THE SERVICE-PROFIT CHAIN: A NEW ZEALAND RETAIL BANKING EXAMPLE

A thesis presented in partial fulfilment
of the requirements for the degree

Doctor of Philosophy in Marketing

at Massey University
Palmerston North

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2001

ABSTRACT

The notion of a service-profit chain has been prevalent in business for many years although only since the 1980s has academic research in services management emphasised such a chain. At its simplest, the service-profit chain implies that certain levels of service to customers will result in profitable transactions for the service provider. However, there are several other linkages in the chain between service and profit such as customer satisfaction and customer loyalty.

One of the first of its kind in the public domain in New Zealand, this study presents an empirical analysis of an abbreviated form of the service-profit chain for one bank. It investigates the relationships in the service-profit chain with specific objectives that include identifying the factors that help generate profitable customers. Just over 1100 personal retail customers of a New Zealand regional bank were surveyed on such issues and these customers' contribution to the bank's profitability calculated using activity-based accounting procedures.

In general, results support the concept of a service-profit chain in personal retail banking. However, a chain implies linearity, whereas the findings here suggest the links between service quality, customer satisfaction, customer loyalty and customer contribution may be more circular than strictly linear. The relationship between customer loyalty and customer profitability is supported, though only at the behavioural loyalty level, where customers conduct all or nearly all of their banking business with one bank. In general, the greater the share of a customer's banking business, the more profitable that customer is to the bank. Conversely, attitudinal loyalty (positive dispositions held about the bank) was not always present for profitable customers. And the study bank's most profitable customers do not always have "all their eggs in one basket" – they are both attitudinally and behaviourally ambivalent in this regard. What sets these customers apart from their peers as profitable customers is their income. They tend to be high networth customers who give the bank the chance to generate profit from their considerable funds and high transaction volume despite not having all their personal banking business consolidated in one bank.

There was some support for association between customer satisfaction and profitability but no hint of a relationship between service quality issues and profitability. In general however, strong associations were common between each successive link in the service-profit chain and for an abbreviated service-satisfaction-loyalty chain. Noteworthy too is the finding that not all customers are always profitable and during this study one third of the bank's customers were unprofitable, one third hovered around breakeven and one third contributed 98% of customer profit. The study also investigated customer defection in personal retail banking and established, in agreement with other recent New Zealand research, that annual defection rates are close to 5%.

From the synthesis of results and their interpretation, several issues emerged including concerns about the study's measurement of attitudinal loyalty as well as the usefulness of the family life cycle model. These, along with limitations and caveats were addressed for the benefit of future research into the service-profit chain in personal retail banking.

ACKNOWLEDGEMENTS

When it comes to the acknowledgement section of a Ph.D. thesis the traditional approach is to thank and acknowledge those people who have been instrumental in allowing the author to achieve the "ultimate academic hurdle." This thesis is no exception but first I have to acknowledge the analogies between completing a thesis and completing a marathon.

I took up long-distance running (as a plodding jogger) about the time I began this thesis and recently one of my MBA students lent me a book on running written by Tim Noakes (citation below) that has many insights which I think bear repeating. He wrote that running:

- Provides solitude especially where fatigue drives us "back into ourselves" from which we emerge with a clearer perspective on issues that worry us.
- Makes us more aware of our bodies and our shortcomings; more self-disciplined, more modest and more humble (traits that I value).
- Gives anyone the opportunity to compete if only against themselves, giving self-confidence and self-belief. Rewards in running, as in life, come only in direct proportion to effort expended.
- Teaches humility in the acceptance of limitations and to accept without envy the physical and intellectual prowess of others. And it teaches you about honesty. In running there is no luck, you cannot fake results and there is no one to blame but yourself.
- Provides time to be creative – much of this treatise has been written in my head as I have pounded around The Old West Road, often in the company of three running mates on the staff at Massey University who deserve acknowledgement: Bruce Wilson, Philip Dewe and Alan Cameron – thanks guys!

So there it is: the humility (wrapped up with a healthy ego), modesty, courage and perseverance essential for successful distance running (measured in the runner's own terms) is akin to the journey necessary for the completion of a Ph.D.

I owe a debt of gratitude to five special colleagues, my supervisors past and present. Originally Professor Norman Marr "took me on" but he had to relinquish that role after accepting the Chair in Marketing at The University of Huddersfield in England. Yet Norman was instrumental in giving me the confidence to submit articles for publication in scholarly journals. Obviously he saw something in me that I wasn't aware of. Thanks Norman. Also part of my original team was my colleague Associate Professor Richard Buchanan who continues as a mentor to this day, dispensing wisdom on academia and life in general. Thanks Rich. And to my old colleague Art Thomas, thanks for the support over the years. Though not a supervisor, you helped a lot.

Now to the biggest thank you, reserved for my Supervisor since 1995, Professor Chris Ryan, now of The University of Waikato, New Zealand, who has "stuck" with me through "thick and thin". Chris, you have taught me much during this thesis and managed the process for me in such good humour that a mere sentence does not do justice to the sincere appreciation that I have for your commitment to my success. The final member on my academic team was Professor Phil Gendall, Massey University, who is a colleague, a mentor and a friend. Phil, you have had an unswerving faith in my ability to see this thesis through and your insightful contributions along the way have helped immensely not just in the thesis itself but in my academic career too. Thank you most sincerely. Massey University itself, along with the Department of Marketing, deserves acknowledgement for funding and supporting doctoral study.

Three members of the Department of Marketing helped me with the typing of this tome and a big thank you to Rosemary, Pat and Maureen for your skills and good humour. And a special word of thanks to the study bank personnel, Rod, John and Greg without whom this thesis would not have been possible.

A Ph.D. gives you the chance to acknowledge and thank parents and extended family for their support over the years. To Nancy and Ron Garland who first sowed the love of scholarship into your children's heads and who have watched me start a Ph.D. twice but finish once, a big thank you. To my brothers and sister thanks for the encouragement along the way. To father-in-law Bill, thanks for being our back up when we needed you. Now it comes time to acknowledge those who stayed in the background and "kept the home fires burning." And fittingly the final acknowledgements must go to my

immediate support team, daughter Ellen, son Lewis and wife Cheryl. You'll see more of me now – perhaps that isn't so good? But thanks heaps! Cheryl, you've lived through two PhDs, the first being a false start in USA twenty five years ago. Your support and love are priceless; please accept some of the kudos for this award.

Noakes, T (1988). *Lore of Running.* Cape Town: Oxford University Press.

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CHAPTER ONE

INTRODUCTION

1.1 Background

Relating the contribution that individual customers make to an organisation's profitability has always interested marketers. Yet in service marketing contexts, and especially in personal retail banking, research has long been handicapped by organisations' inability to allocate their transaction costs to individual customers. Now, using modern activity-based accounting procedures, it is possible to trace the contribution of individual customers to profitability in personal retail banking which, in turn, allows viewing customers as assets and managing them accordingly.

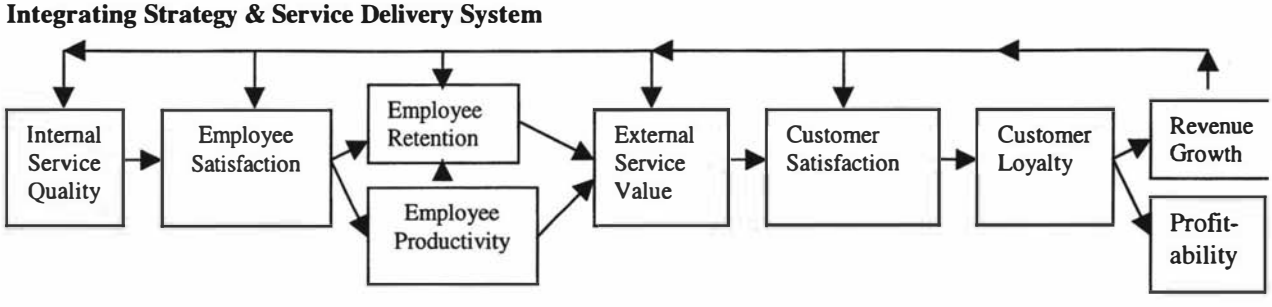
In this thesis, activity-based cost accounting measures were used by the bank under study (hereafter referred to as the "study bank") to derive a measure of customer contribution. This measure, used as a proxy for customer profitability, was then used to investigate relationships and associations with the various antecedent constructs (namely perceived service quality, customer satisfaction and customer loyalty) of the *service-profit chain* (popularised by Heskett, Jones, Loveman, Sasser and Schlesinger, 1994). The study bank's customers were sampled for this investigation. The study bank, with its regional (rather than national) market, is now New Zealand's only locally owned bank.

Relationships between customers and their service providers have been at the forefront of marketing inquiry for decades. Now relationship principles seem to have replaced transactional, short-term exchange in marketing theory and practice as marketers embrace or re-embrace the relationship marketing paradigm (Webster, 1992; Deighton, 1996). The value of enduring long-term relationships has been a recurring theme to such an extent in recent services marketing research that Gummesson (1999) began calling for a "return-on-relationship" (ROR) measure. Actually this type of measure was mooted rather earlier, albeit in a retail banking context, by Storbacka (1994). He coined this measure "customer relationship profitability" (CRP), being an individual customer's contribution, derived from relationship revenue minus relationship cost.

There has been growing pressure in business to demonstrate the financial impact of relationships with customers, especially in services contexts. The commitment to service quality and customer loyalty programmes has usually required an act of faith on management's behalf. This act of faith comes about in part from the "bottom line" of service quality – quality is what the customer perceives quality to be. The service quality movement which was *"spawned during the booming 1980s met the hard realities of recession in the 90s"* (Rust and Zahorik, 1993, p 194) with a concomitant change in managerial mood to cost cutting and demonstration of financial viability for continuation of these programmes. In banking there has been long-standing scepticism about the value of service quality (Le Blanc and Nguyen, 1988; Lewis, 1989).

The structure of this thesis is based upon Heskett et al's (1994) service-profit chain or more correctly, an abbreviated form of their service-profit chain. The full version of this chain is described in Figure 1.1 and it is noted that its authors stated that the links in the chain "s*hould be regarded as propositions"* (Heskett et al, 1994, p 164) in deference to the difficulties of precise measurement of such relationships. Other researchers share these sentiments.

Figure 1.1. Heskett et al's (1994) Service-Profit Chain



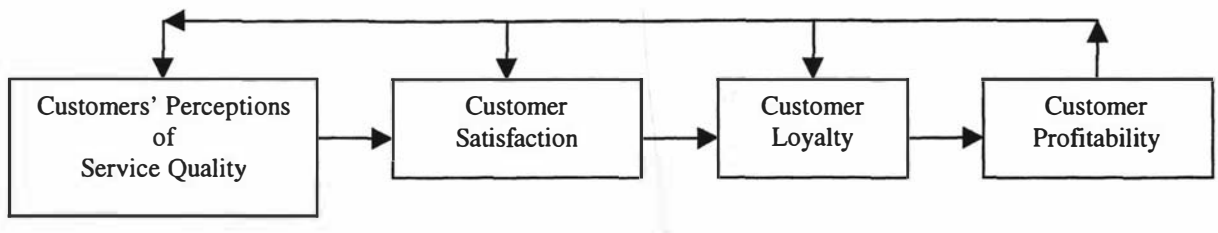
After Chart 1, Heskett et al, 1994, p 166.

The full service-profit chain is an attempt to measure the impact of an organisation's service delivery system on its customers. In turn, through the links in the chain, assessment of the impact of customer perceptions of service value, satisfaction and loyalty upon an organisation's profitability can be traced. These thesis concentrates upon the latter part of the chain where customers (rather than employees) are the focus of attention, befitting research carried out by marketing academics. In the academic services marketing literature considerable emphasis has been placed on the service provider –

customer interface. Conversely, the behaviour and attitudes of service provider employees in their relationships with their organisations has received more attention in the academic management literature.

The services marketing discipline tends to emphasise the latter stages of the service-profit chain. As discussed in subsequent chapters, this thesis adopts a largely positivist approach to research. It is common for such research to seek a reductionist approach with concentration on key variables and key constructs. Hence an emphasis upon an abbreviated form of the service-profit chain is in keeping with this tradition. The abbreviated service-profit chain that underpins this thesis is depicted in Figure 1.2.

Figure 1.2. The Abbreviated Service-Profit Chain



This thesis's examination of the service-profit chain as applied to personal retail banking builds upon previous research. Many researchers have examined the associations between some of the constructs of the chain: perceived service quality, customer satisfaction and customer loyalty. Few have been able to link these constructs to customer contribution. Nonetheless, Bolton and Drew (1991) and Boulding, Kalra, Staelin and Zeithaml (1993) showed how behavioural intentions could be predicted by customer satisfaction and service attributes. Other researchers (for example Buzzell and Gale, 1987; Fornell, 1992) have investigated the profitability of service quality using aggregate, cross sectional data while the Harvard "school" of researchers (for example Reichheld and Sasser, 1990; Heskett et al 1994) have described the profit impact of reducing customer defection. Studies by Rust and Zahorik (1993) and Rust, Zahorik and Keiningham (1994) are among the few that have endeavoured to trace the entire chain of effects from service quality programmes to customer satisfaction to customer retention (measures of behavioural loyalty) to measures of profitability. These authors cite examples of American companies that spent too lavishly on customer service and found there are diminishing returns to expenditure on quality. Rust et al (1994) suggest that quality improvements are more prevalent in manufacturing and standardised services

(such as fast food) than in highly customised services because customisation tends to defy economies of scale. Hence quality improvement in services increasingly implies spending on quality to improve revenues rather than by reducing costs. In a banking context this translates to gaining a greater "share of wallet or purse" among existing customers as well as gaining greater share of customers. Yet in services, with their intangible qualities (like the quality of the personal interactions with service providers), results are not always immediate or measurable. Nevertheless the benefits of quality improvements help customer acquisition in the form of improved ability to attract new customers by positive word-of-mouth and confidence in knowing the bank is offering quality products in a quality "envelope" of service. And quality improvements support the defensive marketing strategies of gaining more patronage from existing customers (that is, a greater share of their "wallets or purses") coupled with higher retention (lower customer "churn"). Small increases in retention rates have been shown to have measurable effects on profitability (Reichheld and Sasser, 1990; Reichheld, 1996). Existing customers tend to buy more than newly acquired customers do. In a banking context, the longer that customers are with their main bank, the greater the "share of wallet" given to that bank, and, as this thesis will show, the greater the share of wallet, the more profitable customers are to their bank. Storbacka (1994) demonstrated this relationship in his study of two Scandinavian banks while Colgate (1999) in his study of customer satisfaction with New Zealand banks writes of the depth of their relationships with customers (the quality of their market share) rather than the quantity of that share as being important. Gummesson (1999) echoes these sentiments in the context of long-term customer relationships, along with earlier work by Fornell (1992), Anderson and Sullivan (1993), Anderson, Fornell and Lehman (1994) and Fornell, Johnson, Anderson, Cha and Bryant (1996).

A long-term perspective to relationships with customers is at the core of recent academic work on customer value (see, for example, Woodruff 1997). For personal retail banking, lifetime value perspectives fit well with the wider literature of customer value, which is related to customer retention and is an output of, rather than an input to, value creation. Customers' value to the study bank is at the heart of the customer contribution measure used in this thesis. As Storbacka (1994) noted, among a bank's customer base, at any time there are those who are profitable, those clustering around a break-even point and those who are unprofitable. Point-in-time studies like this thesis tend to exacerbate the

rigidity of these categories but using customer asset management strategies over time, banks try and move their unprofitable customers into profitability. Otherwise, increasing the retention rates of unprofitable customers can actually erode profitability. Hence the emphasis on relationship value (Crosby, Evans and Cowles, 1990), lifetime value (Reichheld and Sasser, 1990) and return-on-relationships (Gummesson, 1999) using net present value calculations over customers' "banking lives". Further exploration of relationship value reveals that the nature of relationships can change for both customers and service providers – perceived service quality, satisfaction, loyalty and profitability are all likely to change. Several authors have commented on some or all of these changes including de Ruyter, Wetzels, Lemmink and Mattsson (1997) and Woodruff (1997) from a cognitive perspective, and earlier, Kelley, Skinner and Donnelly (1992) from a more sociological perspective.

Enhanced service as a competitive advantage, derived from a clear understanding of the associations between service quality-satisfaction-loyalty-profitability (the service-profit chain), has intuitive appeal for retail bankers. Depicting this "chain" in this linear sequence arose from work by Heskett et al (1994) and the research by authors such as Cronin and Taylor (1994) and Bitner and Hubbert (1994), who established the antecedence of service quality to customer satisfaction. As acknowledged, the two constructs of perceived service quality and cumulative satisfaction can be quite similar and earlier research in the late 1980s and early 1990s confused which construct preceded the other. However, it became clear in the mid 1990s (see for example Oliver, 1993; Taylor and Baker, 1994; Rust and Oliver, 1994) that cumulative satisfaction is a higher order, more global construct than the more transaction-specific perceptions of service quality. Evidence of this antecedence was further substantiated by showing cumulative satisfaction to be a better predictor of repeat purchase (behavioural loyalty) than service quality, as well as the depiction of cumulative satisfaction incorporating additional attributes like perceived value, corporate image and information.

Customer satisfaction as a construct has some well-documented results of relevance for this thesis. Chief among them is that of the negative relationship between perceived service quality/customer satisfaction and socioeconomic status – customers most able to pay for quality tend to be more critical of the quality received. The American Customer Satisfaction Index (ASCI), a quarterly economic indicator of quality as perceived by

customers (Fornell et al, 1996), shows that in addition to the relationship noted above, across 40 measured industries, women are consistently more satisfied than men and that satisfaction rises with age, especially from age 55 years upwards.

Loyalty in the context of personal retail banking is an outcome of several preceding links in the service-profit chain. Conceptual overviews of loyalty in services environments are provided in the academic literature by authors such as Hunt and Morgan (1994), Dick and Basu (1994) and Gremler (1995). This literature views customer loyalty as a multidimensional construct with two main elements of behavioural loyalty and attitudinal loyalty. The attitudinal dimensions of involvement, trust and relationship commitment seem to be common to all types of loyalty. In banking there is the sector-specific dimension of switching costs or inertia because of the financial commitment to the customer-provider relationship which is common in any "subscription-type" market. Some of the earlier research by Jain, Pinson and Malhotra (1987) and Gremler (1995) has been influential in shaping the attitudinal loyalty measures used in this thesis.

The banking industry in New Zealand has had its share of trials and tribulations. In the early 1990s the New Zealand government "bailed out" the people's bank – the Bank of New Zealand – to the value of $NZ1 billion. Paltschik and Storbacka (1992) report similar turmoil in Scandinavian countries, and conclude that banks had organisational structures that did not cope well with turbulence in the business environment. Performance management systems were rare and the systems in place tended to value short-term profitability. Consequently branch management tended to finance risky projects in the boom times and the high interest earned from these projects helped promote these managers. Yet the legacy of a portfolio of risk-loaded financing was left at branch level which in the recessionary times of the late 1980s and early 1990s led to customer insolvencies. Now the New Zealand personal retail banking industry is quite different. Only one bank is in local ownership while the four major banks are all foreign-owned. The "service scape" is quite different too. In 1994 there were nearly 1500 full service retail bank branches; now there are less than one thousand as the realities of bank mergers, mobile mortgage banking, electronic banking and telephone banking take effect. When the primary research for this thesis was conducted, Internet banking (with its interactive on-line systems allowing customised solutions for banking customers) was in its infancy but it too is now a reality.

The study bank for this thesis's empirical research is New Zealand's only locally-owned bank. It is one of the smaller banks and has a regional clientele served by 12 branches, although it actively encourages customer acquisition from beyond its region by electronic and telephone banking. Nevertheless, the study bank owns half of all branches in the region. In 1999 nearly half of the region's adult population claimed the study bank to be their "main bank" (that in which the majority of their personal retail banking business is done) while nearly two thirds of the adult population had some type of banking relationship with this bank.

1.2 Objectives

The overall aim of this research was to take an abbreviated form of the service-profit chain concept (popularised in its original form by Heskett et al (1994) but enunciated by many others such as Buzzell and Gale (1987), Anderson et al (1994), Storbacka (1994), Rust et al (1995), Reichheld (1996) and Loveman (1998)) and explore the extent to which customers' perceptions of service quality, of satisfaction and of loyalty affect customer profitability in a New Zealand regional bank. Being a very broad aim, it was further divided into several more specific research objectives that trace various associations within the service-profit chain. These are:

- To what extent are perceptions of service quality related to customer satisfaction?
- To what extent are perceptions of service quality related to customer loyalty?
- To what extent are perceptions of service quality related to customer profitability?
- To what extent is customer satisfaction related to customer loyalty?
- To what extent is customer satisfaction related to customer profitability?
- To what extent is customer loyalty related to customer profitability?

In turn, these objectives invite "customer-related" questions such as:

- Who are the satisfied, the loyal and the profitable?
- What factors characterise profitable customers? Loss making customers?
- Are satisfied customers loyal customers and vice versa? Are satisfied customers profitable and vice versa?
- Are loyal customers profitable and vice versa?

Also, three propositions for investigation have been derived from the work of Jain et al (1987) and Fornell et al (1996), namely:

- More profitable customers are more likely to have lower perceptions of service performance, be less satisfied and be less attitudinally loyal to their main bank.
- More profitable customers will have higher propensities to defect from their main bank (that is, be less behaviourally loyal).
- More profitable customers will be from above average income households and have higher educational status.

Finally, one specific sub-objective addresses both an issue of content as well as of methodological importance. Juster's (1966) eleven point probability scale has been used in the measurement of various behavioural intentions – to recommend one's main bank, to increase or decrease business there and to estimate the propensity to defect entirely from one's main bank. To examine the predictive validity of the scale, the estimates of defection were compared with actual behaviour one year after that questioning.

The reader may be wondering why the objectives of this thesis have been constructed as a series of research questions and propositions rather than the more stringent procedures of hypotheses and hypothesis testing. At the time that the research for this thesis was undertaken, the service profit chain was more concept than model. Indeed its authors (Heskett et al, 1994) requested readers to regard the chain as a series of propositions (see page 2 of this thesis). While Heskett et al identified potential relationships to be explored within the service profit chain, they did not define the exact nature of those relationships as would be undertaken in model building based on hypotheses. Neither does this thesis, and during its research and data collection phases (1996-1997), researchers were still trying to disentangle the constructs of the service-profit chain whereas by 1999 several authors (for example, Connell, 1997 and Loveman, 1998) had, and their research offered hypotheses for submission to specific testing. Research questions and propositions (rather than the more stringent procedures of hypotheses and hypothesis testing) are deemed suitable when the magnitude and direction of the relationships to be tested are not known with any certainty. Hence research questions and propositions form the research approach taken in this thesis.

Overall, the aim and its objectives are to help advance the financial services academic literature on issues subsumed by the service-profit chain in personal retail banking. In so doing, this thesis could assist managers in their decisions on customer asset management and on resource allocation for enhancing customer profitability. Should investment be allocated to improving perceived service quality of banking services or to encouraging customer loyalty? What effect does an increase in "share of wallet" have upon profitability? These are the types of questions befitting a thesis with both academic and applied objectives.

1.3 Outline of the Thesis

This section is designed to give the reader an overview of the entire thesis. Immediately above in the preceding sections the overall aim has been introduced and its objectives set. Now the thesis moves into academic literature relevant to the service-profit chain in personal retail banking followed by methodological issues and the research methods used for data collection. Then research results are analysed and finally implications of these results are drawn in a chapter entitled 'Conclusions'.

Chapter Two examines the measurement of customer perceptions of service quality within a context of quality improvements reflecting favourably on an organisation's profitability. Early contributions to service quality research are acknowledged, the role of customers as partial employees is discussed and the rise of multiattribute measurement of quality in services, epitomised by the SERVQUAL approach, receives considerable attention. The merits and demerits of this approach to service quality measurement are debated while concomitantly the difficulties of demonstrating quality improvements' impact upon profitability are broached. (Notably, some of this material formed the basis of the literature reviewed in the published journal article: Garland R, Tweed D and Davis N (1999) "Service quality in the New Zealand market for construction hardware," *Journal of Marketing Theory and Practice*, 7(4), 70-80.) The chapter concludes with justification for the adoption of a "perceptions-only" measurement instrument, akin to the SERVPERF format, but adapted to accommodate a New Zealand personal retail banking environment.

Chapter Three discusses academic literature in the next step of the service-profit chain, that of customer satisfaction. The 1980s and early 1990s saw considerable debate about the differences between service quality and satisfaction, particularly debate about which construct preceded the other in the service-profit chain. The disconfirmation of expectations paradigm, introduced to the reader in Chapter Two, is discussed and further justification for a "perceptions-only" measurement instrument provided. Then confusion over the satisfaction construct is examined and evidence for its post-cedence to service quality presented. This chapter provides the background for the thesis's adoption of a global measure for customers' satisfaction with their main bank.

Chapter Four addresses the voluminous literature on customer loyalty. The construct of loyalty carries slightly different meanings and treatments across the social sciences and these are discussed briefly. However, the underlying dimension of commitment is constant irrespective of the context. Marketing studies of customer loyalty tend to focus on brands, usually fast moving consumer goods brands, and earlier studies of brand loyalty are discussed briefly. Their evidence shows loyalty as a multidimensional construct, inclusive of major behavioural and attitudinal dimensions. Research on customer loyalty in service environments is then investigated, especially the attempts at classifying customer loyalty. A review of recent attempts at modeling service loyalty and at producing a bank loyalty index occupy the rest of the chapter. The relevance of these methods to the instruments developed for the measurement of customer loyalty in this thesis is acknowledged.

Chapter Five examines literature on the final link in the service-profit chain, that of profitability derived from an organisation's relationship with its customers. Associations are drawn with the relationship-marketing paradigm and then various models of the service-profit chain are investigated. The chain's application to personal retail banking is examined with important context for this thesis provided by Scandinavian and British studies on customer profitability.

Chapter Six sets the geographical context for this thesis. The New Zealand retail banking market is described, especially recent reductions in branch banking, and New Zealanders' adoption of electronic banking technology. A recent New Zealand study on banking customers' satisfaction, loyalty and defection gives further context. Then

activity-based accounting procedures are reviewed as these procedures provide the basis of this thesis's derivation of its customer contribution measure.

Chapter Seven provides a summary of the underlying themes explored in the preceding review of literature and relates these to the thesis objectives (which are restated). In turn several propositions that address specific aspects of the objectives are presented and then a methodological overview is provided to help link the academic literature with the thesis's research methods.

Chapter Eight, entitled "Preliminary Research," is the first of two methodological chapters. After a brief review of qualitative methods relevant for a personal retail banking context it outlines the qualitative research undertaken in preparation for subsequent quantitative analysis. Discussion of customers' loyalty to their main bank, their banking intentions and their level of expertise with a specific probability scale, the Juster scale, were the main aims of this qualitative pre-research phase. Then the pilot study, a prelude to the main quantitative study, is introduced.

With the pilot study being a mail survey, the chapter goes on to address survey response in detail and then reports on the performance of the survey questionnaire. Evidence for various amendments to the final questionnaire are presented and discussed along with evidence showing the questionnaire has a high degree of validity and that its attitudinal items measuring perceptions of service quality and customer loyalty are capable discriminators. Some preliminary multivariate analysis on the pilot study data is reported to provide guidance for subsequent analysis of major study results. Notably some of the reliability testing used in this chapter formed the basis of a published journal article: Ryan C and Garland R (1999) "The use of a specific non-response option on Likert-type scales," *Tourism Management* 20(1), 107-113.

Chapter Nine, the second methodological chapter, outlines in detail the procedure and sample for the major survey of personal retail banking customers from the study bank. Sampling issues are discussed along with sources of error and bias that can affect research results; Juster's probability scale (used to measure behavioural intention in this thesis) is examined too. Then data reliability and validity are discussed along with the suitability of the data for subsequent multivariate analyses.

Chapters Ten to Twelve present the research findings. After describing the sample's characteristics, Chapter Ten concentrates on describing the results by bivariate analysis. This lengthy chapter suggests that customers' ages, educational status, income status, time with their main bank and "share of wallet" given to their main bank might prove worthwhile discriminating variables in terms of satisfaction with, and loyalty to one's main bank. The various propositions posed in the objectives section are discussed in the light of these results, including the important section on customer defection.

