5 - QFD Matrix (target values; target goals; correlation matrix)

7 - Target Goals (Figure 8.5), as with "WHATs", "HOWs" must be quantified or else it will be difficult to know if they have been accomplished. Target goals are a preliminary filter to help determine if a "HOW" is quantifiable. They indicate if the "HOW" can increase, decrease, or achieve a specific goal. Target goals are located between the "HOWs" and the relationship matrix. Three symbols are used to represent target goals

() Indicates an increase in the desired direction of the target value.





() Indicates a decrease in the desired direction of the target value.

() Indicates that a specific nominal target value must be attained.

Any "HOW" for which it is difficult to assign a symbol, has to be reassessed. If a target value cannot be assigned, the "HOW" should be eliminated from the matrix because it is not a measurable solution. It is important to remember that these arrows are based on target values set in the technical requirements competitive assessment (set specific targets).

8 - The "Roof", is the correlation matrix (Figure 8.5) that takes the shape of a pitched roof because it is actually an 'XY' grid that has been rotated around 45 degrees. It shows the positive and negative correlation among the technical requirements ("HOWs"). This is used to determine which "HOWs" support one another and where conflicts may occur to the established target value.

The "roof" of the matrix is one of the more advanced tools that can be used to substantiate intuitive suspicions that focus on increasing the performance of certain technical requirement. These can have both positive and negative impacts on other technical requirements chosen.

The correlation matrix is completed using four symbols: [] for strong positive; [] for weak positive; [] for weak negative and [] for strong negative. The positive symbols show which "HOWs" support each other. The negative symbols show which "HOWs" are in conflict and where tradoffs may be required.

9 - Concept Evaluation, after the above sections of the QFD matrix have been fully determined. The next step is to develop various design concepts that take into consideration many of the technical solutions that have been developed in response to the customers needs. This step usually is employed for more advanced applications of QFD.

8.4 - Quality Function Deployment Methods

Although the basic philosophy of QFD analysis is fairly straightforward, it is not a rigid tool like a mathematical formula that can be applied in only one way. The manner in which QFD is applied varies, and it has changed since its first application in Japan by Professor Akao, who developed the approach called the Matrix of Matrices (Akao, 1990). Since then, a second method has been developed and primarily used in American applications. It is called as the Four-Phased approach and was developed originally by the American Supplier Institute (Eureka and Ryan, 1988).

8.4.1 - The Matrix of Matrices Method

The matrix of matrices approach, developed in Japan, was originally developed to create linkages with value engineering and reliability charts such as failure modes and effects analysis. It has been further adapted by Bob King of Goal/QPC and is a very complex approach to implementation of QFD (Bicknell and Bicknell, 1995). This methodology is probably more attuned to the Japanese approach to manufacturing and product development, and the focus on the detailed construction of a design and manufacturing scheme. This method requires a greater commitment of resources and time to understand and implement. Some times it can take up to thirty matrices to be completed.

8.4.2 - The Four Phases Method

Like a road-map, the four phases methodology to implement QFD is a guide through the product development cycle, from product design to production. The four phase approach is accomplished by using a series of matrices that guide the product team's activities by providing standard documentation during product and process development. The four elements of this method (see Figure 8.6) may vary depending upon application, but essentially these elements can be described as (1) Program Planning; (2) Product Design; (3) Process Planning; and (4) Process Control Planning.

Each phase has a matrix consisting of a vertical column of "WHATs" and a horizontal row of "HOWs". "WHATs" are customer requirements; "HOWs" are ways of achieving them. At each stage, the "HOWs" are carried to the next phase as "WHATs". This waterfall process continues until specific product and process specifications and manufacturing guidelines (process control methods) result. Traceability is therefore obtained throughout the application as described below.

(1) Program Planning, in this stage customers' needs are translated into customers' requirements ("WHATs"). Then, with the development of the first matrix, different ways of achieving the customer requirements are created ("HOWs"), which will be carried to the next phase.

(2) Product Design, the "HOWs" carried over from phase one became the "WHATs" for the second phase. Here, the details and components necessary to produce the product or service are determined. The details emerging from this phase have the strongest relationship to fulfilling the product requirements specified by the customer. They are the "HOWs" carried over to the next phase.

(3) Process Planning, in the third phase, a matrix is developed showing the processes required to produce the product. The "HOWs" from the second phase become the "WHATs" for the third matrix. The process characteristics that emerge in this phase will best fulfil the product requirement specified by the customer. They are the "HOWs" that are carried to the fourth phase.

(4) Process Control Planning, in phase four, the production requirements for producing the product are developed. . The "HOWs" from the third phase became the "WHATs" in this final phase. The production methods determined now will enable the company to produce a high quality product that meets the customer's requirements.

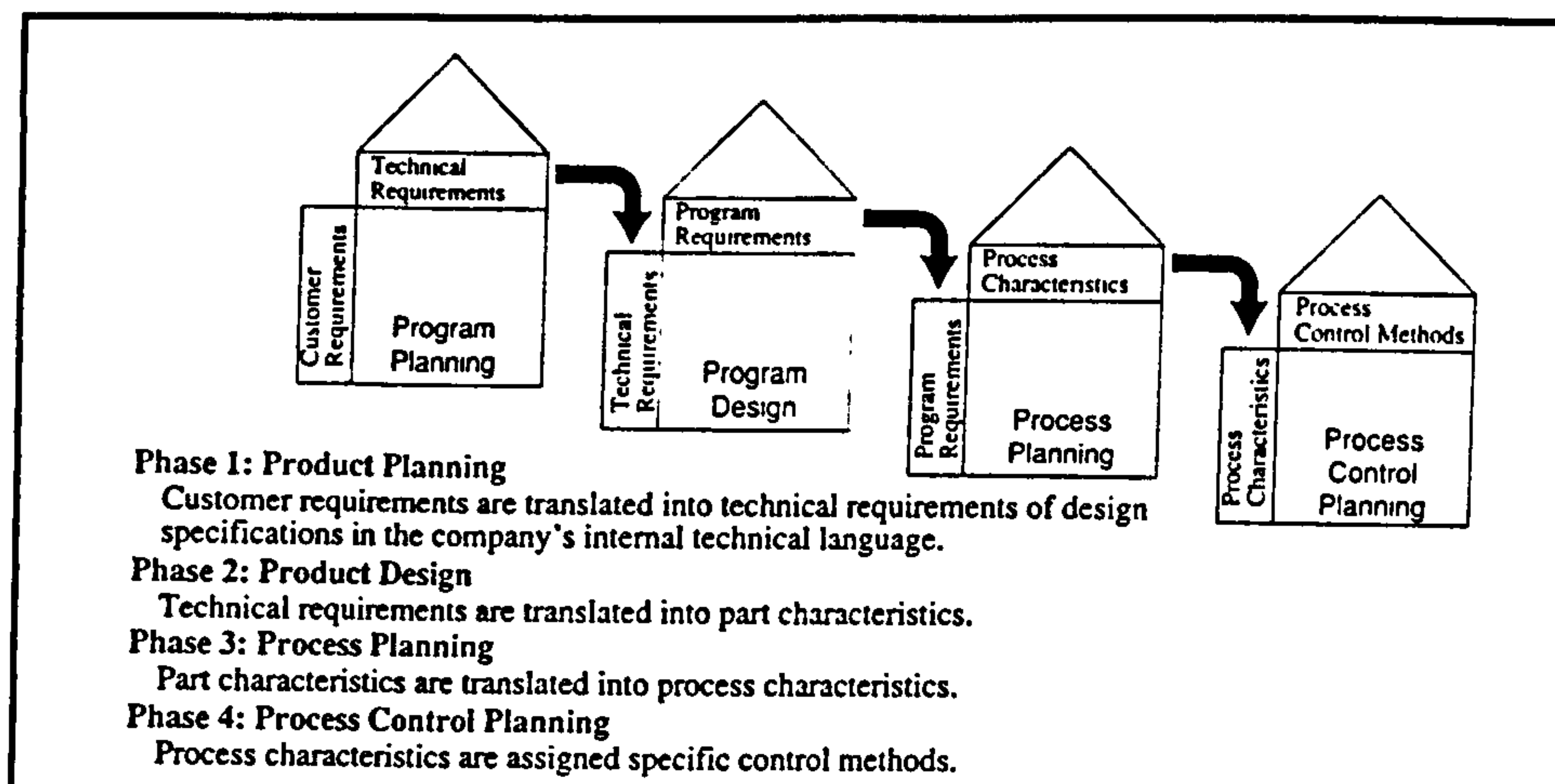


Figure 8.6 - The Four Phases Method (from Bicknell and Bicknell, 1995)

The two methods mentioned above heavily focus on products and process. Bicknell and Bicknell (1995) developed a third one that uses some of the elements of the other systems but approaches the application in a language that enables academics and practitioners to better understand how QFD can be applied to integrate process improvement efforts in service industries.

This method is called the Integrated QFD Approach™ (Figure 8.7). This approach attempts to integrate QFD with planning, functional analysis, and development of performance targets. It reaches the applications from a vantage point that allows inclusion of product requirements, service requirements, and business operation requirements, rather than just primarily focusing on products and processes as the two former methods outlined above.

8.4.3 - The Integrated QFD Approach™

Step 1 - The System Matrix, the first step consists of developing the customer needs and maps them into three categories of requirements: product, service, and business operations. By dividing the first matrix into these elements virtually every application of QFD can be accommodated, and every element or requirement developed in response to the customer needs will fall into one of these three categories. Organisations can either focus on individual elements of these requirements, if the scope of the effort concerns

only the development of a product or service, or they can involve the entire organisation in the integration of defining customer needs against cross-functional goals.

Step 2 - Develop an Integrated Plan, in this method soon after the first matrix is completed an initial integrated plan is created in order to implement the results of the initial QFD matrix. This plan enables the organisation's managers to focus on accomplishing specific short term goals that are spelled out in the first matrix. The advantage of the integrated plan is to eliminate the drawbacks which may occur as a function of the priorities and continuing data that are still to be deployed.

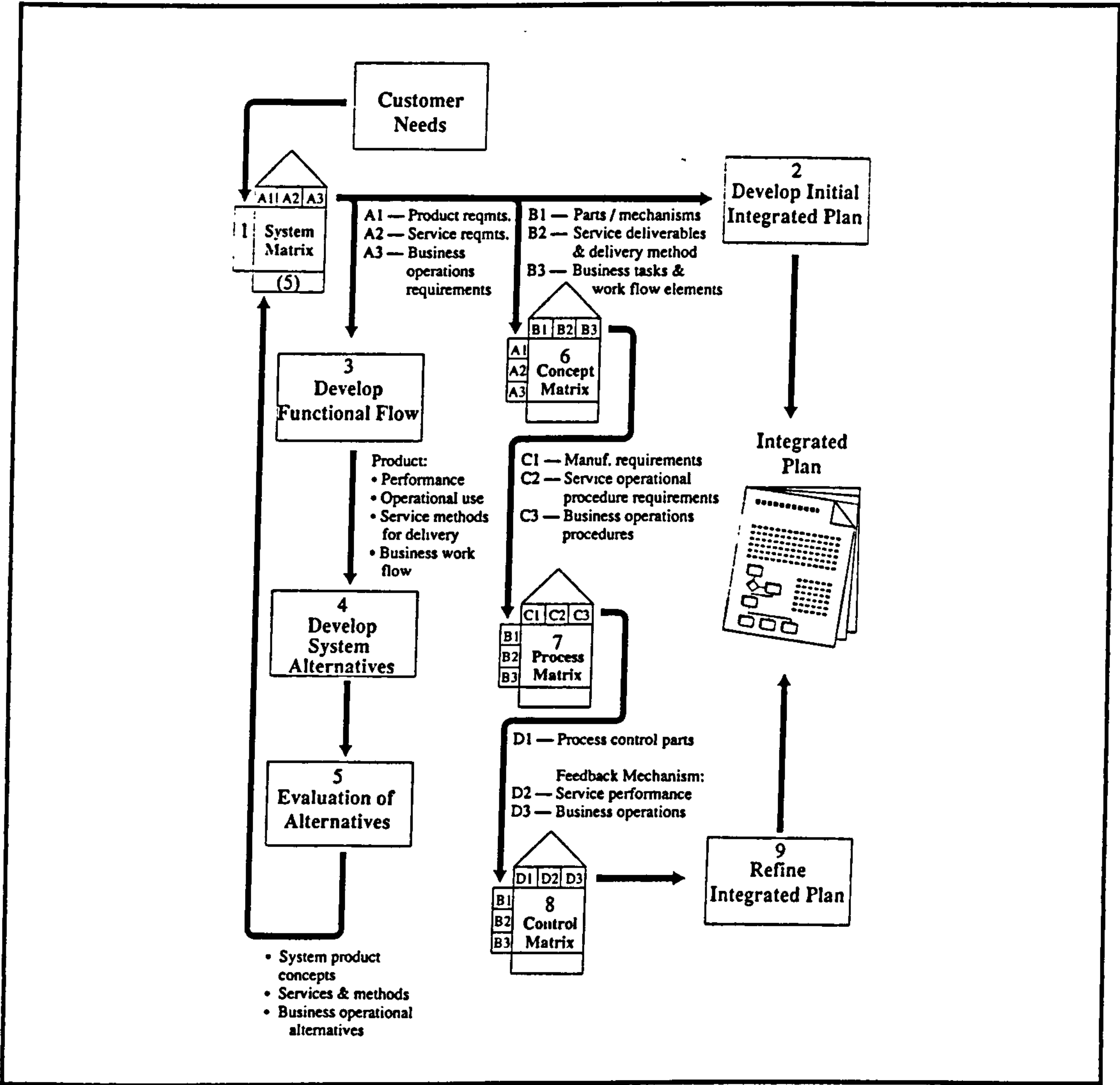


Figure 8.7 - The Integrated QFD Approach™

Step 3 - Develop Functional Flows, after development of an integrated plan, the next step is to develop functional flows for each of the requirements by conducting a functional analysis. The purpose of this step is to create a work flow map so that the organisation planners know how the requirements are met within the organisation and how each function of the company addresses the requirements.

Step 4 - Develop System Alternatives, there is always more than one way to meet a requirement, and it is critical to develop system alternatives to meet the requirements that satisfy the customers needs. This step enables organisations planners to evaluate the best system based on the priority of customer needs and requirements developed in step 1 and the functional flows developed in step 3.

Step 5 - Evaluation of Alternatives, when the system alternatives have been developed, system product concepts, services, methods and business operational alternatives can be compared. A single system, that best meets the customer needs, can be taken to the next level of analysis.

Step 6 - Concept Matrix, in this step product, service and business operations requirements (selected in step 5) can now be taken to the next level of detail. This is the mapping of those requirements against parts/mechanism, service deliverables and delivery methods, and business operational tasks and work flow elements. This is done by conducting another matrix analysis using the same technique as in step 1.

Step 7 - Process Matrix, this step develops how the procedure requirements will be controlled to meet the requirements on the left hand side of the matrix. In this way, traceability is given all the way back to the customer needs in step 1.

Step 8 - Control Matrix, once the procedures are identified, the last step of matrix development is to find the process control and feedback mechanisms to ensure that procedures are followed (control and measurement). Decomposition and mapping to this level of detail is the most efficient way to ensure that control is maintained to meet the customer needs.

Step 9 - Refinement of the Integrated Plan, at this stage of the procedure, the previously developed integrated plan can be revised to incorporate tasks and assignments developed since step 2. Further adjustment to the remainder of the elements can be made accordingly. This is the continuous improvement element of the method.

All methods drive towards specific means to develop more complete and accurate technical requirements that can attain customers needs with available resources. Likewise, they give everyone in the organisation a clear blueprint showing how every step from plan through implementation interacts to fulfil customers requirements maximising efficiency and minimising costs.

8.5 - Tools to Support the QFD Methodology

A special set of seven "new" tools (Figure 8.8) for management and planning, (the so called "the 7 new planning tools"), were developed in Japan for use with QFD and "hoshin" management. The term hoshin is commonly translated as "policy", the English word inadequately expresses the depth of the original. Essentially, hoshin management is a system of deploying corporate strategies and plans into yearly activities, promoted by specific targets and implementation means at all levels in the organisation (Mizuno and Akao, 1994).

Unlike the seven quality control tools used in statistical process control, these new tools work on language data and relationships. These tools were specifically developed to be used by improvement teams outside of manufacturing areas (Mizuno, 1988; Brassard, 1989; Ozeki and Tetsuichi, 1990). The seven new planning tools are a set of tools used for initial planning and QFD matrix generation (affinity diagram, tree diagram, and matrix diagrams); relationship understanding (interrelationship digraph and matrix data analysis); and decision criteria (process decision program chart and arrow diagrams) (Bossert, 1991). These tools are briefly presented below.

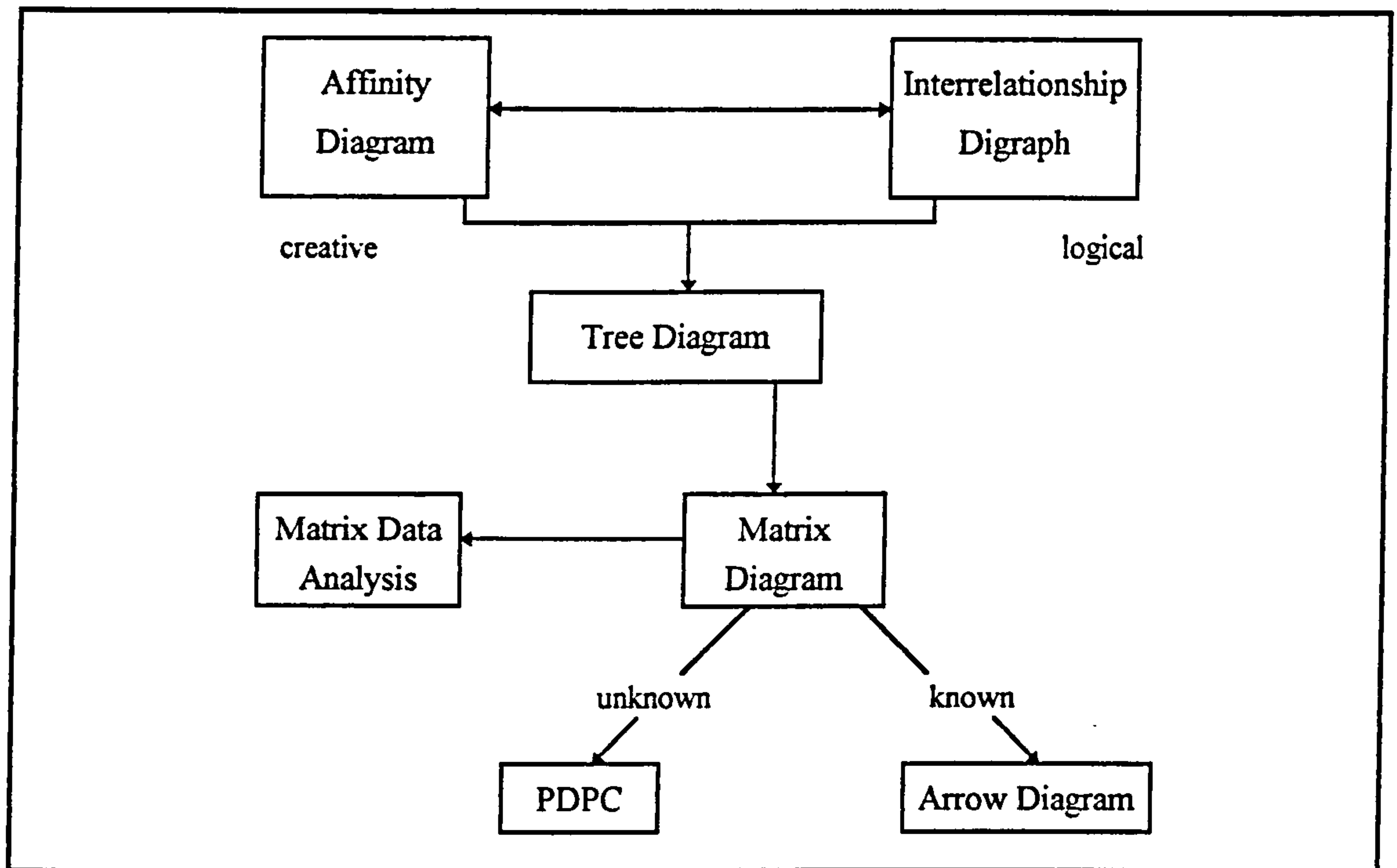


Figure 8.8 - The Seven New Tools (Bossert, 1991)

- Affinity diagrams (KJ method), this tool gathers large amounts of language data (ideas, opinions, issues, etc.) and organises it into groupings based on the natural relationship between each item. It is a creative rather than a logical process.
- Interrelationship digraph; also called relation diagrams. This tool takes complex, multivariable problems on desired outcomes and explores and displays all of the interrelated factors involved. It can be used to analyse the voice requirements of the customer, like affinity diagrams, or, analytically, to find unvoiced requirements. It shows, graphically, the logical (and often causal) relationships between factors.
- Tree diagrams; this tool; which resembles a horizontal organisation chart, is used throughout all the QFD deployments. Items such as customer and technical requirements are organised into hierarchies with primary, secondary, and tertiary levels. It is a powerful tool for obtaining a complete understanding of customer requirements.

- Matrix diagrams; this tool is used to examine two (or more) dimensions simultaneously in a QFD deployment. It helps in expediting the problem solving process and in clarifying problematic areas. It accomplishes this by looking at the degree of strength in correlation between pairs of factors or elements.
- Matrix data analysis; this is the most statistically sophisticated tool. Its graph shows the strength of the relationship between variables which have been determined.
- Process decision program chart; this tool maps out every conceivable event and contingency that can occur when moving from a problem statement to the possible solutions. This is a very useful technique for selecting the best process to use and obtaining the right results. It can also be used for what-if scenarios.
- Arrow diagrams; tool used to plan the most appropriate schedule for any task and to control it effectively during its process. This is closely related to the CPM and PERT diagram methods.

8.6 - Guides for Implementation

The QFD methodology is a means in which organisations aim to deliver quality products and services to the end customer, with the required standards of quality, economic feasibility, and a consistent and competitive approach at various stages of the delivery process. As such, QFD becomes a management responsibility and has to be based on a top-down approach (Zaire, 1993).

The implementation and success of QFD depends on many prerequisites or critical factors, the first of which is the support from top management. The job of top management should include: making it clear that QFD is a priority; setting clear objectives for QFD activities; ensure that the process is based on customer requirements; and becoming QFD leaders rather than managers (Kathawala and Motwani, 1994, Burn, 1990).

Secondly, a successful implementation is a prelude to an extensive educational and training programme for the companies management team and other members of the organisation who will be engaged in the QFD implementation. Those directly involved with the QFD implementation need to be able to construct, interpret, and apply the QFD philosophy (Reid and Hermann, 1989).

Then, define the place of QFD in the TQM Programme, starting with a pilot QFD matrix in order to check if the QFD philosophy has been fully understood by people involved in the QFD process. Finally, measure customer satisfaction on the delivered products/services and gain feedback on the implementation of the project. This is a vital component of QFD. The QFD process has to be exposed to a never-ending improvement cycle based on Deming's PDCA wheel. The "WHATs" and "HOWs" have to be continuously reviewed and revised as and when appropriate (Zaire, 1993).

8.6.1 - The QFD Process Objectives and Multi-Functional Team.

QFD is a strategic tool which begins with the objective statement defining what the company is trying to accomplish. For instance this objective statement could be to improve customer service at branches or reviewing a credit card account statement. Also, at this stage, the boundary conditions are identified for gathering information on customers needs.

Part of defining the boundary conditions includes budget availability for developing customer information, time limitations and assumptions that need to be made about the customer, and to check resources that will be available to all member of the process deployment. Then, a cross-functional QFD team, which will deploy the process, must be formed.

Usually, a multi-functional team that can address directly or interface all of the functions and departments which may be impacted by the QFD analysis needs to be assembled. This team should not have more than eight members, in order to facilitate integration among all participants. The multi-functional team must answer three questions in the order below:

- To whom the organisation wish to (attempt to) satisfy? (Identifying Customers)
- What are the customer needs? (Defining "WHATs")
- How will the company satisfy customer needs? (Defining "HOWs")

Identifying Customers

Identifying customers can be a complex task. Customers can be internal or external. Internal customers are other departments, divisions or other individuals in the organisation who make use of information, product or service produced by other internal sources.

External customers can vary in terms of life style, income, geographic position or even existing or potential new clients. The multi-functional team must segment customers engaged in the process deployment in order to gather their needs and develop desired technical requirements towards deploying the house of quality.

In order to perform the QFD matrix the customer needs must be explored and according to Juran (1992) the process of discovering customer needs includes either being a customer; studying customer behaviour; communicating with customers or simulating customers use.

Capturing Customers Voice ("WHATs")

To capture the "voice" of the customer the multi-functional team begin by listening to raw customer expressions. What customers say are not requirements. They are statements that must be understood, classified, organised and prioritise. Only then, can this customer information be translated into customer requirements ("WHATs"), as required in the QFD methodology.

Customer information comes from a variety of sources. This information can come in an active sense (solicited) because the company is looking for it or, because it is

told to (unsolicited), in measurable ways (quantitative) or in subjective forms (qualitative), on a routine (structured) or haphazard (random) manner (Bossert, 1991).

Data that are solicited, quantitative, and structured are those taken from customer surveys, market surveys, trade trails, or collected from preferred customers. This information is valuable because it identifies where the company is currently positioned in the marketplace and shows strengths and weaknesses of its products and services. The limitations are that these data only show how the company is currently doing, not where the company is going. Neither does it provide too much information about competitors.

Unsolicited data, quantitative, and structured such as complaints, hot lines, industry/organisation standards, and ombudsman also have the same advantages and limitations. The data which are solicited qualitative, structured (focus group) or unsolicited, structured and random (mystery shopper, and feedback) are those which can provide complementary information about customer needs and competitors positions.

Thus after the data has been collected, these raw customer expressions are carefully translated into positive, clear and concise requirement statements. And finally, using analytical tools such as the seven new management tools, these statements become customer requirement that the multi-functional team will enter in the initial QFD matrix.

Defining Technical Requirements ("HOWs")

The customer requirements are captured, understood, organised, and prioritised. Then the multi-functional team must determine what capabilities and characteristics the service or product has to have in order to satisfy each customers identified requirement. In this phase, the multi-functional team must identify the measurable and definable technical features necessary to realise the customers needs, including methods and processes needed for its delivery.

These technical requirements significantly influence the acceptability of the service and hence its perceived quality. It is done in the same way as defining the "WHATs", using the seven management tools to translate the "WHATs" into corresponding "HOWs". Each "HOW" must be expressed in terms which can be measurable and qualified.

8.7 - Performing the House of Quality

As described previously the QFD methodology works as a process of deploying, customer requirements ("WHATs") and technical requirements ("HOWs") through the multiple statistical analysis matrix called the house of quality (Figure 8.9).

Hence after "WHATs" and "HOWs" have been defined, the house of quality can be deployed. Once the QFD matrix is completed the multi-function team accomplish the process by following the steps of the QFD method adopted.

- (1) Fill up the classified "WHATs"
- (2) Fill up the defined "HOWs"
- (3) Compare each defined "WHAT" with those similar offered by direct competitors and then rank the findings (Customer Competitive Assessment)
- (4) Establish whether a relationship exist between every "WHAT" and every "HOW". If so, categorise it as strong, medium, or weak, and perform numerical calculation (Relationship Matrix)
- (5) Define measurement units or fixed standards for each "HOW" enabling target values to be established ("How Much")
- (6) Indicate the desired increase or decrease of target values defined above (Target Goals)
- (7) Compare each "HOW" with those similarly used by direct competitors and rank the findings (Company Competitive Assessment)
- (8) Categorise as positive or negative the relationship among "HOWs". Marking how strong or weak these relationships are. ("The Roof" - Correlation Matrix)
- (9) Product or service are evaluated against "HOWs" and related to "WHATs".

Figure 8.9 - Outline for Performing The House of Quality

8.8 - Critical Evaluation of QFD methodology

The QFD methodology is understood and practised today not only in Japan but in US and European countries; multinational manufacturers have applied it in Brazil too. Professor Akao, says that QFD is a graphic device that enable managers to analyse systematically the structures of the true or ultimately true qualities demanded by customers in their own words, in order to indicate the relationship between these demanded qualities and certain quality characteristics, to convert customer demands into their counterpart characteristics and then to develop the quality desired of services or products.

Therefore, there is a multitude of reasons why QFD should be applied in financial service industries. The value of adopting QFD is the way it can change to a very positive direction the product and service development processes. Establishing a culture of innovativeness based on valuing contributions from all organisational functions, QFD provides strategic mapping, prioritisation, and development of performance measures based on customer needs and corporate objectives (Bicknell and Bicknell, 1995). The quality management starting point is no longer the perceived or subjective ideas on what the customer wants, but a clear objective assessment of customers needs, market conditions and business capabilities/opportunities/threats (Zairi 1993).

The QFD methodology has to be seen, however, as a way to evaluate these changes not as a solution. Financial services top management must understand it before trying to implement it. Hence QFD can be defined as a tool to translate customer demands into company capability to improve services, products or business operations in order to optimise organisational performance and meet (or exceed) customer expectations, if economically feasible.

8.6 - Summary and Conclusions

In this chapter the QFD methodology was reviewed in order to show how it can be applied in financial services. Several definitions of QFD were presented (Section 8.2), however, it was emphasised that the QFD methodology is not a quality initiative in itself.

In reality, the QFD methodology is a systematic means of analysing customer requirements and deploying them towards planning and developing services, products and business operations with high quality to customers at a most reliable and feasible conditions.

In Section 8.3 the core QFD matrix ("The House of Quality") is presented and each of its nine elements ("WHATs", Customer Competitive Assessment, "HOWs", Relationship Matrix, Set Specific Targets, "How Much", Target Goals, "The Roof", and Concept Evaluation) were described.

The three methods to apply QFD are discussed in Section 8.4, they are "The Matrix of Matrices Method"; "The Four Phases Method" and "The Integrated QFD Approach™". All methods drive towards maximising efficiency and minimising costs for companies' services, products, however, it is thought that "The Integrated QFD Approach™ " is more suitable for service industries. Additionally, the set of management tools called "The Seven New Tools", which are used to support the QFD methodology implementation were presented. These tools were developed in Japan to be used primarily by non- manufacturing managers.

Some guidelines to QFD implementation are offered in Section 8.6. This was followed by a list of procedures to perform "The House of Quality" (Section 8.7). Then, a critical evaluation of the QFD methodology is discussed in Section 8.8.

Finally, although it can be said that the QFD methodology produces results when used properly, financial service organisations' top management should always beware of the extent to which they are willing to apply it, in order to avoid pitfalls. Some potential benefits and problems of implementing QFD, as described in the literature, are described below with highlights of their implications for financial service organisations (Table 8.1). The QFD methodology will be used as the core tool to support the research proposed TQM framework developed to be applied in financial services organisations in order to

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enhance current TQM programmes implemented. This framework will be fully presented in Chapter 9.

Table 8.1 - Potential Benefits and Problems of Applying QFD in Financial Services

Benefits	Problems
<ul style="list-style-type: none"> • The power of focus, by identifying and visibly communicating what matters most to customers. QFD improves the efficiency of any process through focus efforts (Zultner, 1992). In financial service organisations, focus efforts are fundamental in order to get short term results needed without loosing the total quality long term commitment. 	<ul style="list-style-type: none"> • QFD project fail because poor project definition; lack of management support; and insufficient training and resources to multi-functional QFD team (Liner et al., 1992). It means, top managers in financial services must be fully committed to the QFD project and its resources demanded, otherwise the QFD efforts will be fall apart without any positive results.
<ul style="list-style-type: none"> • The use of QFD technique facilitate the inclusion of key customer requirements in the service package in a systematic and cost effective manner (Ghobadian and Terry, 1995). To reduce the gap between customer expectation and perception of services and products delivered is the key to any quality management programme. By applying QFD, financial service organisations can increase customer satisfaction at a most economic way. 	<ul style="list-style-type: none"> • The majority of service organisations possesses a very wide customer base, each with different requirements. Also, in the service context it is imperative to take into account the requirements of internal as well as external customers. These are points that need to be carefully built into the QFD process (Ghobadian and Terry 1995). In financial service organisations these problems can be minimised by the already existing wide range of information in the customer accounts' file in each branch. Hence the QFD multifunctional team can have the necessary starting information for each project to be undertaken.
<ul style="list-style-type: none"> • QFD gets things moving more quickly because planning takes place at an earlier stage and mistake interpretations of priorities and objectives are minimised (Zucchelli, 1992). However, top managers in the financial service organisations have to bear in mind that the planning process usually demands time. 	<ul style="list-style-type: none"> • QFD is a very time consuming process. Any attempt to get instant results will probably be disappointing (McElroy 1989 and Harper et al., 1992). Top managers of financial services organisations must be aware that there are no short cuts to accomplish the QFD process.

- QFD provides the framework for employees to become empowered, where not only do they have the power to make decisions but also have the responsibility and the accountability for the major outcomes of a task, project, activity or action (Bicknell and Bicknell, 1995). Financial services organisations need the organisations' members to be empowered and involved in the companies goals in order to get them motivated and committed within the quality process and then avoid the current sceptical environment existing in the past couple of years.

- QFD problems are related to the level of knowledge and understanding of the technique itself. Some are related to cultural aspects in which QFD was found to be incompatible with existing cultures which tend to be predominantly functionally oriented and where activities are driven by individual contributions. Other problems were related to the frictions/conflicts in team building, thus highlighting once again the inexperience of working in teams (Zaire, 1993). Once again here it is suggested that in order to successful apply QFD in financial service organisations top management must have a clear communication towards the QFD project objectives and a good educational programme for all people involved in the process.

Chapter 9: A Framework to Apply TQM Employing OFD

9.1 - Introduction

This research provides an assessment of TQM processes in the banking sector in the UK and Brazil. It was very clear from the research findings that financial service organisations are willing to achieve the quality revolution that was brought from Japanese manufacturing to the West in the 1980's.

It was observed, however, that there is an absence of a TQM conceptual framework to be used in the financial service sector. As a result many banks are applying quality based on conceptual models either adapted from manufacturing or generalist service quality models (Senne, 1989; Smith, 1989; Cheng et al., 1996, Longbottom and Zaire, 1996). In this study three models (The Five Gaps Model; Japanese 5 "S"; and ISO 9000) were identified as the most commonly used among Brazilian banks surveyed. In the UK definite conclusions could not be made because of the reduced number of companies participating in the interviews. Thus, in this chapter, a framework based on the TQM literature and focused on the total quality improvement approach is proposed.

It is intended here to present a framework in which the primary concern is the need of organisations top management to understand the importance of TQM elements in order to ensure that the organisational culture and values are conducive to quality improvements. As Dale and Cooper (1994) pointed out, TQM cannot be "implemented", despite some writers and management consultants talking about the implementation of such programmes; they must be *practiced, lived and nurtured*.

The proposed framework aims to provide a better understanding of how a TQM philosophy can be placed at the core of the organisations business strategies. How can it enhance current Brazilian banks TQM programmes in order to get a real differentiation in the quality environment, which will bring a desirable and sustainable competitive advantage.

9.2 - Current Approaches to TQM Programmes

The fieldwork has shown that, in the UK and Brazil, financial service organisations have implemented TQM programmes in order to cope with competition, reduce costs and attain customer demands for quality products and services.

The outcome in Brazil has been a mixture of successes and failures in delivering the desirable operational effectiveness and in creating productivity gains and better quality standards for products and services delivered to customers as described in previous chapters. The problem centres on which of these new quality standards can be quickly learned and copied by competitors. Applying quality in this way can produce some short term gains, but it may not bring long term competitive advantage nor enhance shareholders profitability.

Recent surveys investigating the status of TQM within financial service organisations in the UK (Longbottom and Zairi, 1996), conclude that no best method of implementation emerges. However, those organisations, which focused on the hard/tangible elements of TQM, have achieved the greatest progress with implementation and improved performance. They moreover, identified that only a small number of organisations are taking on TQM as an overall part of their corporate strategy.

TQM is in its early stages in the financial service industries in Brazil. This can become a way to survive in the tough and even global competitive environment. However, TQM is not only a way to improve efficiency through best practice. It is a new paradigm for changing organisational environments; employee behaviour; and customer behaviour and expectations.

9.3 - Necessary Organisational Changes

For successful implementation of TQM, organisations have to develop cultures that support changes. They have to embrace the ideas, to promote an openness that encourages dialogue and the expression of conflicting points of view. Tuckman (1994) pointed out that TQM has become more explicit as a managerial attempt at cultural transformation.

The distinct contribution of TQM is to provide the ideological support for this process in the name of 'quality' and, through 'cultural change' to challenge traditional practices.

The introduction of TQM allows further organisational changes. For example the breakdown in role demarcation, enhancing the development of a more flexible division of tasks. One of the key features that distinguishes TQM from other types of organisational change is that successful implementation of TQM frequently results, not only in redistribution of resources and power, but also in a paradigm shift that brings into question members' most basic assumptions about the nature of organisations (Reger et al., 1994).

Changing a culture is not a matter of teaching people a pack of new techniques, or replacing their behaviour patterns with new ones. It is a matter of exchanging values and providing comprehensive models which can help them to change attitudes.

In financial services the cultural changes concern top management's perception of the need for active management of the banker-customer relationship. The primary objective being to enhance customer perceptions of the quality of the service actually received and thereby equate these with customer expectations (Howcroft, 1991). Thus, the process of change in an organisation can be a difficult task if top management does not perceive and balance the differentiation among the organisational aims, customer's expectations and employees' needs.

There are two specific cognitive barriers that tend to undermine the acceptance of new programmes (Reger et al., 1994). First, as schemes are composed of a finite set of constructs, individuals may be unable to comprehend fully the meaning of the changes. Secondly, changes that are framed in concepts as opposed to positively valued elements of organisational identity are likely to be resisted.

Thus, failure to understand TQM may introduce concepts that have little meaning to an organisation's members because the concepts are not part of their existing organisational identity. Unless training specifically establishes cognitive links between TQM concepts and the organisation's core identity constructs, their level of understanding is likely to be superficial rather than the deep understanding that is necessary for action (Reger et al., 1994).

TQM is a philosophy of never ending continuous improvement, which allows slow but effective changes. In financial services, the tough and unpredictable environment enforces the need of occasionally applying drastic changes to cope with short term market demands. This is perfectly fulfilled by reengineering. Nevertheless companies embracing TQM have created the proper cultural environment for change. This allows the adoption of new tools as a way to achieve the desired short term improvement.

Finally, the changes which have to occur in the financial service industries through quality programmes can be illustrated by interpreting the eight steps required to transform an organisation towards TQM (Kotter, 1995).

1. Establishing a sense of urgency; examining market and competitive realities; identifying and discussing crises, potential crises or major opportunities.

In financial services undergoing a TQM transformation, this step can represent the top managers ability to transform the environment's threats into a solid promotion of change needed in the company's core management, and to motivate people through new leadership. In many cases companies fail because they lack an understanding of the necessity to change. This arises as a function of good financial position, closed mind management, and lack of leadership.

2. Forming a powerful guiding coalition. Assembling a group with enough power to lead the change effort. Encouraging the group to work together as a team.

This step represents the commitment of the chief executive officer and senior management to form a team of quality leaders, a coalition team. They will spread news of the philosophy changes through the company's members. These groups can have a small number of members but they must be committed to the TQM programme and the chief executive officer has to be the group leader. If there is no support from the head of an organisation towards the change process it will be difficult to achieve it.

3. Creating a vision to help direct the change effort. Developing strategies for achieving that vision.

This step fits directly within the TQM philosophy. Where top management has to create a vision and develop a strategic plan to enable company members to achieve the organisational aims. This vision has to be a guide to the company's members to find the way in which the company is moving through the TQM programme.

4. Communicating the vision. Using every vehicle possible to communicate the new vision and strategies. Teaching new behaviour by the example of the guiding coalition.

This step again fits into the TQM philosophy. There will be no change if the coalition team cannot communicate the vision, which has to be spread throughout the company's members and customers. If the coalition team is unable to communicate the vision, or if that vision is so complex that it cannot be fully understood by the company's members, the transformation process may be jeopardised.

5. Empowering others to act on the vision. Getting rid of obstacles to change. Changing systems or structures that seriously undermine the vision. Encouraging risk taking and non-traditional ideas, activities and actions.

This step has a special appeal to a total quality programme. Since integration, leadership and empowerment are an essential part of TQM. Thus, successful transformations begin to involve large numbers of people as the process progresses.

6. Planning and creating short term wins. Planning for visible performance improvements. Creating these improvements and recognising and rewarding employees involved in the improvements.

This step has a special significance for the financial service industry. The need of short term results to keep the motivation and self belief of top management and share holders in the TQM programme is crucial to the continuing transformation. The lack of

short term results can strengthen the resistance to change, which may breakdown the process.

7. Consolidating improvements and producing still more change. Using increased credibility to change systems, structures and policies that don't fit the vision. Hiring, promoting and developing employees who can implement the vision. Reinvigorating the process with new projects, themes and change agents.

TQM is a process of never ending improvements. Schemes have to be improved from time to time in order to encourage the organisation's continued growth and cultural transformation. Until changes have sunk deeply into a company's culture, a process that can take from five to ten years, new approaches remain fragile and subject to regression (Kotter, 1995). Morgan (1997) argued that many TQM programmes have become trapped in old bureaucratic patterns and cultural norms, leading to failure rates in the region of 70 per cent.

8. Institutionalising new approaches. Articulating the connections between the new behaviours and corporate success. Developing the means to ensure leadership, development and succession.

A new corporate culture should be reinforced with continuous educational programmes among the members. Recruitment and selection should be designed in such a way that the new players, who join the company, will be those who have a profile suitable for the corporate success transformation.

9.4 - The Need for a New Approach

Doggett and Hepple (1996) suggested that many banks have traditionally taken a short-term approach to marketing. The banking sector can no longer afford the expense of short-term tactical changes of direction. Instead they need strong medium-term strategies that will ride out short-term constraints, strategies where costs are predictable and planning can be effective. Relationships with the customers will be a cornerstone of these strategies.

Studies carried out by Cheng et al. (1996) and Longbottom and Zaire (1996) suggested the need to develop conceptual models for assessing and implementing TQM programmes in financial service organisations. Further, they argued that there has been little effort to use existing theory to develop a comprehensive model of TQM in banking institutions.

Financial service organisations are in a highly turbulent environment, where products and technologies are constantly changing and often have a very short life span. This means that a company has to search for new ideas and opportunities on a continuous basis. Applied TQM programmes have possibly been seen as an approach which is concerned with removing inefficient methods and irrational practices and achieving work motivation. However other fundamental quality issues are not adequately addressed (Dotchin and Oakland, 1994).

In the findings of the Brazilian fieldwork (Chapters 6 and 7) some points could be identified that might have had a better outcome if some considerations about the TQM elements had been taken in a more comprehensive way. For example, in companies of group 1 (Brazilian government owned banks) there was a clear lack of commitment from the top management (Leadership commitment) and very little attention was paid to organisational culture and human resource management in order to promote necessary changes towards the TQM philosophy. It can be said that Brazilian banks, with the exception of multinational banks such as Citibank, have developed very few meaningful measurement procedures to follow on the quality improvement processes which they were trying to promote. It was also identified that some companies which applied for ISO 9000 standards, have done this more as a way to promote their image among consumers

rather than a rational and committed implementation of quality standard procedures in their organisations.

The empirical evidence analysed in Chapters 5, 6 and 7, combined with the points identified from the quality management literature review (Chapters 3 and 8), motivated the proposed TQM framework. This framework is thought to provide a way to develop and improve the quality management programmes implemented into the Brazilian banking organisations surveyed. It is based in the elements of TQM identified in Chapter 3 and takes careful consideration of the present status of the TQM programmes in Brazil, as they have been described in Chapters 6 and 7.

In the following sections the framework is described and the framework's theoretical background is discussed. This is followed by the methodology to implementation and an applicability test based on the findings of the Brazilian fieldwork. It is important to notice that the framework is thought to be applicable for financial service organisation in Brazil and in the UK. However, the limited sample population in the UK fieldwork made it difficult to draw general conclusions about the effectiveness of the framework in the UK banking sector in this research. Nevertheless, the UK findings can provide a good illustration of some positive and negative effects of a well performed TQM programme.

9.5 - Framework: Description and Theoretical Background

The framework is seen as a means of presenting ideas, concepts and plans in a non-prescriptive manner. It is not a "how-to" guide for TQM. The "how-to" guides are usually based on a step-by-step approach, they tend to have a set starting point, follow a single route and in general are rigid. In contrast, a framework allows the user to choose their own starting point, specific course of action and develop the individual elements of TQM at a pace which suits their business situation and available resources (Dale, 1994).

From the literature review in Chapter 3, TQM was presented as having three major requirements: "*Total*" which involves participation of everyone in the organisation;

“Quality” which means meeting customer requirements and *“Management”* which is the element of enabling organisations for Total Quality. Further TQM was defined to be composed of ten elements (Figure 3.4 page 55): Organisational Culture; Human Resource Management (HRM); Customer needs and expectation; Benchmarking; Training; Tools; Teamwork; Leadership; Empowerment; and Measurement.

These elements form the theoretical background in which the TQM Framework proposed here was developed. A brief discussion of these elements and their role in the framework are presented below in order to provide a bridge between the theoretical background and the graphic representation of the TQM framework shown in Figure 9.1.

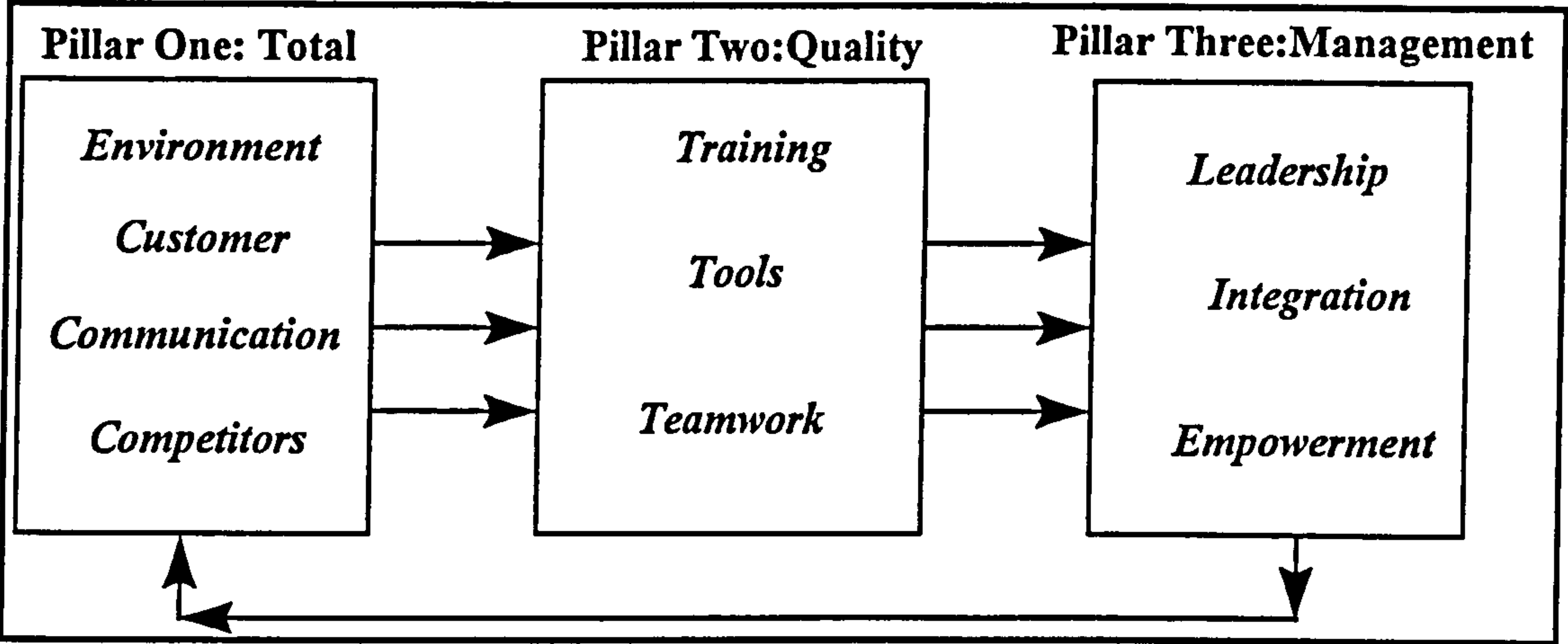


Figure 9.1 - The TQM Framework Proposed: Graphic Representation

The framework represents such an analytical approach which could enable top managers to address the necessary issues for improving the TQM process in financial service organisations. The framework is composed of three pillars.

The first pillar is called “Total”. This is seen as the starting point to approach TQM in financial services organisations. This pillar involves organisational analysis of both the internal and external environment. Here the quality mission strategy must be defined. Its clear purpose, marketing and customer segments, and boundary conditions have to be established.

The second pillar is called “Quality”, it is conceptualised as the TQM systems and tools. In this stage the planning, training and designing of the services and products take place. Quality improvement is achieved by training an organisations members and employing quality tools and techniques in order to satisfy customer’s requirements. This pillar represents a way to combine the TQM aims defined in the first stage of the Framework (“Total”) within the organisational capability towards achieving the desired quality improvements.

The third pillar “Management” is seen as the agent of integration among people, customers, and competitors. This intends to enable the organisation’s members to deliver the services designed, as reliably and economically as possible. Morgan (1997) suggested that in order to achieve the quality improvement aims, it is necessary to transform the companies environment to break down old structures enabling empowerment and creating a new positive leadership towards accomplishing the programmes objectives. Then, encouraging an organisations members to create “language” mind-sets, and values that make learning and change major priorities. Here, potential problems may be identified and at this stage the measurement of the quality processes plays a crucial part in the TQM programme. Then returning the information gathered in the measurement process into the first stage in order to enable the company to review and to improve the quality process, a never-ending improvement culture has been established.

Each of these pillars is composed of different components (Figure 9.1). These components are associated with a set of steps towards the completion of each stage of the framework methodology implementation to be presented in the following section. Apart from this, these components are linked to the ten TQM elements (Chapter 3 - Figure 3.4). Some of these theoretical elements are represented in a straightforward fashion by one of the framework's components; others are represented in more than one of the framework's components. These links are described below.

First pillar “*Total*”:

“Environment”, involves the establishing of trends in the social-political, economic, technological, competitive, and organisational environments by top managers. These trends have to reflect the limits on existing resources, organisational culture, capability, investment, and opportunities for growth. It will then enable top managers to establish strategic objectives, define quality improvement development areas, foresee new players and establish the boundary conditions to be used in the TQM process.

This component is seen as a representation of two TQM theoretical elements: Organisational culture and HRM, where the knowledge of the existing organisational culture and the investigation of the organisation’s resources, competitors, market and capabilities provide information on where changes are needed. A quality management organisation must be based on comprehensive development of human resources. HRM has to concentrate not only on development skills or task-orientated educational programmes, but on building a well motivated management team and workforce.

“Customer”, this component is direct linked to the TQM element, Customer needs and expectations. This means satisfying the customers needs and expectations that are a core aim for the TQM process. The customers can be internal or external to the organisation. The degree to which customers are satisfied, often depends on identifying who they are. Then finding out what their requirements are in order to meet them at every stage of the companies operation processes. Understanding and fulfilling customer requirements can improve competitiveness, reduce costs and eliminate rework. The key element in the attainment of the right objectives of the TQM programmes are the correct identification of customers requirements. Haywood (1988) argued that a service organisation has "high quality" if it meets customer preferences and expectations consistently. The key element in the attainment of the right objectives of the TQM programme is the correct identification of customer requirements and expectations

“Communication”, means top management delivering a clear communication of the TQM strategic aims throughout all levels of the organisation. TQM has to start with total management commitment to the quality programme, which has to be perceived throughout all the members of the organisation, who bring the corporate quality image to customers.

Only with a high degree of participation of all the organisation's members can quality be achieved.

The HRM element is linked to this component. The HRM function should be used to redefine culture and communicate through all the organisations levels the new TQM philosophy. These will be the values and beliefs put forward in the organisations culture.

In a recent study concerning the changing role of top management in leading multinational corporations (Bartlett and Ghoshal, 1995), it was suggested that when people in the organisations clearly understood corporate objectives, they measured their own performance against those objectives. Receiving the same information as their supervisors, those in middle and front-line positions usually reach the same conclusions as their bosses. More importantly, the arrangement allows front-line managers to fix problems at their own level instead of sending variance reports up the hierarchy and then waiting for top-down judgements.

In financial services the full involvement and total commitment of the branch managers with the aims of the TQM programme is crucial to the enhancement of the whole quality process. Howcroft (1992) suggested that branch managers are the single most important determinant of service standards in a retail bank branch network.

“Competitors”. Banking is an industry where the products and services delivered are almost standard, and the rules to be played by are highly regulated by government bodies. Competitors have to be studied in order to learn what mistakes they make in meeting customer's expectations. In this market any innovation from the implementation of new products or new technology can easily be followed by competitors. Only by observing and understanding the weakness of competitors in fulfilling customer needs, can managers add information to the quality plan. The improvements achieved by studying competitors are often difficult to perceive. As a result, they can be an important source of competitive advantage. This does not diminish the importance of conducting a critical analysis of the company's own mistakes.

This component is linked with the Benchmarking element; quality management is a process of never ending continuous improvement. To focus organisational efforts on continuous improvement requires organisations to benchmark competitors and internal best practices in order to accelerate improvement and galvanise changes.

Second pillar “*Quality*”:

“Training”, is a TQM theoretical element which is itself represented in the framework. All members of the organisation need to be trained in the methods and concepts of quality. This training integrates basic skills improvements and the job skills necessary to improve the quality in the organisations operational processes. TQM involves cultural changes, people need to be aware of the quality programme, understand the values relating to quality and be equipped with tools and techniques for quality improvements. Training is an essential component of the proposed framework, it is represented in this pillar.

“Tools”, like training, tools is another component linked in a straightforward way to the TQM theoretical element. The TQM process requires tools and methods that can be applied to improve performance. Using and understanding the right tools can help organisations to identify and resolve quality problems effectively and efficiently.

The quality management tools are Pareto diagrams, cause and effect diagrams, histograms, control charts, affinity diagrams, relation diagrams, tree diagrams, matrix diagrams, brainstorming, etc. In the framework proposed the use of Quality Function Deployment (QFD) methodology is recommended in order to enable organisations to systematically analyse customers’ requirements in order to plan, design and define training programmes towards quality improvements. QFD is not seen as a compulsory tool in the framework methodology, but it can be a source of competitive advantage if it is successfully implemented at the right time.

It should be emphasised that whenever and wherever there is a “customer-supplier” relationship, both internal and external, the basic principles of QFD methodology can be

applied. This would allow the QFD methodology to be used in the “Total” pillar and in the “Management” pillar as well. Further, it can be said that customer’s requirements can be “cascaded down” to every level of the organisation by deploying The House of Quality downstream.

The QFD methodology (described in Chapter 8) demands a strong commitment and involvement from senior management. It requires cross department participation, an extensive training programme, participation of senior management and a shared vision towards quality improvement aims. The combination of using QFD in conjunction with other tools can offer organisations a bridge between the companies quality management aims and the daily operations processes by incorporating them into the development of new products, services and to specify training programmes needed to achieve them. It does this by mapping the customers requirements, reflected in the company’s mission and strategic objectives, into the planning and development process of the organisation.

In Figure 9.2 it is stressed how QFD can fit into the quality process as described in detail in Chapter 8. The companies top management have to allow time for multi-functional teams to work through the dynamics of QFD, and understand their roles and responsibilities. Top management must endow the team with purpose, responsibility, and focus. Table 9.1 highlights some important considerations which help to define the purpose of QFD with top management and team members, as described in detail in Chapter 8.