Chapter Eleven catalogues the results of multivariate analyses carried out on the major study's data in an effort to consolidate, with more precision, the differentiation between customers noted in Chapter Ten. Results here show that perceived service quality in personal retail banking is characterised by three major dimensions (customer service, tangibles and a specific bank pricing and image dimension). Customer loyalty behaves quite similarly to overseas studies in that the dimensions of commitment, familiarity and inertia are strongly represented. Additionally, two banking specific dimensions (all-in-one banking/anti-switching and a fees/location dimension) accompany the other three. The chapter concludes with the derivation of five distinct customer segments, characterised by various degrees of attitudinal and behavioural loyalty to their main bank.

The final chapter of results, Chapter Twelve, is in essence a capstone section of this thesis in that findings addressing the final link in the service-profit chain are discussed. Customers' contributions to the study bank's profitability are analysed allowing detailed classification and an investigation of the relationships between profitability, perceived service quality, customer satisfaction and customer loyalty.

Finally, Chapter Thirteen draws the key findings together under several pervasive themes and discusses their implications for managing customers as assets. Concluding remarks examine future research ideas and suggested modifications to the research design along with a brief review of limitations.

1.4 Summary

This thesis examines, in the context of personal retail banking, an abbreviated form of Heskett et al's (1994) service-profit chain. Thus it investigates the extent to which customers' perceptions of service quality, customers' global satisfaction and customers' loyalty affect their profitability for a New Zealand regional bank. Sub-objectives include tracing the associations between the constructs of perceived service quality, customer satisfaction and customer loyalty as well as investigating customer defection from their main bank.

A multistage methodology was used to gather the primary data for the study. Over a period of two years the research moved from a qualitative phase through a pilot study and on to a major quantitative study. Results were analysed by univariate, bivariate and multivariate research methods; a probability scale, the Juster scale, was used to test likelihood of defection from the bank and these estimates were compared with actual behaviour one year later.

Results are discussed in terms of their contributions to the academic marketing and management literatures along with their implications for financial services managers. Several key conclusions are drawn, limitations are noted and future research directions are discussed.

CHAPTER TWO

PERCEIVED SERVICE QUALITY

2.1 Introduction

Corporate strategy in the 1990s has emphasised service quality (as perceived by customers and staff) as a means of enhancing customer loyalty and attracting new customers via the testimonies of existing customers. In turn, the signs of success of these two basic strategies for growth are increased market share, lower employee turnover (and higher morale) and fewer mistakes, leading it is hoped, to improved financial performance (through increased productivity, lower operating costs, and increased profitability). It has even been claimed (Lewis, 1989) that a service quality positioning can insulate the organisation from intense price competition. Several decades ago, Drucker (1974) was expressing these sentiments in a broader context of management, encouraging organisations to continually reassess their positioning with their customers. He wrote that it should follow that service firms which concentrated efforts to plan, improve and evaluate their service quality ought to survive by retaining customers and enrolling new ones, thereby withstanding environmental and competitive pressures. Peters and Waterman (1982) agreed, suggesting that managing the features of the service which provide sustainable superior value for customers helps target business activity better and (should) contribute to long run improved business performance.

2.2 Services and Quality

The contribution to the study of customer satisfaction and service quality by the operations management discipline should not be overlooked. Crosby (1979) comments that firms which have taken a total quality approach to problem solving have benefited from improved levels of customer satisfaction, improved employee morale, lower operating costs and improved productivity. In the manufacturing firm, quality criteria can be determined with customers, specifications developed, and the concept of quality becomes conformance to specifications. Czepiel, Solomon and Surprenant (1985) were among the first to apply findings from manufacturing to service industries by emphasising service performance standards and then conformance to these standards. However, this traditional method of service quality evaluation has floundered (Shostack, 1987) as services (unlike products) are

rather more complex, and based on processes. Services usually involve a variety of people, are difficult to examine, inspect or replicate exactly. A focus on standards and conformance to specifications distracts attention away from other factors such as social or psychological influences on the individuals performing the service, organisational factors and environmental factors that can affect the service offering. In 1985 Parasuraman, Zeithaml and Berry (hereafter referred to by their initials - PZB, ZPB, PBZ etc) were among the first authors to emphasise multidimensional approaches to examining service quality and the thrust of service quality research since then has followed this paradigm although not necessarily following PZB's method of measurement (SERVQUAL).

Definitions of service abound in the literature. Each mentions exchange and intangibility; some mention services' inability to be stored. Perhaps the most crucial point is simply the participation of the customer in the service process. For example, Kelley, Skinner and Donnelly (1992) go so far as to claim that the customer becomes a "partial employee" in the exchange process where the customer participates as a resource contributor alongside the service provider. Taking this perspective further, Kelley et al (1992) suggest *'there are mutual expectations involving a pattern of rights, privileges, and obligations between the customer and the service organisation'* (p 199), rather like the "marriage" between customer and service provider cited by Levitt (1983). If customers can be regarded as "partial employees" (for instance, completing an application form for a bank account is an example of the customer contributing to the service provision) then any assessment of service performance should consider contributions by customers, to the service encounter. As early as 1983, Gronroos termed this 'customer technical quality' whereas how customers behave during the encounter is termed 'customer functional quality', including interpersonal aspects of the exchange such as courtesy and friendliness. Kelley et al (1992) contend that customer dissatisfaction can arise from customers' ignorance of their role during a service encounter. Further, these authors demonstrated that the process of "organisational socialisation" (providing customers with a means of learning their roles during a service encounter) is positively related to satisfaction with that service (and its provider). Perhaps customer loyalty is also affected as these authors confirmed that the longer customers are associated with the service provider (a behavioural measure of loyalty) the more "socialised" to the service provider they become.

Given that services are *'produced and consumed simultaneously, customers often are present "in the firm's factory" and interact directly with the firm's personnel. Thus "the factory" and the contact personnel play marketing roles as well as serving operational functions'* (Bitner, 1990, p 70). Additionally, because services are essentially intangible processes, customers may search for cues to help them determine the firm's capabilities. Often the only cues available are the firm's physical facility and its employees.

In summary, the involvement of the customer in the service process demands emphasis on managing the exchange between customer and provider. And this duality of roles needs to be reflected in the measurement of service quality. The inseparability of production and consumption of services increases the importance of the role played by service personnel, and the service environment, in customers' evaluation of service quality (Booms and Bitner, 1981).

2.3 Service Quality Research in the 1990s

During the 1980s the academic business literature began to recognise the importance of the service sector in western world economies. The seminal articles by Berry and Parasuraman (1993) and Fisk, Brown and Bitner (1993) in the *Journal of Retailing* describe the rise of the "new" academic field of services marketing from its evolution in the 1960s and 1970s to its present (recognised) status in the 21st century. Now, half to three quarters of the workforce in western world nations are engaged in service functions (Mattsson, 1994).

During services marketing and services management's infancy in the 1980s, academics *'focused on determining what service quality meant to customers ... since then ... the service quality agenda has now shifted and reconfigured to include other issues. The issue of highest priority today involves understanding the impact of service quality on profit'* (ZBP, 1996, p 31). In the 1980s, and even in the early 1990s, the notion that better service would reflect favourably "on the bottom line" could be described as an act of faith; little evidence had been presented to support this appealing but intuitive supposition. However, by the mid 1990s, research on the effects upon profitability of delivering quality service began to appear (Reichheld and Sasser, 1990; Fornell 1992; Rust and Zahorik, 1993; Anderson et al,

1994; Storbacka, 1994; Rust et al, 1994; Barnes and Cumby, 1995; Rust, Zahorik and Keiningham, 1995). These authors' work showed that there are a number of intervening relationships between service quality and profitability. Companies that are rated highly on service performance tend to experience superior rates of customer retention and market share growth (Rust et al, 1994; Anderson et al, 1994) which can lead to enhanced profitability. Yet, as ZBP (1996) suggest:

> *... the evidence is often too general to answer foremost in executives' minds: If I invest in service quality, will it pay off for my company? How will service quality pay off? ... Determining the offensive impact of service quality parallels the age-old search for the advertising - sales connection. Service quality's effects - similar to advertising's effects - are cumulative, and therefore evidence of the link may develop slowly. And, similar to advertising, service quality is one of many variables - including pricing, advertising, efficiency, and image - that simultaneously influence profits. Furthermore, spending on service per se does not guarantee results, because strategy and execution must both be considered* (p 31-32).

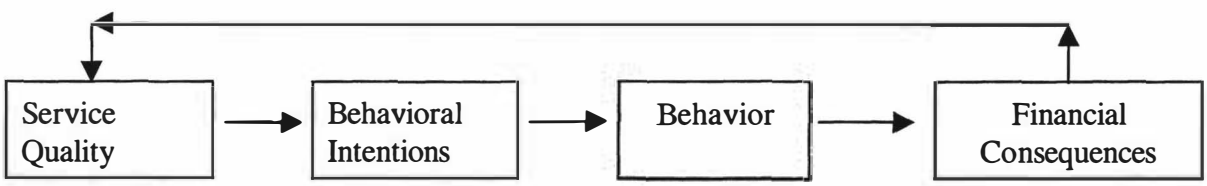
Obviously then, service quality per se is not a panacea for poor business practice or even for slow growth. Nevertheless, as ZBP (1996) suggest, taking a defensive marketing perspective through focusing on customer retention helps organisations measure the financial impact of service quality, and they cite the work of Rust and Zahorik (1993) and Rust et al (1994, 1995) in this regard. As discussed in Chapter Five, Rust et al (1994) outline the procedures required to measure service quality's impact on profitability. These are:

- identifying the attributes of service, and from among these, identifying those of major importance
- modelling behavioural response (for example, retention or defection) to such service programmes
- modelling the impact of such service programmes on profits.

The first of these procedures is common to all studies of service quality and customer satisfaction whereas the second, modelling behavioural response, has been less prevalent in

marketing studies although Cronin and Taylor (1992), Boulding et al (1993), and ZBP (1996) have addressed this issue. The last mentioned authors' work centres on the premise that if service quality affects customer retention at the macro level (as suggested by the authors cited above), then service quality impacts upon individuals' intentions to remain with or switch from a service provider ought to be detectable. They have captured these processes in a model (see Figure 2.1 below) which shows that *'behavioral intentions can be viewed as indicators that signal whether consumers will remain with or defect from the company'* (ZBP, 1996, p 33).

Figure 2.1. Linking Service Quality to Financial Consequences



Superior	→	Favourable	→	Remain	→	Increase profit
Inferior	→	Unfavourable	→	Defect	→	Decreased profitability

Customers demonstrate their level of commitment to a service provider in terms of financial consequences for that provider by favourable or unfavourable behavioural intentions.

> *When customers praise the firm, express preference for the company over others, increase the volume of their purchases, or agreeably pay a price premium, they are indicating behaviorally that they are bonding with the company. Recent research [for example, Cronin and Taylor, 1992; Anderson and Sullivan, 1993] offers some evidence that customer satisfaction and/or service-quality perceptions positively affect intentions to behave in these ways* (ZBP, 1996, p 34).

Additionally, willingness to recommend the company to others is often found to be strongly correlated with perceptions of service quality (for example, PZB, 1988; PBZ, 1991a) as well as intentions to repurchase (Boulding et al, 1993; Garland, Marr and Bell, 1996) and remaining "loyal" (Rust and Zahorik, 1993). Conversely, where service quality has been perceived as inferior, customers can signal their displeasure by complaining, by threatening

to defect, by negative word-of-mouth ("bad mouthing" the service provider to a variety of people) and by reducing expenditure with (but not defecting from) the service provider in question.

Given that service superiority has been shown to foster consumer satisfaction, business managers tend to ask: *'how much service quality is enough to retain customers? Is there a level beyond which there are diminishing returns in terms of strengthening behavioral intentions?'* (ZBP, 1996, p 34). Posing these questions fits well with ZBP's (1993) zone-of-tolerance framework (that is, customers have a zone of tolerance between their desired level of service and that level which they will accept) and they proceeded to test, in their 1996 work, whether the relationship between behavioural intentions and service quality varies within, and beyond, the zone of tolerance. They found support for their proposition; "payback" was greatest within the zone but beyond the desired level, the slope of the cost-benefit relationship is virtually flat.

2.4 The SERVQUAL Debate

The debate in academic management and marketing literature on how to measure service quality (see, for example, Brown, Churchill and Peter, 1993; Cronin and Taylor 1992, 1994; Teas, 1993; PBZ, 1993; PZB, 1994; ZBP, 1996) has focused on using gap analysis (best demonstrated by the SERVQUAL model - measuring service quality as the difference between customers' perceptions and expectations ratings) or the simpler "perceptions-only" ratings. ZBP (1996), who are the proponents of SERVQUAL, concede that a study's purpose may help dictate service quality measurement: *'the perceptions-only operationalization is appropriate if the primary purpose of measuring service quality is to attempt to explain the variance in some dependent construct'* (p 40). This thesis does precisely that, investigating the relationships between service quality, customer loyalty and customer profitability. Therefore, measuring service quality by perceptions alone is justified. Nevertheless, a brief review of the debate about the SERVQUAL measurement instrument is necessary to provide context for the author's reliance on a perceptions-only measure of service quality.

The SERVQUAL measurement instrument is one of several ways to measure service

quality. SERVQUAL, developed from research begun in the early 1980s by PZB, is based on the view that customers assess service quality by comparing what they expect from any service provider in that provider's industry with their perceptions of service received from a particular service provider. PZB (1985) were among the first business academics to present service quality as a multidimensional construct, and by 1991 had concluded that customers use five basic dimensions upon which to base their assessment of service quality, namely reliability, assurance, responsiveness, empathy and tangibles. PZB (1985, 1988) developed a 22-item questionnaire to capture customers' expectations and perceptions of service provider performance. Procedurally, customers score their expectations first on the 22 items and then move to scoring their perceptions of the service provider's performance on these same 22 items. Subsequent revisions of the SERVQUAL instrument (ZBP, 1993; PZB, 1994) have seen the incorporation of a zone of tolerance into the measurement of expectations (expressed as "desired" and "adequate") but the underlying concept of the SERVQUAL instrument remains: to what extent does service performance meet, exceed or fall short of service expectation? In other words, is there a gap, and if so, how big and in which direction (positive or negative)? Arguably, SERVQUAL has been the most widely used service quality measurement instrument in the 1990s, having been used in a wide variety of circumstances and service sectors. Buttle (1996) documents many of these studies, and the reader is directed to this reference for further reading.

Despite its widespread application in service industry settings, criticism of the SERVQUAL instrument abounds in the academic management and marketing literature. Authors such as Iacobucci, Grayson and Omstrom (1994), Buttle (1996) and Ryan and Cliff (1996) cover these criticisms cogently. For example, Buttle (1996) divides these criticisms into theoretical and operational criticisms, discussing each at length. It is not the intention of this thesis's author to replicate these critiques at length here, but rather to use them to reaffirm the choice of a perceptions-only operationalisation of service quality. Hence the review of the SERVQUAL instrument's shortcomings is intentionally brief.

Criticisms of SERVQUAL's theoretical structure arise because of:

- its basis in disconfirmation of expectations theory rather than attitudinal theory
- its reliance on gap analysis
- its emphasis upon service process (how something is delivered) rather than technical

quality (what is actually being delivered)

- difficulties in replicating the five SERVQUAL dimensions and the instrument's lack of universality.

Criticisms of the implementation of the SERVQUAL instrument have addressed:

- respondent confusion with the expectations scale - what is being measured?
- item composition - using only four or five attributes fails to capture the variability within each of the five SERVQUAL dimensions
- choosing one occasion (or "moment of truth") for assessment rather than assessing performance (where possible) over a longer period
- the use of negatively worded attributes (subsequently changed by PZB in 1991) and seven point Likert scales (replaced in 1994 by nine point scales)
- respondent fatigue from two administrations (increased to three in 1994) of the 22 attributes
- relatively low extracted variance, that is, considerable loss of item variance.

Cronin and Taylor (1992, 1994) are among the leading critics of the SERVQUAL authors' advocacy of the disconfirmation model (Perceptions - Expectations) and PZB's claim that the SERVQUAL output is something other than an attitude. Iacobucci et al (1994) reviewed this debate about the "differences" between PZB's "service quality" and customer satisfaction and concluded that if these two similar constructs are not attitudes, then they were at a loss as to how to classify them.

Almost every researcher who adopts the SERVQUAL methodology comments on the intuitive appeals of gap analysis. Yet creating gaps, merely as an artefact of the Perceptions-Expectations (P-E) equation, concerns most. Several authors (for example, Carman, 1990; Babakus and Boller, 1992; Cronin and Taylor, 1992, 1994; Brown et al, 1993) suggest that the main contribution to any P-E gaps results from the perceptions (P) score because almost all respondents score expectations in a very narrow band (usually points 6 or 7 on a seven point scale) on a Likert scale. To illustrate, PZB's own work in 1991, which refined their original SERVQUAL instrument, yielded an overall mean score for expectations of 6.22! Teas (1994) reports several concerns with the P-E gaps. Should a gap of -1 be treated the same no matter whether it comes from high performance minus

slightly higher expectations or from the other end of the scales? And can we be convinced that all service providers in an industry share the same expectations ratings? (Admittedly PZB shared this concern too and modified SERVQUAL in 1993 to accommodate a zone of tolerance between desired expectations and adequate expectations.) Further, Cronin and Taylor (1992) found that SERVQUAL's perceptions - only ratings (which they termed SERVPERF) predicted several behavioural intentions (for example, repeat purchase) as well or even slightly better than SERVQUAL's P-E gap scores.

SERVQUAL's emphasis on how service quality is delivered (the process) rather than the outcomes of the service encounter has been criticised by Mangold and Babakus (1991) and Cronin and Taylor (1992) but this criticism could apply to most measures of service quality. Of more concern are researchers' difficulties with consistently replicating SERVQUAL's five dimensions (queried by, for example, Saleh and Ryan, 1991; Cronin and Taylor, 1992; Babakus and Boller, 1992; Babakus and Mangold 1992; Buttle, 1996; Ryan and Cliff, 1996) and a suspicion (expressed best by Carman, 1990) that the dimensionality of SERVQUAL is more a function of the industry being surveyed than PZB's (1988) claim that SERVQUAL's dimensions are generic. Yet replication study after replication study seems to query the stability of the dimensions despite faithful replication of PZB's analytical procedures. PZB (1991) conceded that high correlations between several of the dimensions (especially Assurance, Empathy and Responsiveness) might account for these difficulties. As Buttle (1996) concludes, *'it therefore does appear that both contextual circumstances and analytical processes have some bearing on the number of dimensions of SQ* [SERVQUAL]' (p 17).

Criticisms derived from implementing the SERVQUAL instrument "in the field" tend to focus on respondents' interpretations of the 22 expectations items. Teas (1993) has led the critique here, claiming that much of the variance in SERVQUAL's expectations could be derived from differing interpretations of the word "expectations". The inability of the 1988 and 1991 versions of SERVQUAL to accommodate the *'bad-service paradox - a customer may have low expectations based on previous experience with the service provider; if those expectations are met there is no gap and SQ is deemed satisfactory'* (Buttle, 1996, p 21) helped persuade PZB to introduce their zone of tolerance framework (desirable versus adequate service). Other implementation issues such as the number of supplementary

items introduced (in addition to the 22 SERVQUAL items), the use of negatively worded items (subsequently changed to all positively worded items in 1991), the use of seven point Likert scales and claims of respondent frustration at two iterations (expectations and then perceptions - modified into a single 'direct judgement scale' by, for example, Spreng and Olshavsky, 1993; Teas, 1993) have each received considerable attention. Suffice to say that debate about SERVQUAL's validity has spawned an "academic industry" in services management and services marketing. Undoubtedly, PZB have made substantial contributions to measuring quality in service contexts (Fisk et al, 1993) but the empirical evidence, so often contradictory, suggests that the widespread use of SERVQUAL as a generic measure of service quality is not justified. Hence, the instrument for the measurement of service quality in this thesis is a perceptions-only procedure, akin to Cronin and Taylor's (1992) SERVPERF format, but expanded to accommodate a personal retail banking context. Further, given that service quality output in this thesis can be classified as "independent variables or dimensions", ZBP's (1996) advice is appropriate: *'the perceptions-only operationization is appropriate if the primary purpose of measuring service quality is to attempt to explain the variance in some dependent construct'* (p 40).

CHAPTER THREE

CUSTOMER SATISFACTION

3.1 Introduction

Enhanced service as a competitive advantage has been the theme of much business writing and there is obvious intuitive appeal in the service quality-satisfaction-loyalty-profitability framework, which this thesis addresses. It seems quite plausible that perceived service quality will affect customer satisfaction that, in turn, will affect both behavioural and attitudinal loyalty, and may then affect profitability of the customer-service provider relationship. Yet, as Cronin and Taylor (1992) and Taylor and Baker (1994) suggest, these relationships are difficult to measure. More fundamentally there is still debate on the differences between perceived service quality and customer satisfaction, and even which construct is antecedent. Researchers seem to agree that these two constructs are different but such agreement ceases when how they differ is explored (Oliver, 1993; Rust and Oliver, 1994; Cronin and Taylor, 1994). As discussed in Chapter Two, service quality was adapted from the satisfaction construct, with both these cognitive structures being underpinned by the disconfirmation paradigm. Despite these structures' similar heritage, Cronin and Taylor (1994) show how perceived service quality alone cannot accurately predict satisfaction. Almost in passing, these researchers, along with Bitner and Hubbert (1994) showed that service quality is antecedent to satisfaction.

It should be noted that the cognitive structures of service quality and satisfaction have drawn their share of criticism from European researchers like East (1991), Barwise (1995) and Foxall (1997), and Australasian researchers like Esslemont and Wright (1994), Danenberg and Sharp (1996) and Chong (1998). They argue that the cognitive approach of the disconfirmation paradigm (which tends to yield better understanding of mental processing at the individual rather than the aggregate level) can be frustrating for marketing management because cognitive constructs cannot be measured directly, are difficult to generalise from and hence problematic for management. Yet this "can't measure it directly, can't manage it directly" proclamation is equally frustrating for cognitivists who defend their use of proxies for the measurement of metaphysical

constructs. Regrettably, when cognitivists have to fend off these criticisms they resort to arguments like the well-accepted measurement of physical entities such as gravity. Just like cognitive constructs, gravity cannot be observed directly and its measurement is by proxy. Further defence of the worth of proxy measures for metaphysical constructs is seen in Sheppard, Hartwick and Warshaw's (1988) meta-analysis of 87 academic papers in which they found a weighted average multiple correlation of 0.66 for the relationship between attitude/subjective norm and behavioural intention. Of course, strict behaviourists categorise behavioural intention as a cognitive construct!

The following sections examine satisfaction, and where relevant its antecedent construct, service quality, within the context of the disconfirmation of expectations paradigm. The strengths and weaknesses of this approach are debated, providing further support for this thesis's adoption of perceived service quality measurement using an adaptation of Cronin and Taylor's (1992) SERVPERF instrument. Then the confusion over the satisfaction construct is discussed, giving the background to this thesis's adoption of a global satisfaction measure for customer satisfaction with one's main bank.

3.2 Cognitive Context and the Satisfaction Construct

The overriding influence in service quality and satisfaction research is cognitivism and the disconfirmation paradigm (Oliver, 1980) with its psychologically-based framework. Stated simply, cognitive research seeks to explain consumer actions by understanding the beliefs, opinions and feelings that underlie those actions. The nature of cognition is a focus on individuals' actions. Generalising these actions to aggregate statistics has already been acknowledged as somewhat worrisome for authors like Anderson and Sullivan (1993) and Foxall (1997).

Satisfaction is also a metaphysical construct that influences human behaviour and its most literal meaning is fulfillment, especially in the sense of satiating basic human needs of food, water and shelter. However, in the social and business sciences, satisfaction takes on the broader meaning of consumers' evaluations of their experiences with product and service providers. Oliver (1980) is widely credited with conceiving the concept of disconfirmation as applied to satisfaction. His context is that satisfaction is based on the intersection of expected service levels and those actually received

(perceptions of service performance) – did the service received positively or negatively disconfirm the prior-to-purchase expectation? The outcome is satisfaction or dissatisfaction. The incorporation of the cognitively based disconfirmation paradigm into the early service quality work by Gronroos (1984) and PZB (1985) is clearly evident. Indeed, the SERVQUAL instrument is based on disconfirmation and the mixed results from comparative studies using SERVQUAL (see Chapter Two) spilled over into a questioning of disconfirmation as the foundation of the satisfaction construct.

It would seem that satisfaction is somewhat more complex than a unidimensional arithmetic comparison of expected and received service. ZBP (1993) and (1996) suspected that inconsistent results in the early SERVQUAL studies might have been due to different types of expectations and their incorporation of zones of tolerance into the 1994 SERVQUAL instrument was a clear acknowledgement that different expectations arise under different circumstances. Even as early as 1985, Oliver himself (Oliver and Bearden, 1985) suggested that there could be different types of disconfirmation, and Oliver and Swan (1989) coined these as objective and subjective disconfirmation. Running in parallel with this questioning of the form of disconfirmation, and by implication the satisfaction construct, was the use of norms in conceptualising satisfaction. This involved comparing the "ideal" level of service against the level of service received, discussed in Cadotte, Woodruff and Jenkins (1987).

3.3 The Measurement of Customer Satisfaction

Stepping aside from the debate about the form of disconfirmation, it is clear that the measurement of the satisfaction construct still revolves around the intersection of expectations and performance. Further complexity can be added by acknowledging that satisfaction has an affective component too. In other words, how consumers feel about themselves, the service provider in general and the world at large at the time of evaluation of service provision might need to be factored into measurements of satisfaction. Oliver (1980) hinted at this when coining satisfaction as contentment (adequate for the purpose) and satisfaction as surprise or delight. Later he returned to this theme (Oliver, 1993) with emphasis on the delight factor, postulating that when satisfaction is especially strong then it becomes a good indicator of loyalty. Here it would seem that the affective element "delight" is really an outcome of the

disconfirmation of expectations model – expectations have been exceeded. However, whether or not satisfaction has an affective component in addition to its cognitive elements of expectations and perceptions, is rather distracting. Probably of more import is the temporal element of satisfaction, reflected in transaction-specific satisfaction versus overall (global) satisfaction, the latter being the cumulative satisfaction derived from all the service encounters with a specific service provider. Contrast this with transaction-specific customer satisfaction, which, as Oliver (1993) stated, is an immediate evaluative judgement or affective reaction to the most recent service encounter. As Garbarino and Johnson (1999) state, *'applied market research tends to measure customer satisfaction as the consumer's general level of satisfaction based on all experiences with the firm. This overall satisfaction is a cumulative construct, summing satisfaction with specific products and services of the organisation and satisfaction with various facets of the firm'* (p71). This cumulative experience is of particular interest to this thesis as retail banking is based on numerous repetitive service encounters with one or several banks. In passing it can be noted that there is a relatively easy leap from here to the notion of relationship marketing which has, as its basis, a continuum from transactional relationships between customer and provider to intense commitment and bonding. Cumulative satisfaction is more likely to be set in an environment of relational exchange characterised by frequent transactions and anticipation of future exchanges.

The longer-term view of satisfaction encapsulates more than just service quality attributes and forms a multidimensional construct (see, for example, Oliva, Oliver and Macmillan, 1992; Bitner and Hubbert, 1994; Gwinner, Gremler and Bitner, 1998). Also of relevance are the national customer satisfaction indices reported for Scandinavia and the US by Fornell (1992) and Fornell et al (1996), which are based on cumulative satisfaction data. Of interest to this thesis is the direct relationship between cumulative satisfaction and profitability claimed in the national customer satisfaction indices as well as in the work by members of the Harvard "school" such as Reichheld and Sasser (1990), Reichheld (1993), Heskett et al (1994), Jones and Sasser (1995) and Reichheld (1996). Details of this work are discussed more thoroughly in Chapter Five. Cumulative satisfaction received considerable attention in the mid 1990s with research at this more aggregate level conducted by researchers such as Anderson and Sullivan (1993),

Anderson et al (1994), Danaher and Mattsson (1994) and Anderson, Fornell and Rust (1997).

Cumulative satisfaction has been shown to be part of the theoretical debate on attitude-behaviour relationships (for example, Fishbein and Ajzen, 1975) where fleeting satisfaction experiences (akin to transaction-specific satisfaction) can have little effect on future behaviour. Bitner and Hubbert (1994) tried to address the links between encounter satisfaction, overall satisfaction and quality, finding that overall satisfaction and service quality are highly correlated (but not identical) while encounter satisfaction is quite discrete from these other two constructs. Nonetheless, confusion has characterised the literature in this regard. For example, Rust and Zahorik (1993) assumed service quality and overall satisfaction to be the same without distinguishing between transaction-specific and overall satisfaction. Undoubtedly, this lack of distinction for the satisfaction construct has led to contradictory results.

It would seem logical that the overall or cumulative satisfaction measure is the appropriate level of satisfaction required in any study that explores the relationships between perceived service-quality – customer satisfaction – customer loyalty – customer profitability in personal retail banking.

3.4 Associations Between Perceived Service Quality and Customer Satisfaction

As the preceding discussion shows, the two constructs of service quality and satisfaction are quite similar. To date, researchers (see, for example, Kelley and Davis, 1994; Taylor and Baker, 1994; Spreng, MacKenzie and Olshavsky, 1996) have gone to some length to distinguish between them as well as deciding which construct precedes the other. Here the academic literature can become confusing. In the early 1990s, Bitner (1990) and Bolton and Drew (1991) suggested that satisfaction was antecedent to service quality but it soon became clear (Oliver, 1993) that their research used transaction-specific satisfaction and not cumulative satisfaction. Therefore these studies had service quality as a higher order construct and hence the early confusion over antecedence.

Differences between service quality and cumulative (or overall) satisfaction (see, for example, Oliver, 1993; Taylor and Baker, 1994; Rust and Oliver, 1994) can be presented

as service quality attributes being very specific whereas satisfaction is a more global construct. Noteworthy too is that service quality can be imagined without actually engaging in a service encounter whereas satisfaction can only be determined after receipt of service. Herein lies the first hint that service quality is antecedent to cumulative satisfaction – experience is required to produce satisfaction and that experience is formed from both service quality (imagined or actual) and non-service elements like price, competitive brand performance, value, environmental influences etc. Cronin and Taylor's (1992) study and Taylor and Baker's (1994) study used purchase intentions to show the differences between service quality and satisfaction as well as showing service quality to be antecedent to satisfaction. Further evidence of this antecedence was produced when they showed that cumulative satisfaction is a better predictor of repeat purchase (behavioural loyalty) than service quality.

Having established that overall or cumulative satisfaction is a higher order, and different, construct to service quality, what else seems to affect satisfaction? The whole notion of perceived value's effect on customer satisfaction has preoccupied several researchers (Anderson et al, 1994; de Ruyter et al, 1997; Woodruff, 1997; Sweeney, Soutar and Johnson, 1997, 1998; Zeithaml, 1998) and they present convincing arguments that quality relative to price has a direct impact on satisfaction. Important too in this context is Holbrook's (1994) work that posited how value can be both transaction-specific or global while Cronin, Brady, Brand, Hightower and Shemwell (1997) showed the importance of perceived value in customer loyalty.

Spreng and Mackay (1996) and Spreng et al (1996) have demonstrated how information provided by service providers to their customers affects satisfaction while the global concept of corporate image (Selnes, 1993) has some effect too. In retail banking studies, researchers like Jain et al (1987), Le Blanc and Nguyen (1988), Rust and Zahorik (1993) and Nguyen and Le Blanc (1998) have shown that corporate image and locational convenience are determinants of customer satisfaction.

Overall then, cumulative satisfaction is both a higher order construct and subsequent to perceived service quality, because it incorporates some of the attributes of service quality along with other determinants like value, corporate image and information.

CHAPTER FOUR

CUSTOMER LOYALTY

4.1 Introduction

Customer loyalty, though a complex construct, is seldom disputed in business. Managers know it exists, that it can be won (and lost). Yet the abstract nature of customer loyalty ensures that it remains difficult to measure and manage. Managers have had to rely on intuition and experience in their efforts to encourage customer loyalty.

Loyalty as a construct is rather wider than marketers' use of the term which, in a marketing context, tends to imply purchase and consumption behaviour. Other social and business sciences discuss loyalty in terms of personal and organisational relationships (for example, Rusbult, 1991). However, some services marketing literature now covers commitment in organisational relationships with studies by Kelley et al (1992) and Kelley and Davis (1994) exemplifying research with this perspective. Also, there are studies of employees' commitments to their employers, represented by an alignment with their organisations' values, by their desires to stay with their organisations and by their willingness to further their organisations' objectives. Mathieu and Zajac (1990) provide a review and meta-analysis of the studies on this topic. In a related literature, that of tourism research, Ap (1990, 1992) and Perdue, Long and Allen (1990) demonstrate how social exchange theory (which treats interaction as a process in which participants supply each other with valued resources) can be applied to host-guest encounters. In the general management literature, commentators like McGee and Ford (1987), posit the view that employees' bonds to their employers result more from self-interest than from loyalty, with the expression of commitment as a behavioural rather than attitudinal action. Allen and Meyer (1990) take this view further in describing how some employees stay with their employers through necessity whereas others do so by choice. Whatever the motivations for 'commitment', these authors' contribution to research on the loyalty construct reaffirms many marketers' views (for example, Jacoby and Chestnut, 1978): namely the construct of loyalty has behavioural and attitudinal components.

While the organisational commitment of employees to their organisations is a logical topic area for human resource researchers, occupational and applied psychologists, so too is the organisational commitment of customers a logical research topic for marketers, especially in circumstances where customers are heavily involved as co-producers or partial employees of the service they are buying (Kelley et al, 1992). Kelley and his co-authors (Kelley et al, 1992; Kelley and Davis, 1994) have aligned customer organisational commitment with repeat purchase and advocacy in a similar fashion to the intensely loyal positions on Christopher, Payne and Ballantyne's (1991) 'customer loyalty' ladder (see Chapter Five). Not unexpectedly, Kelley and Davis (1994) found that the more satisfied customers were more committed to the organisation in question. Aaker (1991) expressed this notion as brand franchise and the parallels with research in brand equity (for example, Aaker, 1991; Keller, 1993) are easily drawn. One might conclude that different disciplines in social and business science are researching the same construct (loyalty) but from differing perspectives. Gremler (1995) seems to agree when he concludes that *'various literatures suggest that people display varying degrees of loyalty in many aspects of their lives. Two particular types of loyalty, commitment to personal relationships and organisational commitment, seem to be similar in many respects to customer loyalty ... this bond between organisations and their customers has been labelled a variety of different names"* (p 44). He provided a review of the loyalty construct that is presented in Table 4.1.

Table 4.1 Sample of Loyalty-Related Constructs

Author(s)	Construct	Definition
Anderson and Weitz (1989, p. 311)	Perceived continuity of the relationship	is the channel member's perception of the likelihood that the relationship will continue (*paraphrased*)
Beatty, Kahle, and Homer (1988, p.151)	Brand commitment	is an emotional or psychological attachment within a product class
Berry (1983, p 25)	Relationship marketing	is attracting, maintaining, and enhancing customer relationships
Berry and Parasuraman (1991, p.118)	brand meaning	is the customer's snapshot impression and classification of the firm ... [and] is a function of brand presentation and service concept, quality, and value
Crosby and Taylor (1983, p. 414)	Psychological commitment	refers to a tendency to resist change in preference in response to conflicting information or experience
Dwyer, Schurr, and Oh (1987, p. 19)	[relationship] commitment	refers to an implicit or explicit pledge of relational continuity between exchange partners ... the exchange partners have achieved a level of satisfaction from the exchange process that virtually precludes other primary exchange partners who could provide similar benefits
Keller (1993, p. 2)	brand equity	is the differential effect of brand knowledge on consumer response to the marketing of the brand
Kelley and Davis (1994, p. 54)	customer organizational commitment	a committed [customer] believes in and accepts the goals and values of the organization, expresses genuine interest in its behalf, and desires to remain a member
Lastovicka and Gardner (1978, p. 68)	Commitment	is the pledging or binding of an individual to his brand choice
Morgan and Hunt (1994, p. 23)	Relationship commitment	occurs when an exchange partner believes an ongoing relationship with another is so important as to warrant maximum efforts at maintaining it (i.e., the committed party believes the relationship is worth working on to ensure that it endures indefinitely)

(after Gremler, 1995, p 45.)

4.2 Brand Loyalty

In the marketing literature, loyalty research has been dominated by studies of brand loyalty, that is, loyalty to products or the manufacturers of such products. Jacoby and Chestnut (1978) provided a seminal work on brand loyalty some twenty years ago in their examination of the determinants of brand loyalty, concluding that this construct has both behavioural and attitudinal components. These authors chronicle more than 50 ways of measuring brand loyalty with their variety of operational definitions and their reliance on empiricism rather than theory. They classify these empirical studies into micro or macro level and then classify again on the basis of the data used to measure loyalty (behaviour, attitudes, both-composite). Briefly, the micro or individual level assumes loyalty exists and can be measured for each person. This approach is closely linked with what Jacoby and Chestnut (1978) call a deterministic philosophy where

'purchasing,...is the output of a dynamic, decision-making system involving numerous psychological variables, and since BL [brand loyalty] is one of these variables, it should be placed in the context of the individual's process of cognitive/behavioral activities' (p 8).

In contrast, the macro or aggregate level assumes loyalty exists but across entire samples. Little emphasis is given to understanding any one purchase. Instead the focus is to forecast gross market phenomena (such as market share); this is a stochastic view of buyer behaviour.

At the time of writing their book (1978), Jacoby and Chestnut further conceded that no one set of brand loyalty indices had been developed and more than two decades later this conclusion remains valid. Given that customer loyalty, a similar construct to brand loyalty, is also a complex, multi-faceted phenomenon, it would seem appropriate to use both behavioural and attitudinal approaches in its measurement. This dual approach to loyalty measurement would appear to satisfy both the consumer theorists of the cognitive "school" (for instance, Engel, Kollat and Blackwell, 1990) and the behaviourists such as Ehrenberg and Bass (see Jamieson and Bass, 1989; East 1991) although for different reasons. The former "school" claims that the complexity of the loyalty construct is such that dual measurement is necessary. The behaviourists claim that loyalty is really a continuum - no

one is usually ever rigidly loyal to one brand or institution and nor do consumers have as much choice as consumer behaviourists from the cognitive "school" would have us believe. East (1991) contends that *'consumer researchers have tended to exaggerate the amount of choice that people have ... the claim that the consumer is sovereign must be set against the evidence that people do a great number of things they would prefer to avoid, e.g. going to work, using congested facilities...'* (p 14).

In personal banking, consumer sovereignty can be more conceptual than realistic because the "cost of exit" from one bank to another can be high especially if penalty clauses are invoked for repayment of mortgages from refinancing with another financial institution. Apart from the cost of exit, East (1991) would contend that most people are not sole brand loyal but *'evidence supports a looser meaning of brand loyalty [*as people*] continue to buy the same portfolio of brands in much the same proportions over long periods of time'* (p 41).

East and his colleagues of the behaviourist approach have criticised the rigidity of brand loyalty measurement, claiming that multi-brand buying debunks the 'sole brand loyal' customer. In essence, people don't necessarily "switch" when they buy a brand which is different from their last purchase - the most recently purchased brand is still part of their portfolio. Again, the rigidity of the cognitive information-processing model with its sole loyalty customer suggests that brand loyalty attitudes and behaviour are identical. Yet how can this be reconciled with multi-brand buying? East suggests it is necessary to distinguish brand loyalty as an attitude from brand loyalty as a behaviour - *'a loyal attitude to one brand may co-exist with multi-brand buying'* (East, 1991,p 56). This view seems realistic as people's brand repertoires change via changing requirements, as they experiment with other brands, as distribution changes etc. In banking for instance, a household may have its children's accounts at a bank other than the parents' bank simply because of prior distribution constraints (in New Zealand, grade school student banking had been closely aligned with local Trust Banks) or current distribution constraints (the study bank has nearly three times as many branches in its region than each of the other main competitors). Hence one could be in a situation of loyal behaviour but not necessarily loyal attitude or vice versa! However, the longer term relationships typical of most banking activities with

customers make comparisons with research from fast moving consumer goods' markets rather more difficult. The myth of the *solely loyal* customer is heavily related to Stum and Thiry's (1991) concern that suppliers of customer satisfaction programmes have realised that satisfaction does not automatically mean loyalty. Cottrell (1993) presented evidence on how some customers who claimed to be "satisfied" on typical attitudinal measures switched suppliers without "looking back" - might not they be merely switching between brands in their portfolio of brands? Hence, when loyalty is measured, it is necessary to separate attitude from behaviour.

4.3 Measuring Loyalty and Intended Loyalty

Throughout the twentieth century academics from a wide variety of disciplines have pondered how best to measure future behaviour. Models of consumer behaviour, perhaps best illustrated by Fishbein and Ajzen (1975), hold to the notion that respondent behaviour can be predicted by intention, attitude and belief – people do what they say they will do. Yet linking intentions and subsequent behaviour has proved quite difficult and these difficulties are well documented in commentaries like those by Foxall (1982) or Driver and Foxall (1986) who, instead, offer more direct behavioural measures as an alternative measurement procedure. These use explicit subjective probabilities (expressed as "*chances of doing something*") instead of attitudes or intentions, and probably provide more accurate estimates of future behaviour.

Researchers like Sudman and Bradburn (1974) make the distinction between behavioural questions whose responses can be tested by external checks, and attitudinal questions, which cannot be verified. The context here is one of predictive validity for future behaviour; many researchers acknowledge that respondents' positive opinions about something may bear little relationship to actually doing it – what one feels and what one does may differ! Hence there has been a long running debate in social and business science over how best to measure predictions about consumers' behaviour. An important aspect to this debate has been the use of questions, which elicit statements of intention (for example, "*definitely will do something*"," *probably will do something*") versus eliciting probabilities of intention.

Jacoby and Chestnut (1978) refer the reader to the possibilities of using Juster's (1966) 'purchase probability scale' as a viable attitudinal measurement of loyalty. This scale requires subjects to indicate their likelihood of purchase for each alternative given to them for consideration in terms of eleven verbal and numerical probability statements: the chances of buying brand X are "certain, practically certain" (99 in 100), "almost sure" (9 in 10), 8 in 10, ..., very slight possibility" (1 in 10) and "no chance, almost no chance" (1 in 100). Empirical results from Juster (1966) and Gruber (1970) support the scale's increased sensitivity and predictive validity for non-durable goods. Brennan (1995) in New Zealand has now extended this research to various other goods. A probability statement of intent to purchase reflects a behavioural predisposition to buy; data collected with Juster's scale are considered attitudinal and Jacoby and Chestnut (1978) predicted a bright future for this approach in buyer behaviour studies. Yet they conceded that the older behavioural and composite indices have continued to be reworked in the hope of providing a "better measurement" of loyalty. Choosing

'purely behavioural operationalisations, Carman's (1970) entropy measure is a case in point. Carman defines a loyalty index "O" equal to negative the summation of pi multiplied by the log of pi, where pi is nothing more than the proportion of purchases going to a given brand. Carman's index differentiates itself from Cunningham's (1956) only by making certain assumptions about buying behaviour. It is still not clear, however, exactly whether or how this measure is better than other indices' (Jacoby and Chestnut, 1978, p 23).

4.3.1 The Juster Scale

Juster's early work (reported in his 1966 monograph) showed that many respondents did not carry out their reported behavioural intentions in the given time period, while many purchases were made by people who reported no intention of buying yet bought the item or service of interest within the given time period. Since these departures from stated intention were not random, Juster's research then focused on testing the relationship between intentions and behaviour versus subjective probabilities versus behaviour. The results supported his claim that subjective probabilities had greater predictive power and he introduced his eleven point scale which relies on respondents to assign odds, chances

or points out of ten (remember 0 is viable here – hence the eleven point scale) of doing something. *"Points out of ten"* is regarded as a common notion.

Although Juster's eleven-point scale looks quite similar to some of the ordinal intention scales of the past, by introducing probabilities his scale became metric. This allows researchers to use the mean response to estimate the proportion of the sample's members who will perform the behaviour in question. Juster asserted that probability based scales have superior explanatory ability because of their stronger relationship with underlying factors like respondents' financial circumstances. Nonetheless, Juster is not without his critics (for example, Hogarth, 1975) who regard the task of eliciting subjective probabilities from respondents as rather demanding and rather too difficult. Whether or not this holds true is open to debate and continued testing of the Juster scale usually comments in this regard (see, for example, Brennan and Esslemont, 1994). Criticisms aside, tests that compare the Juster scale against behavioural intention scales (see, for example, Gan, Esslemont and Gendall, 1985; Gendall, Esslemont and Day, 1991) have shown the former to be more highly correlated with the behaviour it estimates. Administration of the Juster scale in the major study (see page 7 of the questionnaire attached in the Appendix) was preceded by an explanation of how to use the scale, adapted from Juster's (1966) work and that of Brennan and Esslemont (1994). Assessment of the accuracy of the Juster scale estimates of defection from one's main bank were put to the test by obtaining from the study bank confirmation of whether respondents still banked there one year on and these results are discussed in Chapter Ten.

4.4 Customer Loyalty in Services Contexts

The services marketing and services management literature recognises the sometimes intense, sometimes intimate relationships that characterise some services environments. For instance, relationships with anyone who is performing a service on your person (usually medical or dental related) or on your mind (usually educational or remedial type activities) tend to be more intense than other services or product-related exchanges. The greater opportunities for more personal contact in these circumstances means, in general, a greater propensity for loyalties to develop (Crosby and Stephens, 1987; Surprenant and Solomon,

1987; Czepiel, 1990) but a greater risk of problems eventuating than in tangible goods' environments or indeed in less intimate service environments. While Gremler (1995) contends that research on customer loyalty in service environments has received minimal attention in comparison to brand loyalty research (which almost always involves tangible goods), perhaps this observation is a little unfounded because research on relationships abounds in the social and business sciences literatures. Rather, it appears that much of the research that addresses the quality of the liaison between two or more parties is presented under different words and titles. Notwithstanding, Gremler (1995) has provided a workable definition of customer loyalty in services contexts: '*service loyalty is the degree to which a customer exhibits repeat purchasing behavior from a service provider, possesses a positive attitudinal disposition toward the provider, and considers using only this provider when a need for this service arises*' (p 4). The influence of brand loyalty research, and Jacoby and Chestnut's (1978) review of that literature, is strongly represented in this definition. It encompasses the elements of loyalty, repeat purchase (the behaviour), fealty and commitment to the service provider (the attitudinal disposition), and the exclusion of other providers (a cognitive element discussed below). It is not difficult to see the parallels with the service-profit chain or return-on-quality models advocated by Heskett et al (1994) and Rust et al (1994) and discussed in Chapter Five . Yet it should be remembered that while customers can be bound to their banks through (for example) mortgage commitments, they may switch between *branches* of the same bank to obtain better relationships. Increasingly, technology can assist customers in access to their banks with less dependence on the nearest branch for anyone.

4.5 Composite Measures and Descriptions of Customer Loyalty

Dick and Basu (1994), in their conceptual review of research into customer loyalty, echo the calls for such research to encompass composite measures. '*Loyalty is a complex phenomenon that warrants a more multifaceted conceptualization than has been attempted previously*' (p 11). Their review emphasises the attitudinal antecedents of loyalty and links this construct to the attitudinal literature in psychology and sociology although less import is given to the cognitive component ("forsaking all other providers"). Research in travel and tourism contexts by Backman and Crompton (1991) and Pritchard, Horward and Havitz

(1992) tends to align with the service loyalty typologies posited by Dick and Basu (1994) and Denison and Knox (1995). These typologies involve the allocating of customers to one of four loyalty positions based upon the interaction of their patronage behaviour and their attitudinal disposition to the service provider being studied as seen in Figure 4.1 below:

Figure 4.1 Service Loyalty Typologies

		Repeat Patronage	
		High	Low
Relative Attitude	+ve	Loyalty	Latent Loyalty
	-ve	Spurious Loyalty	No Loyalty

(After Dick and Basu, 1994, p 101)

Commit-ment	Number Stores Visited		
		Few	Many
	High	Loyals	Variety Seekers
	Low	Habituals	Switchers

(After Denison and Knox, 1995, p 3)

Dick and Basu's (1994) relative attitude is simply an overall comparison of the feelings for each of the brands or providers in one's portfolio of brands or service providers (sometimes called the evoked set) so that repeat purchase intentions are better understood. Their model's emphasis on relative attitude is worth examining further. For example, a weak attitude that is still superior to that for any competitor in the evoked set such as one might have for a vehicle repairer, will still result in some customers being allocated to a loyalty position in the vehicle repair market. The state of 'no loyalty' (or 'switchers' in the Denison-Knox typology) probably results from organisations buying market share through aggressive discounting or merchandising. 'Spuriously loyal customers' (termed 'habituals' by Denison and Knox) have little attitudinal commitment but familiarity, habit or inertia governs their repeat purchase. Some banking relationships seem to fit this characterisation as exemplified by the work of Jain et al (1987) discussed later in this chapter. 'Latent loyalty' seems slightly more difficult to understand although access barriers could explain low repeat purchase. Or the need for the service (for example, holiday travel to a given destination) may be infrequent, meaning loyalty is latent over a longer time period. For the marketer, an important issue is finding the "triggers" that convert latent demand derived

from latent loyalty into actual demand. Dick and Basu's (1994) example of restaurant patronage where less preferred restaurants are patronised to placate one's spouse might better be termed 'derived loyalty', that is, loyalty derived from the main purchaser.

4.6 The Antecedents of Customer Loyalty

Dick and Basu (1994) position loyalty within the larger body of attitudinal research, describing their "loyalty" construct (which they call relative attitude) as cognitive, affective and conative, the three states of traditional attitude models. These three states can be explained as:

- cognitive antecedents - formed from accessibility (the ease with which an attitude is retrieved from memory), confidence (one's level of certainty about the service provider - based on past experience), centrality (degree to which one's attitude to the service provider aligns with one's value system) and clarity (level of definition of feelings toward the service provider).
- affective antecedents - emotions, moods, physiological effects, satisfaction derived from relationships with the service provider. These factors may be indirect; they can be derived from images and perceptions formed from advertising or others' relationships with the service provider.
- conative antecedents - switching costs, sunk costs and future expectations that govern relationships with the service provider.

As suggested by Gremler (1995), there are a multitude of antecedents to customer loyalty but the literature on relationship marketing shows a consistency in describing these antecedents as: involvement, trust, product or service quality, relationship satisfaction, previous experience with the service, and switching costs. (This last antecedent of loyalty is further divided into contractual costs, set-up costs, continuity costs -reduced performance from "taking the customer for granted", psychological commitment costs - justifying previous decisions to remain with that service provider, that is, sunk costs.) These antecedents can be described together as interpersonal relationships between customer and service provider. A variety of studies support this contention including those by Cronin and Taylor (1992), Fornell (1992), Oliva et al (1992), Anderson and Sullivan (1993), Biong

(1993), Rust and Zahorik (1993), Selnes (1993), Heskett et al (1994), Kelley and Davis (1994), Rust et al (1994) and Gremler (1995). Some of the more conceptual studies in the marketing and management literatures also make the same broad connections between interpersonal relationships (and their many underlying attributes) being antecedent to customer loyalty. The notion of trust has received substantial attention in the marketing literature, initially in industrial marketing contexts (for example, Anderson and Narus, 1990), but more recently in all aspects of marketing. Hunt and Morgan's (1994) review of relationship marketing suggests that customers' trust is with employees of an organisation rather than with the organisation itself ... *'Trust is the degree to which a customer has confidence in the service provider employee's reliability and integrity'* (p 23). Ryan and Cliff (1996) found exactly this distinction between employee and organisation in their study of travel agents' service quality while Dick and Basu (1994) reiterate this statement about the role of trust as a precursor to loyalty.

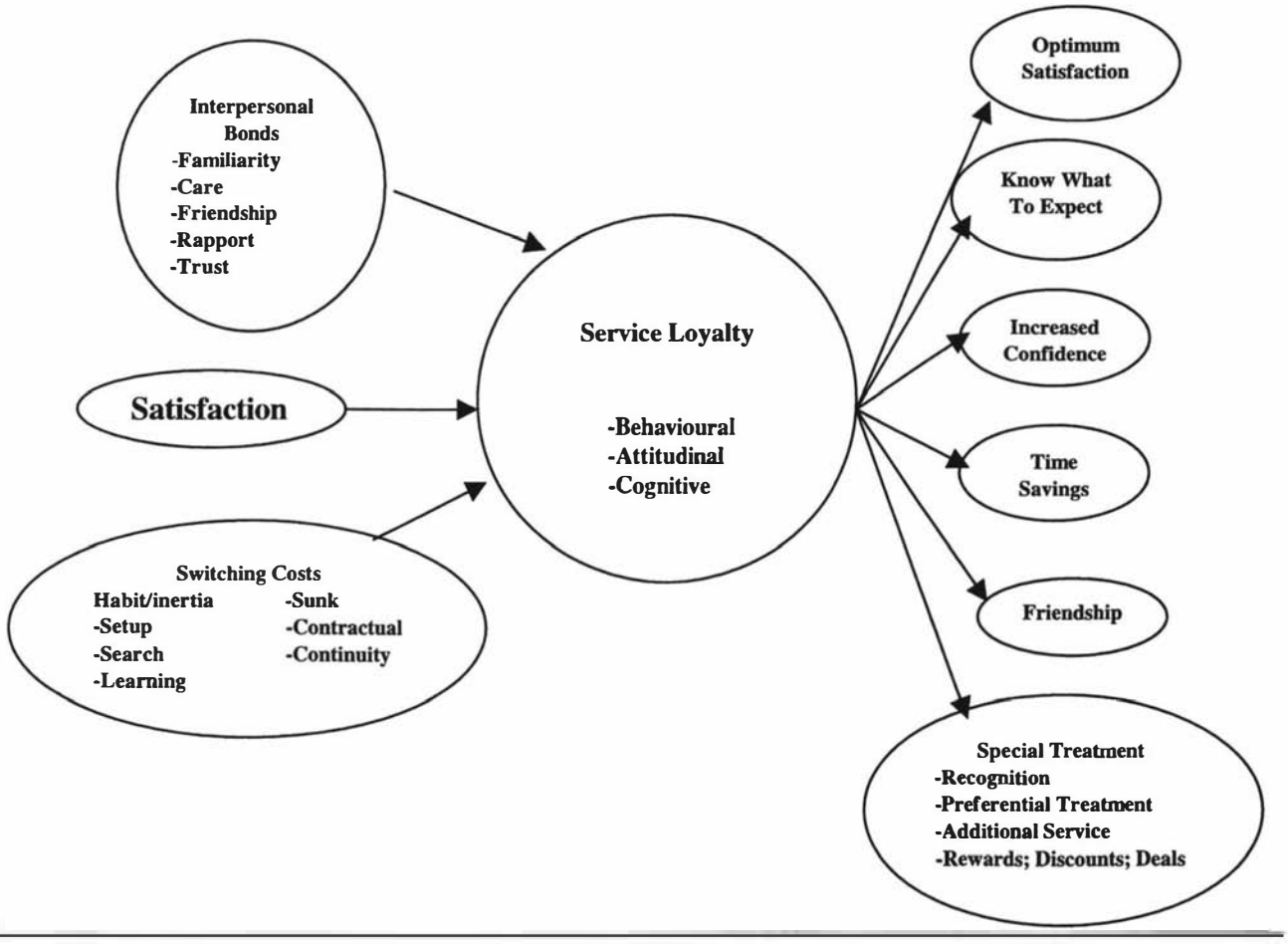
The links between the notions of service loyalty (customer loyalty to services providers) and relationship marketing are plain to see. And the whole area of brand equity research was, to some extent, responsible for subsuming brand loyalty research, given that brand loyalty is treated as a component of brand equity. Hunt and Morgan (1994) claim that brand loyalty is very similar to their understanding of relationship commitment which, they suggest, is that special ingredient present when both partners in an exchange process are working assiduously to achieve valuable outcomes for themselves. These authors extend their review of brand loyalty research further when they claim that the recent dearth of brand loyalty research (in tangible goods) may be because goods tend to be judged mostly on their product and price values (akin to Gronroos' (1990) technical quality). In contrast, how products are delivered to their buyers (akin to Gronroos' (1990) functional quality) is rather more complex and rather more exciting to research. In services, these functional quality or process characteristics are usually more central to the exchange relationship and often are the very dimensions that influence customers to become loyal to services providers. Hence customer loyalty to services providers differs from brand loyalty in that the person-to-person component is crucial to the exchange process whereas in product exchanges, the (physical) product tends to be the major emphasis of these exchanges. In turn it should not surprise that customer loyalty is considered a stronger element in services

contexts than in tangible goods' contexts (Booms and Bitner, 1981).