Table 9.1 - Top management and QFD Team Major Considerations

Project Objectives Considerations
<ul style="list-style-type: none">• Identify purpose of QFD project• Define expected results• Define how they (the expected results) can be delivered• To whom and when they will be used
QFD Operational Considerations
<ul style="list-style-type: none">• Define team members activities• Evaluation of resources constraints such as budget; schedule or departments involved• Define to whom the team will report results and how team success will be measured• Analysis of company information available to start the process

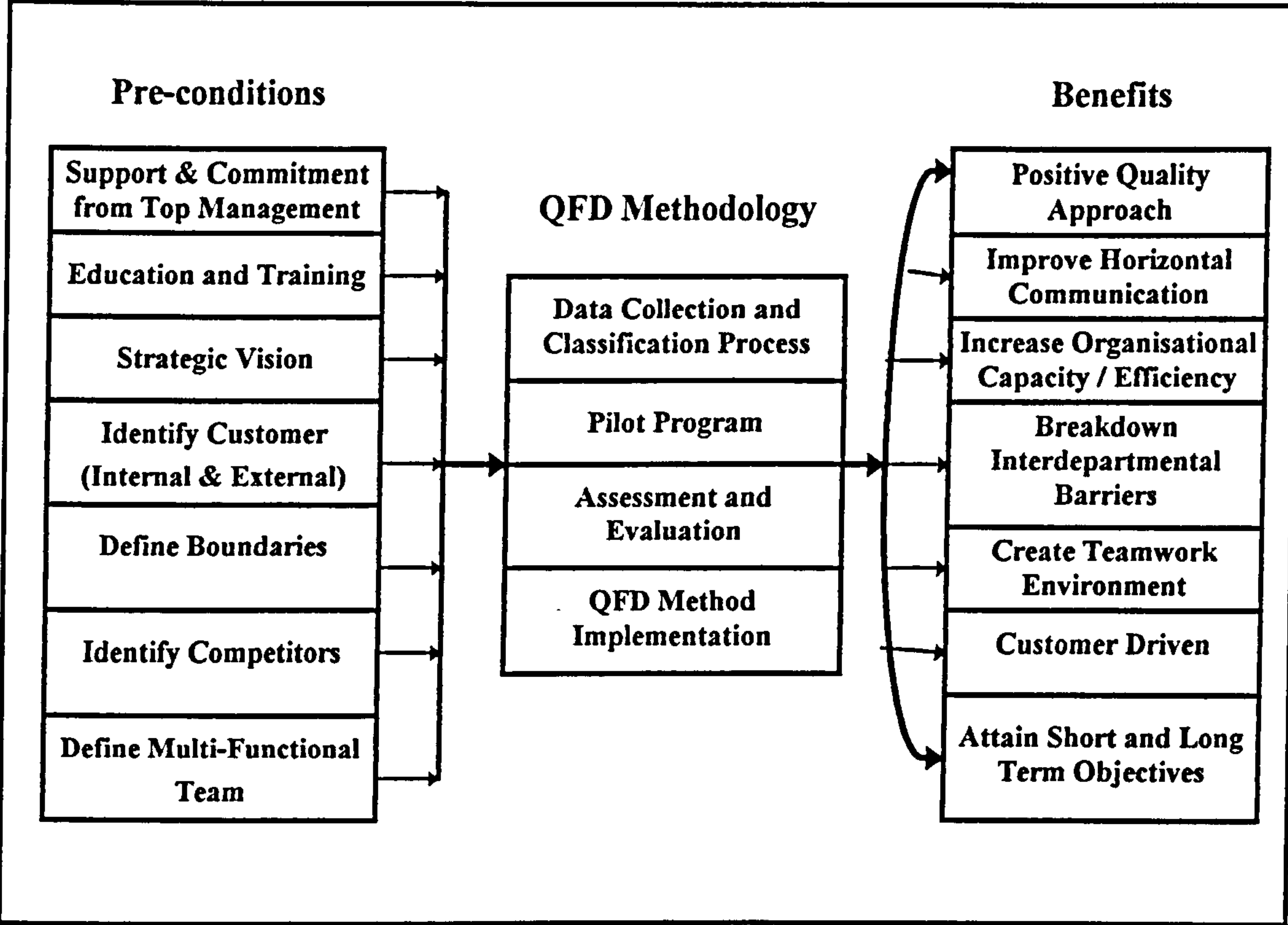


Figure 9.2 - Guideline to Fit QFD Methodology in the Quality Process

"Teamwork". This component, itself, represents one of the ten TQM theoretical elements. Team working is the key to success in every organisation. Teams are a useful way of determining issues, involving those who must indicate solutions, and they are crucial to the management of continuous improvement, or driving forces for successful quality management programmes.

Third pillar *"Management"*:

"Integration", this is the breakdown of rigid structures; closed mind sets; entrenched cultures with reflected values, behaviours and skills that are not adapted to TQM programmes. Creating an environment where an organisation's members perceive that they can increase their power as they work together as a team and expand their knowledge.

This integration will create a strong force for change that can promote a full association between managers, staff and customers. Financial service organisations are very labour intensive, and their staff come into frequent contact with the customer. Therefore teamwork, co-operation and motivation are crucial for delivering quality products and services.

The TQM element, measurement, is represented in this component. No improvement can be made if it cannot be measured. A successful TQM process depends on having the appropriate measurement procedures to ensure that the quality initiatives are working as planned.

"Leadership", leadership and continuing support for the TQM process is the single most critical success factor (Porter and Parker, 1993). Leadership involves a total commitment from top managers to supervision within the principles of TQM, its thoughts and practices. Leadership is about quality committed senior management. It is this which will ensure that the principles of TQM are fully implemented, continually sought and improved in practice. Leadership is itself represented in this pillar.

It has to start with the company's board and top managers. They must be the foremost buyers of the quality actions prioritised in the second stage. They have to lead and support with openness and objectiveness the company's vision.

The motivation of a new leadership will be initiated, becoming the agent of change in the quality transformation. They will replace the old hierarchical structure, and then invigorate a management style based on mutual belief, rewarded by the accomplishment of common goals.

"Empowerment", like leadership, empowerment is represented as itself in this component. Empowerment is a fundamental element of the TQM philosophy. A real total quality process has to empower all members of the organisation in order to enable them to deliver quality services and products to customers first time and every time. Empowerment means senior management's recognition that the majority of problems and barriers to

achieve quality goals can be identified and solved by employees. Therefore, it is a crucial element for a total quality organisation.

This is the natural output of a well implemented TQM programme. It promotes freedom to employees to use their initiative in matters of customer care. Additionally, this freedom creates an environment of trust which enables staff to act towards the company's cultural transformation without fear. Kleiner and Kim (1996) argued that the most important way to achieve service excellence is through people. Empowering employees to improve their knowledge and skills for customer satisfaction and build up *"relationship banking"*.

9.6 - Methodology for Framework Application

Considering the features of each pillar of the proposed framework, a methodology for its implementation was developed. These are shown on Tables 9.2, 9.3, 9.4 as a set of steps to be taken and are intended to be a guide to those organisations that are either starting up or on the way to improve their quality programme. The columns in the tables represent the main methods to be considered and each column is related to the components of each framework pillar (Figure 9.1).

TQM is a never ending improvement process. A company should always strive to do better, until they are the best in the world. Although some companies arguably would not want to go beyond a certain stage due to limitations in resources, marketing opportunities, etc. The methodology (Tables 9.2, 9.3, 9.4) is intended to offer a set of actions which might help Brazilian banks achieve the desired TQM environment. However, Brazilian banks should be aware that in order to achieve TQM they need to accumulate continuous quality improvements. Several actions steps presented in Tables 9.2, 9.3, 9.4 can be implemented in parallel, but some have to be implemented sequentially at different stages of the quality improvements development. This means that Brazilian banks should try to achieve the next quality stage only after previous levels of quality have been achieved. For example:

Level 1 should be: Creation of a long term strategy for quality improvement and its integration within the companies business plan; Development of the company's vision and a mission statement; Defining quality improvements priorities.

Level 2 should be: Executive leadership and commitment; Employees involvement.

Level 3 should be: Regular assessment of customers (internal and external) requirements and satisfaction levels.

Level 4 should be: Benchmarking the company's own performance against best practices of major competitors.

Level 5 should be: To apply quality tools and techniques such as QFD in order to improve the quality of products and services. For example, to apply the four phases of QFD (Figure 8.6, page 210, Chapter 8) to improve the mortgage application procedures:

Phase 1- *Product or Service Planning* - In this initial phase customer requirements such as the number of forms to be filled; the speed of the process; the level of information given either in the branch or by phone; etc. are translated into technical requirements. These could be defined in terms of personnel availability in the branches and the bank phone service, IT resources and additional features of mortgage applications, etc. The technical requirements identified will be carried forward to the second phase.

Phase 2 - *Product or Service Design* - Technical requirements carried forward from phase 1 are translated into "part characteristics". Here, the details and components necessary to produce the product or service are determined. The key outcomes of phase 2 will determine the critical "part characteristics", such as training requirements, to be carried over to phase 3

Phase 3 - *Process Planing* - In this phase, a matrix is developed showing the processes required to produce the product or service. The characteristics determined in phase 2 are translated into process characteristics. The process characteristics that emerge in phase 3

(e.g. numbers of lines available for the mortgage phone services) are selected in order to best fulfil the product or service requirements specified by the customers. These are carried forward to phase 4.

Phase 4 - *Process Control Planning* - Process characteristics are assigned specific control methods in order to establish the systems that need to be implemented to support the processes selected in phase 3. These processes control methods are established for areas such as quality control and training. The key outcomes of phase 4 will be the evaluation of process operations for achievability and the establishment of production planning requirements for improving the mortgage application procedures

Level 6 should be: Self-assessment programmes such as the European Quality Award (EQA) or the Brazilian National Quality Award (PNQ) (Chapter 4) which is based on the Malcolm Baldrige National Award (MBNA).

Level 7 should be: Benchmarking against best practices within global banking organisations, specially those companies which are already banking in Brazil.

TQM will not happen overnight, it may take 3 to 5 years for a company achieve all these levels. Thus, in order to achieve TQM top Brazilian managers have to bear in mind that it has to evolve through several stages. Each stage depends upon identifying the quality improvement level according to the degree of sophistication of the technique being employed. If Brazilian banks only aim to provide a ‘three star’ service, they may not want to become a ‘five star’ company? However, they should be fully aware of the level of services their competitors can, and would, be prepared to provide.

In the following section an applicability test stimulated by the findings and analyses of the Brazilian fieldwork presented in Chapters 6 and 7 will be used to illustrate the framework applicability and to discuss in detail each stage described in the framework methodology (Tables 9.2, 9.3 and 9.4).

Table 9.2 - Framework Methodology Pillar One “Total”

“Environment”	“Customer”	“Communication”	“Competitors”
<ul style="list-style-type: none"> • Formulation of long term strategy for quality improvement and its integration with business plans. • Definition of quality, TQM and quality improvement development areas. • Executive leadership and commitment to quality improvement strategy. • Establishing organisational quality steering team to facilitate ownership of TQM improvements. 	<ul style="list-style-type: none"> • Definition of market segments to be served. • Identify the customers. • Establish procedures to obtain the needs and expectations of customers. • Assess internal customers needs and expectations. • Identify motivation points for customers (internal and external). 	<ul style="list-style-type: none"> • Vision and mission statement should be developed and communicated. • Define channels of communications. • Considerations of the links between results from quality improvement and reward. 	<ul style="list-style-type: none"> • Identify the competitors. • Establish procedures to perform the competitors analyses.

Table 9.3 - Framework Methodology Pillar Two “Quality”

<i>“Training”</i>	<i>“Tools”</i>	<i>“Teamwork”</i>
<ul style="list-style-type: none"> • Training in the use of tools and techniques for the right people at the right time. • Provide education for key personnel. • Forming multifunctional quality improvement teams. 	<ul style="list-style-type: none"> • Perform competitive benchmarking to compare your own performance to other organisations. • Identification of other standards that may be required by customers, legislation or marketing demand. • Identification of applicable tools and techniques such as QFD at each stage of quality improvement. • Establishment of measures and quality indicators that validate the objectives and goals of the organisation. 	<ul style="list-style-type: none"> • Assigning of multifunctional teams for each quality improvement process. • Forming new committees, new teams and new departments, or hiring new specialists to help the process as and when required.

Table 9.4 - Framework Methodology Pillar Three “Management”

“Leadership”	“Empowerment”	“Integration”
<ul style="list-style-type: none"> • Acknowledging the role of people as an asset. • Recognising and rewarding quality improvements. • Establishing leadership and commitment to quality improvement in all management level. 	<ul style="list-style-type: none"> • Establishing local ownership of quality improvement. • Empowering and motivating people to do it right every time. • Promoting customers' forums to discuss the expected performance. 	<ul style="list-style-type: none"> • Identification of factors which indicate that the organisational culture is changing. • Periodical evaluation of the programme, redesigning or revising it when needed. • Assessing the TQM progress towards world-class performance considerations e.g. EQA or Baldrige.

9.7 - Applicability Test

The test presented below has as its main objective to provide some insight into the prospective applicability of the proposed framework. The set of actions discussed are based on the framework methodology presented in Tables 9.2, 9.3 and 9.4; on the research findings (Chapters 5, 6 and 7); on the researchers own experience in the Brazilian financial service organisations and on some documentation provided by the organisations which took part in this study in Brazil. The outcome may have different results in terms of improvements, prejudices and practices using different data or groups of companies. However, this hypothetical exercise can indicate how the proposed framework may help Brazilian financial service organisations to improve the TQM process adopted.

It is important to note that the applicability test covers the full framework implementation, in order to illustrate the framework's methodology. Although several points of the methodology can be implemented in parallel, some have to be implemented sequentially, at different stages of the development, in order to allow previous improvements to be achieved before the company even try to apply those discussed in Section 9.6.

To demonstrate the applicability of the framework methodology proposed, one of the Brazilian company groups assessed in Chapter 6 was selected; Brazilian Banks Owned by the Federal Government. A summary of the findings of the Brazilian fieldwork from the companies of group 1 (Brazilian Banks Owned by the Federal Government) are shown in Table 9.5. The applicability of the framework methodology will be presented and potential improvements that would be achieved are also discussed.

Table 9.5 - A Summary of the Status of TQM in the Brazilian Companies from Group 1

Approach:

- Mostly change driven through creating awareness and motivation about quality issues among employees and the front line management team in order to promote organisational restructure;
- TQM programme based on Japanese model 5 “S” , Five Gaps Model and MBNQA;
- Formal Quality Department in the headquarters which the major function is advising companies top management in quality improvements plan.

Strengths

- Initial motivation of the front line management team;
- High investment in staff training;
- Focus on customer care and quality of services and products.

Weaknesses

- Alienation of top management not involved in the quality improvements goals;
- Lack of commitment;
- Lack of understanding of TQM elements leading to a wide use of quality models with a very low achievement rate;
- Start plan with high expectations and investment in training in the front line with a lack of commitment from the centre, leading to early failure with little benefits.

Majors Problems

- Lack of commitment from top management; resistance to change; cross department conflicts; organisational culture; company size and conflict between TQM and organisations short and long term strategy.

Majors Improvements

- Raise quality awareness among the organisation members; improve quality standard in product/service; raise customer satisfaction.

Perceived Success of TQM Programme

- The majority of branch managers perceived their company TQM programme has had minor importance or no effect in companies overall performance.

Measurement Procedures Adopted

- No specific quality measurement procedure had been implement yet. Group 1 companies are only using market research and market share analyses to assess quality improvement progress.

Applying the TQM Framework in companies of group 1:

Pillar one -“Total” (Table 9.2) - At the first stage, the framework is concerned with the starting point of the quality improvement process and the defining strategies which are necessary to introduce TQM. The TQM aims have to be tuned to the companies business strategy in order to maximise efforts to satisfy customers, motivate employees and generate profitability for shareholders.

“Total - Environment”

- *Formulation of long Term strategy for quality improvement and its integration with business plans.*

In the Brazilian fieldwork findings it could be observed that companies whose managers were interviewed associated their business strategy with the TQM process, these were the organisations in which branch managers perceived the best results in quality improvement as reported in the questionnaire survey. Thus, companies in group 1 could start their TQM approach by defining quality improvement within the company's business strategy. In addition to recognising that TQM is a long-term strategy, these organisations must also have a short-term strategy which is a characteristic of the industry. However, the short-term quality improvement strategy should be consistent and integrated with the long-term strategy and not in conflict with the TQM objectives as was pointed out in Table 9.4.

- *Definition of quality, TQM and quality improvement development areas.*

The definition of quality, TQM and quality improvement development areas should be made based on the companies quality improvements and the strategic objectives which have been formulated. For example, would a bank be likely to start the TQM process at the administration level or in a particular operational/customer service area. Any company defining quality should consider the customer's stand point and base quality on their own needs and expectations. Also, defining and naming the TQM process, can create a sense of process ownership among an organisation's members. In the companies of group 1 it could

help to break down the resistance to quality improvement changes proposed and create new values to be incorporated into the organisations culture.

- *Executive leadership and commitment to quality improvement strategy.*

The chief executive officer and the senior management team should, first and foremost, buy into the TQM concept and lead and support the quality initiative. Top management should take care to ensure that the organisation's culture is suitable to foster TQM. Organisational culture has to agree with the basic quality values and visions.

The level of top management commitment and involvement in the TQM process is identified as strongly related to effectiveness of quality improvements in the Brazilian fieldwork (Chapter 6). For instance, in companies from group 3 senior management was identified as very committed and in companies of group 1 senior management had a low commitment. Branch managers from group 3 regard their TQM programmes as successful or very successful and managers from group 1 regard their companies programmes as neutral or non-effective.

Getting top management committed to TQM is easier said than done. The companies' board should be involved in educational programmes, in order to learn the quality management philosophy and understand the TQM elements to decide if they will be fully committed in the quality process. The researcher strongly believes that if senior management commitment cannot be achieved the company might be better off without a TQM programme rather than start such a change driven process without the organisations core management team committed to it.

- *Establishing Organisational quality steering team to facilitate ownership of TQM improvements*

The TQM steering committee should comprise top managers representing as many departments and areas of the organisation as possible. It would be desirable that people from HR or Personnel Departments be involved as well. Unfortunately, besides departments of quality and productivity, no quality steering committee were identified in

the Brazilian fieldwork. However, it could be observed that in organisations where the TQM process was carried out by managers from a HRM background, the motivation and attention to TQM elements were much more evident in the quality initiatives adopted than in organisations where only managers from marketing or retail departments were in charge of the quality improvement process adopted.

For example; in companies of group 1 and group 2 (without formal TQM programmes), where TQM programmes were perceived as low or non-successful, they had no managers from a HRM background involved in planning the quality initiatives. However, in companies of groups 3 and 2 (with formal TQM programmes), where TQM programmes were perceived as successful, they had managers from the HR departments as a base in the formation of the quality and productivity department established, to develop and implement the quality process.

The steering committees main objective is to provide the support and motivation for all areas of the organisation towards achieving quality improvements as defined in the companies TQM strategy. This committee would emphasise the senior management commitment, within the TQM process, throughout the organisation.

“Total - Customer”

- *Definition of market segments to be served and identify the customers.*

In a country where a couple of years ago the financial service sector used to obtain fifty per cent of their income from inflation revenue, it is not surprising that bankers have lost contact with their customers. Thus, in this step, the definition of market segment and identification of customers are crucial. The extent to which the quality improvement process as reflect customer requirements depends on how well organisational links extend into the customer chain that the company wants to serve.

- *Establish procedures to obtain needs and expectations of customers.*

Establishing procedures to evaluate customers (internal and external) needs and expectations is a very important starting point in the quality improvement programmes. The evaluation could enable top managers of companies in group 1 to identify customers requirements to be used in the next framework pillar ("*Quality*"), assess the current status of the organisations culture, identify resistance to change among internal customers and their requirements in order to move the process forwards. Internal assessment could take place annually and external assessment could occur four times a year. These evaluation procedures could be carried out by using customer surveys and mystery shoppers.

“Total - Communication”

- *Vision and mission statement should be developed and communicated*

At this stage, senior managers should develop and then communicate and display the vision and the mission statement. It is important that these statements are cascaded down through the organisation. These would help companies of group 1 to unite and focus the organisation resources towards its main quality improvement objectives. It must not be forgotten that the support and involvement of middle management are essential as much as is that of senior management.

- *Define channels of communications*

In order to communicate vision and mission statement, channels of communication have to be defined. Channels of communication can be company's newsletters; video; e-mail or any other written or audio improvement programme. The key issue here is to keep alive the quality vision and the main objectives of the quality improvement programme. The steering committee should guarantee that all existing communication channels are used to deliver the vision and mission statements. As such the necessary support to all levels of the organisation carrying out the quality process is provided.

- *Considerations of the links between results from quality improvement and reward.*

Celebration and communication of success play an important part in the TQM process. These include the recognition of both individuals and departments. Companies of group 1 after an initial highly motivated quality improvement programme, began to let their management team and staff down, losing the TQM programmes momentum due to lack of purpose and commitment. Linking quality improvements and rewards would keep these organisation's members motivated and committed in adding value to the TQM process.

“Total - Competitors”

- *Identify the competitors and Establish procedures to perform the competitors analyses.*

It is identified in this research that Brazilian companies emphasise pressure from competitors as one of the majors factors leading them to apply TQM. Nevertheless, in the interviews, when managers of group 1 were asked about which competitor was the front runner in quality improvement, the answer was multinational banks, which definitely cannot be considered by these organisation as direct competitors. It is important to point out that only after March 1997 did the Brazilian government allow multinational banks to expand their retail operations in the country. Therefore, at the time this research was carried out, the biggest single multinational bank retail operation in Brazil represented a branch network of twenty four branches and less than one hundred thousand clients, where the companies of group 1 had at least one thousand branches and an average of two million clients. Additionally, the multinational organisations usually provide banking for the middle to the upper classes and companies of group 1 have a more mixed range of customers of Brazilian society.

Thus, identification of competitors is considered in the framework as a key element in order to develop the quality improvement process which can enable companies to gain competitive advantage within their own market environment. Otherwise, an organisation's resources and efforts would be used towards achieving improvements in a very small part

of the companies business operation. Then it may eventually be wasted if it shows a lack of contribution in terms of the business's overall performance results.

Pillar two “Quality” (Table 9.3) - Having accomplished the ideas of the previous pillar, it would be expected by now that organisations in group 1 in this stage of the framework could be involved in the development of a quality system to provide the necessary controls and standards to the required improvements. It comprises training, use of TQM tools and techniques to aid quality planning, listening to the voice of customers, capturing data, controlling processes and of course it involves all the organisation’s members.

“Quality - Training”

- *Training in the use of tools and techniques for the right people at the right time.*

Training should be carried out in relation to systems and techniques to be adopted. For example, training about the ISO standards and regulation should be provided for the organisation's members at the moment that the companies of group 1 are considering registering for the ISO 9000. Further, the company should also emphasise training programmes, the why and how, the benefits gained by applying quality improvement.

The more people are aware and engaged with the quality tools and techniques adopted by the company, the more they can contribute to quality improvements goals. Then, new quality initiatives can be brought up among individuals and teamwork groups.

- *Forming multi-functional quality improvement teams*

Multi-functional teams are an important feature in the development and execution of any quality improvement programme. Multi-functional teams are a task force created to carry out quality improvement projects, it should be formed from managers of all departments involved in the quality improvement task. It is important here to not mistake

the steering committee with multi-functional teams. Multi-functional teams are project-oriented and they could promote more integration among departments and create a quality chain among all organisational areas in the companies in group 1. This could improve middle management, staff morale and commitment to the TQM programme.

- *Provide education to key personnel*

Evidence from the fieldwork suggests that companies of group 1 do not use quality control tools. It is very important to provide education programmes for members of the steering committee in order to help its members to be up-to-date with the theoretical evolution of the TQM philosophy and its elements. In addition, people who will be involved in the multi-functional teams should be engaged in educational programmes which provide training in the quality tools and techniques such as benchmarking and QFD. This is considered very important in developing a customer driven quality process for financial service organisations in Brazil.

“Quality - Tools”

- *Perform competitive benchmarking to compare your own performance to other organisations.*

Brazilian banks in general seldom use benchmarking procedures. The use of competitive benchmarking could provide a leap forward in a TQM programme adopted by companies of group 1. It would give top management some reference to potential best practices achieved by competitors in the same industry or best practices of companies in the Brazilian service sector. The information collected could also be used to raise top managers commitment to TQM programmes in companies of group 1.

- *Identification of other standards that may be required by customers, legislation or market demand.*

Identifying and implementing an industry's quality standard requirements can be a good way to increase a company's commitment to quality improvement processes. Besides the natural benefits of the adoption of quality standards, such as registration to the ISO 9000 series or industry ombudsman standards, these standards can promote quality awareness among managers, staff and customers. If the formal industry standard already exists they should be developed and improved.

- *Identification of applicable tools and techniques such as QFD at each stage of quality improvement.*

When the use of quality tools is raised people only think of statistical process control. Quality tools involve a much broader range of technical and managerial tools such as affinity diagrams, tree diagrams, histograms; etc. The framework proposition employing QFD means that organisations should be encouraged to use quality tools which enable them to control and assess their own performance, to enable them to act immediately to get things right for the customers, and to improve continuously.

QFD is a methodology which can enable organisations to check, measure, record, analyse, decide and take action. It also facilitates cross department communication and problem solving. However, top managers must bear in mind that QFD is a very complex and demanding tool, as reviewed in Chapter 8. It takes a long time to plan, train and gain commitment from top management and multi-functional teams. The QFD effort can be a complete waste of resources if it is not carried through in a proper way.

Nevertheless, it has been used as a powerful and efficient quality tool with good results in Japanese organisations and in some of the best practice organisations in the West, such as IBM, Xerox and HP. The steering committee should start piloting QFD on a simple assignment, for example: to define specific objectives, types and priorities of training programme carried out for the organisations members to achieve the aims of quality. Further, when the QFD methodology has been piloted and implemented successfully, it can then help the organisation to identify customers' key requirements that

can be met cost effectively, ensuring customer satisfaction at an acceptable cost to both producers and consumers.

It is important to notice that by employing QFD companies can become more customer orientated, however, the time and the right moment to apply QFD should be carefully considered by top management in terms of timing, specific training needs, and commitment within the process. Apart from the many benefits of QFD, there are some limitations associated with it (Chapter 8). QFD is a very time consuming process and any attempt to get instant results will probably be disappointing. To apply the QFD methodology successfully the financial service organisation should have achieved a customer oriented culture; rely on teamwork and multidisciplinary team approaches; create an environment which regards everyone down-stream as a customer; attempt to eliminate bureaucracy and internalise the QFD methodology and use it as a matter of course.

- *Establishment of measures and quality indicators that validate the objectives and goals of the organisation..*

The development of quality indicators can provide companies own quality standards for all members of the organisation and customers in a very efficient way. These quality indicators would provide companies of group 1 with a set of quality targets. For example, define the speed for customers to be served in the branch by a cashier and define the time for answering the telephone calls. It could provide a good starting point for companies in group 1 to measure the efficiency of quality improvement areas by fixing these objectives and communicate them to the customers. This could create a clear quality standard among customers, then open a communication channel where customers can complain if the standards are not met.

“Quality - Teamwork”

- *Assigning of multifunctional teams for each quality improvement process.*

Involvement, participation and cross department teamwork activities provide the necessary ownership and commitment among an organisations members. Assigning multifunctional teams for developing and implementing quality improvement activities creates ownership and commitment among team members. As a consequence the teams behaviour can spread throughout the organisation. In companies from group 1 this teamwork activity could create a positive management behaviour towards TQM such as understanding, commitment, leadership and continuing support for the TQM process. These would increase motivation, cross department involvement and commitment from managers and staff.

- *Forming new committees, new teams and new departments, or hiring new specialists to help the process as and when required*

The TQM process is very dynamic. It requires a variety of skills and activities. This step, concerns the identification by the steering committee of the need for new skills to add value to the process. It is thought that a company engaged in a TQM process should never finish quality improvement, when the initial aims are achieved, rather, the organisation should be prepared to review new ways of improvement from the steps already achieved and maintain the never ending continuous improvement philosophy. For instance; Companies from group 1 could form one committee with the purpose of developing quality improvement measurement procedures.

Pillar three “Management” (Table 9.4) - The framework is not a "straight jacket" to quality, but it is intended that through following this set of ideas at the right time the quality philosophy will flow naturally in companies of group 1. By pillar three, quality activities should start to happen naturally, the whole organisation should by now be contaminated with the quality culture. This stage can be said to be the culture change stage, where the TQM continuous improvement philosophy has to be perceived, measured

and applied on behalf of customers and their needs, the organisations members and shareholders.

“Management - Leadership”

- *Acknowledging the role of people as an asset and Recognising and rewarding quality improvements.*

Acknowledgement and recognition can be a valuable tool for improving employee morale, self-interest and interest in TQM. Having considered the links between results from quality improvements and reward in the pillar one stage, now a reward system can be established. The reward system, however, must be managed carefully, taking into account a highly qualified staff. The research findings show how the management perception about these issues are low in Brazilian companies from group 1. If companies of group 1 promote a well planned and consistent reward scheme, in which the recognition of success of both individuals and departments could be rewarded by certificates and trophies, special bonuses and gifts (e.g. dinners, holiday trips), it will raise managers and staff involvement and morale.