In a financial services context, in this case the personal insurance sector, Crosby et al (1990) found that trust in, and satisfaction with, insurance agents govern repeat patronage but they acknowledged that there may be sector-specific or context-specific exceptions. Customers are likely to place more importance on relationship trust in their physical or mental health, and perhaps in their financial planning, than in lower order services like cinemas, dry-cleaners, or indeed almost any retail context. However, it should be recognised that not all customers want the "intrusion" of a close relationship with a service provider in all circumstances.

Gremler (1995), in his modelling of service loyalty (akin to this thesis's definition of customer loyalty to service providers), posited that three dimensions influence the development of this construct: satisfaction, switching costs, and interpersonal bonds. Each dimension is regarded as related to service loyalty, and indeed, each proved to be so in subsequent analyses. However, the especially high correlation between satisfaction and the dependent variable, service loyalty, persuaded Gremler to reformulate his original model (shown in Figure 4.2) with satisfaction as a mediating factor between switching costs/interpersonal bonds, and service loyalty.

Figure 4.2 Gremler's (1995) Model of Service Loyalty (after his Figure 4-1, p187)



In his model Gremler (1995) describes service loyalty as a continuous variable. Satisfaction is antecedent to service loyalty but not always sufficient to explain that construct. Switching costs and interpersonal relationships have been explained above.

4.7 Customer Loyalty in Retail Banking

Adaptation of loyalty measurements in fast moving consumer goods environment to the services sector began in earnest in the late 1980s. Jain et al (1987) mention that loyalty in the context of banking was cited rarely in the literature prior to their work but, like Jacoby and Chestnut (1978) before them, Jain et al (1987) acknowledge how the *construct of loyalty* has implications for the planning of marketing strategy. They used a mail survey of consumer panellists in one North American city to develop an index of bank loyalty. With a 70% response rate, these authors went on to examine the concurrent and nomological

validity of their loyalty index and then investigated the factors underlying such loyalty (socio-demographic, banking expertise, behavioural and attitudinal). Jain et al (1987) seem to share Jacoby and Chestnut's (1978) opinion that loyalty is more than repeat purchase, in that commitment (an attitude) to banking with an institution is also required. They talk of "intentional loyals", "passive loyals", "vigilant loyals" and "spurious" loyals, the latter being those lacking real attachment to the bank, rather similar (but not exactly the same) to the "passive loyals" who have a rather resigned attitude to banking which is based on their lack of enthusiasm for banking per se. In contrast, the "vigilant loyals" are those customers who keep evaluating their bank(s)' offerings vis-à-vis the competition.

As recommended by the literature on loyalty (Jacoby and Chestnut, 1978; East 1991), Jain et al (1987) separated behaviour from attitude in an attempt to measure customers' attachment to their banks. They presented customers with the eight items shown below in Table 4.2 and asked them to rate each on a six point Likert-type agreement scale (without mid-point). Individual responses to the eight items were summed to produce a 'Bank Loyalty Index' and respondents were allocated a loyal or non-loyal classification. Then the concurrent and nomological validity of the Bank Loyalty Index was tested. The concurrent validity test used an independent, behavioural measure of loyalty based on entropy (Jacoby and Chestnut, 1978). This test was computed on the basis of accounts/relationships with banks in the community: a low entropy value indicated concentration of banking business with few banks. *'An ANOVA test with the entropy value as the dependent variable and the two loyalty groups as the independent variable strongly supported the concurrent validity of the psychographic measure of bank loyalty ...'* (Jain et al, 1987, p 52).

Then a test of the nomological validity (does the Bank Loyalty Index measure what it purports to measure?) of Bank Loyalty was carried out, based on susceptibility to switching to another bank ("deal proneness") and general attitude to banks. Two hypotheses lay beneath this test.

Table 4.2. Jain et al's (1987) Bank Loyalty Index

(1) Unless I am very dissatisfied with that bank, changing a checking account from one bank to another is too much bother.

(2) Lower checking account charges at another bank would convince me to switch my account there*.

(3) As long as the present service continues, I doubt that I would switch from my present bank.

(4) I have never switched an account because of either bad service or some annoying incident at a bank.

(5) I would rather deal with a new bank in town than one of the established local banks*.

(6) It is better to do all your banking in one bank because then they have a better overall picture of your financial situation.

(7) If my current checking account had service charges, I would switch my checking account to a bank that offered it with no service charges*.

(8) I would rather do all my banking business with one bank even if another bank offered a slightly better deal on a loan or a saving account.

Coefficient alpha = 0.54.

* Scale transformed so that a large number reflects a positive attitude towards the measure (after Jain et al, 1987, p 51).

Bank loyal customers ought to be less "deal prone" than non-loyal customers are and there ought to be a positive relationship between bank loyalty and favourable attitudes to banks. Each hypothesis was confirmed using ANOVA. The researchers then proceeded to test specific hypotheses about the socio-demographics of bank loyals and non-loyals. Bank loyal customers were older, less educated and on lower incomes than non-loyals. Higher networth customers had a tendency to be non-loyal. Turning their attention to banking expertise, behaviour and attitudes, the authors found that loyal customers:

- tended to report less differentiation between banks and were less knowledgeable about available financial services than non-loyals.
- placed more importance on bank commitment to the community, size, reputation whereas non-loyals favoured interest rates, banking hours and parking more.

- used fewer financial services.
- were more risk-averse.

A number of the research objectives for this thesis owe their formulation to Jain et al's (1987) findings. In addition, the research design and analysis uses some input from these authors' work and such input is duly acknowledged.

Selnes (1993) examined the relationship between satisfaction, brand reputation and loyalty, hypothesising that customer satisfaction and brand reputation are antecedents of loyalty. He suggests that brand reputation or service provider image is the overall evaluation whereas satisfaction is episodic, which is the dominant view of the literature. For customer loyalty, Selnes notes that this construct is a behavioural intention for the product or service under study and includes repeat purchase, contract renewal and susceptibility to switching allegiance to another service provider. He acknowledges that loyalty may be derived from high switching costs or from technical or psychological barriers. Selnes cites the work of Fornell (1992) and Cronin and Taylor (1992) to help substantiate the formation of his hypothesis that "performance quality" (another term for service quality) has a positive effect on satisfaction. His results confirmed this relationship.

Selnes' (1993) work showed that brand reputation affects loyalty but he warns that the strong correlation between quality, satisfaction and loyalty in other studies could be biased where these studies have not controlled for the effects of branding. Selnes concludes that loyalty *'is not just driven by internal quality-improvements, but also by the more traditional external activities familiar to marketing managers (i.e., advertising, public relations, packaging, and so on)'* (Selnes, 1993, p 31). Neither internal or external marketing activities exist alone in well-managed organisations; each is part of a symbiotic relationship, managed for profit growth.

4.8 Summary

Over the last two decades, research into the construct of loyalty, whether at the product, brand or customer level, has vacillated between the amount of emphasis placed upon cognition and upon behaviour by researchers. Yet it is clear, irrespective of individual researchers' philosophy, that the construct of loyalty has two major dimensions, namely attitude and behaviour. Any measurement of this construct necessitates that separation to accommodate fealty and commitment to the service provider (attitudinal attributes) and repeat purchase (behavioural loyalty). Translating this perspective into the service-profit chain for personal retail banking is illustrated by a customer having accounts at several banks. Probably there will be one main bank but a loyal attitude to one bank can co-exist quite easily with multiple bank patronage.

Several service loyalty typologies that operationalise the attitudinal and behavioural dimensions of customer loyalty have helped shape this thesis. The work of Jain et al (1987) in banking contexts and of Dick and Basu (1994), Hunt and Morgan (1994), Gremler (1995) and Denison and Knox (1995) in more generic contexts are particularly noteworthy in this regard. Also, measuring customers' future loyalty intentions have preoccupied academics too. Juster's eleven point probability scale is used in this thesis for such measurement. The rationale for its choice relies on the extensive testing of the scale and its demonstrated superiority over other behavioural intention scales for predicting behaviour.

CHAPTER FIVE

PROFITABILITY DERIVED FROM CUSTOMER RELATIONSHIPS

5.1 Introduction

The competitive realities of business demand that efforts devoted to ensuring customer satisfaction and associated service quality initiatives be financially accountable and improve profitability. While customer care is engraved in the corporate culture of most successful organisations, assessing the financial impact of customer care is not always present.

For an investigation into retail banking, Gronroos' relationship definition of marketing seems appropriate ...

> *'Marketing is to establish, maintain, and enhance (usually but not necessarily long term) relationships with customers and other partners, at a profit, so that the objectives of the parties involved are met'* (Gronroos, 1990a, p 138)...

because, arguably, successful banking requires enduring relationships with its customers.

The notion of the word 'relationship' is as old as the human species. Within this thesis the focus on relationships, mutuality and profit is deliberate. The mutuality of any relationship, with its commitments, its variations, its adaptations and sometimes its termination, again received marketing academics' attention in the 1990s, under the aegis of 'relationship marketing'. Earlier theorists (for example, Levitt (1960)) implied that marketing was both about gaining and keeping customers, that is, nurturing existing relationships with customers. With the widespread adoption (perhaps for educational convenience) of the '4Ps' framework in the 1960s, emphasis seemed to shift to acquiring customers (transactional marketing) and building market share rather than a joint emphasis of acquiring and enhancing existing client relationships. Now relationship marketing is enjoying renewed emphasis, as markets become more competitive and customers become more demanding. Service orientation and customer care programmes abound now and management accountants grapple with valuing financially these relationships. In the early and mid 1990s various authors from the Nordic School (for example, Gronroos, 1990b; Fornell, 1992) published work alongside other Europeans (for example, Christopher, Payne and Ballantyne, 1991) and North Americans (for example, Barnes and Cumby, 1995;

Reichheld, 1992, 1996; Heskett et al, 1994) that addressed the financial value of relationships. Each author comments how existing customers contribute to service organisation profitability. Heskett et al (1994) suggest that *'in the new economics of service, frontline workers and customers need to be the center of management concern'* (p 164) and recount examples of American companies that use the service-profit chain which, they claim, establishes relationships between profitability, customer loyalty, and employee satisfaction, loyalty and productivity. In essence, working backwards down the service-profit chain shows that profit and growth is mostly derived from customer loyalty and, in turn, loyalty is directly attributable to customer satisfaction. Further, satisfaction is influenced by employees who can only be happy at work when they enjoy high-quality support services from their superiors.

5.2 The Importance of Customer Retention

Recent research on customer value (for example, Gummesson, 1999) continues to echo the work of Heskett et al (1994), Reichheld (1996) and Loveman (1998) in that long-term customer retention is profitable. Gummesson (1999) writes how *'in business life it is imperative to monitor the financial impact of activities; the bottom line is magic...*[but] *in accounting theory, valuing customers and relationships with customers, is difficult.* He proposes the concept of return-on-relationships (ROR) *which is the long-term net financial outcome caused by the establishment and maintenance of an organisation's network of relationships'* (p 81).

However, earlier in the 1990s, Rust and Zahorik (1993) and Rust et al (1994) had been investigating 'return on quality.' They provide a context for their studies from the evidence of the relationship between quality and profits present in the PIMS (Profit Impact of Marketing Strategy) database (see Buzzell and Gale, 1987), maintained in Boston, USA, by The Strategic Planning Institute. The PIMS' data suggest that the quality - profit link (much like Heskett et al's service-profit chain) is derived from lower costs through increased efficiency, from higher rates of customer retention, high rates of customer acquisition and a potential to charge higher prices. Nevertheless, there is variation across different industries just as Fornell (1992), Anderson et al (1994) and Fornell et al (1996) found in the Customer Satisfaction Barometer among Swedish and North American

companies.

Rust et al's quality-profit link is driven by customer retention. Heskett et al's service-profit chain is powered by customer loyalty but closer reading shows that their conceptual models are very similar - loyal customers are repeat buyers who are usually satisfied customers! Anderson et al (1994), building on earlier work by Fornell (1992) recount their customer satisfaction - profitability linkage as follows:

$$Expectations_t = f_1 (expectations_{t-1}, quality_{t-1}, V_{1t})$$
$$Satisfaction_t = f_2 (quality_t, price_t, expectations_t, V_{2t})$$
$$Profitability_t = f_3 (satisfaction_t, V_{3t})$$

V_{it} = *vector of other factors (e.g. environmental trends, firm-specific factors, error)* (after Table 1, Anderson et al, 1994, p 55). This model appears sequential and implies elapsed time between t-1 and t, perhaps without meaning to imply such a chronology. Reassessment of expectations can occur quite rapidly, and even retroactive re-assessment of expectations can occur through processes of cognitive dissonance such as in tourist experiences (Ryan and Cliff, 1996).

Generally, high customer satisfaction should increase loyalty for existing customers, reduce price elasticities for them, insulate them from competitive efforts, lower costs of future business with them including lower costs from failures and defects, as well as lower costs of new customer acquisition through word-of-mouth recommendation. The behavioural outcome of this enhanced satisfaction and enhanced loyalty is repurchase (measured by customer retention). Anderson et al's (1994) work showed that an annual one point increase in customer satisfaction resulted in a net present value of nearly $US7.5 million over five years for a typical Swedish firm. Obviously, immediate profitability from customer satisfaction improvements are not always possible, suggesting a long-term perspective is necessary.

As with Heskett et al's (1994) service-profit chain, Rust et al's (1994) 'return on quality' is driven by customer retention. Studies by the US Department of Commerce's TARP office (1979, 1986) show that it costs, on average, five times as much to recruit a new customer as

it does to retain an existing one. High rates of customer retention are a competitive weapon in that competitors have difficulty measuring an opponent's retention rate. Rust et al's (1994) return on quality schema can be summarised as:

Service Performance → Satisfaction → Customer Retention→ Market Share → Profits

These authors comment that no account is made of bonus extra revenue which may arise from increased efficiencies, customer acquisition (from strong word-of-mouth and referrals from existing customers) and the ability to charge higher prices. It comes as no surprise that satisfied customers have a higher propensity to re-buy (for example, Anderson and Sullivan, 1993) or even that those customers, who have experienced a serious service shortcoming, have, on its rectification become even more loyal than beforehand (for example, Kelley and Davis, 1994).

Relating the 'return on quality' and 'service-profit chain' approach to retail banking shows that quite small increases in customer retention rates of less than five percentage points can impact dramatically on profitability (Reichheld and Sasser, 1990; Heskett et al, 1994). Obviously then, the quality of market share (measured in terms of customer loyalty which is in turn measured by surrogates like customer retention rates, number and frequency of use of various banking services, customer satisfaction etc) is at least as important as size of market share, for the 'quality' of this current share becomes a determinant of future market share.

Similar themes emerge from the work of Christopher et al (1991). Satisfied customers are claimed to be loyal customers, the "most satisfied" of whom can become 'apostles' or partners, converting people to their supplier. (Conversely, customers who are very angry with their service provider can be termed 'terrorists', seeking every chance to damage the provider's credibility.) The essence of relationship marketing, as suggested by Christopher et al (1991) is to move customers up the 'customer loyalty ladder':

Prospect → Customer → Client → Supporter → Advocate → Partner

While empirical testing and validation of this idealised progression is under way, the

concept seems sensible and appropriate for services organisations, especially financial services organisations. Paltschik and Storbacka (1992) wrote that ...

*'customers are probably the biggest under-utilized business potential the financial services companies have ... (1) the possibilities for increased sales volumes ... using cross-selling techniques, (2) ... building relationships based on a customer life cycle perspective and finally (3) the opportunities to affect customers' buying behaviour so that they consume less of the unpriced activities ...' (*p 157*).*

Indeed, it is in the third area, where banks have provided technology such as automatic teller machines (ATMs) and access to EFTPOS (thereby saving on cheque handling costs) in which customers become co-producers of the service they consume, that banks have made substantial gains. Arguably, customers seem to have benefited too. Access to funds outside of normal banking hours (usually 9am - 4.30pm in New Zealand) is taken for granted now. Banking management concerns lie with the question "at what point does the amount of human contact between customer and bank personnel fall below a critical threshold before dissatisfaction becomes widespread." Also, will the implementation of telephone and Internet banking services (which are particularly cost effective for banks) provide enough human contact in the banking relationship to retain customer satisfaction? This trade off between "high tech" and "high touch" service delivery is at the forefront of current service management challenges.

Building relationships based on customer life cycle is important. Storbacka (1994) reports that youthful customers can be unprofitable initially (if they have small account balances but many transactions) but will become profitable later in life. Hence enduring, long-term relationships with customers are especially important to banks. In retail banking at the individual customer level, some benefit may come from better understanding customer characteristics and segmentation of the customer base on the basis of customer profitability seems a worthwhile starting point. It can be concluded that customer profitability (which is a function of customers' banking behaviour, their loyalty to their bank(s), and their cumulative business volume) can only be changed by influencing customers' banking behaviour. Attempting to optimise returns from a bank's customer base relies heavily on the relationship marketing paradigm and its essential premise that it is cheaper to retain

customers than to recruit new ones.

5.3 Profitability From Customer Relationships

In retail banking, the service provider, that is, the bank, generates revenue in two main ways. Firstly, revenue is derived from the margin the bank earns on its lending and investment activities. Secondly, revenue from fees for transactions, credit cards etc needs to be included too. Customer profitability analysis is based on activity accounting principles (Paltschik & Storbacka, 1992; Storbacka, 1994; Barnes and Cumby, 1995). As many costs as possible are set against the relationship with each customer and then the costs are deducted from the revenue the bank earns from that customer. The resultant positive or negative amount is profit or more correctly, contribution. Hence a bank can influence profitability in three major ways:

- by taking an operations management approach which usually means striving for better performance in cost control, increased efficiency - an internal approach
- by taking an external approach or a service management and marketing approach which is based on customer satisfaction driving profitability
- by both internal and external approaches simultaneously.

The notion that customer satisfaction "drives" profitability has been discussed above in relation to reviewing Reichheld and Sasser's (1990), Heskett et al's (1994) and Rust et al's (1994) work. Stated even more simply, but with a more behavioural emphasis (rather than a more attitudinal emphasis) is that customer retention drives profitability - satisfied customers tend to be loyal and hence they tend to repeat buy. However, a satisfied customer may not always be profitable. Such customers might have many automatic payments and direct debits (called standing orders in British banking) but small account balances meaning that the interest margin earned by the bank on these customers' funds (both investments and borrowings) is not enough to cover transaction costs. Results from the Swedish and US Customer Satisfaction Barometers (Anderson and Fornell and their colleagues, 1992, 1994, 1996) have shown that customer satisfaction is not always similar across sectors and nor are loyal customers always satisfied. Yet satisfied customers tend to be loyal customers suggesting that customer satisfaction (the attitude), which is manifested

in repeat purchase (the behaviour) is crucial. While customer satisfaction appears to be necessary for profitability in some sectors it is not sufficient in retail banking, which serves private customers, households and small business operators. Retail banking is characterised by many customers, many of whom make relatively small transactions (measured in dollar terms). Cross subsidisation of customers is common. Customers who borrow from or invest with a bank subsidise those who merely use banks to pay their bills by automatic payment. And certain customers are "locked in" to their obligations with their bank by contract (for example, loans and mortgages) which acts as a switching barrier. Loans are considered as relatively binding and customers show substantial levels of "claimed" loyalty during the duration of the loans or mortgage. However, as soon as the loan or mortgage is cleared there is evidence of movement in banks' customer files, especially around age 40-49 (Meidan, 1996; Connell, 1997). This is the very stage in the conventional (that is, excluding the effects of divorce, late marriage etc) life cycle that the bank is likely to make profits on its customers with further profitability potential in customers' later lives from investment potential. The challenge to New Zealand's banks is to retain customer loyalty at these crucial stages in the life cycle. Bankers talk (off the record) of the "positive entanglement" of their customers through legal bonds during the earlier stages of customers' life cycles but worry about retaining customer patronage when legal obligations are completed. Perhaps proportionally more of banks' promotional budgets might be devoted to retaining existing customers instead of trying to lure each others' customers at crucial stages in the life cycle. Obviously, achieving a balance between "getting and keeping" customers is a difficult objective.

5.4 Calculating Customer Profitability

Storbacka (1994), Barnes and Cumby (1995) and Connell (1997) have provided working examples of methods for calculating customer profitability in the standard accountancy based schemes of revenue minus costs. It should be noted that such analysis is extremely difficult in retail banking because bank record formats are dictated by legislative requirement (as well as certain accounting requirements). For example, only changes in account balances are recorded; the costs of selling efforts and advice given are not recorded systematically. And while it would be desirable to estimate profitability over the total length of a customer relationship (by calculating net present value of yearly revenues and

costs), difficulties in accessing data longitudinally restricts profitability analysis to smaller time periods.

Calculation of each customer's revenue (for the bank) is achieved by deriving the margin that the bank earns on each customer's banking volume (that is, the sum of deposits and loans) plus the fees incurred by the customer for transactions, credit facilities etc. Therefore, customer revenue can be characterised as:

$$\text{Customer revenue} = \sum_{i=1}^{n} DV*I + \sum_{i=1}^{n} LV*I + \sum_{i=1}^{n} F$$

where DV = deposit volume, LV = loans volume, I = interest margin and F = Fee revenue.

Fees should not be overlooked. For example, the usual fee for arranging a new mortgage is typically one percent of the loan amount.

As discussed by Czepiel (1990), Gronroos (1990b), Reichheld and Sasser (1990) and Heskett et al (1994), establishing, maintaining and enhancing relationships with customers incurs costs to the service provider. (Obviously there are costs to customers too such as searching out alternative service providers, travel and time costs etc but these are beyond the scope of the study.) Simply then,

$$\text{Customer Cost} = \sum_{i=1}^{n} CT + \sum_{i+1}^{n} CI + \sum_{i=1}^{n} CL + \sum_{i=1}^{n} O$$

where CT = cost of transactions
CI = cost of investment services
CL = cost of lending services
O = other specialist services (for example, foreign exchange).

Bringing together the two calculations (revenue and costs) results in:

Retail Customer Profitability = ΣCustomer revenue - ΣCustomer costs.

For the purposes of the present study, customer profitability is one of the major variables, with the inquiry covering issues like the major determinants of customer profitability, differences in profitability across the customer base, and how do different levels of profitable customer evaluate their relationships with their bank? It should be noted that Storbacka's (1994) study showed that volume based revenue correlated highly (0.648) with

customer profitability. Less encouraging though is the calculation of relationship costs - there are no reliable estimates of the production costs of different types of interactions.

5.5 Relationship Strength Index

The theme of the discussion of customer-provider relationships above was that more interaction tends to promote stronger relationships but for banks' relationships with their less profitable customers, paradoxically, more interaction can mean lower profit. Nevertheless, Storbacka (1994) introduced the relationship strength index (RSI) as another measure of customer commitment or customer loyalty, on the premise that customer satisfaction and customer retention ought to be reflected in patronage, which is central to the RSI. In this model, RSI is really a proxy for patronage. Hence low levels of patronage of a bank would suggest that customers have relationships with other financial services organisations whereas high levels of patronage would suggest most of their banking business is with one bank. (This thesis examines RSI through the simple proxy of "share of wallet" – the proportion of customers' personal retail banking business given to their main banks.) Patronage can even become a surrogate for propensity to switch banks (high levels of patronage suggest low switching propensities), just like the 'brand entropy' factors in the brand loyalty entropy models reviewed by Jacoby and Chestnut (1978) or the entropy model used by Jain et al (1987) to validate their bank loyalty index.

$$RSI = \sum_{i=1}^{n} \alpha_i I_i \quad \text{where}$$

n = number of relationship strength indicators
I_i = value of the ith relationship strength indicator
α_i = weight of the ith relationship strength indicator

(after Storbacka, 1994, p 133).

The other variable (or group of variables) required to implement the service-profit chain (Heskett et al, 1994), 'return on quality' (Rust et al, 1994) and customer profitability measures (Storbacka, 1994; Barnes and Cumby, 1995) is measurement of customer satisfaction. Customer satisfaction is the significant concept that fosters customer loyalty (in Heskett et al's terms) or customer retention (in Rust et al's terms). Storbacka (1994) found a high correlation (0.434) between an overall measure of customer satisfaction and the demographic variable 'age', with older customers more satisfied. While this finding

supports the cradle-to-grave philosophy of life cycle and relationship banking, *'the correlation coefficient between age and customer relationship profitability is, however, not that high [0.23 in one bank and 0.21 in the other]. Our conclusion is that we at least have to be very careful in adapting a life-cycle idea in bank marketing'* (Storbacka, 1994: p 133). This aspect of the life-cycle debate is continued in Chapter Six.

5.6 Summary

The final link in the service-profit chain is that of customer profitability. Having profitable customers usually requires the firm or organisation to have strong and enduring relationships with those customers. This chapter has reviewed various representations of the service-profit chain, each with its emphasis upon customer retention. Indeed, customer retention is pivotal to profitable relationships with customers. Then these more generic illustrations of the service-profit chain were applied to personal retail banking where ongoing patronage is usually part of any banking relationship. Here, activity-based accounting principles as they apply to calculating customer contribution were reviewed, with particular emphasis placed upon the algorithms developed by Storbacka (1994) and Connell (1997). The special difficulties of assigning transaction costs to individual customers are noted. The chapter ends with a review of Storbacka's (1994) relationship strength index which is really another measure of behavioural loyalty.

CHAPTER SIX

THE STUDY'S BANKING CONTEXT

6.1 Introduction

The primary research for this study is set in New Zealand and, more specifically, it addresses the service-profit chain in one bank in one region of this country. Therefore, the aim of this chapter is to provide context for the study both in terms of personal retail banking in New Zealand and the study bank's region. Additionally, there are a number of issues about measuring customer profitability which are specific to the study bank that need discussion along with a review of activity-based accounting methods, customer asset management and customer longevity (retention). Unavoidably, several results are reported here of a general nature that are derived from this thesis's major study. Such results are presented as part of the context for the study rather than for addressing specific research objectives.

6.2 The New Zealand Context

The New Zealand retail banking market is quite similar to the Scandinavian market described by Storbacka (1994). Prior to deregulation of New Zealand financial markets in the mid-1980s, the price of money (interest rates) and the functions banks could transact (for example, chequing accounts) were regulated and not available as a differentiating (product) factor. Hence banks focused on other differentiating factors, especially distribution and peripheral services (often supported by latest electronic technology). Large branch networks, often sited in "high street" locations close to peak land value intersections used to characterise New Zealand's banking market. In 1994 there were nearly 1500 full service retail bank branches in New Zealand (Prendergast and Marr, 1994) and the experts on Prendergast and Marr's (1994) Delphi panel agreed that branch numbers would be close to 1200 by the year 2000. With the advent of mobile mortgage banking, electronic banking, telephone banking, Internet banking and bank mergers, KPMG (1999) report that over one third of bank branches have closed since 1993. As of early 1999 New Zealand had 988 bank branches, 555 (or 36%) fewer than 1993. Bank branch numbers fell 113 alone in 1998 and the number of bank employees fell by 8%. By comparison the number of ATMs had increased from 1163 in 1993 to 1520 in 1998.

In the particular region where this thesis's research has been conducted there were 49 branches representing seven different banks in 1993, with the 'study bank' having 15 of those branches. Now there are just five banks (after mergers) with 26 branches of which the study bank has 12.

In New Zealand, one of a number of methods used by banks to acquire and retain customers has been the provision of increased convenience by self-service technology. Several self-service technologies now affect retail banking:

- ATMs (automated telling machines), first introduced in 1979.
- EFTPOS (electronic funds transfer at point of sale) first introduced in 1983. This involves making electronic payments at retailers by entering a computer readable card into an EFTPOS terminal. Retailers are benefited by improved inventory control, security and minimal bad debts as funds are transferred automatically and immediately from customers' accounts to retailers' accounts.
- Telephone banking, first introduced in 1990, which enables customers to access their accounts and perform "non-cash" transactions using their telephone's "touch-tone" technology.
- Internet banking. At the time of primary data collection for this research (1996-1998), banking by Internet was in its infancy. It is indicative of the rate of technological change that by the time of writing the final version of this thesis (2000), Internet banking is relatively well-established, not only for transaction-type banking but for a variety of financial services such as share trading and bill settlement.

Banks have also developed a plethora of peripheral services (from foreign exchange to bill paying) sometimes provided free to retain customers. Banks investigated their ability to unbundle these free services with most now charging fees for hitherto free services in an effort to have each service closer reflect its true economic costs. Now, certain customers are being charged fees based on customer profitability and certain types of accounts attract fees for exceeding specified monthly frequencies of transactions.

In banking, different delivery systems have different cost structures. Storbacka (1994) cites a 1992 New York Times article which states that using a teller for a simple transaction is approximately three times more expensive than the same task performed by automated

teller machines (that is, performed by customers at their convenience). Meidan (1996), summarising research on the British banking system, suggests *'that if the average cost of a direct deposit is X, the average costs of other main banking products vary between 2-5X: direct deposit X; direct debit 2X; cheque payments 2X; standing order 3X; cash withdrawal 4X; credit transfer by cheque 5X'* (p 149). As discussed above, modern technology is available to reduce the costs of serving customers but its utilisation requires behavioural change as customers become co-producers (Lovelock, 1992).

Past New Zealand experience (see Marr and Prendergast, 1991) reflects that of overseas countries in that older customers are, in general, less enamoured with modern banking technology like automatic teller machines (ATMs) or telephone banking using interactive voice response. Both these technologies increase banks' productivity and reduce labour and location costs but place more burden on customers as co-producers. Yet, even though some customers dislike these technologies, if banks can induce buyer behaviour change, customers will experience increased value from their banking relationships through enhanced time and locational accessibility, not to mention the cost savings to the bank.

Important context for this thesis is provided by the work of Colgate (1999) in his study of customers of New Zealand banks. He conducted a random survey of 838 New Zealanders selected from telephone directories (response rate 44% after two waves) which slightly overrepresented high income earners and slightly underrepresented the under 30 years age groups. These biases are quite typical of survey research (see, for example, Baim, 1991; Meier, 1991; Brown, 1994) and indeed are reflected in this thesis's customer sample (see Chapter Nine: Main Study's Methodology). Colgate (1999) found that New Zealanders valued relationships with their banks but there was still room for improvement by banks here. Overall levels of satisfaction stood at two thirds being satisfied (combination of 48% "satisfied" and 19% "very satisfied") while 55% of customers would be likely (combination of 28% "likely" and 27% "very likely") to recommend their main bank to others – a proxy for an (attitudinal) loyalty measure. Comparatively the results for this thesis's study bank were 77% "satisfaction" and 76% "loyalty." Although the two survey's methodologies were not identical the higher results for the study bank's customers confirms the author's suspicion that the study bank's customers are, on average, higher in their loyalty and there is less discrimination in the results than at a nation-wide level. Colgate's (1999) work further verifies this contention in his cross-tabulation of "likely to recommend" by

customers' main banks. He found that smaller financial institutions (of which this thesis's study bank is one) were held in higher esteem by their clientele than the corresponding measure for New Zealand's large banks. While placing a number of caveats on his findings, Colgate (1999) showed how New Zealand banking customers are less satisfied with, and less likely to recommend their main banks than their United States' counterparts (as reported in Chakravarty, Feinberg and Widdows, 1997).

Like other commentators studying satisfaction and loyalty in service marketing settings, Colgate (1999) suggests that *"if banks are to improve their satisfaction and loyalty ratings, and differentiate themselves from the competition, they need to understand what really drives satisfaction and loyalty"* (p 40). Banks also need to know which of these "drivers" of satisfaction and loyalty will induce the greatest changes in affection, and ultimately, profitability. As Colgate's research illustrated, "overall customer service" scored highest but real progress in increasing customer satisfaction and loyalty ratings may be easier to gain through improvements in "relationship closeness", price (fees and charges) and value. This assertion is derived from the Importance-Performance matrix that shows that banks are underperforming their customers' expectations on these three variables while on the areas of overall customer service and on "listening to the needs of the customer" a status quo performance will suffice. Colgate (1999) found that most customers valued close relationships with their main bank and, importantly, confirmed the strong direct statistical association between satisfaction, loyalty and relationship closeness.

Turning to defection rates, Colgate (1999) found that New Zealand banking customers had an annual switching rate of only 4% (when an earlier study by the same author in 1996 reported 8%) although 15% expressed an intention to switch. He quite rightly concluded that there is a high level of inertia – many had contemplated switching but had stayed with their main bank because of the perceived costs of switching and "better the devil you know" sentiments. Yet these customers still harbour a grudge because their levels of satisfaction and loyalty are substantially lower than the New Zealand average. It is noticeable that these results at nation-wide level align quite closely with those of this thesis (derived from a regional level study).

6.3 Customer Response to Changes in Retail Banking

It is intuitively obvious that banks add value for their customers in that banking is not an end in itself but merely a service that enables some other goal to be attained. Banks are used to help create the process necessary for customers to satisfy a need or a want. When buying a major asset like a home, holiday home, holiday or motor vehicle, securing finance is one part of this process, yet the customer's focus is on the asset. Bankers are cognisant of this "means to an end" feature of retail banking, providing finance at competitive rates over tailor-made repayment periods with flexibility for loan extensions, early repayment etc.

> *'Thus it would seem that the truly customer oriented provider puts its emphasis on analyzing its opportunities to support the customers' value creation, taking into account both its present resources and possible future resources. This of course has to be balanced with the ability to understand the customer's aptitude to change his/her behaviour and the appropriate pace of change'* (Storbacka, 1994, p 65).

Inducing customers to change their banking behaviour (to suit the banks' cost structures) without creating major problems in their relationships with their bank is the challenge facing all New Zealand retail banks. The danger is that an internal focus on cost control (in contrast to an external focus on customers) can result in policies that cut peripheral services and create marginal cost savings in the short-term but mitigate against long-term satisfaction (represented behaviourally by customer defection rates). Yet fears of customer defections from customer dissatisfaction in a banking context need to be confirmed. Quite large proportions of customers in retail banks are "unprofitable" at any given time and their profitability is not going to increase by improving their satisfaction levels. Indeed the switching barriers might be high enough to prevent all but the most persistent "switchers" from ending their relationships with their banks over new fees. Similarly, relationships between customers and their service providers are only 'relationships' when both parties acknowledge such mutual interest (see, for example, Ap (1992)). Often the provider thinks a relationship is in place but does the customer? Some people have accounts at several banks and banks have their 'inactive' customers who hold accounts with low balances and conduct little business for months or even years with a particular bank. These people may not even know they have a relationship with a particular bank, or if they do, they may regard the "relationship" as so transitory or so trivial that it does not count as a relationship.

It is quite common for customers to bank at several different banks, one of which is their main bank. Customers of the bank studied in this thesis report averages of two banks at which they transact business (AGB McNair, 1996). That institution where the customer's wages or salary is lodged or where mortgages/loans are drawn (since wages/salaries tend to be the starting point for transactions) tend to be termed 'main bank'. Rigid definitions can be unwise in retail banking. For instance, one customer may act as a gatekeeper to other customers in the same household. Sometimes the household, rather than individuals, is the "correct" level to define customers, and sometimes, especially for the self employed, personal finances and business finances are intermingled.

Examining banks' relationships with their customers in order to compute a profitability measure for each customer requires classification of the relationship in terms of:

- monetary volumes across various accounts (value)
- amounts of interaction across various accounts (frequency)
- how such interaction across various accounts is conducted.

Monetary value is derived from the interest margin that banks earn on the money borrowed from, and lent to customers, as well as fee-based revenue. Different types of accounts can be accessed by different means - cheques, debit cards, credit lines, automatic payments etc - and different types of access yield different impacts on customer profitability. As discussed above, customer co-production or even customer self-service can be substantially cheaper than when a bank teller is involved. New Zealand banks appear to be rather fortunate in that EFTPOS usage has become so universal so quickly that shifting customers from the higher cost (to banks) chequing technology to the lower cost EFTPOS technology has happened with only minimal active encouragement by banks. With smart card technology imminent (with a unique identifier for each customer), customers would then be able to be encouraged to use certain channels. At present, customers choose how they want to interact with their bank - personally, electronically, telephonically or a combination of the latter two access channels.

6.4 Transaction Costs

Storbacka (1994) quotes from a New York Times article (see Storbacka, 1994, Figure 4.2, p 97) which portrays the US banking industry's average cost per type of transaction in the

early 1990s. Interestingly, teller transactions appear as four to five times more expensive for banks than the same transaction by telephone or ATM. Meidan's (1996) comments about British banks confirm these relative costs.

The study bank was able to provide relative transaction costs after an in-house task force had spent several months assembling these. It confirmed that the two largest costs are the interest paid out to customers on customers' funds and the costs from transactions with customers. Interest payments to customers (being the reward for lodging funds with the study bank) come from rewards for minimum monthly balances in various types of accounts as well as daily interest rewards and the standard term deposit/term investment interest rewards. The study bank consolidates all its interest payments into one large "consolidated" account ready for payment. Some parts of the payment to customers will be instances where the bank has made excellent margins on its transactions; other transactions will be less rewarding for the bank. Overall however, the costs of borrowing (from customers) and the interest payments to customers stood at 2.9% in 1999, down from 3.3% in the 1996-1997 period. One suspects that much of this reduction in margin comes from the study bank's (indeed all New Zealand banks') relationship with the Reserve Bank and with the competitive influences of the wider banking market. Obviously a substantial portion of bank costs lie beyond the ability of bank management to control directly.

Nevertheless, it is possible to compare, in relative terms, transaction costs reported elsewhere in the bank marketing literature (Storbacka, 1994; Meidan, 1996) with those provided by the study bank. In the Table 6.1 the figures are indexed (to preserve confidentiality) so that the cheapest transaction cost is the base of 100. It is not possible to compare transaction costs between banks or banking systems (such as Nordic countries versus New Zealand or the United Kingdom) but rather to compare within the study banks listed in Table 6.1. However, the production costs for the different types of transactions, and at different venues within the same bank, confirm the sheer expense of personnel based transactions versus electronic transactions.

Table 6.1 Relative Transaction Costs: Indices for Example Banks

	Study Bank	Storbacka		Meidan
	(1999)	(1994)		(1996)
Transaction Costs	One NZ Bank	Nordic Bank A	Nordic Bank B	London, UK banks
Local ATM	100	440	450	300
Batch processing/automatic transfers	133	100	354	200
EFTPOS/Bankcard	250	190	784	n.a.
Telephone banking	383	510	n.a.	n.a.
Teller batch processing	675	510	n.a.	n.a.
"Behind-the-scenes" teller work	917	n.a.	1896	500
Teller transactions (own bank)	1250	850	1956	n.a.
Teller transactions (competitor bank)	1833	n.a.	2225	500

For example, simple transactions with a teller at one's own bank branch are at least five times more expensive, and perhaps as much as 12 times more expensive, than the same transaction at the relevant bank's ATM. Small wonder then that New Zealand banks are reducing both the opportunities for branch banking (through branch closure) and for in-branch transactions by levying charges for teller transactions while simultaneously trying to shift their clients' normal transactional banking to electronic and telephonic banking. Indeed since 1993 more than one third of New Zealand bank branches have closed because of bank mergers and the introduction of new technology. Similar trends have affected the study bank's region as discussed above in section 6.2.

Even a cursory glance at Table 6.1 would reveal that some customers cost banks substantially more than others in relationship costs. Personnel from the study bank tell anecdotal stories of elderly customers checking their account balances daily with branch tellers, probably as an excuse to talk to someone.

Just as with revenue calculations, customers have different configurations of interaction with their bank but as Storbacka (1994) showed it is possible to assign costs and allocate customers into relatively homogeneous "cost" groups. Storbacka's earlier consultancy work

with Scandinavian banks (alluded to in his 1994 publication and acknowledged above in Table 6.1) showed that the cost side of the banking equation creates cross-subsidising impacts across the customer base. Customers who do not use their bank's autopayment procedures and undertake few transactions but from whom banks derive high volume based revenue subsidise those with low volumes (low account balances, no loans) who use many transactions and take advantage of many "free" banking services. Given that some services are free to customers (for example, investment advice), profitability for banks is partly a function of their customers' interaction behaviour. Odd as it may seem (compared to fee based service environments), more banking interactions (more transactions) are likely to be less profitable than fewer interactions! In Storbacka's (1994) work, the cost of handling transactions (employees' time, consumables, allocation of overheads) totalled half of all customer costs. As he stated, cost information is especially confidential and is the single biggest problem of reliability in customer profitability calculations.

6.5 Activity-Based Costing and Customer Asset Management

Retail banking has long been handicapped by an inability of management to trace the contribution of customers to banks' profitability. Usually, in the absence of precise data, cost containment becomes the main weapon for increasing profitability. While this strategy needs to continue in order to reduce unnecessary costs, there comes a time when continuous reductions may start compromising customer service. Hence there have been a number of exhortations for using activity-based costing procedures akin to those of the management accountants (for example, Bellis-Jones, 1989; Howell and Soucy, 1990 and Cooper and Kaplan, 1991) in retail banking. Activity-based costing procedures simply accumulate overhead costs by activities; overhead costs are traced from activities to cost objects based on the demand for these activities. Usually activity-based costing is most appropriate when overhead costs are a large proportion of total cost, when the proportion of non-unit or non-volume related overhead costs to total overhead costs is large and when the degree of product or service diversity is great. Personal retail banking is characterised by all of these, and this thesis, along with the study bank, is working toward recognising the worth of customer asset management. Several authors have argued that while profitability is the responsibility of everyone in an organisation, ultimately, profits are derived from customers (for example, Anderson et al, 1994; Heskett et al, 1994; Fornell et al, 1996; Connell, 1997; Loveman, 1998). Customer asset

management is now an appealing strategy. Obviously cost control has been a pervasive strategy until now, but *"being able to assess customer contribution provides a different view on customers as prime assets of the business. It is, therefore, appropriate that customers are managed in the same way as any other asset"* (Connell, 1997, p 137). Before such management can occur, customer contribution measures are needed. Activity-based costing procedures similar to those reported in the work of Storbacka (1994), Barnes and Cumby (1995), Hartfeil (1996) and Connell (1997) have been used in this thesis. As the last of these commentators stated, *"the information technology department needs to be deeply involved in the development of the means of calculating and reporting customer contribution"* (p 139). It was no different for this thesis. Being able to measure and apply contribution values to marketing activities and customer characteristics brought together the disciplines of information technology, accounting, finance and marketing. Customers are viewed as an investment but with an important difference from the other banking assets. Equipment that does not perform is discarded or sold; for customers it is not so simple, as discarding customers can be dangerous (see, for example, the meta-analysis of recent studies of customer exit in retail banking by Stewart, 1998). Instead some New Zealand retail banks have been more subtle but no less effective by introducing account fees for low balances, for frequent transactions and for teller-based rather than electronic or telephonic banking. Concomitantly, so-called "good" customers have been given fee waivers on some or all of these fees.

6.6 Customer Relationship Longevity and Customer Retention

A "cradle-to-grave" philosophy is engrained in banks' customer relationship planning. *"According to this idea, customers should be acquired preferably while they are children, even though they are unprofitable until they become employed and start to earn a salary. The underlying assumption is that the customer will become profitable with time and that the discrete relationship, analyzed over the total length of the relationship, will be profitable"* (Storbacka, 1994, p 131). This thesis has a length of relationship measure, supported by a "share of wallet" measure (% of banking business at main bank) which is discussed in more detail in Chapter Ten. Correlation between these two measures is 0.09 showing only weak association at best but as shown below in subsequent discussion, customer contribution is correlated with both length of banking relationship and share of wallet. It should also be noted that the cradle-to-grave philosophy is really the same as the

"lifetime value of a customer" espoused by commentators like Reichheld and Sasser (1990), Heskett et al (1994), Rust et al (1995) and Lowrie (1997).

Diminution or even dissolution of banking relationships is hard to measure as customers seldom suspend all their engagements with a bank at once. As Storbacka (1994) suggests, perhaps the best indicator is the regular wage/salary/benefit deposit. Abrupt changes in this deposit can signal changes in loyalty, just as large withdrawals or closure of savings accounts might. Dissolution interviews at the time of customer defection are commonplace now when banks have such knowledge. The study bank has annual customer defection rates of approximately 5% which are slightly below one study of the New Zealand banking average, reported as around 8% (Colgate, 1996, p 116) but slightly above Colgate's latest (1999) figure of 4%. In turn, these figures are relatively similar to those reported in Stewart's (1998) meta-analysis of bank customer exit where she cites various studies in the UK, Europe and Scandinavia ranging from Storbacka's (1994) exit rate of 7% over two years to an annual defection rate of 5% (Ennew and Binks, 1996) to Colgate, Stewart and Kinsella's (1995) 18% annual rate for Irish students. Interestingly, actual rates reported by banks (for example, Ennew and Binks, 1996) always seem to be lower than the claimed rates by their customers and the same holds for this thesis's results. Indeed, 8% of customers claimed they had completely exited a bank in the previous year (and the probability of defection was 10% for the next 12 months) whereas subsequent analysis placed the "true" rate at 5% (± 1% at 95% confidence). Colgate's (1999) study for all New Zealand's banks shows an annual intention to defect rate of 15%.

Storbacka (1994) was rather disappointed with correlations between age and relationship measures in his study because, he suggested, high correlations are required to support the viability of a cradle-to-grave philosophy. His correlations between age and deposit volumes were strong and directly proportional while correlations between age and loan volumes were inversely proportional but weaker. His disappointment surfaced with the age and customer relationship profitability correlation of 0.21, prompting him to state that *"our conclusion is that we at least have to be very careful in adapting a life-cycle idea in bank marketing. It has to be only a part of the total approach. It is not self evident that customers become profitable with time"* (Storbacka, 1994, p 133). The correlation between age and customer contribution for this thesis's study is almost identical to Storbacka's, at

0.19. While there are differences in specifying the profitability measure, the peculiarities of each study bank and each country's banking system, and differences in culture, the similarities of the correlations suggest Storbacka's sentiments apply here. Perhaps our expectations were really too high because banking support systems are accounting based and lack the depth needed to analyse the complexities of customer interactions. For instance, negotiations about loans, insurance, superannuation, and investments are seldom registered; only when new accounts are opened, or the balance of existing accounts change is there an entry. Similarly, critical events in the life cycle like marriage, children, divorce and retirement are seldom captured in banks' databases. Indeed, the family life cycle concept as coined originally may well be a root cause of these low correlations. It does not accommodate well the societal changes since the 1970s. The delaying of marriage and child-bearing, empty nest stages now being later in life, higher divorce rates, more open same-sex relationships, acceptance of female choice to remain childless, etc all disrupt the family life cycle model. Perhaps it is surprising that age or life cycle have predictive capabilities as high as reported here.

6.7 Summary

Geographical and market-specific contexts for this thesis were reviewed in this chapter. The New Zealand personal retail banking market was described in terms of recent reductions in branch banking and in terms of adoption of electronic banking technology. A recent study by Colgate (1999) provided important contributions to the notion of a service-profit chain in New Zealand's personal retail banking. For instance, he found that most New Zealanders valued close relationships with their main bank and that statistically significant associations were present between the constructs of satisfaction, loyalty and "relationship closeness".

The discussion then addressed activity-based accounting procedures as they relate to personal retail banking and especially the derivation of the transaction cost component of this thesis's customer contribution (profitability) measure. The chapter ends with a banking context for customer retention, relationship longevity and customer defection.

CHAPTER SEVEN

SYNTHESIS OF LITERATURE, AIMS AND OBJECTIVES

7.1 Introduction

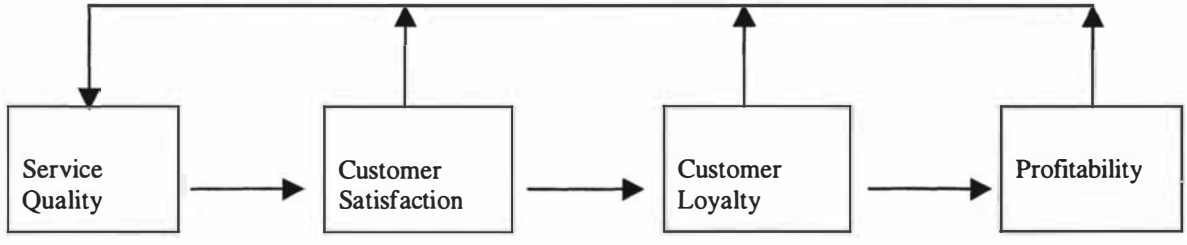
This chapter provides a summary of the underlying themes, as they relate to the service-profit chain, derived from the literature reviewed in Chapters Two to Five. Then it shows how these themes have been reflected in the aims and objectives (which are restated). A methodological overview follows to demonstrate the way these themes (the constructs of the service-profit chain) were measured in a personal retail banking context and the methods used to derive the results.

This thesis recognises that the link between service quality and profitability parallels that of the age-old search for the advertising-sales connection. Similar to advertising effects, those of service quality and of customer satisfaction are cumulative and difficult to isolate from initiatives taken by firms in their pricing, distribution, new product launches and image-building, which simultaneously affect profitability (ZBP, 1996; Zeithaml, 2000). Nevertheless, the links between service quality and profitability can be depicted as a chain (as alluded to often in the literature review – Chapters Two to Five above). Figure 7.1 below presents the service-profit chain. The contribution of constructs like perceived service quality, customer satisfaction and customer loyalty to profitability has intrigued marketing academics and practitioners for at least the last two decades. Linking these constructs in a conceptual model is not new. Many commentators have either hinted at such a model or depicted one in their writings. As discussed in the literature review chapters above, service-profit chain models have characterised the writings of Buzzell and Gale (1987), Reichheld and Sasser (1990), Boulding et al (1993), Anderson et al (1994), Heskett et al (1994), Storbacka (1994) and Rust et al (1995). Rarely has any single researcher or research team been able to trace the whole service-profit chain at one time. Instead, different people have studied different aspects of the service-profit connection. Zeithaml (2000) in her latest review of the relationship between service quality and profits suggests that *'the relationship took time to verify, part of the delay due to unfounded expectation that the connection was simple and direct. Investments in service quality, however, do not track directly to profits...*[they] *accumulate over time,*

making them less amenable to detection using traditional research approaches...many variables other than service improvements (such as pricing, distribution, competition, and advertising) influence company profits...mere expenditures on service are not what lead to profits; instead spending on the right variables and proper execution are responsible (p 67).

The links between perceived service quality and customer profitability can be depicted as a chain as conceptualised in the models of the various authors alluded to above. Quite simply, these draw on a service-profit chain type configuration as shown in Figure 7.1.

Figure 7.1. The Service-Profit Chain



Acknowledging the difficulties in isolating the contribution to profitability that preceding constructs in the service-profit chain make should not preclude attempts to try and study these relationships.

7.2 Underlying Themes

The underlying themes are the four constructs depicted in Figure 7.1's service-profit chain.

7.2.1 Service Quality

Quality in the production of goods has been recognised as somewhat different to quality in the production of services. Unlike goods' production, customers are more often than not part of services' production. That involvement of customers in the service process demands emphasis on managing the exchange between customer and provider. These dual roles – producing the service and managing the customer-provider exchange on site – are reflected in the way service quality is measured in this thesis. Service quality

measurement has been debated extensively in the academic marketing and management literature for at least the last decade. Kelley et al (1992) suggest that the longer customers are associated with a service provider (longevity of the relationship demonstrates behavioural loyalty), the more "socialised" to that provider they become and usually the more comfortable (attitudinally loyal) they become with the relationship. Most commentators mention service quality's multidimensionality and the work in this regard by PZB (1985, 1991) and Cronin and Taylor (1992, 1994) is reflected here.

The SERVQUAL method (PZB 1985, 1991, 1994) of measuring service quality, criticised for its measurement of the gap between service expectation and service performance, was rejected and the SERVPERF method (Cronin and Taylor 1992, 1994) substituted instead for the measurement of perceived service quality. As its name suggests, the SERVPERF procedure is a perceptions-only measure. It has been acknowledged even by the SERVQUAL authors (ZBP 1996), as an appropriate measure when the primary purpose of measuring service quality is to attempt to explain its relationship to other dependent constructs such as customer loyalty and customer profitability.

7.2.2 Customer Satisfaction

The customer satisfaction construct in the service-profit chain has been the focus of considerable debate too. The constructs of service quality and customer satisfaction have similar heritage, yet they differ. Much of the research reviewed in Chapter Three traces these differences along with the acknowledgement that service quality is antecedent to satisfaction. This temporal element is important in constructing the service-profit chain. This thesis takes the stance that service quality is influenced heavily by recent experiences with a service provider whereas of customer satisfaction is a more global, cumulative experience construct. Consider too that customer satisfaction has been shown to be a better predictor of repeat purchase than service quality (Cronin and Baker, 1992; Taylor and Baker, 1994). Such findings have shaped this thesis's measurement of customer satisfaction.

7.2.3 Customer Loyalty

Like the preceding constructs in the service-profit chain, customer loyalty is a complex, multifaceted phenomenon. It is recognised that customer loyalty has both attitudinal and

behavioural dimensions. Typologies and classifications of customers based on both their attitudinal and behavioural loyalty to service providers have influenced the way customer loyalty is measured in this thesis. The work of Jain et al (1987) and Gremler (1995) is acknowledged in this regard. It is important to acknowledge too, at least in personal retail banking, that sole brand loyalty is not the norm – one can have loyal behaviour but not necessarily loyal attitudes to one's main bank, or vice versa.

7.2.4 Customer Profitability

The foundation research on the service-profit chain by the Harvard School of researchers, represented by Reichheld and Sasser (1990), Heskett et al (1994), Reichheld (1996) and Loveman (1998), along with the research by Anderson et al (1994) and Rust et al (1994) has all influenced this thesis. Each of these authors' models of the links between service quality and profitability are fuelled by customer retention: loyal customers are repeat buyers who tend to be comparatively satisfied and comparatively happy with their service provider's service. Yet Storbacka's (1994) work with Scandinavian banks shows that at any point in time some customers are financially unprofitable for banks. However, such customers, while unprofitable initially, can become profitable. Hence enduring, long-term relationships are important to banks in retaining customer loyalty through crucial stages of the customer life cycle. Profitability is expressed as a financial contribution in this thesis and is depicted as only from the service provider's (the study bank's) viewpoint. However, one could posit that "profitability" from a customer's viewpoint is expressed by customer loyalty, either attitudinally by several measures, or behaviourally by proxies like longevity of the relationship and share of wallet devoted to main bank.

In this thesis, customer profitability has been measured by customer contribution in financial profit or loss terms over a three-month period with the study bank. Important context has been provided by the activity cost accounting work in the research by Storbacka (1994), Barnes and Cumby (1995) and Connell (1997). Also Colgate's (1999) research provided a New Zealand context for the writing up of this thesis even though his research was conducted after the fieldwork phase of this thesis had been completed.

7.3 Aims and Objectives Reiterated

Although the aims and objectives of this thesis have been presented already in Chapter One it is timely to restate them here to show how they have been derived from the academic marketing and management literature. The overall aim of this research was to take an abbreviated form of the service-profit chain concept (popularised by Heskett et al (1994) but enunciated by many others such as Buzzell and Gale (1987), Anderson et al (1994), Storbacka (1994), Rust et al (1995), Reichheld (1996) and Loveman (1998)) and explore the extent to which customers' perceptions of service quality, of satisfaction and of loyalty affect customer profitability in a New Zealand regional bank. Being a very broad aim, it was further divided into several more specific research objectives that trace various associations within the service-profit chain. These are:

- To what extent are perceptions of service quality related to customer satisfaction?
- To what extent are perceptions of service quality related to customer loyalty?
- To what extent are perceptions of service quality related to customer profitability?
- To what extent is customer satisfaction related to customer loyalty?
- To what extent is customer satisfaction related to customer profitability?
- To what extent is customer loyalty related to customer profitability?

In turn, these objectives invite "customer-related" questions such as:

- Who are the satisfied, the loyal and the profitable?
- What factors characterise profitable customers? Loss making customers?
- Are satisfied customers loyal customers and vice versa? Are satisfied customers profitable and vice versa?
- Are loyal customers profitable and vice versa?

Also, three propositions for investigation have been derived from the work of Jain et al (1987) and Fornell et al (1996), namely:

- More profitable customers are more likely to have lower perceptions of service performance, be less satisfied and be less attitudinally loyal to their main bank.
- More profitable customers will have higher propensities to defect from their main bank (that is, be less behaviourally loyal).