- *Establishing leadership and commitment to quality improvement in all management levels.*

The requisite leadership can be demonstrated by senior management visiting branch networks on a regular basis, holding discussions with people at the operating level and also with customers. This can display vision and passion, encouraging participation and innovation. Likewise, branch managers must be encouraged in their dealings with staff to emphasise the importance of customers, quality, value-added and the companies image as a quality improvement organisation. These are strong contributions to culture change, communication improvement and the organisations members involvement in the TQM process. All of these seemed to be ignored in the companies in group 1.

“Management - Empowerment”

- ***Establishing local ownership of quality improvement.***

Companies of group 1 might not have achieved better results from their TQM programmes, because of a lack of participation and commitment from all the organisations members. At this stage the framework is concerned with management and staff who should be encouraged to participate in the TQM process in their daily core activities, in order to create individual and departmental ownership in the quality improvement initiatives. It could be done by introducing a “*Quality Improvement New Ideas*” competition where members of staff can be rewarded for providing new ideas and innovation in order to improve customer service in their daily activities. These ideas should be collected, managed and judged by the steering committee in such way that all ideas should be acknowledge and rewarded from publication in the company newsletter to some sort of financial reward. It is very important that the rules and reward procedures are clearly communicated throughout all the organisations levels. Besides potential benefits for the organisations, this would improve participation, ownership and commitment among the organisation who are members of group 1

- ***Empowering and motivating people to do it right every time.***

By now it is expected that senior and middle management are aware of the companies quality activities and it should be natural that they get more and more involved in a wide range of team activities, which stress leadership style and promote individuals activities and the involvement of everyone in the TQM process. This provides the necessary empowerment and motivation to create a culture of do it right every time, among an organisations members.

- ***Promoting customers' forums to discuss the expected performance.***

It is very important to empower the customer as well as the organisations members. Creating channels through which customers can be taken to gain their

perception of the organisations performance, are a very powerful way to achieve customer awareness about the companies quality improvement commitments. This can increase customer satisfaction and provide useful feedback for improving products and services. A multi-functional team could be assigned to interview a random sample of customers about the company's quality services and products in order to promote customer feedback. It would improve the quality improvement process of companies from group 1 and create a more customer driven regime for quality improvement goals.

“Management - Integration”

- *Identification of factors which indicate that the organisational culture is changing.*

Culture change is not just relevant to quality improvement, although TQM makes some form of culture change a necessity, in particular within companies of group 1 in which the organisational culture is characterised as centred and bureaucratic. Thus the current status of the organisational culture from both management and employees perspectives should be identified and measured on a periodic bases in order to evaluate how the necessary changes established in pillar one are moving forwards with the quality improvement initiatives adopted. In promoting changes, senior management should be prepared to solve conflicts and any resistance to change, which is likely to be encountered among middle management and staff.

- *Periodical evaluation of the programme, redesigning or revising it when needed.*

Measurements procedures should involve evaluating the success or failure of the TQM programme. This should be conducted periodically (e.g. annually), with feedback mechanisms for continuous improvements. For example, if the programme is not achieving its goals, the causes could be identified and new quality initiatives used. It should be redesigned and improved rather than postponed, as was the case for companies in group 1, which caused demotivation and a waste of the companies resources.

The absence of measurement procedures reduces the TQM process to nothing more than a ‘flavour of the month’ scheme, which raises an organisations resistance to

change, produces dissatisfied customers, demoralised organisations members and wastes an organisations resources.

- *Assessing the TQM progress towards world-class performance considerations e.g. EQA or Baldrige*

Self-assessment methods are not the only means of introducing a process of quality improvement into an organisation. It is only when an organisation has put into place a number of the elements of TQM, that they will be in a position to use any self-assessment method to best advantage. It is difficult for a company to assess what has not been fully implemented. These methods expect the basic fundamentals of TQM to be already in place. Many authors (Ansell, 1993; Dale, 1994; Oakland, 1993) considered that an organisation needs at least three to five years experience of the TQM process before considering the use of self-assessment methods.

Summary of the Applicability Test

This test was intended to illustrate the applicability of the proposed framework in the Brazilian banking sector. Although this test was discussed employing the Brazilian companies of group 1, it is believed that other Brazilian banks surveyed or even the UK banks, may benefit from some of the ideas in this framework. Furthermore, the test illustrates the potential improvement that should be achieved by Brazilian banks owned by the federal government (companies of group 1), if the frameworks three pillars are adopted. Following are the some of the benefits of implementing the framework in companies of group 1.

- Definition of company's Long and Short-term strategy towards quality improvement aims. Then communicate these throughout all the organisations levels and customers.
- Creation of a TQM steering committee composed of top managers and managers from the HR or personnel department. The committees main objectives are to plan and support quality improvement activities and motivate the organisations members towards

achieving quality goals. The existing quality department should provide the technical and educational advice to the steering committee.

- Improving communication channels.
- Establish the use of TQM tools and techniques.
- Creation of measurement procedures for each quality improvement activity.
- Link quality improvement with reward for managers and staff.
- Identification of cultural change towards the quality improvement process.
- Realisation of the need to periodically review quality improvement activities instead of just postpone it when anything goes wrong.

9.8 - Discussions and Conclusions

In this chapter a framework to implement TQM in financial service organisations was proposed. This was also discussed in the light of the ten TQM elements presented in Chapter 3. Finally the methodology to implement it and an applicability test for Brazilian banks from group 1 was presented.

The framework proposed is not intended to be a prescriptive rule or a "straitjacket" to apply TQM in financial service organisations. It is thought, however, that by following its three stages, Brazilian financial service organisations should have their TQM programme results improved. One advantage is that it begins with companies' top management, understanding the quality management philosophy and defining the quality improvements goals. Apart from this, it induces top management into looking after customer requirements and company resources for meeting these requirements, by experiencing and learning from the quality process. As Harte and Dale (1995) suggested, companies which have had most success with TQM programmes, are those in which the senior management team has been prepared to think through the quality issues for itself, make mistakes, and learn from them.

It was identified in the research carried out in Brazil that the most applied TQM schemes are: The Five Gaps Model, Japanese 5 'S' and ISO 9000. The Five Gaps model is an excellent quality design model which provides a blue print for the design and the development of quality goals, meanwhile the Japanese 5 'S' is more a quality awareness type model. The Japanese 5 "S" is a very powerful tool to promote quality awareness among people inside organisations and to mark the starting point of the quality improvement change process. The ISO 9000 standards have the greatest value to promote desirable quality standards and organise operations and processes in the organisations.

Apart from these schemes, there are several conceptual models that top management in service organisations may employ in pursuit of quality improvement. Some of these models are highlighted below and the primary focus of each approach are also shown (Table 9.6).

Table 9.6 - Primary focus of Service Quality Management Models

Model	Primary Focus of the Model
Organisational service quality improvement (Moore, 1987)	The model provides a framework for launching an overall quality improvement programme. It highlights the steps involved in an organisational quality drive and the pertinent factors at each stage.
Service quality Trade-offs (Haywood-Farmer, 1988),	The model facilitates the identification of quality trade-offs using three salient services attributes. There are: (a) degree of customisation; (b) degree of labour intensity; (c) the degree of contact and interaction.
Service Journey (Nash, 1988) and Customer processing (Johnston, 1988)	These two models focus primarily on operational issues. They depict the stages of the experience at each stage on the formation of expectations and perception of quality. They are useful in highlighting the operational areas of a service organisation that influence the quality issues.
Behavioural (Beddowes et al., 1987)	This model stresses the importance of the behaviour of the delivery personnel on the perceived quality. The vital quality factor according to this model is the balance between the customers' and staff expectations. The model also stresses the importance of the delivery system.

All the schemes discussed above have as their main context applicability and focus on specific quality issues. The study carried out by Ghobadian et al. (1993) suggested that a quality model should ideally enable the organisations top management to:

- (1) identify sources of quality;
- (2) discover the quality problems;
- (3) pin point the causes of the observed quality problem;
- (4) offer possible courses of action.

None of the models discussed meets all of the above criteria. Each model focuses basically on one or two of the areas. The framework developed for use by financial service organisations, particularly in the Brazilian banks surveyed, has certain similarities with those developed for use in the generic service sector and to some extent with those applied in manufacturing organisations. However, it is intended to provide a broader analytical approach to quality that enables financial service organisations to encompass all the above criteria, by focusing on the TQM elements, addressing the role of top management, management team, staff and customers. Furthermore, the measurement issues for assessing and reviewing the quality improvement processes are addressed. It can enable top management to understand the quality issues as a dynamic process involving the relationships among an organisations resources, customers expectations and employees needs, rather than a set of static standards to be achieved.

Nevertheless, it must be borne in mind that any conceptual framework or model has many limitations, which concern corporate culture and human behaviour, thus directly affecting the quality of an organisation and its products and services. Although a generic quality framework has the advantage of channelling the efforts of the organisation in the appropriate direction, it is important to be aware of the limitations of any approach (Ghobadian et al., 1994).

It is clear that without a strong commitment from top managers in creating the correct organisational environment, where TQM objectives can be trusted and shared by all the organisation's members, this may compromise the quality improvement programme. One should also be aware that aiming only at short-term quality improvements, may eventually lead to a waste of resources.

Chapter 10 - Conclusions and Recommendations

10.1 - Introduction

The aims of this research were to analyse and to evaluate the TQM process (strategies for implementation and perceived effects) in the financial service organisations in the UK and Brazil. Further it was intended to develop a theoretical framework to implement TQM in financial companies in order to enable academics, practitioners and financial services top managers to implement a more comprehensive TQM programme which is believed to be needed in this industry.

The fieldwork was carried out in the UK and in the Brazilian retail banking sector. These were aimed towards assessing the current situation of TQM in this industry, and the strategies adopted to implement quality in both countries. These two fieldwork were accomplished by applying a research method composed of a questionnaire survey among branch managers in the UK and in the Brazilian banking sector. And a set of interviews with senior managers in charge of quality initiatives (strategies for implementation and programmes development) in the organisations surveyed in both countries.

The mainly objectives of the fieldwork were to assess the status and the perceived effects of the TQM programmes by branch managers, also, to identify key strategic issues and the conceptual models used for implementing TQM in financial service organisations. Additionally, an extensive literature review was conducted in order to assist the fieldwork development and analyses as well as to support the development of the proposed TQM framework for Brazilian financial service organisations.

10.2 - Research Critique

From a methodological standpoint, the survey research method used in this study has made it possible for the researcher to gather both types of data: quantitative from the questionnaire survey and qualitative from the structured interviews. The analyses of both types of data have contributed to a greater understanding of quality management issues in financial service organisations surveyed in Brazil and in the UK. However, as a piece of research conducted under several constraints, there are some weakness that can be identified.

As has been pointed out in Chapter 2, there are several methodological limitations to this type of study, mostly related to the use of the survey questionnaire and interview techniques, where a limited number of companies were selected mostly in the UK banking sector. This study has the following limitations:

(1) The number of interviews carried out in the UK banking sector was very small. One of the most vexed areas for many researchers is quite simply getting into organisations. Jackall (1983) carried out an interview-based study in four US companies but was denied access by thirty-six companies. Sutton (1987) initially contacted twenty dying organisations, but was refused access by twelve. Both of these authors remark that the experience of refusal is not always entirely negative, it sometimes affords the possibility of collecting some relevant information. In this study, from the eight organisations in the UK which denied access for interviews, some of those sent some documentation describing the quality management programmes undertaken. However, the situation of having only two interviews in the UK made it impractical to draw major conclusions about the status of TQM in the UK financial services.

(2) The use of self-administered questionnaires has some limitations which cause concern such as; respondents can read the whole questionnaire before starting to answer the first question, so that answers to early questions may be influenced by their knowledge of the later ones, perhaps making answers more consistent than they would be. The researcher can never be certain who has answered a self-administered questionnaire. However, the use of questionnaires is usually quicker than interviews and in this study the sample population (Branch managers) have very little or no time for external researchers. Thus conducting a self-administered questionnaire enabled the researcher to collect a large amount of data in the limited period of time imposed by the boundary conditions of a Ph.D. scholarship, three years research.

(3) Although at certain points in the analysis, additional data from Brazil would have been useful, it was very difficult for the researcher to obtain this from his academic base in England. Certainly, additional data would have provided more information and enhanced the details in the findings. However, the presence of additional data would be unlikely to alter the general conclusions of this study, however they would have provided a greater precision to some of the figures discussed in the thesis.

(4) The questionnaire sample population could be greater in the UK, which might enable the researcher to compare the TQM issues raised among organisations surveyed in the UK in order to identify differences and similarities with the Brazil sample surveyed. However, since only two companies were committed to participate in the UK interviews, this kind of analysis would have very little significance and bring little strength of evidence to the conclusions.

On the whole, it is believed that these limitations serve as warnings against allocating numerical and statistical confidence to the findings, rather than denying the significance of them in providing sufficient strength of evidence to the conclusions. In this

respect, the empirical aspect of this research can be treated as a descriptive work which has served to do several things. It has:

(1) Highlighted issues connected to the conceptual understanding of quality management in financial service organisations.

(2) Related the important role of values in the strategy of implementation and effectiveness of TQM programmes as they have been applied in the banking sector in the UK and Brazil.

(3) Described the current situation of the Brazilian retail banking sector and the contextual moment when the so called quality movement arrived in this sector in Brazil.

(4) Propose a conceptual framework as an alternative to implement or enhance the TQM programmes in the Brazilian financial services organisations. A description of issues that are relevant to the improvement process are presented; the definition of the concept of quality, performance and effectiveness of organisations and the use of quality function deployment (QFD) in financial services, as an alternative to enable a never ending improvement philosophy focused on customer needs.

10.3 - Findings Summary and Conclusions

The descriptive accounts in this research has potential for providing the quality management researchers, particularly, those from Brazil and the UK, with a deeper understanding of the TQM movement in the financial service sector in both countries.

There is strong evidence to suggest that organisations are seeking to achieve the TQM philosophy in both countries and TQM programmes had been rated as important for most of the organisations surveyed (Table 10.1).

Table 10.1 - The Importance of TQM in the UK and Brazil Financial Services

	Important	No Effect	Not Important
The UK Banks	56 %	31 %	8 %
The Brazilian Government Owned Banks	65 %	32 %	6 %
The Brazilian Private Banks	90 %	8 %	-
The Brazilian Foreigner Owned Banks	97 %	-	-

It was, however, identified that in only a few organisations whose managers was interviewed that TQM is integrated into their companies business strategies in both countries. TQM was confirmed to be a recent phenomenon in this industry, the UK organisations and multinational banks in Brazil had started their programmes a few years before the Brazilian private and government owned banks. Overall TQM had an average of less than 5 years of implementation when the survey was carried out.

The findings suggested that organisations are struggling in managing the conflict between long term TQM commitment and the banking industry traditional short term business demands. No best practice to implement TQM has been identified. In fact evidence shows that organisations are using several conceptual models to implement quality, but most of these had been implemented only partially. Companies are using different models for different situations in order to reduce costs, improve processes, and increase quality of services and processes, but these models did not seem to be fully suitable for the implementation of a more holistic TQM programme in the banking sector. The evidence enforces the need to present a TQM framework as a conceptual alternative to the TQM implementation for this industry.

It was discussed that the Brazilian and the UK banking sectors, have some similarities. They are almost equal in terms of services, products, and channels of delivery. The major differences were that in Brazil there are not Building Societies and that in the UK financial service organisations are bigger either in terms of assets as well as in terms of the customer base.

In both countries evidence suggests that organisations implemented TQM for the same reasons (pressure from competition, pressure to reduce costs, and customer demands for better quality in products and services). Nevertheless, it was pointed out that the source of these reasons are quite different in each country. Where in the UK the competitive pressure came from a market heavily banked, with almost 75 per cent of adult population already having a bank account. Banks also face fierce competition from the non-traditional competitors, such as some big high street retailers, which have already a strong reputation for quality among customers. Further in recent years customers have increased their knowledge about financial services in the UK with strong support from regulators (Bank and Building Societies Ombudsman) and customer associations.

In Brazil, the source of pressure are different. The banking sector is in the middle of a transformation era. After two decades of high inflation banks now have to learn how to live without the inflationary earning (accounted for nearly 49 per cent of the total bank's income) and rebuilt a more efficient and reduced market. Additionally, the new deregulation in the Brazilian financial services, brought to the country powerful international specialist such as HSBC, Lloyds TSB among others who are planning to come.

Hence, in the UK it can be said that financial services organisations are implementing TQM in order to increase their capability to compete towards offering better quality services and products to customers. In Brazil it seemed to be the way to rebuild the industry and get some source of competitive advantage to cope with the new and stronger competitors.

In terms of quality initiatives in the UK organisations were using many programmes to improve quality such as TQM, BPR, Customer Care, Competitive Benchmarking, and Quality Standards (ISO 9000/ BS 5750). Brazilian organisations were relying on investing heavily in IT, TQM programmes, and ISO 9000 credentials (the most popular quality initiatives in the Brazilian financial services). Nevertheless, it was perceived that Brazilian organisations are seeking quality standards in order to enhance their image among customers rather than a real commitment to the TQM philosophy. The UK organisations, like most of the multinational banks in Brazil, are the clear front runners in terms of quality achievements. However, job losses and the absence of TQM as a part of the companies business strategy raise some scepticism among employees and customers.

In common with other empirical studies, this research finds that TQM can improve quality standards, raise quality awareness among customers and employees and reduce defect levels. Also a very high proportion of failure was identified if top management are

not committed to the programmes, which may lead to a significant cost to the organisation involved. Most TQM programmes may fail simply because the organisations lack understanding about the TQM philosophy and as a result creates a strategic mismatch among desired targets, implementation approach and customers expectations. In addition to these, companies efforts are short-term focused and lacking solid theoretical foundations for implementing a TQM programme.

10.4 - TQM Framework Summary and Conclusions

The fieldwork findings show that the current TQM programmes in the financial services in the UK and Brazil are used towards reducing costs, improving processes and increasing awareness about quality in financial services. There is, also, evidence that companies adopted a variety of conceptual quality models used to achieve short-term goals, most of these models are adapted from the manufacturing sector.

Three of the most used conceptual models (The Five Gaps Model, Japanese 5-S and ISO 9000) identified in the fieldwork were discussed, and none of them were thought to be fully fitted for implementation of TQM in financial service organisations. These confirmed that there are a lack of quality management conceptual models to implement TQM in this sector.

From the fieldwork analysis and the existing quality management theory, a comprehensive framework was developed in order to enhance the implementation of TQM in banking institutions. The QFD methodology was employed in the proposed framework. It is used not as a compulsory tool but as an alternative for combining customer requirements and companies resources into each stage of products, services and business processes throughout planing, training and designing stages, so as meet customer needs and company's goals. The timing to adopt the QFD methodology has to be decided considering the right time and organisational culture.

The TQM framework proposed is composed of three major pillars as follows:

TOTAL, which is the input of the TQM process. It is the learning point, where top managers have to perform a systematic analysis of company's cultural environment organisation capability, customers and competitors in order to define priorities for the programmes, quality goals and to review the communication system.

Quality, which is the core process stage in the proposed framework. In this part the planning, training and designing of services and products take place. Quality improvement is achieved by training an organisations members and employing quality tools and techniques in order to satisfy customers' requirements. It is done by translating the TQM priorities into measurable actions to achieve quality goals.

Management, which is the output of the TQM framework. It was defined as the agent of integration among an organisation members, customers and competitors. In this stage leadership commitment, employees empowerment and vertical integration will be the necessary outcome to deliver the quality process desired. Also to provide the necessary feedback which will be added to the TQM process for continuing improvement.

In conclusion, competition, deregulation, new competitors and technology are changing the shape of the financial services. This is forcing all institutions to examine the way business is being conducted. If banks are to become leaders in the financial services industry, they have at least to meet customers expectations. Top managers must be committed to quality and must communicate the importance of quality services throughout the organisation. Thus, the proposed TQM framework is a primary issue of concern for top managers in understanding the quality process that they want to implement, then to secure the quality initiatives that will work perfectly on demand. Finally, it addresses the role of managers, employees and customers.

10.5 - Recommendations for Future Research

The research contributions to the field of TQM in financial services are descriptive and exploratory-type, more research on the subject of TQM in financial services, especially in Brazil, are necessary to the development of the theory of quality management in this sector. Some of the issues which have been identified that require further investigation and can be recommended for futures research are:

- The generalizability of the findings, still require more studies to support them. This study identifies the current status of TQM in the Brazilian banking institutions and the distinctive characteristics between companies grouped by ownership. More focused studies using a combination of survey and case study methodology with a couple of organisations in each group surveyed in Brazil, for exploring the evolution of the present findings, would certainly enrich the understanding of the effects of the TQM process in the Brazilian banking sector.
- It was perceived in this research that the measurement procedures to assess customers satisfaction and quality improvements in financial services organisations are a further area which need to be researched in order to identify the effectiveness of the existing measurement procedures. Research to investigate the current measurement procedures used and its effectiveness would provide a valuable insight in this field. This can be performed by using the case study methodology in a couple of organisations in order to identify measurement methods and its effects, and a survey among the organisations customers in order to identify their perceptions about the improvements of quality of services and products offered. The findings can be compared in order to identify the effectiveness of the measurement procedures used by the organisations.

- This study was concentrated in the largest financial service organisations. It could also be extended to middle and small companies in order to identify if similar traits exist and possible differences concerning the implementation of TQM in these organisations. This will be useful to investigate what aspects of quality management are emphasised, and to learn the effect of TQM and the process of change in these organisations.

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APPENDIX 1

A typical Letter Written to an Organisation

(While survey in the UK)

August, 97



Dear Sir or Madam,

I would like to invite you to take part in my research about total quality management in financial service industries in our region. I am aware that you are under tremendous business pressure and have very little time for attending this kind of request, but I can guarantee that you will not take more than 15 minutes from your time to answer this questionnaire .

I hope you can give your contribution for this research which is the main part of a PhD project carried on in the School of Business Management, Newcastle University.

Please refer to the questionnaire attached to this letter for details about the objective of the survey as well as instructions on answering the questionnaire.

Finally, I would like to thank you for your co-operation and assure you that all information given is anonymous and will be treated in strict confidence.

Yours Sincerely,

C.R.J.Longo

PhD student Newcastle University

APPENDIX 2

Survey Questionnaire Applied in the UK

TQM- SURVEY

This survey is being undertaken by a research student from The Business School of Newcastle University - Newcastle upon Tyne- UK; as part of the PhD course. The sample are companies in the financial service industry in the UK. The objective of the questionnaire is as follows:

- To identify the usage of TQM(strategically & fashion) in financial companies in the UK.**
- To identify the key issues currently faced by the organizations in terms of : management commitment; training(educational approach); customer care and; strategic approach towards TQM.**
- To gauge the level of understanding of the TQM philosophy across the organization's managers.**
- To compare the standard of quality achieved and desired by financial companies in the UK.**
- To encourage managers to give their own opinions about day by day quality of work executed.**

There are no right or wrong answers. Your replies will be anonymous and all information provided in this questionnaire will be treated in strict confidence.

INSTRUCTIONS FOR COMPLETING THE QUESTIONNAIRE:

- Only one answer is required for each question
- Total Quality Management (TQM) is an organization-wide philosophy of management which emphasizes the need to meet customer needs precisely and to get things "right first time". Some organization called the TQM programmes as: 'Way of life'; 'Quality Service programme'; etc.' . In this survey will be used the contraction TQM.

- For questions which require an opinion, there is a grid of boxes to show grades of opinion. Please mark the box which most closely fits your opinion e.g.:
Question: *C.14 What have been the effects of implementing TQM in your organization? (please score the following statements where 5-Major Importance; 4-Minor Importance; 3- Uncertain; 2- Mostly False; 1- Definitely False)*

Increase Quality awareness ☐5 ☐4 ☐3 ☒2 ☐1

or

Question: C.12 What factors have led your organization to implement TQM?

Customer demand for quality ☒Major ☐Minor ☐No effect
 Importance Importance

- If you do not understand a question or it is unclear please omit the question and move on to the next
- The questionnaire is anonymous.
- Any information provided in this questionnaire will be treated in strict confidence
- The questionnaire should be answered and mailed until October/95

SECTION A - PERSONAL DETAILS

- A.1 Age Group ☐16-25 ☐26-35 ☐36-50 ☐50+
- A.2 Sex ☐Female ☐Male
- A.3 Years of Service ☐0-3 ☐4-10 ☐11-20 ☐20+
- A.4 Management Level ☐Junior/Trainee ☐Middle ☐Top/Senior
- A.5 Department _____
- A.6 Education
- ☐Certificate ☐Bachelors Degree ☐Master Degree ☐Other(*please state*)

SECTION B - COMMUNICATION APPROACH

- B.1 Does the company have a clearly defined mission statement?
- ☐Yes ☐No ☐Don't Know
- B.2 If your answer is yes, can you list the key features of the mission statement associated with the delivery of service quality to customers?
- _____
- _____
- _____
- _____
- B.3 Do the staff know the companies mission statement?
- ☐Yes ☐No ☐Don't Know
- B.4 Is the downwards flow of information smooth and efficient in the company?
- ☐Definitely True ☐Mostly True ☐Uncertain ☐Mostly False ☐Definitely False
- B.5 Is the upwards flow of information smooth and efficient in the company?
- ☐Definitely True ☐Mostly True ☐Uncertain ☐Mostly False ☐Definitely False

SECTION C - TOTAL QUALITY APPROACH

C.1 How many management levels are there in your organization?

☐Four ☐Five ☐Six ☐Other(*please state*)

C.2 How many hierarchy levels are there between your management level and the top management in the company's organizational structure?

☐One ☐Two ☐Three ☐Other(*please state*)

C.3 In relation to the company would you classify your branch as:

☐Large ☐Average ☐Small ☐Other(*please state*)

C.4 What are the majors barriers to introducing the total quality management programme in your organization?

Lack of Resources	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Cost Constraints	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Emphasis on Short-term goals	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Measuring Quality	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Communications	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Lack of Training	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Internal Environment	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
External Environment	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Skill of Employees	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Other (<i>please state</i>)	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance

SECTION C - TOTAL QUALITY APPROACH

C.5 Using your own judgement, attempt to list the critical success factors for your organization performance? (please at least 6 (six))

1-

2-

3-

4-

5-

6-

C.6 What are the principal changes that your organization needs to make to achieve its TQM aims?

Leadership	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Educational Programme	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Management Style	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Communication	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Customer's Segment	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Design of Product / Service	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Branch Design	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Measurement Procedures	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Other (Please state) <div></div>	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance

C.7 Has the company implemented TQM?

☐Yes

☐Planned

☐Discontinued

☐No

☐Don't Know

SECTION C - TOTAL QUALITY APPROACH

C.8 How long has TQM been implemented in your company?

☐Less than one year ☐1-3 years ☐4-6 years ☐6+ years

C.9 Has your organization achieved a recognised quality standard / certification?

☐Yes (please state) ☐Aiming for one ☐No ☐Don't Know

C.10 Does the company have a manual with formal TQM procedures to be followed?

☐Yes ☐No ☐Don't Know

C.11 How important has TQM been in supporting the companies achievements?

☐Major Importance ☐Minor Importance ☐No effect ☐Minor deterioration ☐Major Deterioration

C.12 What factors have led your organization to implement TQM?

Customer demand for quality	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Competitive pressures to reduce cost	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Competitive pressures to improve Service/Product quality	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
New Top Management	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Enthusiasm of Top Management	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Parent Company	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance
Other (Please state)	<input type="checkbox"/> Major Importance	<input type="checkbox"/> No effect	<input type="checkbox"/> Minor Importance

SECTION C - TOTAL QUALITY APPROACH

C.13 Who has primary responsibility for quality in your organization?

- ☐ Top managers ☐ Quality Control Specialist ☐ Line Managers ☐ All employees

C.14 What have been the effects of implementing TQM in your organization? (please score the following statements where 5-Major Importance; 4-Minor Importance; 3-Uncertain; 2-Mostly False; 1-Definitely false).

Increase Quality awareness	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Increase Employee morale	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Improve Team work	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Reduce Labour Turnover	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Reduce Absenteeism	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Improve Cost efficiency	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Reduce Defect levels	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Raise Customer satisfaction	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Increase Number of customers	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Increase Profitability	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Other (please state)	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

C.15 Is there a TQM educational training programme in the company for:

- | | | | |
|------------------|------------------------------|-----------------------------|-------------------------------------|
| Management Team | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Don't Know |
| Supervisory Team | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Don't Know |
| Members of Staff | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Don't Know |

C.16 Does the company have quality circles or any other scheme in which members of the management team and other staff meet to discuss operational problems etc. ?

- ☐Yes ☐No ☐Don't Know

SECTION D - ASSESSMENT PROCEDURES

D.1 What are the principal ways of measuring customer satisfaction in your company? *(please score the following statements where 5-Major Importance; 4-Minor Importance; 3-Uncertain; 2-Mostly False; 1-Definitely false).*

Market Research	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Number of new Accounts	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Number of Accounts Closed	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Mystery Shopper	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Market Share	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Customer Face to Face Contact	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Other (Please State) _____	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

D.2 How are total quality improvements measured in the company? *(please score the following statements where 5-Major Importance; 4-Minor Importance; 3-Uncertain; 2-Mostly False; 1-Definitely false).*

Customer Feedback	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Number of complaints	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Quality's Cost	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Other (Please State) _____	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
It is not Measured	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
It cannot be Measured	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

APPENDIX 3

A typical Letter Written to an Organisation

(While survey in Brazil)

Rio de Janeiro, 08 de Abril de 1996

Prezado(a) Gerente,

É com imensa satisfação que venho convidar - lo(a) à participar na primeira pesquisa em gestão pela qualidade total (GQT) nas instituições financeiras do Brasil.

Este projeto é financiado pelo MEC através da CAPES - Coordenação de Aperfeiçoamento de Pessoal de Nível Superior e, é parte do meu projeto de tese de doutorado (PhD) na universidade de Newcastle - Inglaterra.

A pesquisa consiste no preenchimento do questionário anexo e postagem no envelope selado e pré - endereçado fornecido.

O questionário deve ser respondido anonimamente, não sendo necessário nenhuma identificação da agência ou empresa do gerente pesquisado. Todas as informações recebidas serão tratadas com total confidencialidade.

Sua contribuição será de grande valia para avaliar o processo da gestão pela qualidade no mercado financeiro nacional e, comparar este processo com moldes competitivos internacionais.

Caro(a) gerente, acredito que você achará interessante a maioria dos tópicos abordados. Peço a você a gentileza de utilizar alguns minutos do seu valioso tempo dando sua contribuição para esta pesquisa, preenchendo o questionário em anexo.

Ciente das suas melhores intenções em participar nesta pesquisa, quero desde já agradecer sua colaboração.

Atenciosamente

Carlos Longo

Newcastle University
CAPES - MEC

APPEMDIX 4

Survey Questionnaire Applied in Brazil

Pesquisa em Gestão pela Qualidade Total

Esta pesquisa é parte do projeto de doutorado (PhD) na "Business School of Newcastle University" - Newcastle upon Tyne, Inglaterra - Reino Unido. Este questionário foi desenvolvido para obter a opinião dos gerentes dos bancos participantes na pesquisa sobre a rotina do dia a dia nas agências e a utilização da gestão pela qualidade total. Estão participando desta pesquisa as seguintes organizações (nomes em ordem alfabética): Banco Bamerindus, Banco do Brasil, Banco Bradesco, Banco Itaú, Banco Real, C.E.F., Grupo Icatu, Unibanco. Os objetivos deste questionário são:

- Identificar o uso da gestão pela qualidade total (estratégico & modismo) em empresas do mercado financeiro no Brasil e Reino Unido.**
- Identificar os principais pontos praticados atualmente pelas organizações em termos de: comportamento gerencial, treinamento, comunicação, preocupação com clientes, planejamento estratégico para gestão pela qualidade total.**
- Comparar o padrão de qualidade alcançado e o desejado pelas empresas do mercado financeiro no Brasil e no Reino Unido.**
- Identificar a opinião dos gerentes sobre o dia a dia das atividades com qualidade total.**

Por favor complete todo o questionário conforme instruções a seguir. Todos os questionários serão respondidos anonimamente e todas as informações contidas serão tratadas de maneira estritamente confidencial.

INSTRUÇÕES PARA O PREENCHIMENTO DO QUESTIONÁRIO

Este questionário foi desenvolvido para ser distribuído junto aos gerentes das agências das empresas participantes na pesquisa. Os principais objetivos são :

- Indicar o uso da gestão pela qualidade total (GQT) em empresas do mercado financeiro no Brasil.
- Acessar a percepção dos gerentes com relação à estrutura organizacional, comunicação, processo da gestão pela qualidade, treinamento e preocupação com o cliente.

GQT é uma filosofia de gerência que envolve todos na organização controlando e melhorando continuamente as rotinas de trabalho a fim de atender e/ou superar as expectativas dos clientes nos serviços/ produtos prestados. Nos anos 90, GQT tem sido adotado nos maiores bancos da Europa e E.U.A. . No Brasil, empresários e governo federal tem promovido a gestão pela qualidade como o melhor caminho para elevar o padrão de qualidade da indústria e comércio nacional.

Por favor complete todo o questionário conforme instruções abaixo.

- Não há resposta certa ou errada. O objetivo das respostas deve ser o de expressar sua opinião no momento atual.
- Dê apenas uma resposta por questão.
- Nas questões que demandam assinalar um ponto na escala de 5 à 1, marque somente uma das alternativas, como nos exemplos abaixo. Respostas com dois ou mais escores serão anuladas!

C.4A comunicação entre gerentes e a diretoria é boa, clara e fluente em sua empresa?

☐5 ☒4 ☐3 ☐2 ☐1

Excelente ←-----→Inexistente

D.4De acordo com a escala abaixo, marque à pontuação que mais se aproxima da sua opinião sobre as seguintes frases: (Sendo 5-Para totalmente verdadeiro; 4; 3; 2; 1-Para totalmente falso)

Sua motivação para o trabalho é alta atualmente? ☐5 ☐4 ☒3 ☐2 ☐1

- Se você não entender alguma questão por favor deixe sem resposta e passe para a questão seguinte.
- O questionário é anônimo.
- Todas as informações serão tratadas com total confidencialidade.
- O questionário deve ser respondido e postado no envelope fornecido até 14/Maio/96.

PARTE A - DADOS PESSOAIS

- A.1 Faixa etária (anos) ☐16-25 ☐26-35 ☐36-50 ☐50+
- A.2 Sexo ☐Feminino ☐Masculino
- A.3 Tempo de serviço(anos) ☐0-3 ☐4-10 ☐11-20 ☐20+
- A.4 Nível Gerencial ☐Junior ☐Médio ☐Senior ☐Diretoria
- A.5 Departamento/Área _____
- A.6 Empresa ☐Pública ☐Privada ☐Mista
- A.7 Formação: ☐Secundária ☐Universitária ☐Mestrado ☐Outro(especificar)

PARTE B - ESTRUTURA ORGANIZACIONAL

- B.1 Quantos níveis gerenciais existem na sua empresa?
☐Quatro ☐Cinco ☐Seis ☐Outro (Favor especificar)

- B.2 Quantos níveis hierárquicos existem entre você e a diretoria da empresa?
☐Um ☐Dois ☐Três ☐Outro (Favor especificar)

- B.3 Como você classificaria sua agência no âmbito da empresa?
☐Grande ☐Média ☐Pequena ☐Outro(favor especificar)

PARTE C - ANÁLISE DA COMUNICAÇÃO

- C.1 Existe na empresa uma missão estratégica claramente definida?
☐Sim ☐Não ☐Não tenho certeza
- C.2 Se sua resposta foi sim. Você poderia listar os pontos da missão que estão associados a oferecer produtos e serviços com qualidade aos clientes?

PARTE C - ANÁLISE DA COMUNICAÇÃO

C.3 Todos os funcionários conhecem esta missão?

☐Sim ☐Não ☐Não tenho certeza

De acordo com a escala abaixo, dê sua opinião sobre as seguintes frases:

C.4 A comunicação entre os gerentes e a diretoria é boa, clara e fluente em sua empresa?

☐5 ☐4 ☐3 ☐2 ☐1
Excelente ← ----- → Inexistente

C.5 A comunicação entre os gerentes e os subordinados é boa, clara e fluente na sua empresa?

☐5 ☐4 ☐3 ☐2 ☐1
Excelente ← ----- → Inexistente

C.6 Qual dos seguintes canais de comunicações são usados para comunicar as metas, notícias etc. em sua empresa?(favor marcar de 1 a 5 o método em ordem de frequência de uso sendo 5- para o mais usado, 4..., 3..., 2... e 1-para o nunca usado)

Memorando	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Reunião com a Gerência	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Jornal da Empresa	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Círculos de controle de qualidade	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
E-mail ou outro tipo de Correio Eletrônico via computador	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

PARTE D - ANÁLISE DA GESTÃO PELA QUALIDADE TOTAL

D.1 Usando seu próprio julgamento, liste os fatores críticos de sucesso para o bom desempenho da sua empresa? (liste os 6 principais)

1- 2-

3- 4-

5- 6-

PARTE D - ANÁLISE DA GESTÃO PELA QUALIDADE TOTAL

D.2 De acordo com a escala abaixo, marque a pontuação que mais se aproxima de sua opinião sobre as seguintes frases: (Sendo 5 para totalmente verdadeiro, 4, 3, 2, 1 para totalmente falso)

Na sua empresa os funcionários são considerados como principal investimento?	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
A satisfação do cliente é a meta principal da gerência e dos funcionários da empresa?	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Produtos e serviços são preparados e prestados com altíssima qualidade para os clientes?	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Você recebe treinamento adequado para o exercício de sua atividade?	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Sua motivação para o trabalho é alta atualmente?	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

D.3 Quais são (ou foram) os maiores obstáculos para introdução da gestão pela qualidade total em sua empresa?(Marque na escala de 5 a 1, sendo 5 para o mais importante, 4, 3, 2, 1 para totalmente irrelevante)

Falta de Pessoal	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Limitação Orçamentária	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Ênfase nas Metas de Curto Prazo	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Dificuldade na Avaliação de Desempenho	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Falta de Comunicação	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Confronto de Objetivos com Outros Projetos em Andamento	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Falta de Treinamento	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Cultura Organizacional	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Influência das Empresas Concorrentes	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Capacitação dos Funcionários	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Falta de Comprometimento da Diretoria	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Falta de Comprometimento da Gerência	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Falta de Comprometimento dos Funcionários	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Outros(Favor especificar)	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

D.4 Quais são as principais mudanças que devem ocorrer em sua empresa para que se possa introduzir a gestão pela qualidade total? (Marque na escala de 5 a 1, sendo 5 para o mais importante, 4, 3, 2, 1 para totalmente irrelevante)

Liderança	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Programa de Treinamento	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Estilo Gerencial	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Comunicação Interna e Externa	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Segmento do Mercado	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Desenvolvimento de Produtos e Serviços	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Layout das Agências	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Avaliação de Desempenho	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Outros (Favor especificar)	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

PARTE D - ANÁLISE DA GESTÃO PELA QUALIDADE TOTAL

D.12 Quais têm sido os efeitos da implementação da gestão pela qualidade total em sua empresa? (Marque na escala de 5 a 1 o valor que mais se aproxima de sua opinião nas frases abaixo sendo: 5 para o mais importante, 4, 3, 2, 1 para totalmente irrelevante)

Melhoria do Padrão de Qualidade em Produtos / Serviços	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Conscientisar os Funcionários sobre a Importância da "Qualidade Total"	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Crescimento no Moral dos Funcionários	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Criação da Cultura de Trabalho em Equipes	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Redução na Rotatividade de Funcionários	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Redução no Absenteísmo	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Melhoria na Relação Custo / Eficiência	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Redução de Erros nas Rotinas de Trabalho	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Aumento da Satisfação dos Clientes	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Crescimento do Número de Clientes	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Crescimento da Lucratividade	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Outros (favor especificar)	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

D.13 Existe um programa de treinamento em gestão pela qualidade total em sua empresa?

Para Gerência	<input type="checkbox"/> Sim	<input type="checkbox"/> Não	<input type="checkbox"/> Não tenho certeza
Para os Supervisores	<input type="checkbox"/> Sim	<input type="checkbox"/> Não	<input type="checkbox"/> Não tenho certeza
Para os Funcionários	<input type="checkbox"/> Sim	<input type="checkbox"/> Não	<input type="checkbox"/> Não tenho certeza

D.14 Como gerente, você tem recebido treinamento em gestão pela qualidade total?

☐Excelente ☐Bom ☐Adequado ☐Inadequado ☐Não tenho sido treinado

D.15 Em quais pontos da gestão pela qualidade total você acredita que um gerente precisa de treinamento?(favor dar o escore que mais se aproxima de sua opinião nas frases abaixo sendo: 5 para o mais importante, 4, 3, 2, 1 para totalmente irrelevante)

Filosofia da Gestão pela Qualidade	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Ferramentas para Gestão pela Qualidade total	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Habilidade de Comunicação	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Capacitação em Técnicas de Liderança	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Habilidade de Aconselhamento	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Capacitação de Criação de grupos de trabalho	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Planejamento Gerencial	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
Outros (favor especificar)	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

D.16 Existe na sua empresa "Círculos de Controle da Qualidade", ou algum outro tipo de grupo de trabalho que seja composto de gerentes e/ou funcionários, onde o objetivo principal do grupo é discutir e tentar resolver problemas do dia a dia nas rotinas de trabalho?

☐Sim ☐Não ☐Não tenho certeza

PARTE E - PROCEDIMENTOS DE AVALIAÇÃO

E.1 Quais são os principais procedimentos para medir a satisfação do cliente em sua empresa?

Pesquisa de Mercado Feita com os Clientes	<input type="checkbox"/> Fator Determinante	<input type="checkbox"/> Pouco Importante	<input type="checkbox"/> Não é Avaliado
"Cliente Misterioso" * (do termo em inglês "Mystery Shopper")	<input type="checkbox"/> Fator Determinante	<input type="checkbox"/> Pouco Importante	<input type="checkbox"/> Não é Avaliado
Pelo Crescimento do Número de Clientes	<input type="checkbox"/> Fator Determinante	<input type="checkbox"/> Pouco Importante	<input type="checkbox"/> Não é Avaliado
Pela Redução do Número de Clientes	<input type="checkbox"/> Fator Determinante	<input type="checkbox"/> Pouco Importante	<input type="checkbox"/> Não é Avaliado
Auditoria	<input type="checkbox"/> Fator Determinante	<input type="checkbox"/> Pouco Importante	<input type="checkbox"/> Não é Avaliado
Participação na Fatia do Mercado	<input type="checkbox"/> Fator Determinante	<input type="checkbox"/> Pouco Importante	<input type="checkbox"/> Não é Avaliado
Contato Direto com os Clientes	<input type="checkbox"/> Fator Determinante	<input type="checkbox"/> Pouco Importante	<input type="checkbox"/> Não é Avaliado
Outros (favor especificar) -----	<input type="checkbox"/> Fator Determinante	<input type="checkbox"/> Pouco Importante	<input type="checkbox"/> Não é Avaliado

* Técnica de avaliação, onde pessoas "disfarçadas" de cliente vão à agência solicitar serviços/produtos do banco.

E.2 Como são avaliados melhorias na qualidade de produtos e serviços prestados aos clientes em sua empresa?

Feedback dos Clientes	<input type="checkbox"/> Fator Determinante	<input type="checkbox"/> Pouco Importante	<input type="checkbox"/> Não é Avaliado
Pelo Número de Reclamações	<input type="checkbox"/> Fator Determinante	<input type="checkbox"/> Pouco Importante	<input type="checkbox"/> Não é Avaliado
Custo da Qualidade	<input type="checkbox"/> Fator Determinante	<input type="checkbox"/> Pouco Importante	<input type="checkbox"/> Não é Avaliado
Isto Não é Avaliado	<input type="checkbox"/> Concordo	<input type="checkbox"/> Discordo	<input type="checkbox"/> Não Tenho Certeza
Isto Não Pode Ser Avaliado	<input type="checkbox"/> Concordo	<input type="checkbox"/> Discordo	<input type="checkbox"/> Não Tenho Certeza

APPEMDIX 5

**Results of ANOVA for Fieldwork Analysis Presented
in Chapters 5, 6 and 7**

Barriers to Implement TQM

ANALYSIS OF VARIANCE ON TQM BARRIERS - LACK OF RESOURCES

SOURCE	DF	SS	MS	F	p
Companies Group	3	20.19	6.73	3.45	0.018
ERROR	142	276.94	1.95		
TOTAL	145	297.13			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

COMPANIES	N	MEAN	STDEV	
Group1	33	3.818	1.261	(-----*-----)
Group2	45	3.044	1.331	(-----*-----)
Group3	20	2.700	1.174	(-----*-----)
UK	48	3.458	1.611	(-----*-----)

POOLED STDEV = 1.397

2.40 3.00 3.60 4.20

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column Companies mean) - (row Companies mean)

	1	2	3
2	-0.059 1.607		
3	0.088 2.148	-0.632 1.321	
UK	-0.462 1.182	-1.168 0.340	-1.725 0.209

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.977

Intervals for (column Companies mean) - (row Companies mean)

	1	2	3
2	0.141 1.406		
3	0.336 1.901	-0.398 1.086	
UK	-0.264 0.984	-0.987 0.159	-1.493 -0.024

ANALYSIS OF VARIANCE ON TQM BARRIERS - SHORT-TERMS GOALS

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	0.41	0.14	0.07	0.976
ERROR	140	268.15	1.92		
TOTAL	143	268.56			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

COMPANIES	N	MEAN	STDEV	
Group1	34	3.265	1.082	(-----*-----)
Group2	43	3.372	1.254	(-----*-----)
Group3	20	3.350	1.268	(-----*-----)
UK	47	3.255	1.700	(-----*-----)
POOLED STDEV = 1.384				-----+-----+-----+-----
				2.80 3.15 3.50 3.85

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column Companies mean) - (row Companies mean)

	1	2	3
2	-0.934 0.719		
3	-1.100 0.930	-0.953 0.997	
UK	-0.801 0.820	-0.643 0.877	-0.867 1.056

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.977

Intervals for (column Companies mean) - (row Companies mean)

	1	2	3
2	-0.735 0.521		
3	-0.856 0.686	-0.718 0.763	
UK	-0.607 0.625	-0.461 0.694	-0.636 0.825

ANALYSIS OF VARIANCE ON TQM BARRIERS - MEASURING QUALITY

SOURCE	DF	SS	MS	F	p
Companies Group	3	5.91	1.97	1.03	0.383
ERROR	141	270.73	1.92		
TOTAL	144	276.65			

				INDIVIDUAL 95% CI'S FOR MEAN BASED ON POOLED STDEV
COMPANIES	N	MEAN	STDEV	-----+-----+-----+-----
Group1	33	3.242	1.226	(-----*-----)
Group2	45	2.911	1.203	(-----*-----)
Group3	20	2.800	1.105	(-----*-----)
UK	47	2.702	1.718	(-----*-----)
POOLED STDEV = 1.386				-----+-----+-----+-----
				2.50 3.00 3.50

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column Companies mean) - (row Companies mean)

	1	2	3
2	-0.495 1.158		
3	-0.579 1.464	-0.858 1.080	
UK	-0.279 1.359	-0.543 0.961	-0.865 1.061

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.977

Intervals for (column Companies mean) - (row Companies mean)

	1	2	3
2	-0.297 0.959		
3	-0.334 1.219	-0.625 0.847	
UK	-0.082 1.162	-0.362 0.780	-0.634 0.829

ANALYSIS OF VARIANCE ON TQM BARRIERS - LACK OF COMMUNICATIONS

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	18.21	6.07	3.10	0.029
ERROR	142	277.76	1.96		
TOTAL	145	295.97			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

COMPANIES	N	MEAN	STDEV	
Group1	34	3.588	1.076	(-----*-----)
Group2	45	2.622	1.154	(-----*-----)
Group3	20	2.950	1.050	(-----*-----)
UK	47	3.000	1.865	(-----*-----)

POOLED STDEV =	1.399			
		2.40	3.00	3.60 4.20

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column Companies mean) - (row Companies mean)

	1	2	3
2	0.139		
	1.793		
3	-0.387	-1.306	
	1.664	0.650	
UK	-0.231	-1.137	-1.022
	1.408	0.381	0.922

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500

Critical value = 1.977

Intervals for (column Companies mean) - (row Companies mean)

	1	2	3
2	0.338		
	1.594		
3	-0.141	-1.071	
	1.417	0.415	
UK	-0.034	-0.954	-0.788
	1.211	0.199	0.688

ANALYSIS OF VARIANCE ON TQM BARRIERS - OTHER PROJECTS PRIORITIES

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	15.19	5.06	2.53	0.060
ERROR	142	283.94	2.00		
TOTAL	145	299.13			

				INDIVIDUAL 95% CI'S FOR MEAN BASED ON POOLED STDEV
LEVEL	N	MEAN	STDEV	-----+-----+-----+-----
Group1	32	3.875	1.129	(-----*-----)
Group2	45	3.289	1.180	(-----*-----)
Group3	20	3.200	1.281	(-----*-----)
UK	49	3.000	1.780	(-----*-----)
POOLED STDEV = 1.414				-----+-----+-----+-----
				3.00 3.50 4.00

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.265 1.437		
3	-0.374 1.724	-0.900 1.078	
UK	0.039 1.711	-0.471 1.049	-0.776 1.176

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.977

Intervals for (column level mean) - (row level mean)

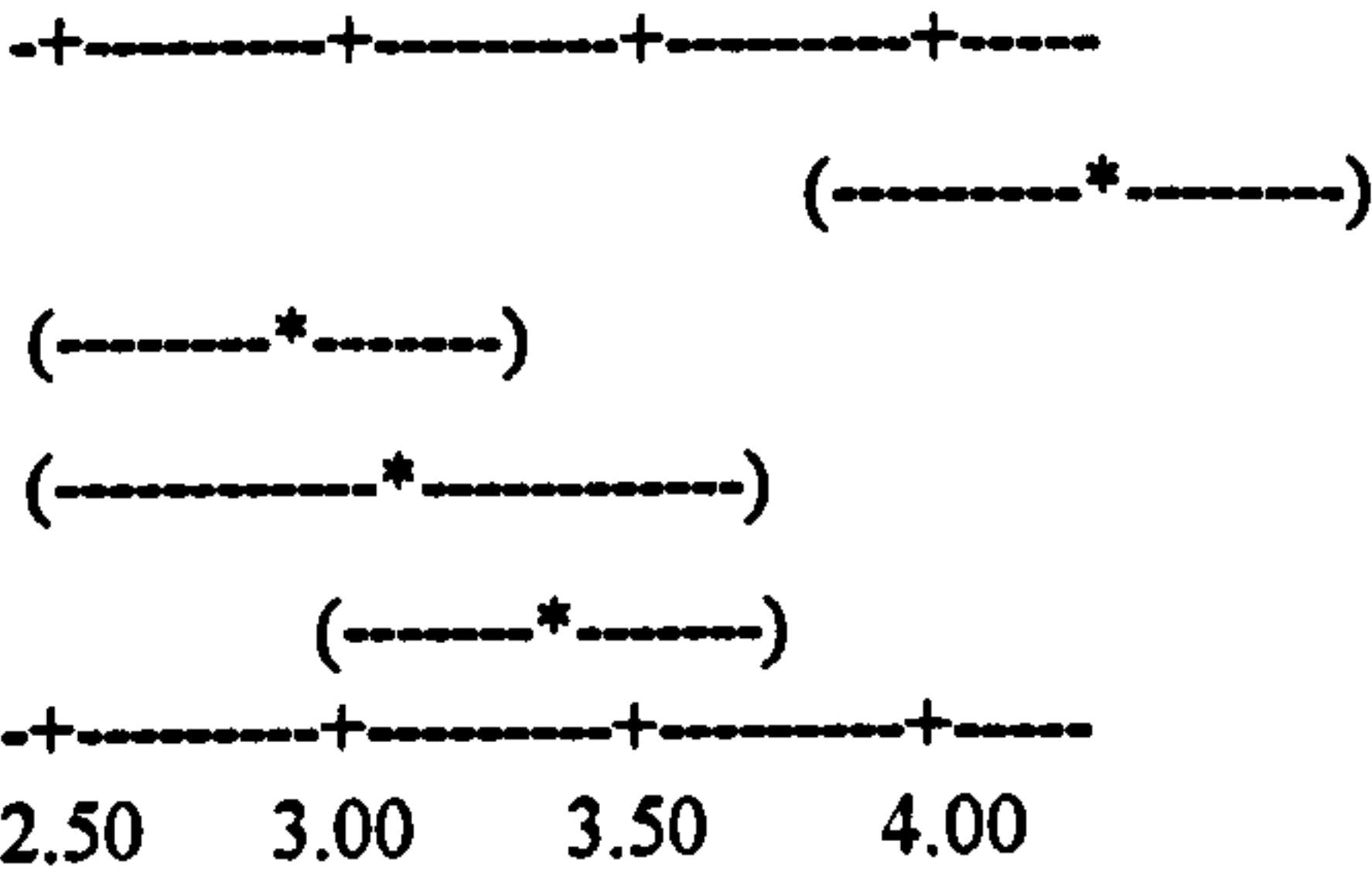
	1	2	3
2	-0.060 1.233		
3	-0.122 1.472	-0.662 0.840	
UK	0.240 1.510	-0.288 0.866	-0.542 0.942

ANALYSIS OF VARIANCE ON TQM BARRIERS - INTERNAL ENVIRONMENT

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	17.13	5.71	2.87	0.039
ERROR	142	282.24	1.99		
TOTAL	145	299.37			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV
Group1	34	3.794	0.946
Group3	45	2.978	1.406
Group3	19	3.105	0.994
UK	48	2.958	1.774



POOLED STDEV = 1.410

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.017 1.650		
3	-0.362 1.740	-1.131 0.876	
UK	0.013 1.658	-0.742 0.781	-0.847 1.141

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.977

Intervals for (column level mean) - (row level mean)

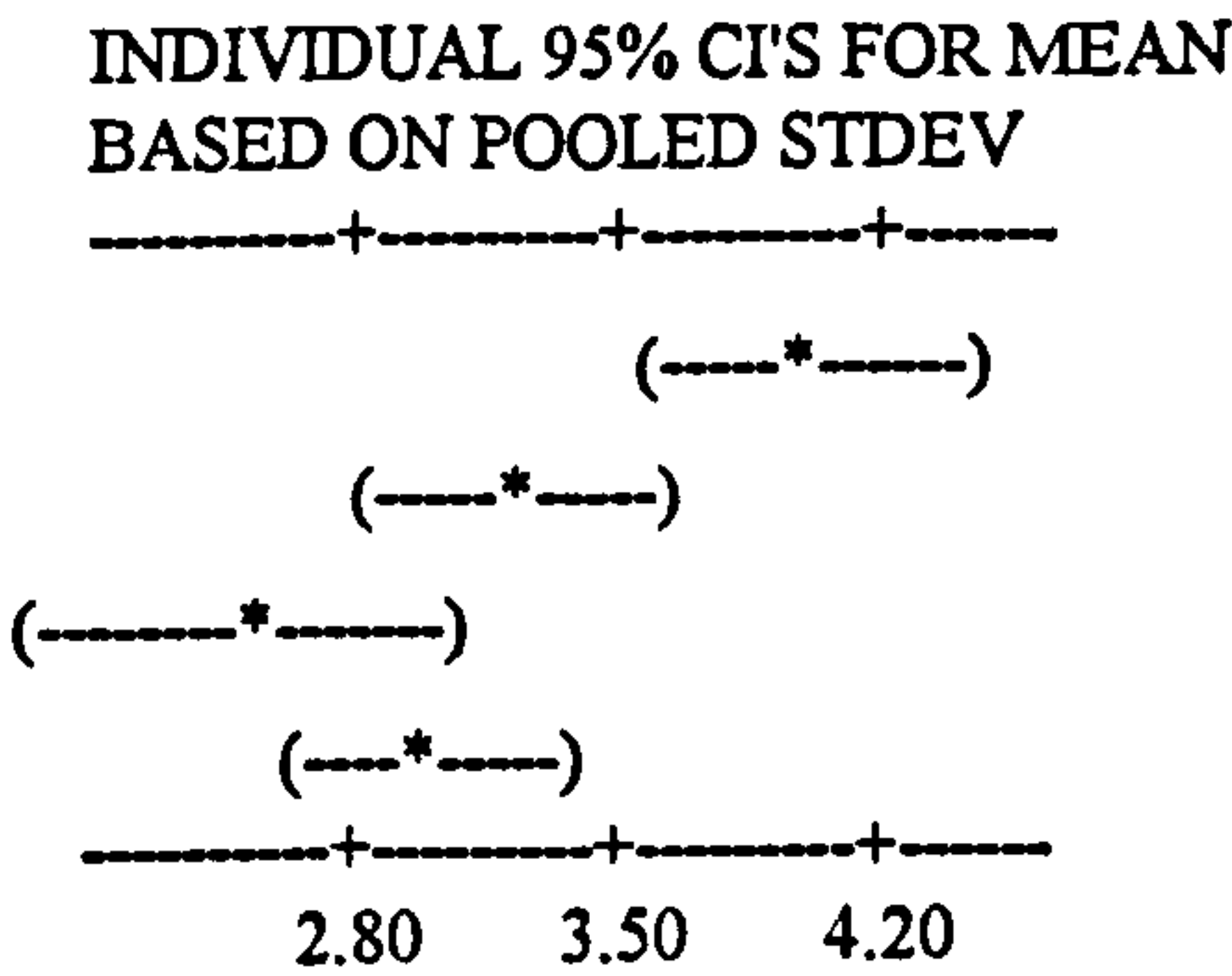
	1	2	3
2	0.183 1.450		
3	-0.109 1.487	-0.890 0.635	
UK	0.211 1.461	-0.559 0.598	-0.609 0.902