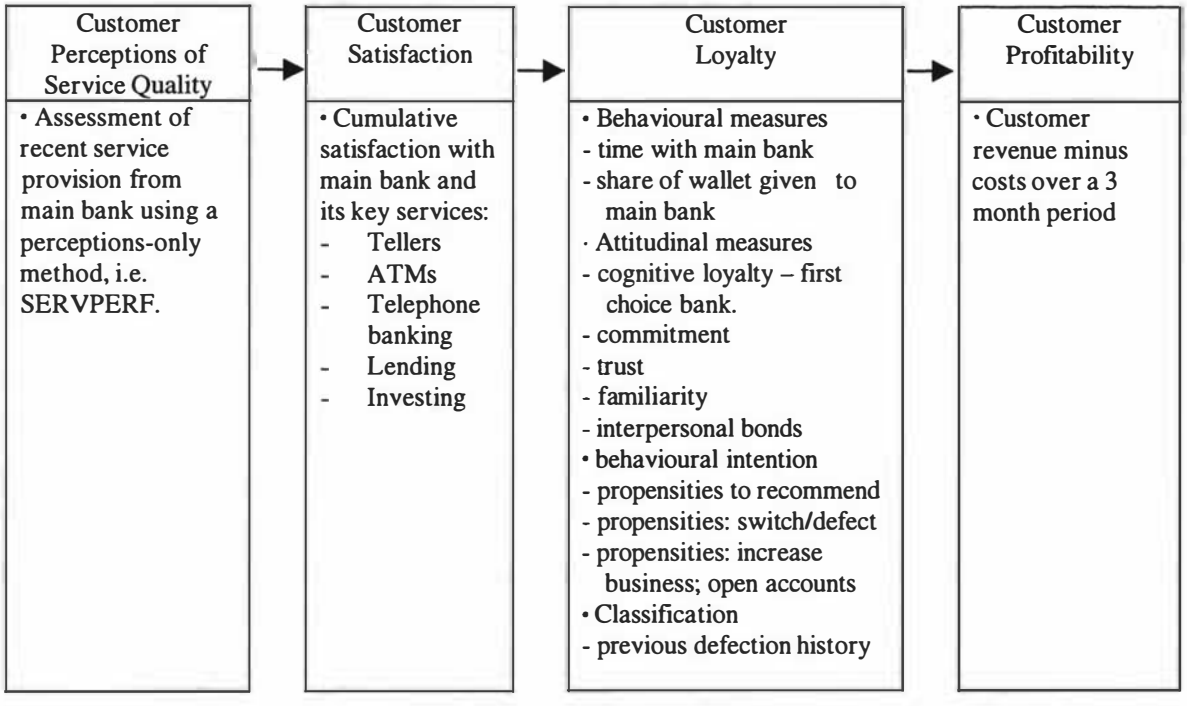
- More profitable customers will be from above average income households and have higher educational status.

Finally, one specific sub-objective addresses both an issue of content as well as of methodological importance. Juster's (1966) eleven point probability scale has been used in the measurement of various behavioural intentions – to recommend one's main bank, to increase or decrease business there and to estimate the propensity to defect entirely from one's main bank. To examine the predictive validity of the scale, the estimates of defection were compared with actual behaviour one year after that questioning.

The research questions and propositions outlined above were constructed in that format rather than stated as hypotheses for the reasons discussed in section 1.2 in Chapter One. Briefly, at the time of the research design and data collection phases of this thesis, the service-profit chain in personal retail banking was still more concept than model, necessitating exploratory and descriptive objectives rather than the more prescriptive demands of hypothesis testing.

The service-profit chain acts as an over-arching model for this research. Figure 7.2 below shows how the service-profit chain has been operationalised to address the thesis's overall aim. While Figure 7.2 depicts the service-profit chain as a linear model, the complexities of the relationships between perceived service quality, satisfaction loyalty and profitability would suggest a more circular framework. For instance, positive reinforcement by the study bank for "loyal" customer behaviour is likely to feed back into positive perceptions of service quality and of satisfaction.

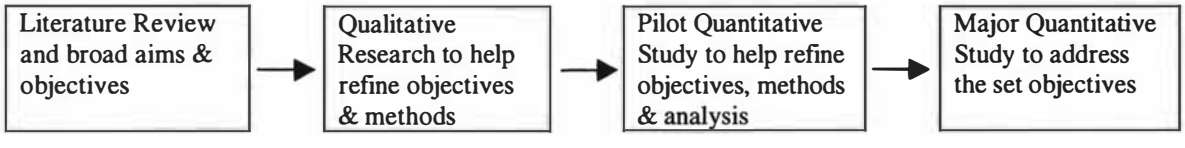
Figure 7.2. Linking Service Quality to Profitability: The Service-Profit Chain for a Regional New Zealand Bank



7.4 Methodological Overview

This thesis adopted a positivistic approach derived from empirical research in the marketing discipline. While reviewing the academic literature was ongoing throughout the thesis's "life" the initial phase of literature review helped shape the aims, objectives and methodology. Figure 7.3 shows diagrammatically the sequence of phases and events.

Figure 7.3. The Research Process for this Thesis



A preliminary research phase followed the literature review. Firstly, it involved two group discussions with customers of the study bank where the elements of customer loyalty and the ways to measure behavioural intention received special attention, as guided by the work of Jain et al (1987) and Juster (1966), respectively. The issues raised in these group discussions shaped further the research objectives and measurement

procedures used in the later phases of the research process. Then followed the pilot study that led to refinement of the customer loyalty measurement as well as providing a forum for trialing multivariate methods of analysis. Also the constant-sum method for ranking service quality dimensions was abandoned at this point (see Chapter Eight). The final phase of the thesis focused on the Major Survey which analysed results using a mixture of univariate, bivariate and multivariate techniques including cross tabulation, correlation, ANOVA, regression, factor analysis, cluster analysis, discriminant analysis and hierarchical log-linear modeling.

The way in which service quality is measured is quite controversial. The SERVPERF methodology was chosen for measurement of perceived service quality in this thesis, primarily because it had just been sanctioned as appropriate by the SERVQUAL authors, PZB in 1996. The piloting phase of the research was conducted in late 1996. However, the SERVPERF format was modified quite substantially to incorporate a number of issues (expressed as attributes) encountered in the qualitative phase. Hence there was considerable input on issues such as parking, branch "atmospherics" and staff performance gleaned from the 'blank sheet' approach in the two group discussions. Though not directly visible in the attributes of the SERVPERF format, the influence of the Nordic School of researchers was certainly in the background with the paper by Selnes (1993) acknowledged. The Nordic School's emphasis on technical quality (what customers receive from their service provider), process quality (how the service provider conveys service to customers) and corporate image underlies all service quality measurement.

CHAPTER EIGHT

PRELIMINARY RESEARCH

8.1 Introduction

In preparation for the later quantitative phases of this thesis, a preliminary research phase involving two group discussions (qualitative research) and a pilot study was undertaken. After a brief review of qualitative methods relevant for a personal retail-banking context, this chapter outlines how the qualitative research was carried out in preparation for questionnaire development. One of the aims of this chapter is to integrate the results of the two group discussions and the pilot study with some of the theoretical and conceptual findings of the academic literature reviewed above, especially those from the customer loyalty literature discussed in Chapter Four.

The pilot study for this thesis was the opportunity to review several aspects of survey and questionnaire design. With the pilot study being a mail survey, the chapter addresses survey response and pre-testing and then reports on the performance of the questionnaire. Evidence for various amendments to the final questionnaire are presented and discussed in terms of the instrument's accuracy, validity and reliability. Its attitudinal items measuring service quality and customer loyalty were found to be capable discriminators of these two essential constructs in the service-profit chain. Then some preliminary multivariate analysis on the pilot survey data is reported in order to provide guidance for subsequent analysis of the major study's data.

8.2 Qualitative Pre-Research

Undertaking qualitative research to further examine dimensions that underlie certain circumstances or contexts is common in marketing research and the particular focus of this qualitative research upon customer loyalty in personal banking was deliberate. Comparatively, this aspect of the research is least well covered in the academic literature whereas the academic marketing and management literature abounds with studies on service quality and customer satisfaction in personal retail banking. Indeed, marketing theory on customer loyalty to service providers is described as underdeveloped by Keaveney (1995) and Price, Arnould and Tierney (1995). Therefore, specific objectives of

the qualitative phase were to examine various constructs of customer loyalty, to place them in context, to discover other factors influencing customer loyalty and to learn the respondent language for these constructs.

This thesis's qualitative phase draws quite heavily upon the loyalty in banking work undertaken by Jain et al (1987) and Gremler (1995). And as Grove and Fisk (1992) suggest, *'independent of one's philosophy of science [qualitative methods] encompass a continuum of purposes and activities that can generate interpretative or descriptive information about services'* (p 217). Given that services are dynamic and exist only while being rendered (the simultaneity of service production and consumption), it is understandable that traditional survey research methodologies might overlook important elements of services. While qualitative research techniques have these shortcomings too, their ability to spend longer with respondents, to probe further, to clarify statements, to discuss answers and even to help respondents analyse their own beliefs, opinions, attitudes and actions make qualitative techniques useful research procedures.

This section traces the design and implementation of the two group discussions used in the pre-quantitative phase of this study. The nature and characteristics of group discussions are reviewed briefly followed by discussion of the issues researched, the participants who formed the discussion groups and the findings. In turn, these findings have helped shape the content and design of the survey research instruments.

Belson (1986) describes a group discussion as an assembly of several people, usually five to ten, brought together to discuss the different aspects of an issue which is introduced to them by a moderator under whose control they work. Generally this technique is used to collect the different sorts of ideas, thoughts and reactions of people in relation to some specified matter. In so doing, new dimensions and new insights can be uncovered, especially via respondents generating ideas from hearing the remarks of other group members. Generally then, group discussions are a research technique used for exploratory purposes to uncover the quality of feeling, emotions and attitudes about a subject. Additionally (as in this thesis), these discussions can be used as a pre-planning phase for a quantitative project.

People are brought together in an informal setting, usually without much knowledge of exactly what will be discussed. The moderator's job is to put the participants at ease and guide the dialogue on the desired topic in an indirect fashion without suggesting answers. Usually discussion moves from the general aspects of a topic to particular aspects. The group process usually stimulates participants sufficiently to bring about meaningful discussion, with the moderator interposing questions with calls for elaboration or clarification of thoughts expressed. Before the discussion the moderator will have prepared an outline of the issues to be covered, and with skilful guidance, most of these will be covered spontaneously. Where necessary, and usually near the end of the discussion, direct questions may have to be put to the group, but this is a last resort. Gordon and Langmaid (1988) describe the stages of the group's process with the five rhyming words: forming, storming, norming, performing and mourning. Each stage is self-explanatory and is a good approximation of the process. Early pioneering work in group projective techniques by social psychologists like Allport (1935) is still quoted today.

It is not possible to interpret findings from group discussions in a statistical sense but it is possible to form hypotheses about what various clusters of people may think in preparation for later quantification.

For this phase of the study, 14 participants were recruited for two group discussions held in March 1995 in the major city at the centre of the study bank's region. Recruiting was carried out by the local field supervisor of a national market research company and the two group discussions were held in the private home of one of her interviewers. Participants were each rewarded for attendance by a cash payment of $20 to cover costs such as transportation and child-care. The groups were mixed by gender and age with the one overriding qualification being that each participant had to have had a personal or joint (with partner, not parent) account at any bank for at least ten years. This stipulation was imposed to ensure participants had sufficient knowledge of loyalty issues in personal banking.

The discussants comprised six males and eight females; their ages ranged from 24 to 86 (with a median age of 47). Apart from three participants who lived alone, all were members of households with multiple banking loyalties (range 1-4; median and average: 2)

and length of relationship with their "main" bank (self-defined) ranged from six months to nearly 50 years! Duration of relationship with participants' main bank tended towards a bi-modal distribution: five people had relationships of less than two years whereas six people had relationships of more than 20 years.

Discussions were moderated by the author using the following topic guide:

- How many banks do you (separately or with partner) do business with? (Why? Reasons for bank(s) chosen...? Why more than one?)
- How do you judge one bank against another? On what basis? [Generate details]
- What things are most important to you in banking? [Generate lists]
- What do you expect from your bank(s)? (Day-to-day? Weekly? Longer?)
- What should your banks expect from you?
- What makes you remain with your bank? Loyal? (What bothers you? What impresses you? How loyal do you consider yourself to be to your main bank? Why?)
- [Estimate customer retention rates] Juster scale self completion work then "defend" answers
- Bank Loyalty Index: self completion [To help generate loyalty attributes]
- Demographics, signatures for participation fee (Administration).

Discussions were audio taped for later analysis. Each lasted between 110 and 140 minutes and the format involved discussion of the issues outlined in the topic guide plus work on a self-completion exercise based on customer loyalty in banking attitudes used by Jain et al (1987). The group discussions were important in terms of determining the subsequent research design. First, the discussion helped determine the items to be used in the perceived service quality, customer loyalty and satisfaction scales developed for the pilot and major surveys. For example, discussants emphasised the importance of tangible items such as tidy writing counters and clear signage meeting their perception of a businesslike bank. During the group discussions various self-completion exercises were carried out in which discussants generated their own answers (on paper) and then shared these with the group when called upon to do so. Two of these instances were *"how do you judge one bank against another* and *what things are most important to you in banking?"* Hence, the "open-forum" discussion in the groups, and the associated individual questioning began to both provide items on the 'blank sheet of paper' that was to become the questionnaire. In

turn, these provided support for items derived from prior research such as from PZB's SERVQUAL's attributes (repeated by Cronin and Taylor in their SERVPERF instrument), from Lewis (1989; 1991), from Selnes (1993) and Storbacka (1994) representing some of the research carried out by the Nordic School of service management researchers, and from Jain et al (1987).

The group discussions also provided support for the concept that satisfaction can be assessed by reference to evaluations alone without reference to an expectations scale as posited by PZB (1985,1988). It was from the question *what things are most important to you in banking* that led to decisions to not only measure cumulative customer satisfaction (see Chapter Three for a full explanation of the rationale for global satisfaction measures) but also to measure satisfaction with the main departments of the study bank, namely tellers, ATMs, telephone banking, lending and investing.

At the time the research was carried out transaction fees were not levied by the study bank although those people who were also customers of competitive banks (with transaction fees) voiced strong opinions. Nevertheless when study bank customers were asked projective questions about transaction fees a common response was *"if the [study bank] was to bring in fees we've got nowhere else to go because every other bank has fees...might as well stay where we are...I don't like it though!"*

During the self-completion phase of the group discussions, the opportunity was taken to test an adaptation of Juster's (1966) probability scale. In this instance, the scale was adapted for use in projective questioning about future loyalty behaviour in personal banking. (Previously, extensive testing of Juster's scale has been carried out in product environments by members of Massey University's Department of Marketing: see, for example, Day, Gan, Gendall and Esslemont, 1991; Esslemont, Hamilton-Gibbs and McGuinness, 1992; Brennan, 1995.)

8.3 Customer Loyalty in Personal Banking

Participants in the discussions were quick to stress that any loyalty they had to their bank(s) was based on reciprocity, though further probing revealed that customers' relationships with

banks were quite fragile - one "wrong" move by the bank (as perceived by customers) and the relationship is at risk

It was clear that the concept of a "main bank" (Storbacka, 1994) is prevalent among the participants, with the choice of "main bank" arising from loans and mortgages, a place for salaries and wages, and through longstanding reciprocity (*they value my custom and I stay with them).*

Underlying some of these reasons for "main bank" choice were the influence of employers (where employers' accounts were kept) and the whole debate about transaction fees. (In the study region, the study bank waived transaction fees at the time of the research whereas its competition continues to have various levels of fees that they impose on their customers.) Some participants in the discussion groups seemed to suggest that they could accept transaction fees (perhaps begrudgingly) whereas others were vocal in their opposition.

When the conversation was steered to consideration of banks being in business to survive, like any other profit-making entity, there was grudging recognition that banks are commercial enterprises although this sentiment seems entwined with some "social" commitments to their customers.

Participants were then requested to consider another aspect of loyalty - "What makes you remain with your bank?" The somewhat perfunctory nature of their answers suggested that banking relationships with retail customers may not always be quite as intense as bank marketing literature claims (for example, Smith and Lewis, 1989; Stum and Thiry, 1991; Lewis, 1991).

As Storbacka (1994) observed in his research in Scandinavia and Stewart (1998) in her review of bank customer exit studies, there appears to be a reluctance to close accounts (or to close all accounts at a bank). Instead, banking customers are more likely to begin relationships with other banks, resulting in a proliferation of bank accounts and banking relationships. Perhaps only the "relationships" customers have with their main banks are worthy of the perceptions of commitment, trust and intensity that are commonly attached to the term "relationship".

Further probing of the relationships that group discussion participants have with their banks resulted in acknowledgement of bank employees' efforts to render efficient and effective customer service although nostalgia for the "more intimate, everyone knows everyone else" days of banking was very evident.

8.4 Measuring Loyalty to Banks and Banking Intentions

With a view to using adaptations of Jain et al's (1987) bank loyalty index and Juster's (1966) probability scale in the quantitative phase of this thesis, the author took the opportunity to pilot test these research instruments near the conclusion of the two group discussions. Jain et al's (1987) work represents an original attempt to measure customers' cognitive loyalties to their banks rather than the more straightforward behavioural measures like number of accounts, balances of those accounts and time period with the same bank. In their research Jain et al (1987) presented retail banking respondents with eight statements about relationships with their bank and asked them to rate each on a standard six point (no mid-point) Likert agreement scale. These statements cover the influences of inertia, fees, service levels, annoyance, new entrant banks, synergy and interest rates on banking loyalty. Individual responses to each statement were summed to produce a bank loyalty index for each customer, and on the basis of these index scores, customers were allocated to a loyal or non-loyal classification. The concept of a loyalty index is appealing, and an adaptation of Jain et al's (1987) instrument (see Table 8.1) was pilot tested near the conclusion of each group discussion. The adaptations made were to match the original statements to the New Zealand personal retail-banking environment. These involved very minor wording changes (for example, "fees" rather than "charges"; "investment" rather than "savings" account) and the omission of one complete statement about cheque account charges that did not apply to New Zealand banking at that time.

The 14 participants in the group discussions were requested to self complete the small questionnaire (reproduced in the Appendix) which includes the bank loyalty index. Comprehension of this task proved acceptable. No one queried the statements and every statement drew an answer. However, the statement *"I would rather deal with a new bank in town (e.g. ASB Bank, Trust Bank) than one of the established banks"* drew two "not sure" responses on the grounds that the respondents had too little knowledge of the

newcomers to answer accurately. Also, the word "established" drew one comment and the suggestion that the words "older" or "longer established" are less value laden. Results from this aspect of the preliminary research suggested that the loyalty index statements were meaningful for respondents.

Table 8.1: Adaptation of Jain et al's (1987) Bank Loyalty Index

(1)	Unless I was very dissatisfied with my bank(s), changing a checking account from one bank to another is too much bother.
(2)	Lower or no fees at another bank would convince me to switch all my business there.
(3)	As long as the present service continues, I doubt that I would switch from my present bank(s).
(4)	I have never switched an account because of either bad service or some annoying incident at the bank.
(5)	I would rather deal with a new bank in town (e.g. ASB Bank, Trust Bank) than one of the established banks.
(6)	It is better to do all your banking in one bank because then they have a better overall picture of your finances.
(7)	I would rather do all my banking business with one bank even if another bank offered a slightly better deal on a loan or an investment account.

As for the "meaning" of the results, little can be concluded from them other than to suggest that these customers are reluctant to conduct personal banking business with only one bank. Although the cost of switching is relatively high - most agreed that one needs to be very dissatisfied with a bank to do so - 11 of the 14 respondents had switched an account in the past because of bad service or some annoying incident at the bank. Undoubtedly, customer loyalty in personal retail banking is not to be taken for granted by banks. These respondents seemed open-minded but sceptical; their loyalties can be lost easily.

The final aspect of the group discussion saw the 14 participants being asked to use an adaptation of Juster's (1966) eleven-point probability scale (as shown in Table 8.2) to quantify their banking intentions. The questions formulated for this exercise each related

to account closure and leaving one's main bank (for another bank) over various time periods – one year, two years and five years.

Table 8.2 Juster's Eleven Point Probability Scale

10	Certain, practically certain	(99/100)
9	Almost sure	(9/10)
8	Very probable	(8/10)
7	Probable	(7/10)
6	Good possibility	(6/10)
5	Fairly good possibility	(5/10)
4	Fair possibility	(4/10)
3	Some possibility	(3/10)
2	Slight possibility	(2/10)
1	Very slight possibility	(1/10)
0	No chance or almost no chance	(1/100)

The adapted Juster scale proved adequate for its task - its instructions have been developed in work by Juster (1966), Day et al (1991), Esslemont et al (1992) and Brennan (1995). The scale's implementation proved relatively easy although two elderly respondents needed reassurance about the detail of the task. Their initial reluctance was acknowledged and addressed in the subsequent quantitative phase of the study in which the mean probability scores for various behavioural intentions formed quantifiable expressions of specific aspects of customer loyalty.

The preliminary results, based on a small convenience sample, confirmed the findings of Storbacka (1994) and Stewart (1998). New banking relationships seem to be cultivated while the existing relationship "wanes but does not end" - accounts are proliferated across several banks (median of two banks for each of the 14 participants). Only one in ten of the participants were adamant they would withdraw completely from their existing

main banking relationship in the next 12 months.

8.5 Mail Surveys

This study relies heavily upon the use of mail surveys for data collection. Mail surveys have the reputation for low response rates yet this reputation is undeserved in certain circumstances. Various American commentators (for example, Ayidiya and McClendon, 1990; Berry and Kanouse, 1987) have reported how mail surveys conducted in the 1970s received "poor press" from some American business text authors because of supposedly low response rates. Not all American academics shared this view at the time (for example, Dillman, 1972) but enough did to denigrate the image of mail surveys. Yet mail survey techniques are used extensively in the USA for market research. Baim (1991) cites from an ESOMAR (European Society of Opinion and Market Research) study that reports 40% of US quantitative research data are collected by mail survey. Indeed, European market researchers also use mail survey methods extensively.

While not appropriate for all topics or all survey populations, mail surveys can provide comparative advantages for surveying widely dispersed samples and for reducing interviewer bias. Additionally they give respondents time for completion and cost advantages for researchers (Brennan, 1992). Low response rates are not a necessary condition of mail surveys and there are published studies to support this claim. For specific details of research on mail survey response rates, see the comprehensive reviews by (for example) Fox, Crask and Kim (1988), Conant, Smart and Walker (1990) and Yammarino, Skinner and Childers (1991).

Brennan (1992) provided research evidence for achieving response rates in excess of 60% from the general public in New Zealand for the period 1979 - 1991. He concluded that the most effective technique is persistence - send at least two reminders to non-respondents, include a questionnaire with each reminder, and of course, a reply-paid (postage paid) envelope. Surveys addressed to a specific person (rather than an unknown householder) and accompanied by a monetary incentive for each respondent (and not just the chance to win a major prize) were the most successful. However, the research on the relationship of incentives with mail survey response rates is somewhat contradictory (Brennan, 1992) and for this thesis, the decision was taken not to offer an incentive, but rather, to invest that

budget in another wave of contact (a second reminder).

More recent mail survey research by the Department of Marketing at Massey University in its role as the New Zealand representative for The International Social Survey Programme (ISSP) has resulted in response rates of 61% to 71% for the period 1991 - 1999. These response rates have been achieved from nation-wide samples of the general public aged 18 years and over, drawn from the New Zealand Electoral Roll, using two reminders and no incentives.

The term response rate deserves some definition. It is used here to describe the ratio of sample units (usually individuals but sometimes households or organisations) successfully surveyed (yielding "acceptable" data) to the number of eligible sampling units. Obviously the response rate can be affected by definitions of "acceptable" data and eligibility. However, it is generally recognised in mail surveys that individuals who never had the chance to complete the questionnaire should be defined as ineligible (Brown, 1994). "Gone, no (forwarding) address" is the most common occurrence while death, long term mental illness, incarceration and long periods overseas are other circumstances affecting eligibility for mail surveys. Definitions of "acceptable data" will vary from survey to survey.
Gendall (2000) reports on the problem of nonresponse in market research in general, and on mail survey research in particular. He notes that a low response rate can increase the potential for nonresponse bias but that such bias is not inevitable with a low response rate. Referencing several recent studies (including Hosie, 1995), Gendall (2000) demonstrates how, for most practical purposes, a response rate of 50% can be acceptable. Nevertheless, he explains that this rate is a minimum and researchers should strive to coax their mail survey response rates into the 60% to 70% range.

Much mail survey methodological research has been conducted in the USA by Dillman and Dillman (1995) and in New Zealand by Gendall (1996; 2000) and his co-authors (Gendall, Hoek and Esslemont, 1995). The New Zealand research was designed to test the hypothesis that photographs or pictures on the questionnaire's cover will increase mail survey response rates. Both studies found no evidence to support this claim. However, research on the amount of influence different types of covering letters have upon mail survey response rates demonstrated that while letters' content and appearance may influence response, an

altruistic appeal (help-the-sponsor) rather than an egoistic appeal (stressing the value of an individual's opinion) was more effective. This was consistent with the findings of Houston and Nevin (1977) in the USA.

8.6 Designing the Pilot Survey

The pilot survey for this study (a copy of which is attached in the Appendix) was a mail survey of 300 randomly selected customers from the study bank, aged 18 years and over, and with at least two years experience with the bank. As discussed in section 8.2, the questionnaire was developed after two group discussions conducted in New Plymouth in March 1995 and an extensive review of the academic literature on customer loyalty, customer satisfaction and service quality in personal retail banking. Respondents were asked to answer questions in the survey in terms of their personal banking (including joint account banking) as opposed to business banking.

The pilot questionnaire's questions follow the rationale of the study's objectives as shown in Figure 7.2 (Chapter Seven). Hence the survey began with an overview of the customer's current banking behaviour, executed by number of banks dealt with, nomination of the main bank (undefined), and proportion of banking business carried out with the main bank. These questions were based on the study bank's own confidential market research, the author's past experience in the New Zealand market research industry and work by Storbacka (1994). Then the service quality section followed, measuring perceived performance of main bank branch by rating 22 attributes on a standard Likert scale. Developed by Likert (1932), the scale represents a bipolar continuum with the low end (strongly disagree) representing a negative response and the high end (strongly agree) a positive response. Customers respond to each item or attribute in terms of how well that particular item describes the service they receive - the quality of the service is indexed by the extent to which the items included describe the service received. Scales with several response options have proved more reliable than the more restrictive "yes/no" or "positive/negative" scales (Lissitz and Green, 1975). The 22 items included in this section of the pilot survey were derived from the qualitative pre-research (March 1995), and by attributes gleaned from service quality in banking studies such as those by Jain et al (1987), Lewis (1989), PZB (1991) and Cronin and Taylor (1992).

The third section of the pilot survey investigated customers' attitudinal loyalty to their main bank using 17 attributes based on the qualitative pre-research and work by Jain (1987), Rust et al (1994) and Gremler (1995). The same Likert scale as used above was adopted here. Then customers' future loyalty to their main bank was examined by adopting Juster's eleven-point probability scale to measure behavioural intentions. These "intentions" were derived from or adapted from work by PZB (1991), Cronin and Taylor (1992) and Zeithaml et al (1996). The fourth section of the questionnaire addressed respondents' satisfaction with their main bank. Satisfaction with specific banking departments (for example, loans, foreign exchange) was derived from the qualitative pre-research whereas the "overall satisfaction question" is commonly found in many studies as a measure of global customer satisfaction (for example, Rust et al (1994), Zeithaml et al (1996)). A section on "single biggest problem and its remedy" was included to assist the study bank but has no further interest for this thesis.

PZB's (1991) constant sum method was included near the end of the survey. This procedure is designed to rate and rank their five SERVQUAL dimensions and it was included to help validate the service quality attributes discussed above. However, as discussed below, the difficulties encountered in the piloting and pre-testing of this format casts some doubt on the effectiveness of its instructions in their current form. Finally, the standard demographics of gender, age and household income were included. It will be noted that no "Customer Profitability" questions appeared. These data were obtained from the study bank in conjunction with the major survey as per the method adopted by Storbacka (1994).

Two elderly respondents, one male in his 70s and one female in her 60s, along with a 44 year-old female were chosen to pre-test this instrument. Belson (1981) notes that the common pitfalls associated with mail surveys are generalising with over-confidence from small samples, low response rates, non-testing of questions to see if they have been understood as intended and seeking sensitive or memory-dependent information by *'naive questions designed more or less in the armchair'* (1981, p 3). Feedback from the pre-test of the pilot survey which was then incorporated into the design of the subsequent major survey was as follows:

- Personal banking: to do with your household, your private lives, personal bank account mainly for private as opposed to business use.