ANALYSIS OF VARIANCE ON TQM BARRIERS - EXTERNAL ENVIRONMENT

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	35.02	11.67	6.35	0.000
ERROR	140	257.54	1.84		
TOTAL	143	292.56			

LEVEL	N	MEAN	STDEV
Group1	34	4.147	0.958
Group2	44	3.205	1.304
Group3	20	2.700	1.081
UK	46	3.043	1.712

POOLED STDEV = 1.356



Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	0.137 1.748		
3	0.452 2.442	-0.447 1.456	
UK	0.305 1.902	-0.583 0.905	-1.289 0.602

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.977

Intervals for (column level mean) - (row level mean)

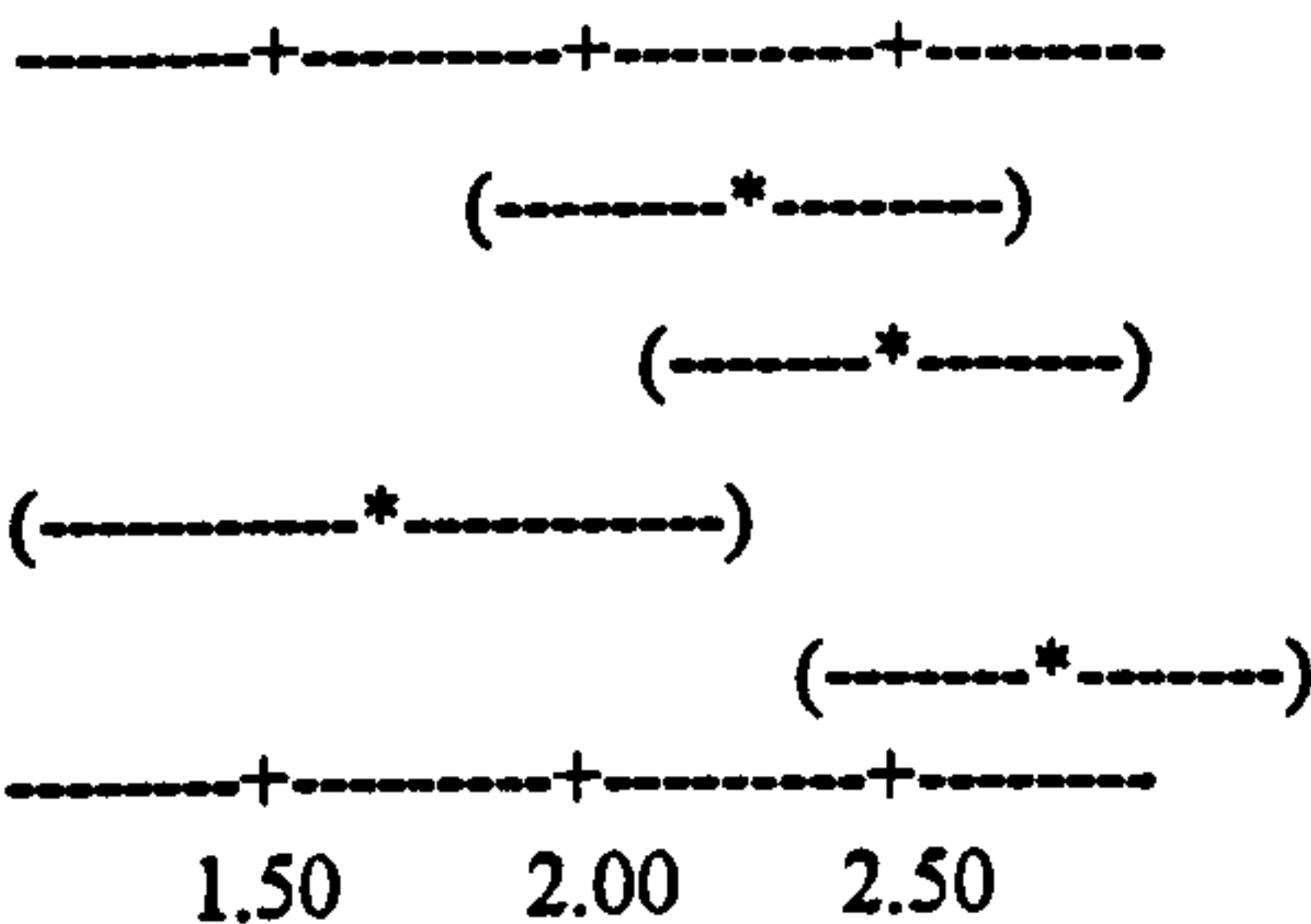
	1	2	3
2	0.330 1.555		
3	0.691 2.203	-0.219 1.228	
UK	0.497 1.710	-0.404 0.726	-1.062 0.375

ANALYSIS OF VARIANCE ON TQM BARRIERS - SKILL OF EMPLOYEES

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	9.13	3.04	1.73	0.164
ERROR	138	242.85	1.76		
TOTAL	141	251.98			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV
Group1	32	2.344	1.310
Group2	44	2.500	1.389
Group3	20	1.700	0.979
UK	46	2.348	1.402



POOLED STDEV = 1.327

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.958 0.646		
3	-0.340 1.628	-0.131 1.731	
UK	-0.799 0.791	-0.576 0.880	-1.572 0.277

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.977

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.766 0.453		
3	-0.104 1.391	0.093 1.507	
UK	-0.608 0.600	-0.401 0.705	-1.350 0.055

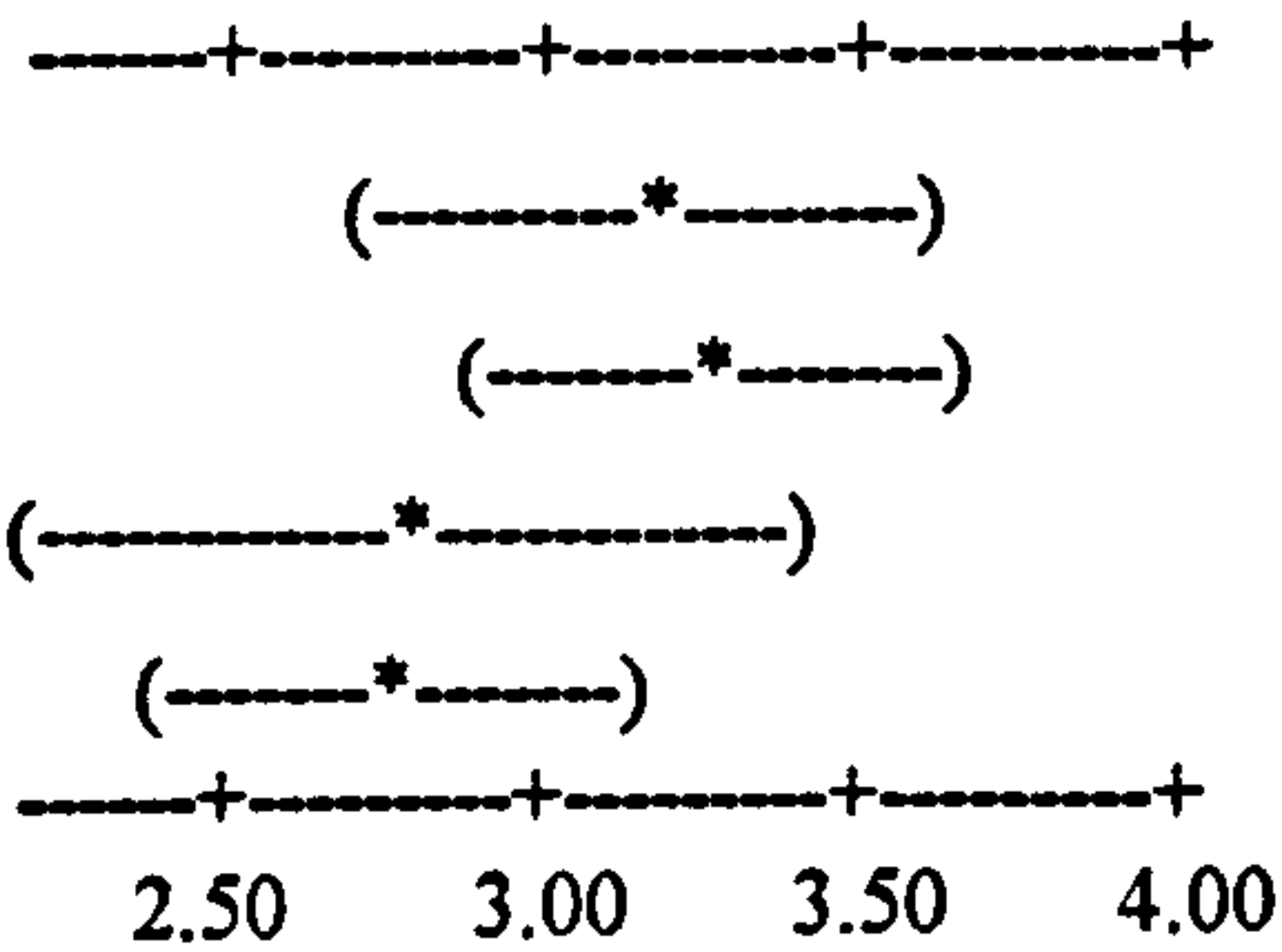
ANALYSIS OF VARIANCE ON TQM BARRIERS - LACK OF COMMITMENT FROM MANAGERS

SOURCE	DF	SS	MS	F	p		
COMPANIES GROUP			3	8.24	2.75	1.40	0.247
ERROR	141	277.59	1.97				
TOTAL	144	285.83					

LEVEL	N	MEAN	STDEV
Group1	34	3.235	1.182
Group2	45	3.356	1.209
Group3	19	2.842	0.958
UK	47	2.830	1.810

POOLED STDEV = 1.403

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV



Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.950 0.709		
3	-0.653 1.439	-0.485 1.512	
UK	-0.417 1.228	-0.236 1.287	-0.980 1.005

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.977

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.751 0.510		
3	-0.401 1.188	-0.245 1.272	
UK	-0.219 1.030	-0.053 1.104	-0.742 0.766

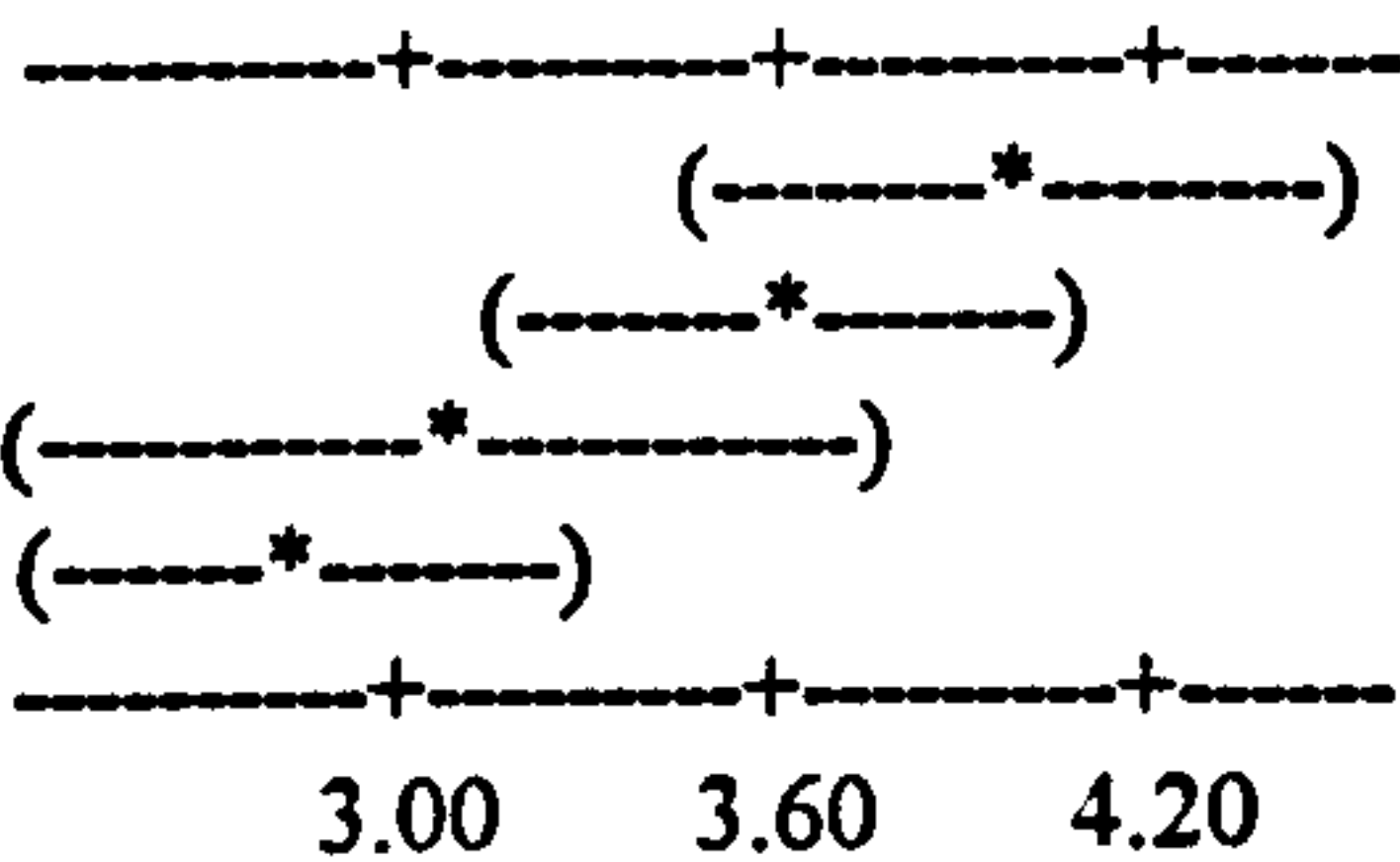
Major Changes to Achieve TQM Goals

ANALYSIS OF VARIANCE ON MAJOR CHANGES - LEADERSHIP

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	25.56	8.52	3.44	0.019
ERROR	134	332.07	2.48		
TOTAL	137	357.62			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV
Group1	33	4.000	1.061
Group2	42	3.619	1.513
Group3	19	3.158	1.537
UK	44	2.909	1.927



POOLED STDEV = 1.574

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.572 1.334		
3	-0.338 2.022	-0.671 1.594	
UK	0.148 2.034	-0.174 1.594	-0.876 1.373

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.978

Intervals for (column level mean) - (row level mean)

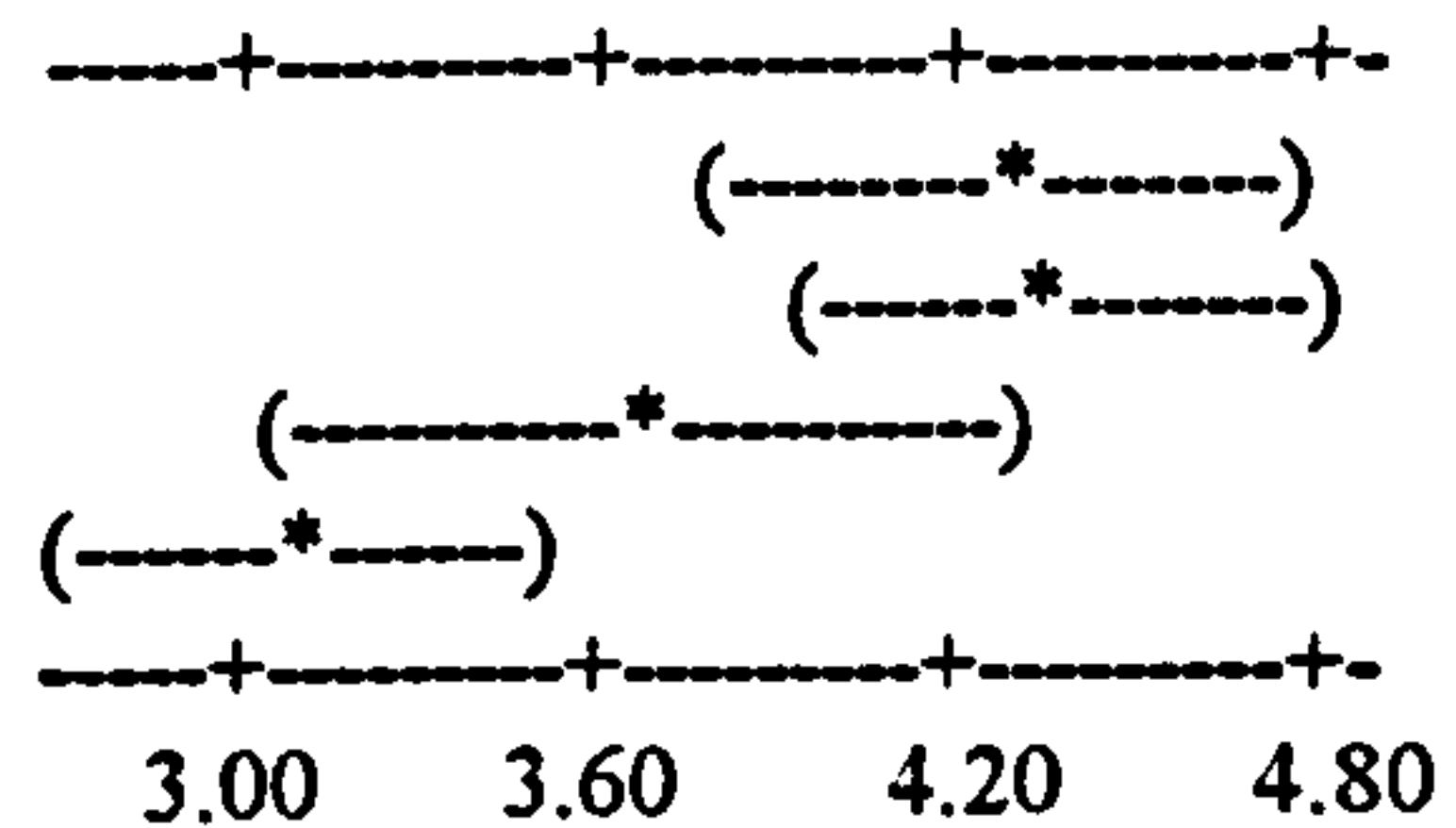
	1	2	3
2	-0.343 1.105		
3	-0.055 1.739	-0.400 1.322	
UK	0.374 1.808	0.038 1.382	-0.606 1.104

ANALYSIS OF VARIANCE ON MAJOR CHANGES - EDUCATIONAL PROGRAMME

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	24.77	8.26	4.01	0.009
ERROR	135	277.91	2.06		
TOTAL	138	302.68			

INDIVIDUAL 95% CI'S FOR MEAN BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV
Group1	34	4.294	0.799
Group2	42	3.857	1.458
Group3	19	3.789	1.228
UK	44	3.182	1.821



POOLED STDEV = 1.435

Tukey's pairwise comparisons

Family error rate = 0.0500

Individual error rate = 0.0103

Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.424 1.298		
3	-0.565 1.574	-0.965 1.100	
UK	0.260 1.965	-0.130 1.481	-0.417 1.633

Fisher's pairwise comparisons

Family error rate = 0.202

Individual error rate = 0.0500

Critical value = 1.978

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.218 1.092		
3	-0.308 1.318	-0.717 0.852	
UK	0.464 1.760	0.063 1.288	-0.171 1.387

ANALYSIS OF VARIANCE ON MAJOR CHANGES - MANAGEMENT STYLE

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	1.97	0.66	0.30	0.824
ERROR	134	291.48	2.18		
TOTAL	137	293.46			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV	-----+-----+-----+-----
Group1	34	3.676	1.147	(-----*-----)
Group2	42	3.667	1.183	(-----*-----)
Group3	19	3.316	1.416	(-----*-----)
UK	43	3.558	1.919	(-----*-----)
POOLED STDEV = 1.475				-----+-----+-----+-----
				3.00 3.50 4.00

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.876 0.895		
3	-0.739 1.460	-0.710 1.412	
UK	-0.762 0.999	-0.724 0.941	-1.300 0.815

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.978

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.663 0.683		
3	-0.475 1.196	-0.456 1.157	
UK	-0.551 0.788	-0.524 0.741	-1.046 0.561

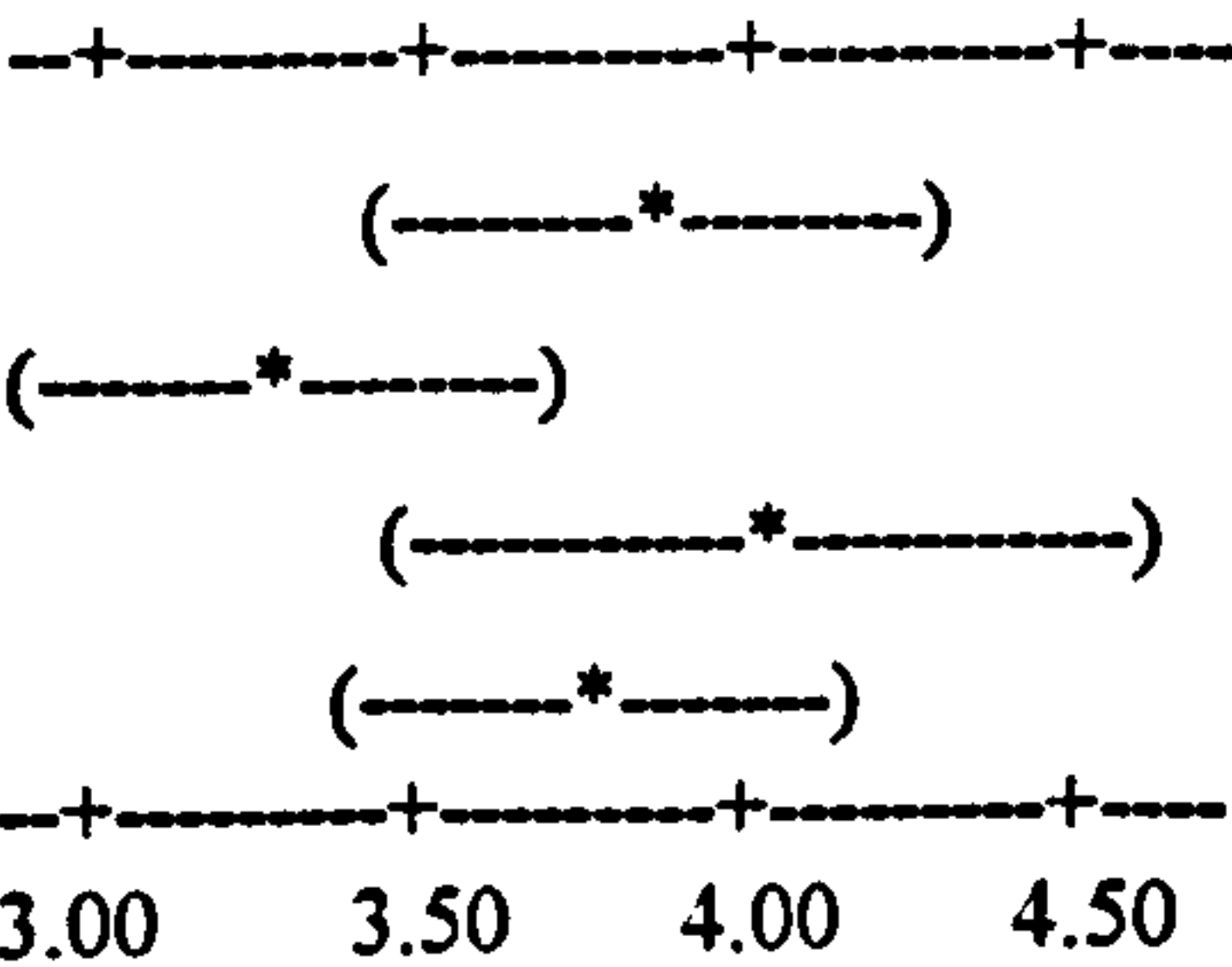
ANALYSIS OF VARIANCE ON MAJOR CHANGES - COMMUNICATION SYSTEM

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	9.66	3.22	1.73	0.164
ERROR	133	247.90	1.86		
TOTAL	136	257.56			

LEVEL	N	MEAN	STDEV
Group1	34	3.912	1.026
Group2	41	3.366	1.260
Group3	19	4.105	0.809
UK	43	3.837	1.812

POOLED STDEV = 1.365

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV



Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.278 1.370		
3	-1.211 0.824	-1.725 0.247	
UK	-0.741 0.890	-1.247 0.304	-0.711 1.247

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.978

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.080 1.172		
3	-0.967 0.580	-1.489 0.010	
UK	-0.545 0.694	-1.061 0.118	-0.476 1.012

ANALYSIS OF VARIANCE ON MAJOR CHANGES - DESIGN OF PRODUCT/SERVICE

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	27.33	9.11	4.02	0.009
ERROR	134	303.32	2.26		
TOTAL	137	330.64			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV
Group1	34	3.853	1.048
Group2	42	3.190	1.452
Group3	19	4.053	1.079
UK	43	2.907	1.950

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(-----*-----)

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POOLED STDEV = 1.505

2.80 3.50 4.20 4.90

Tukey's pairwise comparisons

Family error rate = 0.0500

Individual error rate = 0.0103

Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.241 1.566		
3	-1.321 0.922	-1.945 0.220	
UK	0.048 1.844	-0.566 1.133	0.067 2.224

Fisher's pairwise comparisons

Family error rate = 0.202

Individual error rate = 0.0500

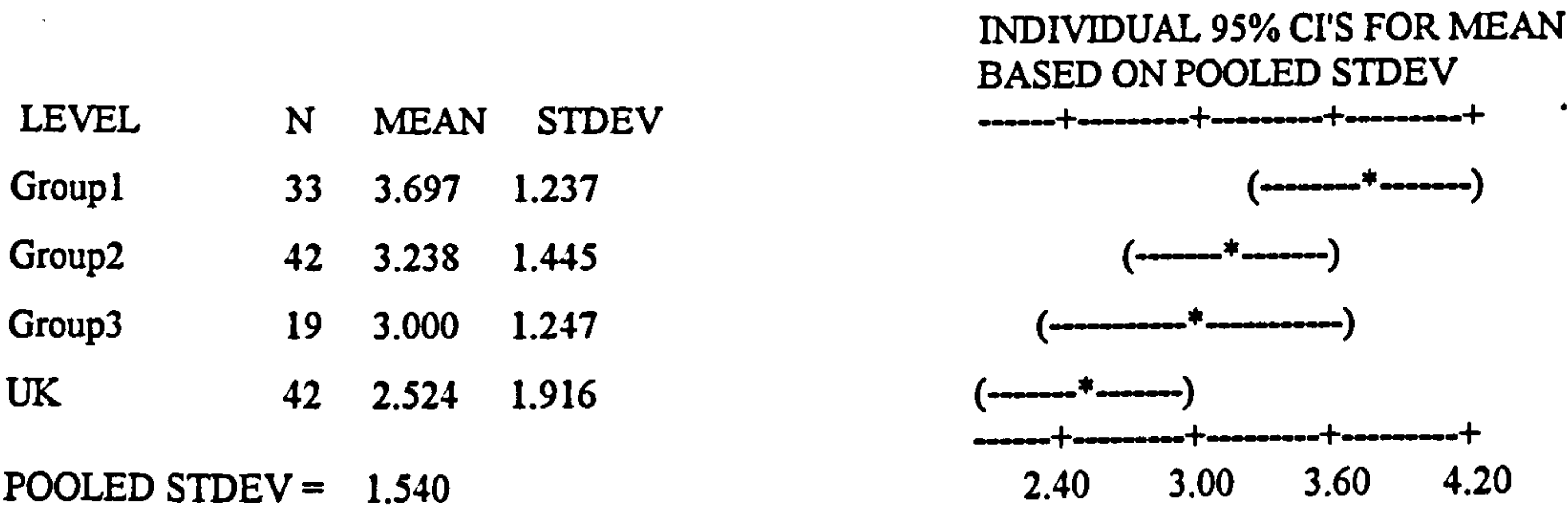
Critical value = 1.978

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.024 1.349		
3	-1.052 0.653	-1.685 -0.039	
UK	0.263 1.629	-0.362 0.929	0.326 1.965

ANALYSIS OF VARIANCE ON MAJOR CHANGES - MEASUREMENT PROCEDURES

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	26.69	8.90	3.75	0.013
ERROR	132	313.06	2.37		
TOTAL	135	339.76			



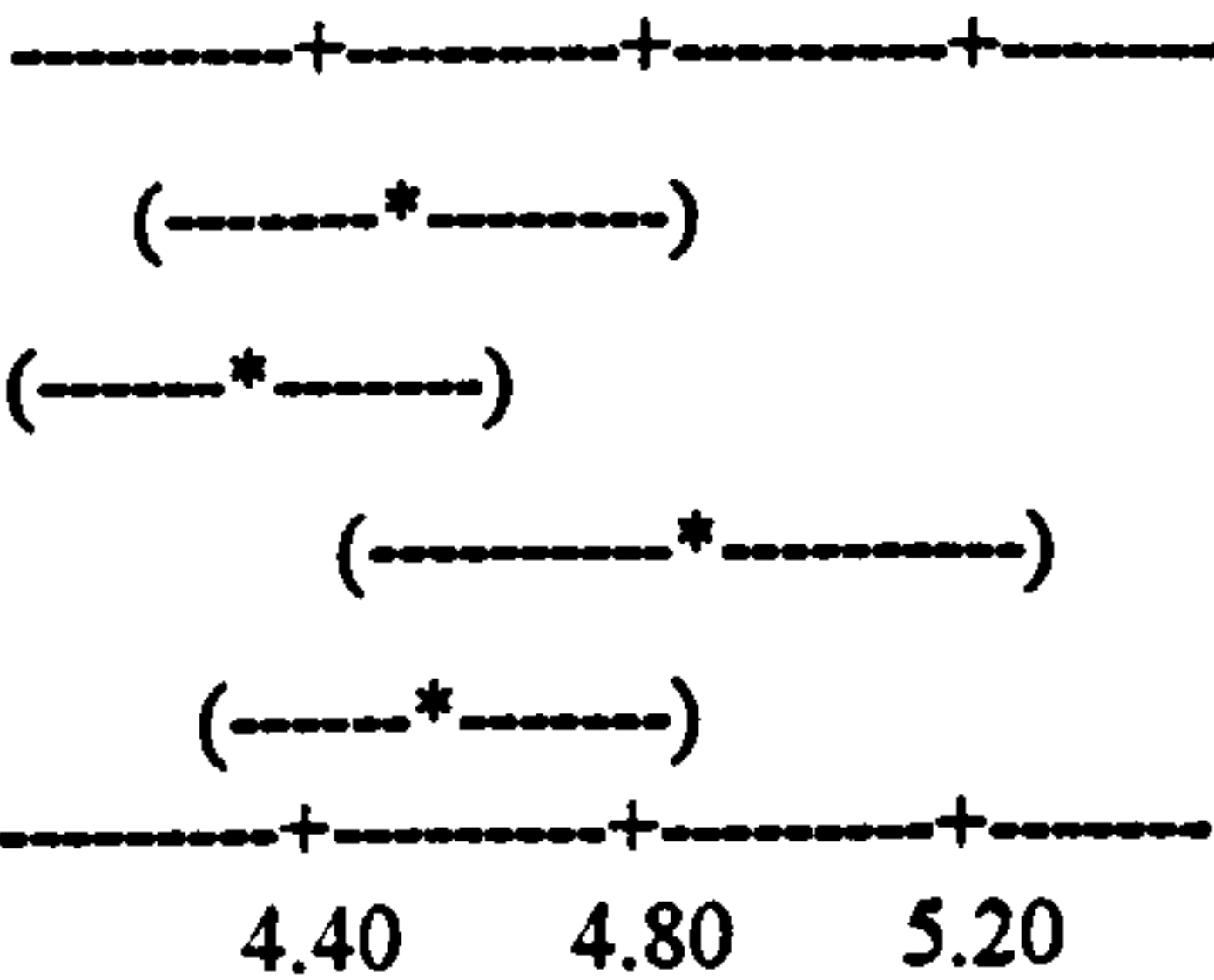
Major Factors Leading to Implement TQM

ANALYSIS OF VARIANCE ON TQM DRIVERS - CUSTOMER DEMAND FOR QUALITY

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	4.260	1.420	1.48	0.222
ERROR	125	119.554	0.956		
TOTAL	128	123.814			

LEVEL	N	MEAN	STDEV
Group1	32	4.5312	0.8026
Group2	40	4.3750	1.1252
Group3	19	4.9474	0.2294
UK	38	4.5789	1.1539

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV



POOLED STDEV = 0.9780

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.4473 0.7598		
3	-1.1532 0.3209	-1.2814 0.1367	
UK	-0.6583 0.5629	-0.7804 0.3725	-0.3466 1.0835

Fisher's pairwise comparisons

Family error rate = 0.201
Individual error rate = 0.0500
Critical value = 1.979

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.3028 0.6153		
3	-0.9767 0.1444	-1.1116 -0.0331	
UK	-0.5121 0.4167	-0.6424 0.2345	-0.1754 0.9122

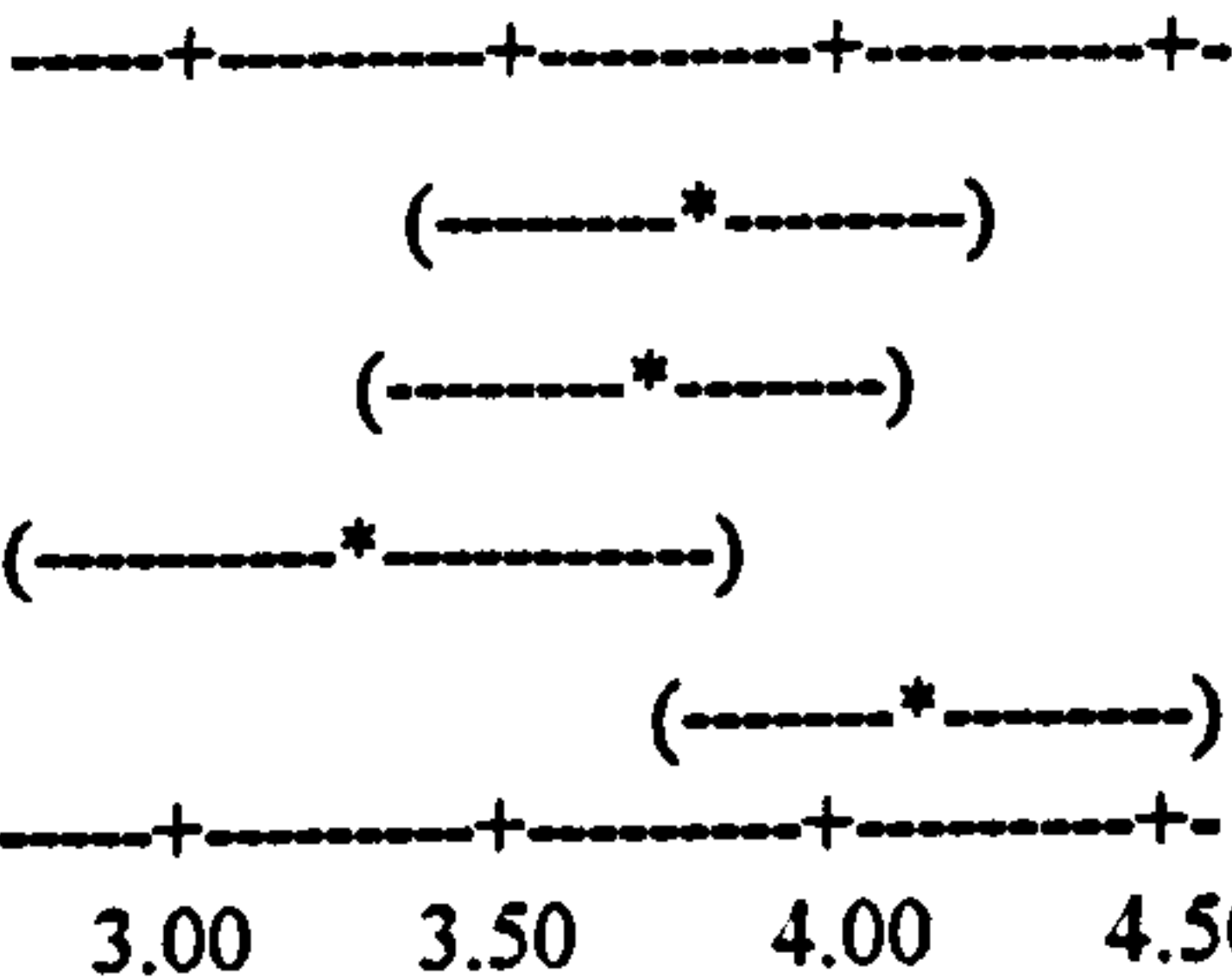
ANALYSIS OF VARIANCE ON TQM DRIVERS - PRESSURE TO REDUCE COSTS

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	9.28	3.09	1.84	0.144
ERROR	125	210.73	1.69		
TOTAL	128	220.02			

LEVEL	N	MEAN	STDEV
Group1	32	3.844	1.194
Group2	40	3.825	1.259
Group3	19	3.368	1.065
UK	38	4.211	1.510

POOLED STDEV = 1.298

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV



Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.783 0.820		
3	-0.503 1.454	-0.485 1.398	
UK	-1.177 0.444	-1.151 0.380	-1.791 0.107

Fisher's pairwise comparisons

Family error rate = 0.201
Individual error rate = 0.0500
Critical value = 1.979

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.591 0.628		
3	-0.269 1.220	-0.259 1.173	
UK	-0.983 0.250	-0.968 0.197	-1.564 -0.120

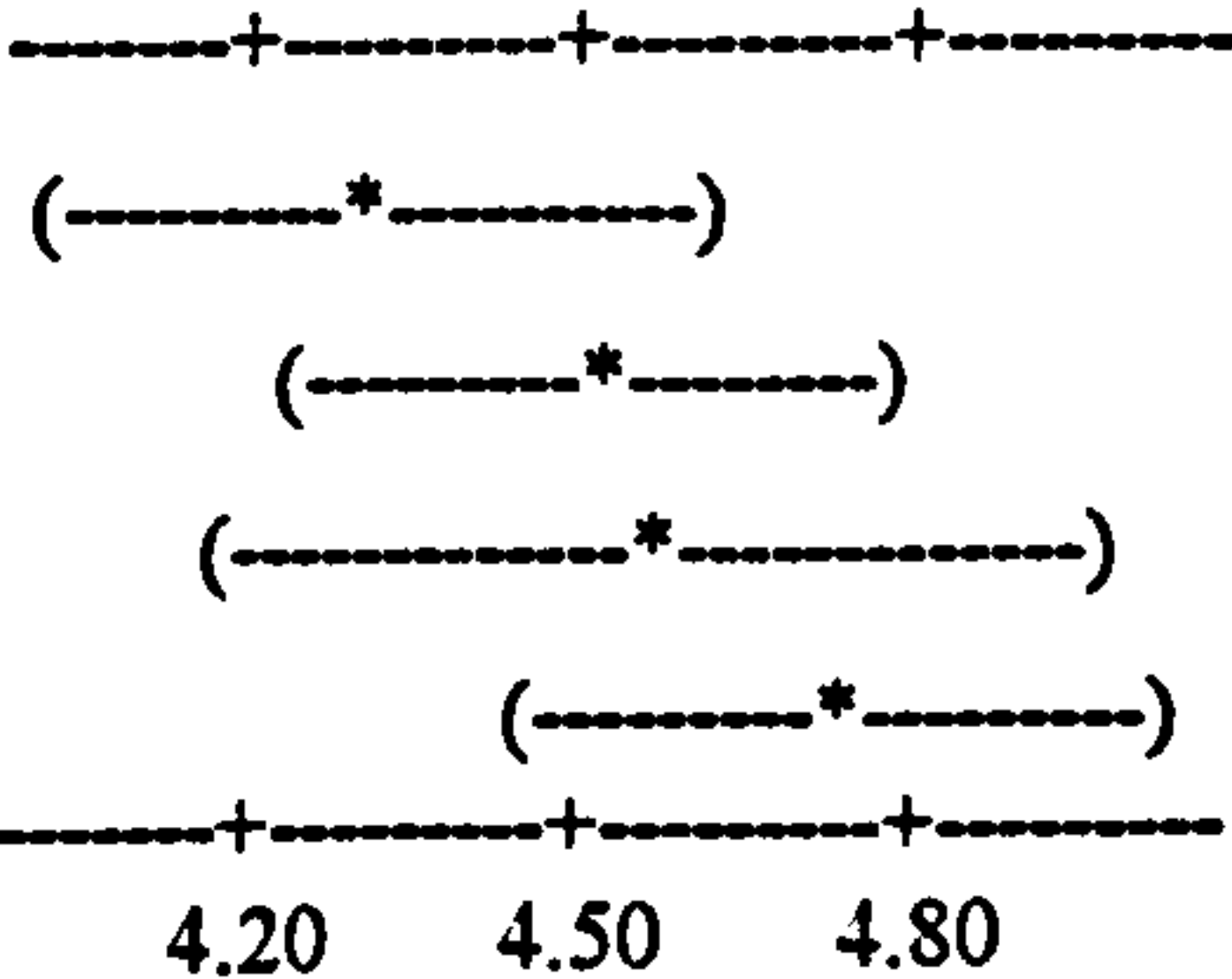
ANALYSIS OF VARIANCE ON TQM DRIVERS - PRESSURE FROM COMPETITORS

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	3.052	1.017	1.20	0.311
ERROR	127	107.376	0.845		
TOTAL	130	110.427			

LEVEL	N	MEAN	STDEV
Group1	33	4.3333	0.9242
Group2	40	4.5250	1.0124
Group3	19	4.5789	0.6070
UK	39	4.7436	0.9380

POOLED STDEV = 0.9195

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV



Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.7543 0.3710		
3	-0.9347 0.4434	-0.7206 0.6127	
UK	-0.9762 0.1557	-0.7570 0.3198	-0.8340 0.5048

Fisher's pairwise comparisons

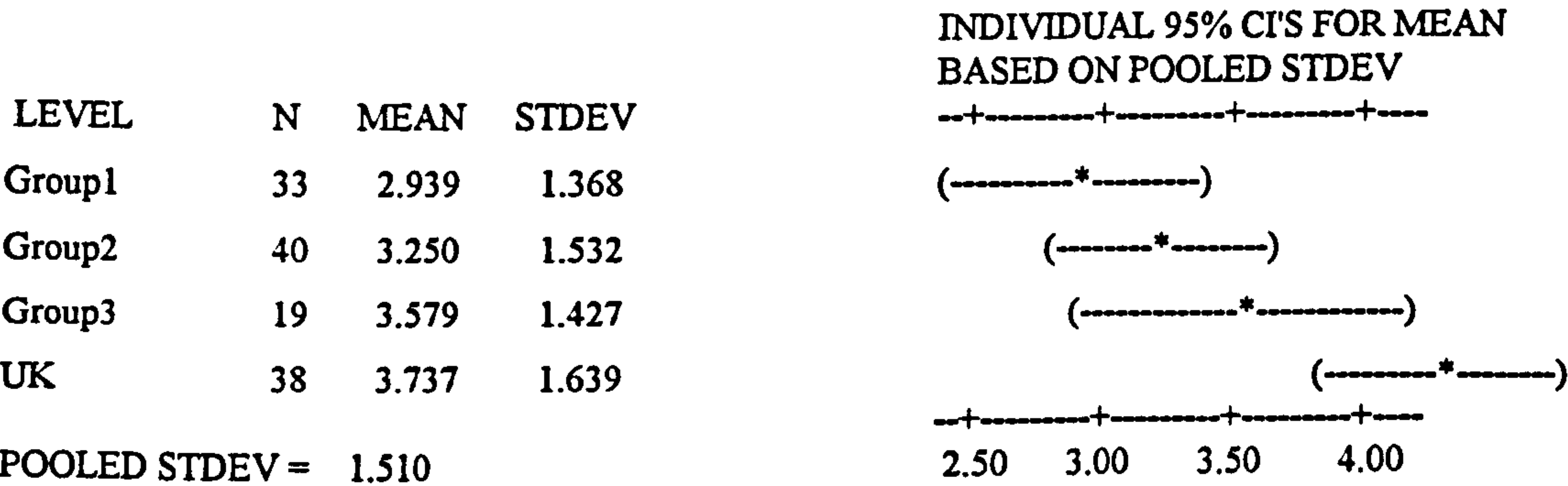
Family error rate = 0.201
Individual error rate = 0.0500
Critical value = 1.979

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.6196 0.2363		
3	-0.7697 0.2784	-0.5610 0.4531	
UK	-0.8407 0.0201	-0.6281 0.1909	-0.6737 0.3445

ANALYSIS OF VARIANCE ON TQM DRIVERS - ENTHUSIASM OF TOP MANAGERS

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	12.63	4.21	1.85	0.142
ERROR	126	287.38	2.28		
TOTAL	129	300.01			



Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	- 1.235 0.614		
3	- 1.771 0.492	- 1.424 0.766	
UK	- 1.733 0.138	- 1.377 0.403	- 1.262 0.946

Fisher's pairwise comparisons

Family error rate = 0.201
Individual error rate = 0.0500
Critical value = 1.979

Intervals for (column level mean) - (row level mean)

	1	2	3
2	- 1.013 0.392		
3	- 1.500 0.221	- 1.162 0.504	
UK	- 1.509 - 0.086	- 1.164 0.190	- 0.998 0.682

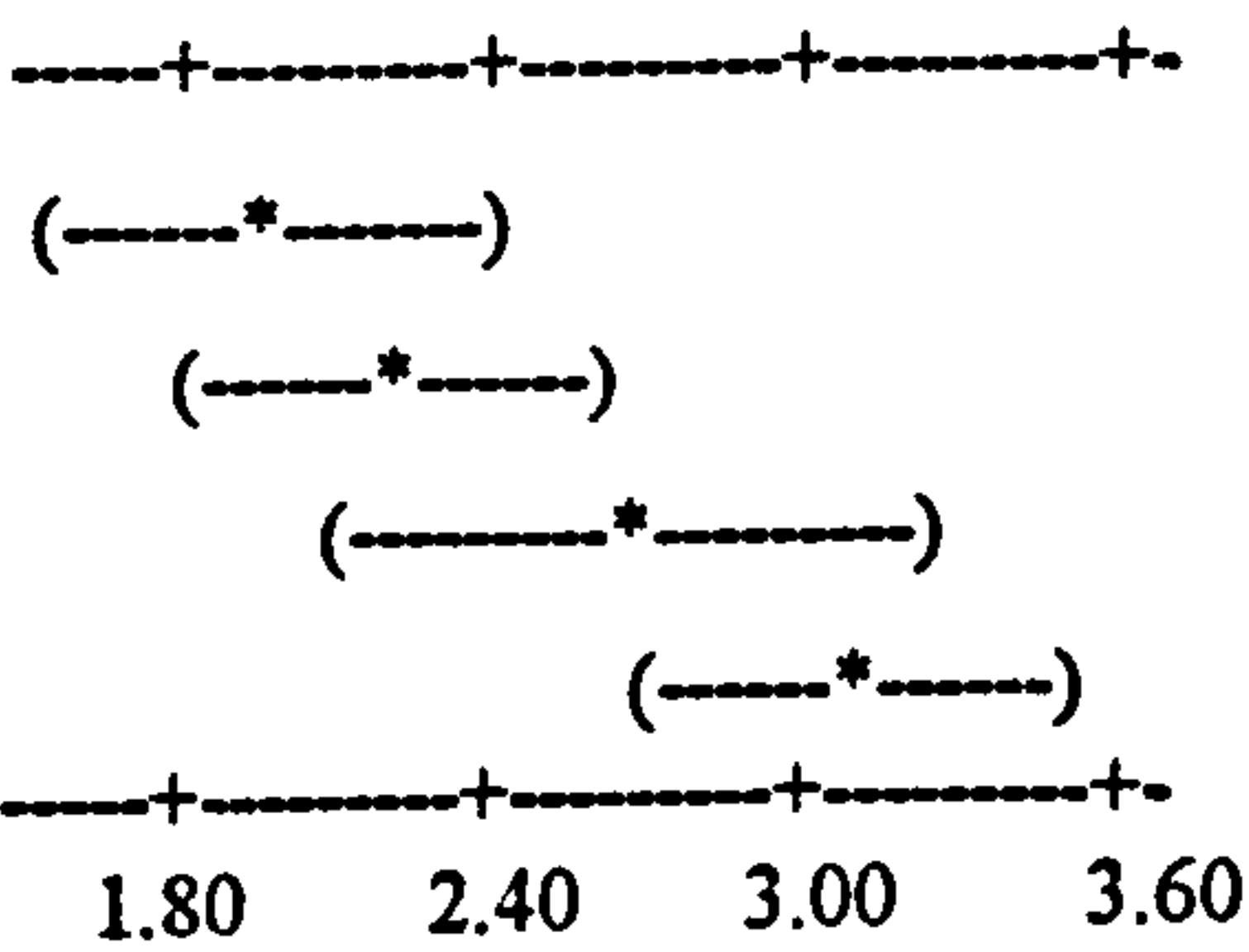
ANALYSIS OF VARIANCE ON TQM DRIVERS - PARENT COMPANY

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	25.20	8.40	4.99	0.003
ERROR	117	196.80	1.68		
TOTAL	120	222.00			

LEVEL	N	MEAN	STDEV
Group1	30	2.000	1.259
Group2	40	2.325	1.385
Group3	18	2.778	1.215
UK	33	3.182	1.261

POOLED STDEV = 1.297

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV



Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.69

Intervals for (column level mean) - (row level mean)

	1	2	3
2	- 1.142 0.492		
3	- 1.787 0.231	- 1.413 0.508	
UK	- 2.035 - 0.328	- 1.653 - 0.061	- 1.396 0.588

Fisher's pairwise comparisons

Family error rate = 0.201
Individual error rate = 0.0500
Critical value = 1.980

Intervals for (column level mean) - (row level mean)

	1	2	3
2	- 0.945 0.295		
3	- 1.543 - 0.012	- 1.182 0.276	
UK	- 1.830 - 0.534	- 1.461 - 0.253	- 1.156 0.348

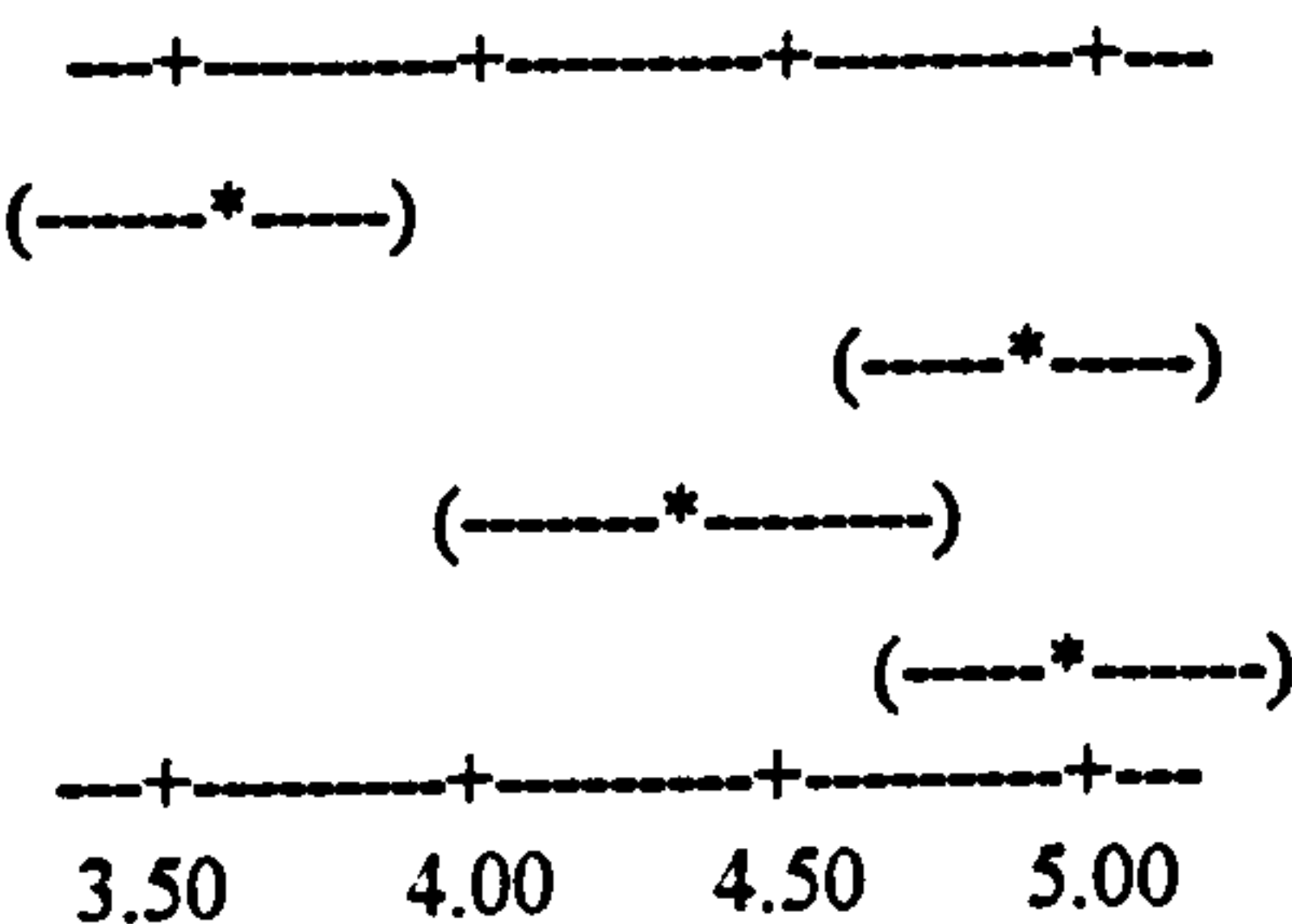
TQM Major Effects

ANALYSIS OF VARIANCE ON MAJOR EFFECTS - RAISE QUALITY AWARENESS

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	14.158	4.719	5.32	0.002
ERROR	125	110.880	0.887		
TOTAL	128	125.039			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV
Group1	32	3.6875	1.1760
Group1	40	4.4500	0.9044
Group1	19	4.4211	0.5073
UK	38	4.4737	0.9223



POOLED STDEV = 0.9418

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	- 1.3438 - 0.1812		
3	- 1.4434 - 0.0237	- 0.6539 0.7118	
UK	- 1.3742 - 0.1982	- 0.5789 0.5315	- 0.7412 0.6360

Fisher's pairwise comparisons

Family error rate = 0.201
Individual error rate = 0.0500
Critical value = 1.979

Intervals for (column level mean) - (row level mean)