- Main bank:usually the one where wages or salaries are paid into, where mortgages are held (Storbacka, 1994), most business conducted with this bank.
- Other banks: PSIS - a financial institution for Government employees; several overseas banks such as Hong Kong Shanghai, Citibank.
- Behavioural Questions: realised that questions on joint accounts (to address any gender bias), and on account closure are required - see Loyalty questions below.
- Service quality: *"has lower than average interest rates on loans"* - needed to substitute *mortgages* for loans; a "double-barrelled" statement: *"tidy writing counters stocked with forms and pens* "; *"supports the local community in practical ways"* drew queries; replaced by *"supports community organisations with financial grants or sponsorships."*
- Customer loyalty: the missing data from the attribute *"switching banks is risky"* raised the issue of the proportion of customers who have switched banks completely. Therefore the questions: "*Have you ever ended business with a bank by closing all accounts?"; "Have you done so in the last 12 months?"* were added to the major survey.
- Classification Questions: the household income question inadvertently bypassed those customers receiving retirement incomes (not strictly "paid employment"). Question changed to *"...total yearly income before tax"*.

This pilot survey was posted on 7 November 1996 and one reminder (with an additional copy of the questionnaire) was sent to non-respondents two weeks later. Budget constraints restricted the pilot study to two waves (original mailing plus one reminder). When surveys were no longer accepted for analysis (on 13 December 1996) 160 valid replies had been received. The overall response rate was 56%, calculated as follows:

Initial sample size	300
LESS: Ineligible (gone no address, deceased, mentally ill, overseas)	15
Adjusted sample size	285
Valid responses	160
Response rate = 160 / 285 * 100	56%

This response rate, derived from two waves, was considered acceptable for piloting purposes, and engendered confidence for the subsequent major mail survey to follow. A

random sample of 160 customers has a maximum margin for error at the 95% confidence level of plus or minus 7.7%.

While the overall response rate was 56% it should be noted that equal numbers of males and females occurred in the adjusted sample (285) yet females were more likely to respond (62% response rate) compared to males (51% response rate). What effect this has upon the results is unknown but a review of the study bank's total customer base by gender showed that the ratio was 47% male to 53% female and available confidential data (AGB McNair, 1997) showed that the 18+ years study region's banking population had a gender ratio of 49% male: 51% female.

Table 8.3 Pilot Survey Sample Demographics

	Pilot Survey Customers (160)	Population 18+ years* (74000)
Gender	%	%
Male	45	49
Female	55	51
Age	%	%
Under 35 years	19	36
35-44 years	18	20
45-59 years	27	21
60 years & over	31	23
Refused	5	-

* Statistics New Zealand (1997) Census of Population & Dwellings: Regional Summary Tables 1 & 2, Wellington, New Zealand.

Given that the study bank has banking relationships with 64% of the 18 years and over population in its catchment area, it is realistic to compare the pilot survey's demographic distributions against those of the population for the study region (derived from Statistics New Zealand data) as shown in Table 8.3.

Comparison of the pilot survey data with the population parameters shows some under representation of males and younger people. However, given the study bank's history, and its former Trust Bank status, it is not surprising that its customers are older than average. (Banking legislative change in the mid-1980s de-regulated New Zealand's financial markets. Prior to then, Trustee Savings Banks could only conduct business with the household sector (non-business sector) and their customer profiles were quite heavily

orientated towards older customers then.) These results are confirmed by reference to AGB McNair's (1997) Banking Monitor (confidential) which shows the study bank's mean customer age to be 43.5 years whereas the catchment area's banking population's mean age is 41.5 years.

8.7 Investigating the Pilot Survey's Accuracy

The study bank's own confidential market research (AGB McNair, 1997) showed that 47% of the adult population in the bank's catchment area nominated it as their "main bank" while 64% of this population had a banking relationship with the study bank. The pilot survey of the bank's customers saw 75% claim the study bank as "main bank", verifying that the sample results were representative of the population. That is, with three-quarters of the pilot sample nominating the study bank as their main bank, and a 64% "penetration" by this bank, it follows:

.75 * .64 (penetration of study bank in catchment area) = 0.48,

meaning, by extrapolation that 48% of the population nominate the study bank as "main bank", which is well within sampling error (+/- 7.7%) of the latest results (47%).

The pilot survey's performance as a research instrument can be assessed in a number of ways. As a precursor to more in-depth analysis, the means and standard deviations of the 22 service quality items and the 17 loyalty items are displayed in Tables 8.4 and 8.5. Each of these lists of attributes accommodates, in part, an underlying model. The service quality items are based in part on PZB's (1991) and Cronin and Taylor's (1992) five dimensional (SERVQUAL and SERVPERF) structure while the customer loyalty attributes drew from Jain et al's (1987) and Gremler's (1995) work.

Table 8.4 Service Quality Item Means and Standard Deviations

Item	Mean	Std Dev	No Opinion	Missing	Total
Parking facilities	3.66	1.93	n=6	n=3	151
Clear signposts	5.39	1.57	n=8	n=3	149
Modern equipment	6.04	1.11	n=4	n=4	152
Neatly dressed staff	6.39	1.02	n=0	n=2	158
Tidy counters etc	6.14	1.11	n=1	n=2	157
Valued as customer	5.90	1.35	n=1	n=3	156
Time promises	5.99	1.23	n=12	n=2	146
Fix problems	6.02	1.33	n=6	n=1	153
Little queuing	5.38	1.40	n=5	n=3	152
Willing to help	6.19	1.08	n=1	n=4	155
Never too busy	6.19	1.13	n=3	n=2	155
Courteous	6.23	1.01	n=2	n=3	155
Product knowledge	5.95	1.16	n=6	n=5	149
Individual attention	6.18	1.08	n=3	n=3	154
Procedural knowledge	6.03	1.22	n=10	n=3	147
Confidence	6.11	1.17	n=3	n=2	155
Willing to listen	6.08	1.11	n=5	n=1	154
Higher Investment rates	5.10	1.52	n=31	n=4	125
Lower Loan rates	4.69	1.84	n=46	n=6	108
Supports loc community	6.17	1.55	n=21	n=1	138
Offers prize draws	5.64	1.77	n=16	n=5	139
Strong reputation	6.35	1.20	n=10	n=1	149

Note: Means are derived from 7-point agreement scale with missing values and "no opinions" omitted from analysis

In Tables 8.4 and 8.5 items with larger proportions of "no opinion" answers tended to have higher standard deviations. Various hypotheses can be advanced for this including:

- high standard deviations might be little more than a statistical quirk in that lower sample sizes (as a result of higher "no opinion" answers) have produced a flatter normal distribution.
- higher standard deviations may be a reflection of varying degrees of knowledge. The knowledge based service quality items like interest rates on deposits, on loans, presence of prize draws and the study bank's involvement in funding community facilities certainly show this effect. Similarly for the Customer Loyalty items, those that involved making comparisons with other banks or attitudinal judgements about switching banks also carried proportions of "no opinion" in the 10% - 22% range. One explanation is that length of time as a customer is an important characteristic. As a result, this question was added to the major survey. These results prompted an

Table 8.5 Customer Loyalty Item Means and Standard Deviations

Item	Mean	Std Dev	No Opinion	Missing	Total
Best bank for me	6.17	1.32	n=5	n=3	152
Like my business there	6.12	1.26	n=6	n=1	153
I'm loyal to this bank	6.26	1.27	n=3	n=1	156
Very satisfied	6.18	1.27	n=11	n=2	147
Switching costs be high	5.70	1.67	n=27	n=4	129
Not worth hassle switch	5.62	1.77	n=24	n=2	134
Gives unique privileges	5.28	1.74	n=32	n=1	127
Changing might be worse	5.19	1.88	n=29	n=5	126
Personally recognised	5.06	2.10	n=7	n=3	150
I'd switch for convenience	2.18	1.73	n=11	n=1	148
Switching banks is risky	3.91	2.15	n=35	n=8	117
Shifting bothersome	4.96	2.03	n=20	n=2	138
I'd switch for lower fees	3.79	2.15	n=15	n=3	148
Doubt I'd switch now	6.24	1.22	n=2	n=1	157
Rather deal new bank	2.03	1.62	n=18	n=3	139
All-in-one banking best	5.19	2.05	n=9	n=2	149
Stay if better elsewhere	4.52	2.19	n=14	n=4	142

Note: Means are derived from 7-point agreement scale with missing values and "no opinions" omitted from analysis

an investigation to identify if any particular customers were more likely to offer a "no opinion" response. It was found that customers who do not regard the study bank as their main bank (marginal customers) were over represented in the "no opinion" response category for certain items as displayed in Table 8.6 below.

The incorporation of "no opinion" as a valid response in the pilot survey appears to have been a successful choice. It can help avoid the problem of results tending toward the mean which can be problematic in small samples simply because respondents have no way of expressing uncertainty, but may be unwilling to omit making a response (Ryan and Cliff, 1997; Ryan and Garland, 1999).

Table 8.6 The Source of "No Opinion" Responses on Selected Items

	% No Opinion		Mean	
Item	Study Bank (120)	Other Bank (40)	Study Bank (120)	Other Bank (40)
Higher interest rates	18	25	5.43	4.07
Lower loan rates	26	38	4.94	3.88
Supports community	4	40	6.64	3.96
Offers prize draws	2	20	6.13	3.71
Strong reputation	17	18	6.65	5.25
Switching costs high	13	20	5.85	5.26
Not worth hassle	14	18	5.71	5.37
Unique privileges	16	33	5.77	3.66
Changing worse?	17	23	5.44	4.48
Switching is risky	20	38	4.17	3.17
Shifting bothersome	13	18	5.19	4.26

Nine of the 17 items used to measure attitudinal and cognitive loyalty to customers' main banks received "no opinion" results in excess of 11%. The pre-testing interviews and re-examination of each of these items' results showed that respondents with little or no experience of more than one bank (derived from the banking behaviour - question 1 of the pilot survey) struggled with those items requiring comparisons between banks. Seven items could be so described and were:

- *For me, the cost in time, money and effort to switch banks would be high*
- *It's just not worth the hassle for me to switch banks*
- *If I were to change banks, the service I might receive could be worse than now*
- *Unless I was very dissatisfied with my bank, changing a cheque account from one bank to another would be too much bother*
- *I would rather deal with a new bank in town than one of the more established banks*
- *This bank gives me particular privileges I would not get elsewhere*

The pre-test showed that three of the above items (all of which can be categorised under the "habit/inertia" dimension of attitudinal loyalty) were potentially confusing to respondents:

- *Unless I was very dissatisfied with my bank, changing a cheque account from one bank to another would be too much bother*
- *It's just not worth the hassle for me to switch banks*
- *If I were to change banks, the service I might receive could be worse than what I get now.*

The first item *"Unless I was very dissatisfied..."* proved to have less relevance to modern New Zealand banking where, with the advent of EFTPOS, cheque accounts are no longer the only means of settling payment. This item was adopted from the work of Jain et al (1987) but has been omitted from the major survey. The next two items, *"It's just not worth..."* and *"If I were to change banks..."* have been modified for the major survey to incorporate respondent language for "inertia" and to better reflect inertia in banking:

- *A major reason I don't switch banks is better the devil you know than the one you don't*
- *I stay with this bank only because it's not worth the hassle for me to switch banks*

Measurement of behavioural loyalty using Juster's eleven-point probability scale resulted in few problems. "Points out of ten" seems ingrained in respondents' evaluative schemes. In the pilot survey all seven behavioural intention questions were answered by everyone, other than two respondents who omitted to answer one question each. Unfortunately the same optimism did not hold for the constant sum method of allocating a total of 100 points across the five SERVQUAL dimensions in order to determine their relative importance (PZB, 1991). Two of the three respondents in the pre-test struggled with comprehending what was expected of them. One resorted to giving each dimension 20 points but subsequent questioning revealed that she did not mean equal weight to each at all. The other respondent encountering problems with the constant sum scheme amassed rating points totaling 120 points. Each agreed that the instructions were not clear enough for them. Analysis of the pilot survey results for the constant sum question (question 6 - see pilot survey questionnaire in the Appendix) gave the following:

	Total Sample	
	n	%
Different scores for some dimensions, adding to 100%	82	51
Different scores for some dimensions, not adding to100%	10	16
Same score (20) for all 5 dimensions	56	35
Same score for all 5 dimensions, not adding to 100%	6	4
Left completely blank	5	3
Acknowledged they didn't know how to complete	1	1

One can assume that some of the "same score (20) for all five dimensions" are genuine but identifying which is impossible (in a mail survey). Given the level of difficulty encountered in the pre-test and the ambiguities in the pilot survey results, it was decided to abandon the constant sum method for the major survey. It should also be noted that Ryan and Cliff (1997) had similar difficulties in their study of an application of SERVQUAL to travel agents.

8.8 Reliability Investigations

Data from the pilot survey were edited, entered and then analysed using Statistical Package for the Social Sciences (PC version), (1988). Main methods of investigation were frequencies, percentages, cross tabulation, correlation and factor analysis. There was some consideration given to using Principal Components Analysis (PCA) rather than factor analysis. PCA is a descriptive rather than inferential statistical technique providing a smaller set of "components" or "dimensions" that can be regarded as accounting for the observed interrelationships in the data. It creates sets of multivariate data each of which is a particular linear combination of the original variables and analogous to factor loadings. Thus PCA is a simple transformation of the data and no assumptions are made about the form of the covariance matrix from which the data arise. On the other hand, factor analysis starts with the hypothesis that a covariance matrix of a given order and rank can be partitioned into two matrices. Both techniques reduce a set of variables into “new” variables ("components") that describe the structure of the original set. Both are widely used multivariate techniques in social and business sciences as exploratory tools for data reduction (and investigating underlying patterns in data) and are considered appropriate for

examining large and complex data sets (Malhotra, 1993). Quite often PCA is used to identify independent factors (new combinations of original variables) for subsequent research (Nunnally, 1967). For this thesis, factor analysis was chosen for the pilot study analysis. While the sample size just fails the requirement for a minimum of ten respondents per item (for those items to be factor analysed in the questionnaire), factor analysis allowed the exploration of response consistency (thereby providing a validity check on the questionnaire) and of possible relationships in the data (for further examination in the major study).

Initial evaluation of the pilot survey data involved a factor analysis with varimax rotation. Prior to this correlations were computed for each of the items in the 22 item Service Quality section and the 17 item Customer Loyalty sections of the survey (see Tables A8.1 and A8.2 in the Appendix). More detail of these procedures is provided below in the relevant subsections of this chapter.

Two statistical tests have been designed specifically for application to correlation matrices to ensure the psychometric coherence of the variables prior to factoring. These are the Bartlett's test of sphericity (Bartlett, 1950) and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (Kaiser, 1970). Bartlett's test tests the hypothesis that the sample correlation matrix came from a multivariate normal population in which variables of interest are independent. Rejection of the hypothesis is taken to mean that the data are appropriate for analysis. In the present study this is hardly surprising with considerable correlation between the constructs of customer satisfaction, customer loyalty and customer perceptions of service quality!

The KMO measure of sampling adequacy indicates whether a particular variable belongs to a family (or construct) psychometrically. Kaiser's calibration of the index indicates that a minimum value of .70 is required. Ideally, larger values of KMO are desirable given the explanatory power of correlations between pairs of variables. Malhotra (1993) suggests that KMO values above .50 indicate factor analysis is an appropriate tool for further data analysis.

The data from the 22 items used to measure customers' perceptions of the service quality of

their main bank were examined to determine their suitability for factor analysis. Inspection of the correlation matrix (see Table A8.1 in the Appendix) revealed the presence of an underlying structure with intervariable correlations as high as .76. Reservations about the ratio of variables being analysed to sample size (in this case 22:160) not exceeding the generally accepted "rule-of-thumb" of 1:10 are duly noted. However, given this was the pilot survey for a more substantial major survey, the decision was taken to proceed.

The Bartlett test of sphericity equalled 1832.40 (significance = .000) and the KMO measure of sampling adequacy equalled .865 confirming the appropriateness of the correlation matrix for further multivariate analysis, in this case factor analysis. Based on the conventional premise of eigenvalues (the amount of variance in the original variable set "explained" by each factor) being equal to, or greater than one, five factors were identified. This was confirmed by Cattell's scree test (Cattell, 1966). This test plots the factors' eigenvalues on a negative slope and reveals the various screes or breakpoints as a guide for the number of factors to be selected. Together the tests seek to identify the point at which factors no longer measure a contribution to variance but simply random error (Norusis, 1988).

Five factors were extracted from varimax rotation (chosen because this form of rotation does not depend on any assumptions about the underlying structure of the 22 variables used here to measure service quality). Factor loadings (the amount that each original variable contributes to each of the "new" variables or factors) were set at a minimum of .50, regarded as a relatively stringent criterion for factor interpretation (Norusis, 1988).

As shown in Table 8.7, the five extracted factors (produced after eight iterations) explained 68.3% of the variance. The *adequate parking* variable was problematic as an item probably because it was least related to specific banking practice. (When *adequate parking* was omitted from the analysis results changed little so the variable was retained for the major study.) Additionally, the study bank is located in one of the less populated regions of New Zealand where parking may not be a significant factor of influence in choice of bank or bank branch. Factor I can be described as an *Assurance* dimension (rather like that of Parasuraman et al's SERVQUAL model) with its emphasis on product and procedural knowledge although there are elements of *reliability* (*sincere interest in fixing problems*)

and *responsiveness (never too busy)* too. Factor II combines aspects of *reliability, empathy* and *responsiveness*; Factor III is an *environmental* dimension (*community and reputation*); Factor IV is the *tangibles* dimension and Factor V focuses on *pricing* (the price of money - interest rates). It is acknowledged that factor solutions are somewhat unstable and it was thought worthwhile to examine where the pricing factor (that of the most difference in the SERVQUAL and SERVPERF findings) would go under different factoring conditions.

When the data were entered into a factor analysis restricted to four factors (using one of the screes from the scree plot as a breakpoint), the pricing variables disappeared and Factors I and II were reversed. However, improvements in the alpha coefficients for Factors III and IV were barely discernible even when the *adequate parking* item was deleted. Given the centrality of the price of money to bank choice, customer satisfaction and customer loyalty (see qualitative pre-research), the five-factor solution was retained. *Tidy writing counters stocked with forms and pens* has proved to be an interesting item in that it loads on both the *Reliability* part of Factor II as well as with the *Tangibles* of Factor IV. It would appear that the "tidiness" aspect aligns with *Reliability* as per the correlations in Table A8.1 whereas the "supplies" part may be contributing to the loading on Factor IV. Hence, this result plus the "double-barrelled" nature of the item's statement meant that it was changed to just *tidy writing counters* in the major study's questionnaire.

With the intention to create composite scales or indices of the various aspects of service quality in banking from the original 22 items, evaluation of the psychometric properties of the five factors was conducted using Cronbach's alpha coefficient of reliability. Factors I, II, and III have alphas in excess of .86 (see Table 8.7). These alphas are considered meritorious; Factors IV and V have alphas in the 0.60s which is mediocre but acceptable (Norusis, 1988). Alpha coefficients are generally low where the number of items in a factor are three or less as seen in Factors IV and V in Table 8.7.

Table 8.7 Service Quality: Factor Loadings

	Factor	I	II	III	IV	V
Item						
P13	Product Knowledge	**.85**	.31	.01	.04	.13
P15	Procedural Knowledge	**.81**	.22	.06	.16	.01
P8	Sincere: fix problems	**.75**	.29	.11	.23	.01
P11	Never too busy	**.70**	.29	.11	.23	.01
P17	Staff will listen	**.58**	.56	.23	-.09	.01
P7	Promises by certain time	**.58**	-.02	.38	.27	.03
P1	Adequate parking	**.35**	.08	.06	.24	.10
P12	Consistently courteous	.22	**.84**	.09	.07	.05
P10	Always willing to help	.39	**.72**	.22	.28	.00
P6	Value me as a customer	.27	**.69**	.19	.38	.00
P5	Tidy writing counters	.08	**.68**	.11	**.51**	.06
P14	Individual attention	.44	**.64**	.10	.16	-.10
P16	Instill confidence	.33	**.58**	.45	.26	.03
P22	Strong reputation here	.08	.20	**.88**	.13	.07
P20	Supports the community	.03	.16	**.87**	.13	.16
P21	Offers prize draws etc	.22	.12	**.74**	.25	.12
P2	Clear signposts inside	.24	.01	.14	**.72**	.08
P3	Modern-looking equipment	.15	.29	.19	**.67**	-.11
P4	Neatly dressed	.09	.32	.31	**.62**	-.03
P9	Minimal queuing	.27	.33	.08	**.57**	.14
P18	Investment interest rates +	.09	-.03	.13	.16	**.84**
P19	Loan interest rates favourable	.08	.04	.13	-.09	**.82**
Eigenvalues		**8.94**	**2.13**	**1.65**	**1.19**	**1.09**
% of variance "explained"		**40.7**	**9.7**	**7.5**	**5.4**	**5.0**
Cronbach's alpha coefficient		**.888**	**.883**	**.865**	**.682**	**.626**

Note: Full wording of each item can be seen in the questionnaire attached in the Appendix.

The data from the 17 items used to measure customers' attitudes about their loyalty to their main bank were examined to determine their suitability for factor analysis. Inspection of the correlation matrix (see Table A8.2 in the Appendix) showed the presence of an underlying structure, with intervariable correlations as high as .84.

The Bartlett test of sphericity equalled 920.98 (significance = .000) and the KMO measure of sampling adequacy equalled .74 confirming the appropriateness of the correlation matrix for factor analysis. Five factors with eigenvalues greater than or equal to 1.0 were extracted and then considered in relation to Cattell's scree test (which would have allowed a sixth factor). However, given that extending the solution to six factors seemed to introduce confusion to interpreting the resultant factors, it was decided to remain with five factors.

Table 8.8 Customer Loyalty: Factor Loadings

Item	Factor	I	II	III	IV	V
L1	Best bank for me	**.86**	-.09	.09	-.05	.15
L2	Like doing business there	**.84**	-.02	.16	-.01	.19
L3	Consider I'm loyal	**.80**	.08	.23	-.11	.04
L4	Comparatively satisfied	**.68**	.21	-.11	.05	.15
L14	Present service won't switch	**.67**	.15	.18	-.25	.05
L6	Not worth hassle to switch	-.06	**.85**	.01	-.02	.11
L5	Switching costly in time, $, effort	-.06	**.79**	.05	.08	.16
L12	Too bothersome switching cheque a/c	.20	**.72**	.23	.01	-.08
L8	Changing banks could be worse	.39	**.54**	-.06	.17	.03
L16	All-in-one banking - overall picture	.14	.04	**.88**	-.05	.01
L17	Stay all-in-one banking if better elsewhere	.18	.13	**.84**	.09	.21
L10	Would switch if more convenient location	.11	-.03	-.06	**.76**	.03
L15	Rather deal with new bank in town	-.10	.08	.13	**.70**	.10
L13	Switch if lower or no fees	.03	.30	-.12	**.58**	-.48
L9	I'm personally recognised in my branch	.17	.03	.18	-.03	**.76**
L7	Get special privileges in my branch	.36	.34	-.04	.06	**.53**
L11	Switching banks is risky	.20	.41	.02	.34	**.54**
Eigenvalues		**4.54**	**2.58**	**1.47**	**1.33**	**1.15**
Percentage of variance		**26.7**	**15.2**	**8.6**	**7.8**	**6.7**
Cronbach's alpha reliability coefficient		**.853**	**.771**	**.776**	**.496**	**.39**

Note: Full wording of each item can be seen in questionnaire attached in the Appendix.

The five extracted factors (produced after six iterations) explained 65% of the variance (as shown in Table 8.8 above). Factor I aligns quite closely to a genuinely loyal position expressed as *relationship commitment* by Morgan and Hunt (1994) and as attitudinal expressions of high levels of loyalty by Dick and Basu (1994) and Denison and Knox (1995). Factor II is the *"habit/inertia"* dimension noted by Gremler (1995) which can be expressed as "spurious loyalty" (Denison and Knox, 1995); Factor III is an *"all-in-one banking"* dimension (another "output' of genuine customer loyalty) whereas Factor IV reflects an *environmental impact* upon loyalty (the impact of convenience and branch location on bank/branch choice). Factor V is the *familiarity and interpersonal bonds* dimension noted by Gremler (1995) but apart from the *"personal recognition"* attribute (factor loading on Factor V of .76), other items load weakly on this Factor. And, as is seen in Table 8.8, this personal recognition item had little correlation with other items (and a comparatively high standard deviation of 2.1 - see Table 8.5) suggesting an under representation of this dimension in the existing items. Therefore it was decided to bolster

this *familiarity and interpersonal* bonds dimension in the major study's questionnaire by referring to Gremler's (1995) work and incorporating two new items:

- *"I feel there is a "bond" between me and my bank's employees"*
- *"My bank's employees treat me "a bit special."*

Perhaps an alternative strategy could have been argued here in that the eigenvalue of 1.15 (see Table 8.8) is relatively low for inclusion of Factor V. Yet when a separate factor analysis was performed with the deletion of the "*personally recognised*" item and a restriction to four factors, the resultant factor solution became very difficult to interpret. Therefore it would appear on the evidence from this pilot stage that a five-factor solution for customer loyalty has value. This contention was reassessed in the analysis for the major study.

Another issue worthy of note in factor analysis is that only that part of the sample that provides ratings for all of the items is included for analysis. As seen in Tables 8.4 and 8.5, non-response for some items was quite high. Nonetheless, given that one of the aims of the pilot study was to examine whether the items used for measuring perceived service quality and customer loyalty possessed "rigour" for the purposes of establishing statistical reliability and discriminatory power, the overall results provided sufficient evidence to retain the items with the modifications as indicated.

8.9 Further Analysis

8.9.1 Analysis of Variance (ANOVA)

Further testing of the extent to which the pilot questionnaire allows discrimination between respondents on the attitude items for perceived service quality and customer loyalty was carried out by conducting ANOVA on these items by "level of business with main bank" and "combined income" (see Table A8.3 in the Appendix). The underlying hypothesis here is that there ought to be variation between lower and higher percentage of business respondents and lower income higher income groups.

In 13 of the 22 perceived service quality items and seven of the 17 customer loyalty items (shown in Table A8.3), significant differences were recorded at the $p<0.05$ level for their

means when cross-analysed by "level of business with main bank" or "combined income" on a one way ANOVA. Given the pilot survey's relatively small total sample of n=160, resulting in very small sub-samples, this level of difference is heartening, further substantiating the claim that the 22 perceived service quality and 17 customer loyalty items will discriminate well among the respondents involved in the major survey.

8.10 Summary

This chapter began with an overview of the qualitative research undertaken in preparation for the subsequent quantitative phases. After a brief review of relevant themes from the academic literature on qualitative research, the findings from two group discussions with banking customers from the study bank region were discussed. This phase of the research demonstrated that the instruments tested in those group discussions had internal consistency in terms of being easily understood by respondents.

The pilot study had several objectives. Firstly, the mail survey method and its research instrument (questionnaire) were tested for response rate, ease of comprehension, ease of completion and data quality. Secondly, the validity of the questionnaire for achieving the objectives set in Chapter Seven required testing. The qualitative and quantitative analysis undertaken on the data from the pilot survey suggests that its questionnaire, and hence that used for the major survey, has a high degree of validity. Attitudinal items to measure perceived service quality and perceived customer loyalty have, with the modifications discussed above regarding the loyalty issues of bank switching, familiarity and interpersonal bonds, proved to be capable discriminators. The pilot survey response, the high level of data quality (high completion rates for each question in the survey), the pre-test results (with their modifications incorporated into the major study's questionnaire) and the reliability investigations all inspire confidence in the major study's questionnaire.

CHAPTER NINE

MAJOR STUDY'S METHODOLOGY

9.1 Introduction

The previous chapters have provided the context for this thesis by addressing perceived service quality, customer satisfaction, loyalty, customer profitability and assessing preliminary research (both qualitative and quantitative) for the major study to follow.

This chapter builds on those previous chapters but its aim is narrower, drawing on academic literature only when illustrating specific issues. After this brief introduction, it describes how the major study was conducted (procedure, sample, and research instruments), the limitations of the research design, and the reliability of the instruments used, all in readiness for subsequent univariate and multivariate data analysis.