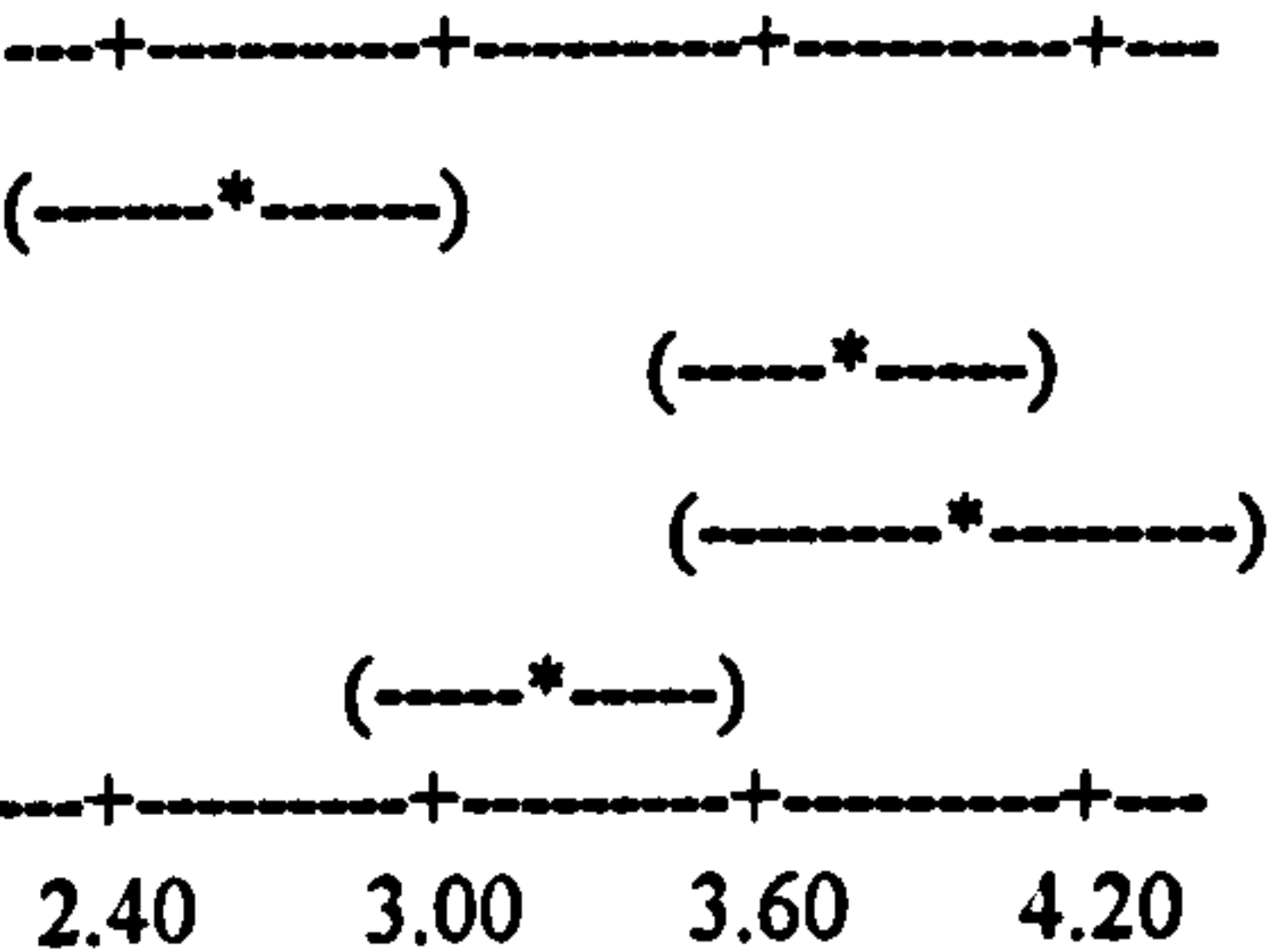
	1	2	3
2	- 1.2046 - 0.3204		
3	- 1.2734 - 0.1937	- 0.4904 0.5483	
UK	- 1.2334 - 0.3390	- 0.4459 0.3985	- 0.5763 0.4711

ANALYSIS OF VARIANCE ON MAJOR EFFECTS - INCREASE EMPLOYEE MORALE

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	25.40	8.47	6.26	0.001
ERROR	124	167.78	1.35		
TOTAL	127	193.18			

LEVEL	N	MEAN	STDEV
Group1	31	2.677	1.249
Group2	40	3.775	1.310
Group3	19	3.789	0.713
UK	38	3.237	1.101

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV



POOLED STDEV = 1.163

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.822 -0.373		
3	-1.994 -0.230	-0.858 0.829	
UK	-1.292 0.173	-0.148 1.224	-0.298 1.403

Fisher's pairwise comparisons

Family error rate = 0.201
Individual error rate = 0.0500
Critical value = 1.979

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.648 -0.547		
3	-1.783 -0.441	-0.656 0.627	
UK	-1.117 -0.002	0.017 1.060	-0.094 1.199

ANALYSIS OF VARIANCE ON MAJOR EFFECTS - REDUCE LABOUR TURNOVER

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	38.06	12.69	8.45	0.000
ERROR	124	186.25	1.50		
TOTAL	127	224.30			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV	
Group1	31	1.839	1.128	(-----*-----)
Group2	40	3.225	1.493	(-----*-----)
Group3	19	3.158	0.958	(-----*-----)
UK	38	2.658	1.097	(-----*-----)
POOLED STDEV = 1.226				-----+-----+-----+----- 2.10 2.80 3.50

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-2.149 -0.623		
3	-2.248 -0.390	-0.821 0.956	
UK	-1.591 -0.047	-0.155 1.290	-0.396 1.396

Fisher's pairwise comparisons

Family error rate = 0.201
Individual error rate = 0.0500
Critical value = 1.979

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.967 -0.806		
3	-2.026 -0.613	-0.609 0.743	
UK	-1.406 -0.232	0.018 1.117	-0.181 1.181

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	36.21	12.07	9.09	0.000
ERROR	121	160.70	1.33		
TOTAL	124	196.91			

LEVEL	N	MEAN	STDEV
Group1	32	1.781	1.157
Group2	37	3.162	1.365
Group3	18	2.944	1.056
UK	38	2.421	0.948

Figure 1 illustrates a four-stage cascaded system. The diagram shows four identical stages connected in series. Each stage is represented by a dashed line with a '+' sign, followed by a dashed line with a '*' sign, and then another dashed line with a '+' sign. The stages are labeled with numbers 1.80, 2.40, and 3.00 below them.

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

	1	2	3
2	-2.105 -0.657		
3	-2.047 -0.280	-0.644 1.079	
UK	-1.359 0.080	0.048 1.434	-0.335 1.381

Family error rate = 0.201
Individual error rate = 0.0500
Critical value = 1.980

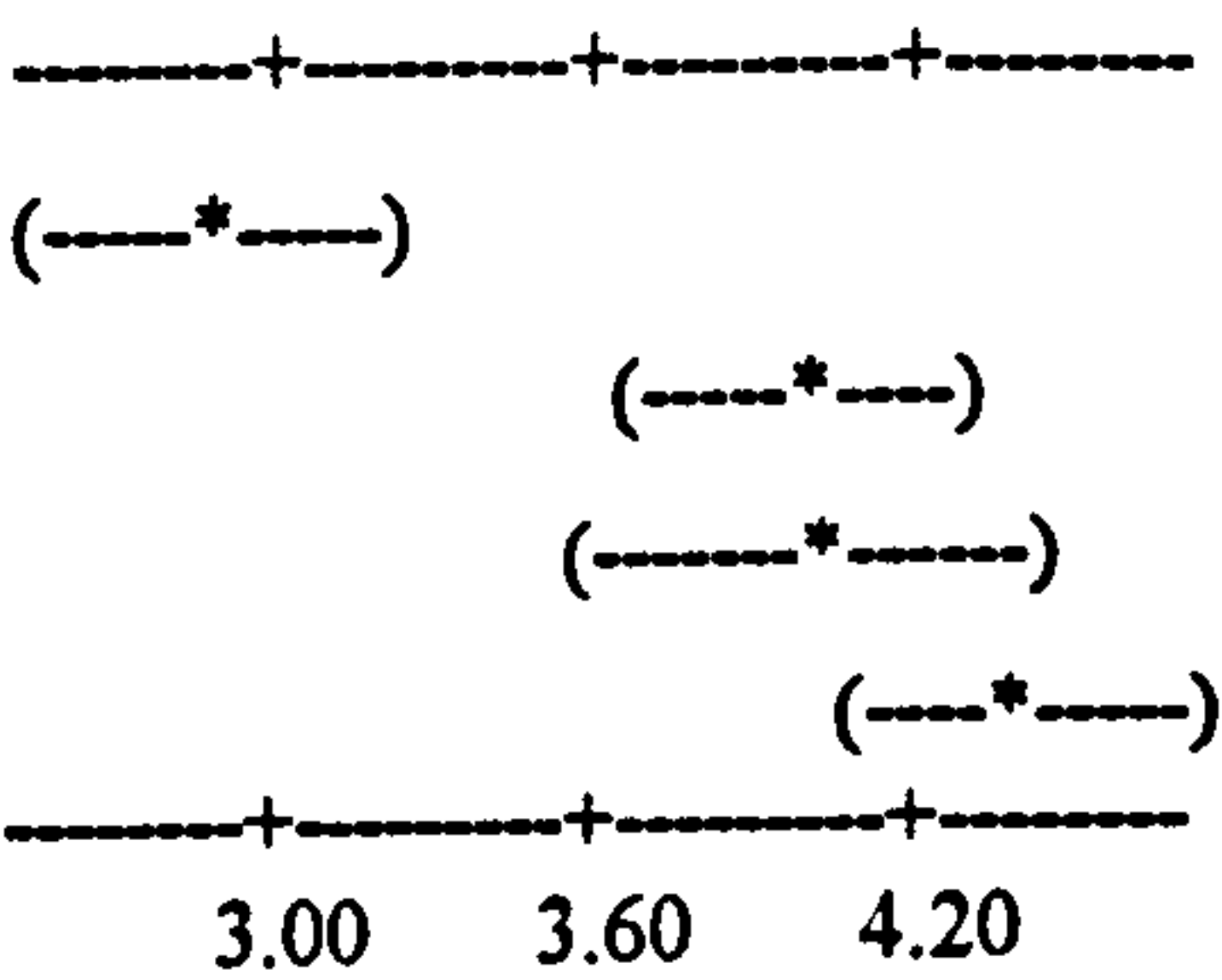
	1	2	3
2	-1.932 -0.830		
3	-1.835 -0.491	-0.438 0.873	
UK	-1.187 -0.092	0.214 1.268	-0.130 1.176

ANALYSIS OF VARIANCE ON MAJOR EFFECTS - IMPROVE COST EFFICIENCY

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	25.68	8.56	8.10	0.000
ERROR	124	131.03	1.06		
TOTAL	127	156.72			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV
Group1	31	2.935	1.181
Group2	40	4.050	1.037
Group3	19	4.053	0.621
UK	38	3.789	1.044



POOLED STDEV = 1.028

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.755 -0.474		
3	-1.897 -0.338	-0.748 0.743	
UK	-1.501 -0.207	-0.345 0.866	-0.488 1.015

Fisher's pairwise comparisons

Family error rate = 0.201
Individual error rate = 0.0500
Critical value = 1.979

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.601 -0.628		
3	-1.710 -0.524	-0.569 0.564	
UK	-1.346 -0.362	-0.200 0.721	-0.308 0.835

ANALYSIS OF VARIANCE ON MAJOR EFFECTS - REDUCE DEFECT LEVELS

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	26.03	8.68	7.63	0.000
ERROR	125	142.17	1.14		
TOTAL	128	168.20			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV	
Group1	32	3.094	1.329	(-----*-----)
Group2	40	4.125	1.042	(-----*-----)
Group3	19	4.316	0.671	(-----*-----)
UK	38	3.974	1.000	(-----*-----)
POOLED STDEV = 1.066				-----+-----+-----+-----+-----
				3.00 3.60 4.20 4.80

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.689 -0.373		
3	-2.026 -0.418	-0.964 0.582	
UK	-1.546 -0.214	-0.477 0.780	-0.438 1.122

Fisher's pairwise comparisons

Family error rate = 0.201
Individual error rate = 0.0500
Critical value = 1.979

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.532 -0.531		
3	-1.833 -0.611	-0.779 0.397	
UK	-1.386 -0.374	-0.327 0.629	-0.251 0.935

ANALYSIS OF VARIANCE ON MAJOR EFFECTS - RAISE CUSTOMER SATISFACTION

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	16.519	5.506	5.90	0.001
ERROR	125	116.691	0.934		
TOTAL	128	133.209			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV	
Group1	32	3.6875	1.1760	(-----*-----)
Group2	40	4.5000	0.9337	(-----*-----)
Group3	19	4.6316	0.7609	(-----*-----)
UK	38	4.4474	0.8913	(-----*-----)
POOLED STDEV = 0.9662				-----+-----+-----+-----+-----
				3.50 4.00 4.50 5.00

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.4088		
	-0.2162		
3	-1.6722	-0.8321	
	-0.2159	0.5689	
UK	-1.3631	-0.5169	-0.5222
	-0.1566	0.6222	0.8906

Fisher's pairwise comparisons

Family error rate = 0.201
Individual error rate = 0.0500
Critical value = 1.979

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.2660		
	-0.3590		
3	-1.4979	-0.6643	
	-0.3903	0.4012	
UK	-1.2186	-0.3805	-0.3530
	-0.3011	0.4858	0.7215

ANALYSIS OF VARIANCE ON MAJOR EFFECTS - INCREASE NUMBER OF CUSTOMERS

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	60.00	20.00	14.52	0.000
ERROR	123	169.43	1.38		
TOTAL	126	229.43			

				INDIVIDUAL 95% CI'S FOR MEAN BASED ON POOLED STDEV
LEVEL	N	MEAN	STDEV	-----+-----+-----+-----
Group1	31	2.548	1.338	(-----*-----)
Group2	40	4.200	1.043	(-----*-----)
Group3	19	4.105	1.100	(-----*-----)
UK	37	4.108	1.197	(-----*-----)
POOLED STDEV = 1.174				-----+-----+-----+-----
				2.80 3.50 4.20

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-2.382 -0.921		
3	-2.447 -0.667	-0.756 0.946	
UK	-2.303 -0.816	-0.605 0.789	-0.865 0.859

Fisher's pairwise comparisons

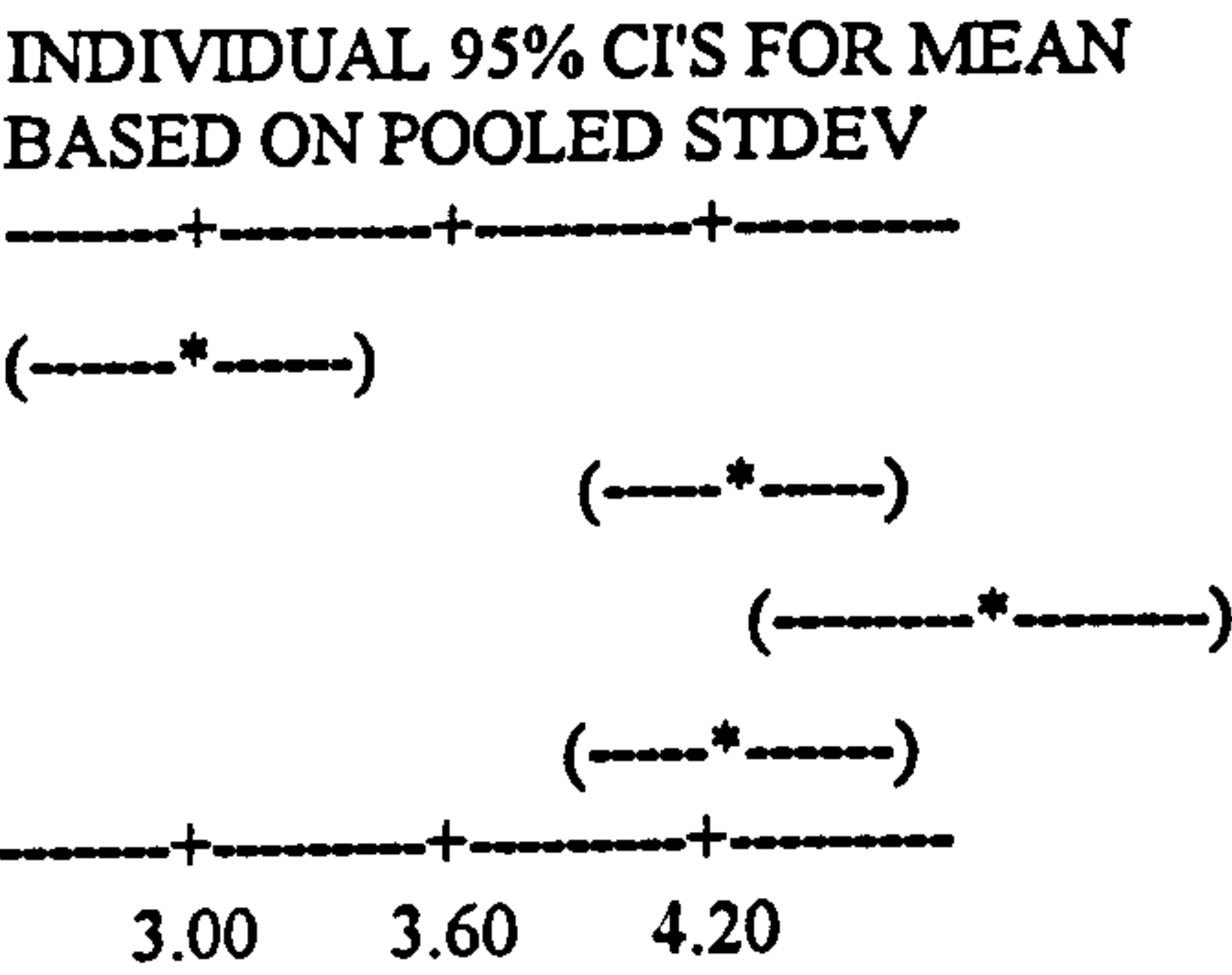
Family error rate = 0.201
Individual error rate = 0.0500
Critical value = 1.979

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-2.207 -1.096		
3	-2.234 -0.880	-0.552 0.742	
UK	-2.125 -0.994	-0.438 0.622	-0.658 0.653

ANALYSIS OF VARIANCE ON MAJOR EFFECTS - INCREASE PROFITABILITY

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	33.15	11.05	7.72	0.000
ERROR	125	178.87	1.43		
TOTAL	128	212.02			



LEVEL	N	MEAN	STDEV
Group1	32	3.000	1.524
Group2	40	4.250	1.149
Group3	19	4.105	0.937
UK	38	4.105	1.034

POOLED STDEV = 1.196

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.988 -0.512		
3	-2.007 -0.204	-0.723 1.012	
UK	-1.852 -0.358	-0.560 0.850	-0.875 0.875

Fisher's pairwise comparisons

Family error rate = 0.201
Individual error rate = 0.0500
Critical value = 1.979

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.811 -0.689		
3	-1.791 -0.420	-0.515 0.804	
UK	-1.673 -0.537	-0.392 0.681	-0.665 0.665

Customer Satisfaction Measured by:

ANALYSIS OF VARIANCE ON MEASUREMENT PROCEDURE: MARKET RESEARCH

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	48.27	16.09	11.19	0.000
ERROR	142	204.25	1.44		
TOTAL	145	252.52			

**INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV**

LEVEL	N	MEAN	STDEV	
Group1	32	3.312	1.693	(-----*-----)
Group2	45	4.600	1.095	(-----*-----)
Group3	20	4.900	0.447	(-----*-----)
UK	49	4.673	1.107	(-----*-----)
POOLED STDEV = 1.199				-----+-----+-----+----- 3.50 4.20 4.90

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-2.009 -0.566		
3	-2.477 -0.698	-1.139 0.539	
Uk	-2.070 -0.652	-0.718 0.571	-0.602 1.055

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.977

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.836 -0.739		
3	-2.263 -0.912	-0.937 0.337	
UK	-1.900 -0.822	-0.563 0.416	-0.403 0.856

ANALYSIS OF VARIANCE ON MEASUREMENT PROCEDURE: MYSTERY SHOPPER

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	238.65	79.55	45.63	0.000
ERROR	133	231.89	1.74		
TOTAL	136	470.54			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV	
Group1	31	1.323	0.748	(---*---)
Group2	38	3.158	1.824	(--*---)
Group3	19	2.684	1.797	(----*----)
UK	49	4.796	0.841	(--*---)
POOLED STDEV = 1.320				---+-----+-----+-----+---
				1.2 2.4 3.6 4.8

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-2.667		
	-1.004		
3	-2.363	-0.492	
	-0.361	1.439	
UK	-4.262	-2.381	-3.040
	-2.685	-0.895	-1.183

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.978

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-2.467		
	-1.203		
3	-2.123	-0.260	
	-0.601	1.208	
UK	-4.073	-2.203	-2.818
	-2.874	-1.073	-1.406

ANALYSIS OF VARIANCE ON MEASUREMENT PROCEDURE: INCREASE OF CUSTOMERS

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	38.60	12.87	4.67	0.004
ERROR	134	369.31	2.76		
TOTAL	137	407.91			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV	
Group1	31	2.871	1.784	(-----*-----)
Group2	41	4.268	1.323	(-----*-----)
Group3	18	3.778	1.215	(-----*-----)
UK	48	3.333	1.950	(-----*-----)
POOLED STDEV = 1.660				-----+-----+-----+----- 2.80 3.50 4.20

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-2.426 -0.369		
3	-2.187 0.373	-0.731 1.712	
UK	-1.458 0.533	0.016 1.854	-0.750 1.638

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.978

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-2.179 -0.616		
3	-1.880 0.066	-0.438 1.419	
UK	-1.219 0.294	0.237 1.633	-0.463 1.352

ANALYSIS OF VARIANCE ON MEASUREMENT PROCEDURE: REDUCTION OF CUSTOMERS

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	36.14	12.05	4.09	0.008
ERROR	135	397.93	2.95		
TOTAL	138	434.07			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV	
Group1	31	2.935	1.672	(-----*-----)
Group2	43	3.605	1.606	(-----*-----)
Group3	17	4.412	0.939	(-----*-----)
UK	48	2.917	2.019	(-----*-----)
POOLED STDEV = 1.717				-----+-----+-----+-----
				2.40 3.20 4.00 4.80

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.722 0.383		
3	-2.825 -0.128	-2.087 0.473	
UK	-1.011 1.048	-0.250 1.626	0.234 2.756

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.978

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.469 0.131		
3	-2.501 -0.451	-1.780 0.166	
UK	-0.764 0.801	-0.025 1.401	0.537 2.454

ANALYSIS OF VARIANCE ON MEASUREMENT PROCEDURE: MARKET SHARE

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	8.70	2.90	1.57	0.198
ERROR	143	263.20	1.84		
TOTAL	146	271.89			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV	
Group1	32	4.313	1.401	(-----*-----)
Group2	46	4.565	1.109	(-----*-----)
Group3	20	4.700	0.733	(-----*-----)
UK	49	4.061	1.688	(-----*-----)
POOLED STDEV = 1.357				-----+-----+-----+----- 4.00 4.50 5.00

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.065 0.560		
3	-1.394 0.619	-1.080 0.811	
UK	-0.551 1.054	-0.221 1.229	-0.298 1.576

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.977

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-0.870 0.365		
3	-1.152 0.377	-0.853 0.584	
UK	-0.358 0.861	-0.047 1.055	-0.073 1.350

Quality Improvements Measured by:

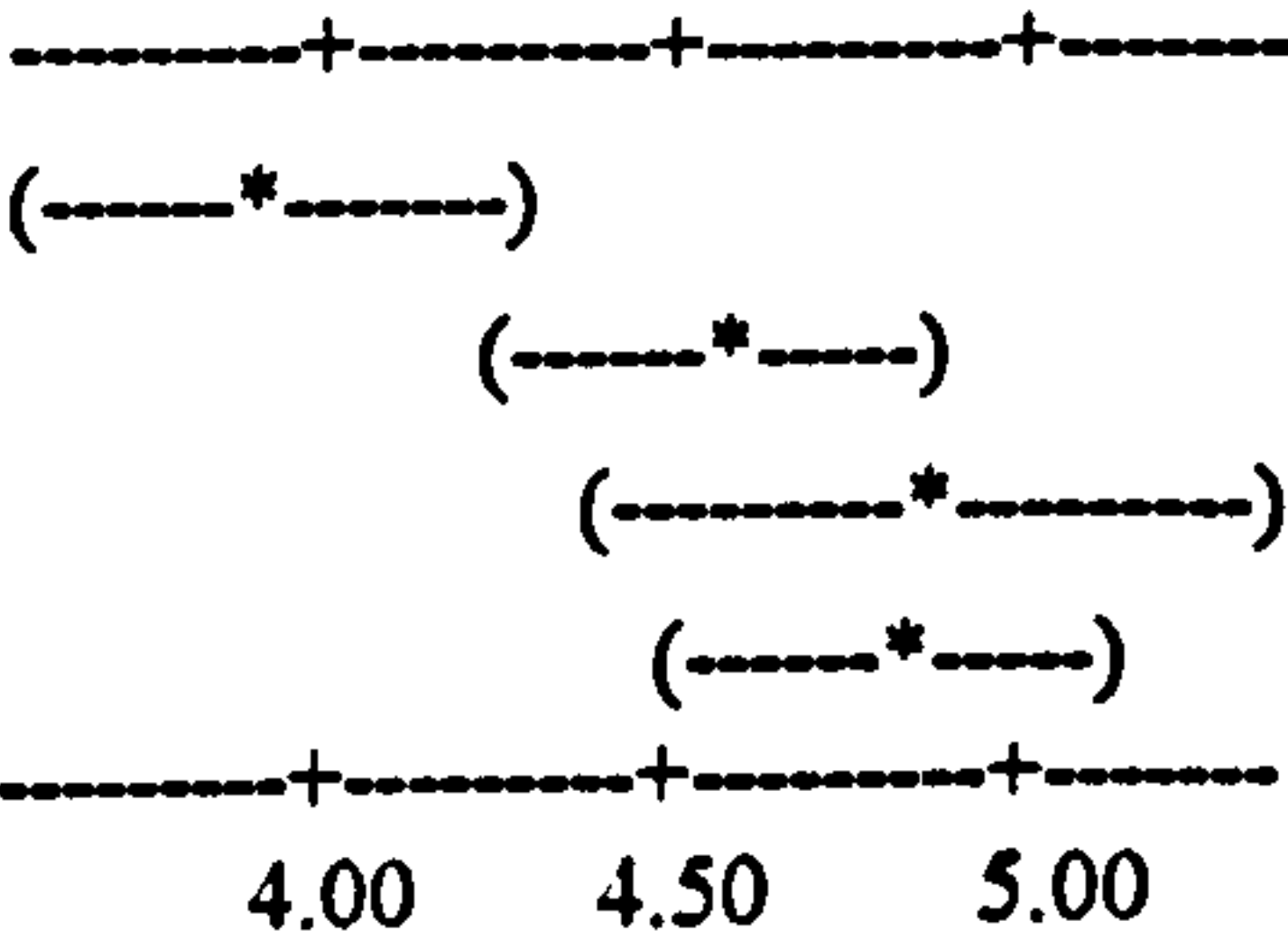
ANALYSIS OF VARIANCE ON MEASUREMENT PROCEDURE: CUSTOMER FEEDBACK

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	14.39	4.80	3.81	0.012
ERROR	139	175.15	1.26		
TOTAL	142	189.54			

LEVEL	N	MEAN	STDEV
Group1	33	3.970	1.591
Group2	43	4.628	0.900
Group3	20	4.800	0.894
UK	47	4.745	0.988

POOLED STDEV = 1.123

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV



Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.334 0.018		
3	-1.658 -0.003	-0.963 0.619	
UK	-1.438 -0.112	-0.733 0.500	-0.725 0.835

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.977

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.172 -0.145		
3	-1.459 -0.201	-0.773 0.429	
UK	-1.279 -0.271	-0.585 0.352	-0.537 0.648

ANALYSIS OF VARIANCE ON MEASUREMENT PROCEDURE: COMPLAINTS

SOURCE	DF	SS	MS	F	p
COMPANIES GROUP	3	16.56	5.52	2.87	0.039
ERROR	141	271.00	1.92		
TOTAL	144	287.56			

INDIVIDUAL 95% CI'S FOR MEAN
BASED ON POOLED STDEV

LEVEL	N	MEAN	STDEV	
Group1	33	3.970	1.510	(-----*-----)
Group2	44	4.545	1.044	(-----*-----)
Group3	20	4.800	0.616	(-----*-----)
UK	48	3.958	1.750	(-----*-----)
POOLED STDEV = 1.386				-----+-----+-----+-----
				3.60 4.20 4.80 5.40

Tukey's pairwise comparisons

Family error rate = 0.0500
Individual error rate = 0.0103
Critical value = 3.68

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.406 0.255		
3	-1.853 0.192	-1.227 0.718	
UK	-0.804 0.827	-0.166 1.340	-0.118 1.802

Fisher's pairwise comparisons

Family error rate = 0.202
Individual error rate = 0.0500
Critical value = 1.977

Intervals for (column level mean) - (row level mean)

	1	2	3
2	-1.207 0.055		
3	-1.607 -0.054	-0.994 0.485	
UK	-0.608 0.631	0.015 1.159	0.112 1.571