9.2 Method and Sampling

9.2.1 Procedure

The major study benefited immensely from the pilot phase conducted in late 1996 that is reported in the Chapter Eight. The reader is referred to that chapter for a discussion of mail survey methodology and reliability testing. As a consequence of the pilot phase, minor amendments (recounted in that chapter) were made to the major study's questionnaire which was then "fielded' to 1700 randomly selected customers of the study bank during April-June, 1997. Its first mailing (complete with covering letters from the researcher and the study bank's Chief Executive – see Appendix) was on April 24, 1997 and two reminders (each with a covering letter and an additional copy of the questionnaire – see Appendix) were sent to non-respondents at two-weekly intervals. Respondents were assured of the confidentiality of the information they provided and that no information would be reported in a way that identified any individual's responses. Further, the research was conducted under the aegis of the Market Research Society of New Zealand's Code of Ethics. The author is a member of this organisation. When the responses dwindled to nothing by June 17, 1997, 1128 valid responses had been received, resulting in an overall response rate of 70%, calculated as follows:

Initial sample size	1700
LESS: Ineligible (Gone no address, died, mentally ill, overseas)	99
Adjusted sample size	1601
Valid responses	1128
Response rate **1128 / 1601 * 100 =**	**70%**

A random sample of 1128 customers has a maximum margin for error at the 95% confidence level of plus or minus 2.9%. That is, a researcher can be 95% certain that any result using the whole 1128 customer sample (and not a sub sample) is within 2.9% of the true result.

9.2.2 Sample

The representativeness of the customer sample (n=1128) was tested against some of the study bank's customer population's parameters derived from available confidential data (AGB McNair, 1997). Also, given that the study bank has banking relationships with 64% of the 18 years and over population in its catchment area, it is helpful to compare the customer sample's demographic distributions against those of the population (derived from Statistics New Zealand, 1997).

Table 9.1 Sample and Population Comparisons

	People 18+ years		
	Customer Sample (1128)	Study Bank Population* (47,000)	Catchment Area Population* (74,000)
Gender	%	%	%
Male	42	46	49
Female	58	54	51
Age			
Under 35 years	27	30	36
35-44 years	20	25	20
45-59 years	25	21	21
60 years & over	26	24	23
Refused	2	-	-

*AGB McNair (1997). Consumer Banking Monitor, Confidential.

** Statistics New Zealand (1997). Census of Population & Dwellings: Regional Summary, Tables 1 & 2, Wellington, New Zealand.

Firstly, the study bank's population differs slightly from the catchment area's 18+ years' population in that there are proportionately fewer males in the former and the customer mean age (42.4 years) is slightly older than the population's (41.5 years). Comparison of the customer survey distribution with the study bank's 18+ years' population shows a

slight overrepresentation of females (58% versus 54%) and of customers aged 45 years and over (51% versus 45%). However, these discrepancies are relatively minor, and in the anticipated direction (see Chapter Eight which notes the effects of the study bank's history on its customer profile), justifying the decision not to weight the results.

9.3 Nonresponse Bias

Most researchers are concerned about a worldwide decline in survey response rates. Commentators like Baim (1991), Meier (1991) and Brown (1994) have suggested the decline is a consequence of changing lifestyles (such as increasing numbers of women in paid employment, continued increases in urbanisation) unethical business practices like "sugging" and "frugging" (selling under the guise of research and fund raising under the guise of research), and the sheer increase in direct marketing (especially telemarketing). Whatever the causes, survey response rates are declining (see Chapter Eight for discussion of the decline in response rate of Britain's National Readership Survey) with a '*concomitant potential for nonresponse bias to increase...the views of a considerable number in the original sample who refused to take part...are not incorporated in the results*' (Hosie, 1995, p1). Nonresponse bias in this context is the absence of any response (unit response) whereas item nonresponse (to individual questions in a survey) is treated differently and is discussed below.

Methods of addressing nonresponse in mail surveys were discussed in the Pilot study (Chapter Eight above). Gratifyingly the major study's survey response rate of 70% reduces the potential for nonresponse bias but it has been noted above that the slight differences in the distribution of the sample's customers (in comparison to known population parameters) due to uneven response rates from various genders and age groups in the final sample can introduce some bias and behaviours or attitudes related to respondents' demographic status could be subject to nonresponse bias. The commentators mentioned above (Baim, 1991; Meier, 1991; Brown, 1994) report that nonresponders are more likely to be older, from households with lower average income and lower educational status, and to be "at home" less often. These findings do not appear to align closely with the findings in this thesis but the commentators above were discussing Northern Hemisphere studies, often in large cities whereas this study was conducted in New Zealand in a study area with half the population living in towns and

rural addresses, and with a bank's customer base rather than a true cross section of the adult population.

Almost all surveys have some nonresponse and although the potential for nonresponse remains until everyone eligible responds, researchers (for example, Gendall and Davis, 1993; Brown, 1994; Hosie, 1995) have commented that at some level of response, interim estimates for particular questions' results do not vary significantly from final estimates. Bradburn (1992) in his presidential address to Public Opinion Quarterly suggests that nonresponse bias may not be as serious as often thought. The response rate of 70% for this study can be regarded as rather "good". Research on the impact of nonresponse in satisfaction surveys (and indeed on all types of attitudinal questions) is relatively sparse and one of the few sources in which nonresponse is discussed in this context is Peterson and Wilson (1992) who conclude that satisfaction percentages are seldom related to response rates.

To examine the possible impact of nonresponse bias on the study's results, data were analysed at three different response levels (corresponding to each "wave" of survey activity) for various classification, behavioural and attitudinal questions. Firstly, a summary of response at each "wave":

Wave 1 response	n=774	48% response
Wave 2 response	n=265	17% response
Wave 3 response	n= 89	5% response
No response	n=473	30%

For classification questions (demographic and socioeconomic) no respondent differences emerged by wave using chi-squared testing at 95% confidence (or in the case of mean age using ANOVA at the $p<.05$ level) showing that these variables had no statistically significant influence on speed of response. Wave three respondents were no different in demographic and socioeconomic characteristics to anyone else, providing some comfort to the researcher. Of course, the potential for nonresponse bias still exists.

Of the other 65 variables in the major study only four show any statistically significant differences at the $p<.05$ level by speed of response. Two of these variables were behavioural and two were attitudinal. (Indeed, just by chance alone one might expect

significant differences for 5% of the 65 variables tested here.) Customers who listed their main bank as other than the study bank (that is, a competitor) were tardier in their response, comprising one third of the wave three respondents in comparison to one fifth over the whole sample. Hence there could be some slight underrepresentation of competitor main bank customers in the sample. Table 9.2 below shows the differences.

Table 9.2 Main Bank by Survey Wave

		Wave		
	Total	1	2	3
	(1128)	(774)	(265)	(89)
Main Bank	%	%	%	%
Study bank	79	80	79	67
Competitor	21	20	21	33

Chi-squared = 7.62, df = 2, p = .022

The second behavioural variable showing some significant variation by speed of response was mean length of banking (see Table 9.3) with main bank. Second wave respondents have had fewer years with their main bank. (Surprisingly this did not show association by customers' age.)

Table 9.3 Length of Time with Main Bank by Survey Wave

	Total	Wave 1	Wave 2	Wave 3	*F ratio*	*p*
Mean length	19.05	19.80	16.76	19.14	3.95	.02

The two attitudinal variables to show difference by speed of response were two of the perceived service quality attributes (*gives you individual attention* and *supports community organisations with financial grants or sponsorships*) as seen in Table 9.4.

Table 9.4 Service Quality Variation by Survey Wave

			Wave			
	Total	1	2	3		
	Mean	mean	mean	Mean	*F ratio*	*p*
Individual attention	6.02	6.10	5.86	5.84	3.79	.02
Financial support	5.69	5.77	5.66	5.09	3.68	.03

Each of these attitudinal variables is associated significantly with main bank (study bank versus competitive main bank – see Chapter Ten) and given that the tardy responders are more likely to list their main bank as one other than the study bank, then it comes as no surprise that these people differ in their attitude to *"individual attention"* and *"...financial grants or sponsorships"*. The laggards are less enthusiastic about their relationship with their main bank than earlier responders and one could conclude that the sample is slightly biased to those who are more enthusiastic about their involvement with their main bank, and who have been banking there a little longer than average. Thus, the results appear consistent. Nevertheless, this seems a minor limitation and it is concluded that nonresponse error is minimal and at the very least no worse than that of major national surveys like Massey University Department of Marketing's International Social Survey Programme or Britain's National Readership Survey.

Problems of questionnaire design and question wording beset all researchers. In respect of question wording, Belson's (1981) pre-testing has already been discussed above in Chapter Eight's pilot study. The importance of simple language and use of respondents' own idiom is acknowledged. Well regarded survey methodology commentators like Schuman and Presser (1981), Belson (1981), Sudman and Bradburn (1982) and Converse and Presser (1986) agree with the necessity for pre-testing survey instruments. Question wording and choice of question type have been tested extensively by these authors who also suggest that open-ended questions be used sparingly. It is common for survey researchers, because of time and cost constraints, to use closed questions instead, usually with specially designed response formats (like the Likert scales used in this thesis). In turn, this adoption of specified response categories has spawned debate on whether response formats should be balanced, have midpoints, include *no opinion* and *don't know* categories etc.

The inclusion of an explicit *no opinion* option on the scales in this thesis's questionnaires was discussed in Chapter Eight and in a subsequent publication by Ryan and Garland (1999). Its inclusion revealed that attitude statements (attributes) which required detailed knowledge of one's own main bank's interest rates and of competitive banks' activities (in order that respondents might make a comparison with their main bank) tended to have the largest *no opinion* and item *nonresponse* results. For the major study, five perceived service quality attributes exceeded 10% no opinion/no response:

- *When (main bank) promises to do something by a certain time it does*
- *Has higher than average interest rates on deposit*
- *Has lower than average interest rates on mortgages*
- *Supports community organisations with financial grants or sponsorships*
- *Offers worthwhile "extras" like prize draws.*

The average item nonresponse/no opinion for the 22 perceived service quality attributes was 8% but the median was only 4%. Full details of these data are displayed in Table 9.5 below.

For the 18 customer loyalty attributes similar patterns of nonresponse/no opinion emerged as shown in Table 9.6 below. Those attributes, which needed some awareness of either one's main bank's or competitive banks' policies or both, tended to have higher item nonresponse/no opinion. This applied particularly to the "switching' attributes:

- *For me, the cost in time, money and effort to switch banks would be high*
- *A major reason I don't switch banks is "better the devil you know than the one you don't"*
- *Lower or no fees at another bank would convince me to switch my business there.*

However there were several other customer loyalty attributes that exceeded the 10% nonresponse/no opinion level:

- *This bank gives me particular privileges I would not get elsewhere*
- *I would rather deal with a new bank in town than one of the established banks*
- *My bank's employees treat me "a bit special"*
- *I feel there is a "bond" between me and my bank's employees.*

Each of these attributes also requires some knowledge or comparative knowledge. Overall, the mean item nonresponse/no opinion rate for the 18 customer loyalty attributes was 9% with a median of 8%. As discussed in Chapter Eight, customers who did not regard the study bank as their main bank were those more likely to offer a no opinion response. In the major study this no longer held. Instead, these people were more likely to be aged 65 years and over and from households earning lower than average annual

incomes (under $30,000). These results are more akin to those reported by Baim (1991), Meier (1991) and Brown (1994).

Schuman and Presser (1981) conducted research on undecided/no opinion options on attitude scales and, not unexpectedly, found that when made explicit, they yielded higher proportions of undecided respondents. Yet balancing the wisdom of inclusion of a no opinion option against non-inclusion continues to be debated. Schuman and Presser's (1981) results show that people with a definite opinion are unaffected by the presence of a no opinion category, and the analysis reported above for the major study tends to support that contention.

9.4 Item Order Effects

The position of items in a list of attitude statements can be problematic in that it is acknowledged by researchers that respondents tend to pay more attention to items in various positions (for example, near the top of lists). There is also the concern that respondents can become "fatigued" by long lists and near the bottom begin making their answers without the careful thought that researchers assume. (For details of the research in this area see, for example, Payne (1951), Schuman and Presser (1981), Belson (1981) and Sudman and Bradburn (1982).) To minimise item order effects, the positions of the attitude statements for the 22 perceived service quality items and for the 18 customer loyalty items were reversed resulting in two versions of the questionnaire. The "correct" item order was re-established at the data entry stage by adjusting the data entry program accordingly.

9.5 Other Sources of Error

Potential sources of error are acknowledged and those pertaining to nonresponse error have been discussed above. Clearly, any survey that achieves less than 100% response will produce estimates potentially affected by nonresponse error. Its impact on this survey's results is mostly unknown but the effects of nonresponse error cannot be dismissed out of hand. Similarly, respondent error is unavoidable; researchers rely on respondents for truthful and accurate information. Research topics like banking may or may not be more susceptible to respondent error. The possibility of social desirability

bias (when respondents fit their answers to or claim a status that they feel is more appropriate than their current status) is also acknowledged but its effects on the results are unknown.

9.6 Measuring Behavioural Intention

There has been a long running debate in social and business science over how best to measure predictions about consumers' behaviour. An important aspect to this debate has been the use of questions, which elicit statements of intention (for example, "*definitely will do something*"," *probably will do something*") versus eliciting probabilities of intention. One probability scale, the Juster scale, reviewed in Chapter Four, is used in this thesis on the basis of its accuracy in estimating a variety of different behaviours.

Administration of the Juster scale in the major study (see page 7 of the questionnaire attached in the Appendix) was preceded by an explanation of how to use the scale, adapted from Juster's (1966) work and that of Brennan and Esslemont (1994). Then respondents were asked to state their probabilities for the following measures of future loyalty:

- Positive word-of-mouth about their main bank
- Recommendation of main bank to anyone seeking advice about bank choice
- Positive encouragement of friends or relatives to undertake business with their main bank
- Increasing their banking business with their main bank in the next 12 months
- Decreasing their banking business with their main bank in the next 12 months
- Opening an account at a new bank in the next 12 months
- Closing all accounts and terminating business with their main bank in the next 12 months

Assessment of the accuracy of the Juster scale estimates of defection from one's main bank were tested by obtaining from the study bank confirmation of whether respondents still banked there one year later and these results are discussed in Chapter Ten.

9.7 The Major Study's Attitudinal Data

Tables 9.5 and 9.6 present the main descriptive statistics for the attributes of perceived service quality and customer loyalty used in the major study's survey. These data are subjected to tests of validity (the extent to which the data measures what is intended to be measured) and of reliability (the extent to which a repetition of the survey would generate the same results) in a section below.

The following is a brief analysis of the perceived service quality and customer loyalty results from a methodological perspective. Full analysis of these results appears in Chapter Ten. For purposes of discussion, the perceived service quality attributes in Table 9.5 can be categorised into seven dimensions, five of which have received extensive treatment in the services marketing and management literature (for example PZB, 1991; Cronin and Taylor, 1992 & 1994 and ZBP, 1996). These five dimensions are *Tangibles, Reliability, Responsiveness, Assurance and Empathy.* Noteworthy was the finding in this thesis' pilot study (Chapter Eight) of the last three dimensions coalescing into one "super" dimension, a situation quite common in other commentators' research, which is well summarised in Buttle (1996). Indeed, respondents to the major study answered the service quality attitude attributes almost identically to the respondents to the pilot study, showing a high degree of instrument reliability. For the major study, standard deviations ranged from a high of 2.00 for *adequate parking facilities* (on the seven-point agreement scale) to a low of 0.79 for *neatly dressed staff.* Parking facilities obviously vary from bank to bank and branch to branch while almost all bank staff are in uniform which tends to narrow the distribution of responses and the latter standard deviation is very low. As noted in the pilot study results, attributes with larger proportions of "no opinion" responses tend to have higher standard deviations. This trend was repeated here in the major study (see Table 9.5).

Other than the *adequate parking facilities* attribute's large variance (discussed above), any other that exceeded 1.50 required specific knowledge about interest rates or one's main bank's promotional activities. Thus, the highest standard deviation was for *offers worthwhile "extras" like prize draws* at 1.70.

Table 9.5 Perceived Service Quality Item Means and Standard Deviations

Item	Mean	Index of... Skew-Ness	Kur-tosis	Std Deviat-ion	No Opinion	Missing	Total	
	Mean			σ	n	n	n	%
Parking facilities	4.26	-.19	-.15	2.00	67	27	1034	92
Clear signage	5.76	-1.16	-1.00	1.38	51	30	1047	93
Modern looking equipment	6.17	-1.60	2.95	1.10	43	31	1054	93
Neatly dressed staff	6.55	-2.54	9.47	0.79	17	14	1097	97
Tidy writing counters	6.30	-1.53	2.55	0.94	19	23	1086	96
Value as a customer	5.90	-1.33	1.60	1.30	12	30	1086	96
Time promise	6.02	-1.41	2.21	1.17	124	26	978	87
Fix problems	6.01	-1.52	2.31	1.26	62	24	1042	92
Little queuing	5.26	-.88	.34	1.49	16	21	1091	97
Willing to help	6.13	-1.52	2.58	1.11	17	29	1082	96
Never too busy	6.03	-1.28	1.46	1.13	26	21	1081	96
Consistently courteous	6.21	-1.79	3.71	1.11	8	21	1099	97
Product knowledge	6.03	-1.44	2.34	1.12	26	22	1080	96
Individual attention	6.13	-1.50	2.30	1.11	19	28	1081	96
Procedural knowledge	6.08	-1.53	2.74	1.12	37	19	1072	95
Confidence	6.07	-1.60	2.70	1.21	21	16	1091	97
Willing to listen	6.01	-1.53	2.55	1.22	28	18	1082	96
Higher investment rates	4.78	-.46	-.13	1.52	236	57	835	74
Lower loan rates	4.94	-.54	-.17	1.55	326	64	738	65
Supports local community	6.31	-2.23	4.66	1.30	110	14	1004	89
Offers prize draws	5.68	-1.27	-.64	1.70	126	29	973	86
Strong reputation	6.30	-2.03	4.50	1.15	42	16	1070	95

Skewness is the tendency of the deviations from the mean to be larger in one direction than the other, thereby "skewing" the distribution's tail in one or other direction (Malhotra, 1993). Without exception, the 22 perceived service quality attributes in Table 9.5 have negatively skewed distributions, with the index of skewness statistic ranging from close to that of a normal distribution for *adequate parking facilities* (-.19) to a severely skewed one for *neatly dressed staff* (-2.52) where almost every respondent used either the '6' or '7' positions on the seven point agreement scale. This shows up even more graphically on the index of kurtosis (kurtosis being the extent to which, for a given standard deviation, observations cluster around a central point resulting in a "peaked" or "flat" curve) with a score of 9.47. A normal distribution has a kurtosis statistic of zero. Where kurtosis is positive, the distribution is peaked, while a flatter distribution has a negative kurtosis. Not surprisingly, perceived service quality items with the highest means (and lowest standard deviations) have the highest kurtosis and perusal of Table 9.5 shows relatively "peaky" results suggesting some homogeneity of agreement for these variables.

Very brief analysis of the results in Table 9.5 follows as the full analysis is reported in Chapter Ten. Apart from *adequate parking facilities* (4.26) mean scores for the *Tangibles* dimension (the first five attributes) were in the range 5.76 – 6.55, which is relatively high. The next four attributes can be classified as belonging to the *Reliability* dimension and they too have means close to '6' (when '7' is strongly agree). The two attributes from *Responsiveness* (*are always willing to help* and *are never too busy to respond to your requests*) both exceed 6.0 as do the next six (which belong to either the *Assurance* or *Empathy* dimensions). Then the attributes of *Pricing* (addressing investment and borrowing interest rates) fall in the range 4.78 – 4.94, while the final attributes can be classified under an *Environmental* dimension and their mean scores range from 5.68 – 6.31. Undoubtedly, perceived service quality for the study region's banks is relatively high.

The ratings of attitudinal and cognitive attributes of respondents' loyalty to their main bank are considered in more detail in subsequent chapters. Table 9.6 describes the dimensions of customer loyalty in a banking context and shows how these attributes can be allocated to some of the underlying dimensions of attitudinal and cognitive loyalty posited by Jain et al (1987), Dick and Basu (1994), Denison and Knox (1995) and Gremler (1995).

Table 9.6 Dimensions of Customer Loyalty in a Banking Context

Relationship Commitment

L1	This bank is clearly the best one for me
L2	I really like doing business with this bank
L3	I consider myself to be a loyal customer of this bank
L4	Compared to other banks I've used, I'm very satisfied with my main bank
L14	As long as the present service continues, I doubt that I would switch from my main bank.

Habit/Inertia

L5	For me, the cost in time, money and effort to switch banks would be high
L6	I stay with this bank only because it's not worth the hassle for me to switch banks
L8	The major reason I don't switch banks is better the devil you know than the one you don't
L11	Switching banks is risky.

Familiarity & Interpersonal Bonds

L7	This bank gives me particular privileges I would not get elsewhere
L9	I am personally recognised whenever I visit my bank

L12 My bank's employees treat me a bit special
L16 I feel there is a bond between me and my bank's employees.

Environmental Impact

L10 If another bank's branch was more conveniently located for me, I would switch
L13 Lower or no fees at another bank would convince me to switch my business there
L15 I would rather deal with a new bank in town than one of the more established banks.

All-in-one Banking

L17 It is better to do all your banking in one bank because then they have a better overall picture of your finances
L18 I would rather do all my banking business with one bank even if another bank offered a slightly better deal on a loan or an investment account.

Table 9.7 shows that the attributes categorised under *Relationship Commitment* have all been scored in such a way as to yield a mean of close to '6' and standard deviations of 1.27 to 1.44. In turn their skewness is negative and kurtosis is "peaked", supported by the relatively low standard deviations (ranging from 1.27 - 1.44). Most respondents chose to answer these questions. In contrast, the distributions for the attributes in the *Habit/Inertia* and *Familiarity & Interpersonal Bonds*' dimensions were much closer to a normal distribution with skewness values in the range 0.66 to -.44 and kurtosis statistics in the range –0.81 to 1.82.

Table 9.7 Customer Loyalty Item Means and Standard Deviations

Item	Mean	Index of... Skew-Ness	Kur-tosis	Std Deviation	No Opinion	Missing	Total	
	Mean			σ	N	n	n	%
Best bank for me	5.94	-1.33	1.33	1.38	25	13	1090	97
Like doing business there	5.97	-1.27	1.22	1.29	24	13	1091	97
Loyal to this bank	6.18	-1.96	3.99	1.27	16	13	1099	97
Very satisfied (comparat-ively)	6.13	-1.78	3.19	1.27	56	24	1048	93
Switching costs be high	4.37	-.25	-1.38	2.22	140	36	952	84
Not worth hassle switch	3.06	.66	-1.09	2.22	74	23	1031	91
Gives unique privileges	4.68	-.44	-.94	1.95	152	29	947	84
Better devil you know	3.49	.34	-1.31	2.21	117	28	983	87
Personally recognised	4.56	-.38	-1.27	2.15	64	33	1031	91
Switch for convenience	2.72	.88	-.46	1.94	61	26	1041	92
Switching is risky	3.69	.18	-1.17	2.03	192	63	873	77
Treated a "bit special"	4.40	-.30	-.81	1.82	117	36	975	86
Switch for lower fees	3.69	.18	-1.39	2.22	78	32	1018	90
Status quo – no switch	6.11	-1.97	3.42	1.44	18	12	1098	97
Rather deal new bank	2.12	1.60	1.82	1.60	114	36	978	86
"Bond" with bank staff	4.41	-.26	-1.06	1.95	119	34	975	86
All-in-one banking best	5.07	-.68	-.72	1.92	58	16	1054	93
Stay even if better elsewhere	4.84	-.55	-.94	2.00	61	13	1054	93

Means were distributed around the midpoints of the agreement scale (between '3' and '5') and standard deviations were understandably higher, in the range 1.94 – 2.22. Notably though, the attribute *switching banks is risky* drew 23% nonresponse, due to a lack of precise knowledge among some respondents about such behaviour. Finally, the attributes comprising the *Environmental Impact* and *All-in-one Banking* dimensions also exhibit means around the middle of the seven point agreement scale and standard deviations that reflect respondents using the whole scale to register their opinions. Consequently, skewness and kurtosis statistics are relatively low (and are near either the positive or negative side of zero). Overall then, these results suggest that certain aspects of customer loyalty may become important variables in discriminating between respondents in subsequent multivariate analyses discussed in Chapters Eleven and Twelve below.

9.8 Correlations

9.8.1 Correlation of Perceived Service Quality Attributes

Correlations were calculated for the perceived service quality attributes. This allows the strength of any association to be quantified (on a +1 to –1 scale) using Pearson's coefficient of correlation. Norusis (1988) warns that care should be taken when examining the significance levels of linear associations for large numbers of variables because some correlation coefficients will appear statistically significant by chance alone. To err on the side of caution here only the correlations exceeding 0.6 are included, and where these are cited, all are statistically significant at the 0.05 level.

The correlation matrix for the perceived service quality variables (see Table A9.1 in the Appendix) shows clearly the high correlations between the variables that comprise the *Tangibles* dimension (as per the SERVQUAL and SERVPERF research by PZB (1991 and 1994) and Cronin and Taylor (1992 and 1994) respectively). For example, main bank/branch employees:

- (P3) *"has modern-looking equipment"* (and) (P4) *"are neatly dressed"* = 0.62
- (P3) *"has modern-looking equipment"* (and) (P5) *"tidy writing counters"* = 0.61
- (P4) *"are neatly dressed"* (and) (P5) *"tidy writing counters"* = 0.60.

Similarly, the variables constituting the *Reliability* dimension show strong linear associations too:

- (P6) *"act like they value me as a customer"* and (P7) *"when it promises to do something by a certain time it does so"* = 0.60
- (P6) *"act like they value me as a customer"* and (P8) *"sincere interest in fixing problems"* = 0.76
- (P7) "*when it promises to do something by a certain time, it does so*" and (P8) *sincere interest in fixing problems*" = 0.69

The attribute P9 "*has little or no waiting time in queues*" is difficult to classify because it associates quite strongly with both *Tangibles* and *Reliability* dimensions. The two attributes of SERVQUAL's *Responsiveness* dimension that were included here had the single highest correlation:

- (P10) "*are always willing to help you*" and (P11) *"are never too busy to respond to your requests"* = 0.80.

However, further examination of Table A9.1 shows that there is considerable association (exceeding correlations of 0.60) between the variables (attributes) comprising the dimensions of *Responsiveness, Assurance* and *Empathy.* Indeed, some of the variables are also quite strongly associated with variables of the *Reliability* dimension. Some of the criticism of SERVQUAL's dimensionality comes from the way that the dimensions are "transient", appearing in one form in some research but reconfiguring into new forms in repeat versions of the same or very similar research. In this thesis the 22 variables used to measure perceived service quality of main bank are not identical to those used by the SERVQUAL and SERVPERF authors. The banking specific variables will have introduced changes to dimensionality making comparison with the cited research unfair. Nevertheless, the way that the three dimensions of *Responsiveness, Assurance* and *Empathy* and to a lesser extent *Reliability,* converge is consistent with commentaries on the SERVQUAL instrument (see, for example, Saleh and Ryan, 1991; Buttle, 1996). Not unexpectedly, two variables of the *Environment* dimension, (P20) "*supports community organisations with financial grants or sponsorships"* and (P21) *"offers worthwhile extras like prize draws"* were associated (0.60).

Perhaps of more importance though is evaluation of variables that are not strongly associated with any other thereby being unlikely to align closely either at the subsequent multivariate analysis stages. (P1) *"has adequate parking facilities"* and (P18) *"has higher than average interest rates on deposit"* were not strongly associated with any other variable although each managed to attain correlations in excess of 0.30 with other variables. Each variable represents an attribute of perceived service quality considered important by respondents in the qualitative phase of this research and each is "unique" in that no other variables have been used to measure these distinct attributes. Therefore both of these variables have been retained for the multivariate analyses which follow in Chapters Eleven and Twelve.

Two statistical tests have been designed specifically for application to correlation matrices to ensure the psychometric coherence of the variables prior to factoring. These are the Bartlett's test of sphericity (Bartlett, 1950) and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (Kaiser, 1970). Bartlett's test of sphericity tests the hypothesis that the sample correlation matrix came from a multivariate normal population in which the variables of interest are independent. Rejection of the hypothesis is taken to mean that the data are appropriate for analysis. The Bartlett test of sphericity equalled 9762.53 (significance = .00) In this study it is hardly surprising that the variables are not independent because of the high levels of correlation between the customer perceptions of service quality, constructs of customer satisfaction and customer loyalty.

The KMO measure of sampling adequacy indicates whether a particular variable belongs to a family (or construct) psychometrically. Kaiser's calibration of the index indicates that a minimum value of .70 is required. Ideally, larger values of KMO are desirable given the explanatory power of correlations between pairs of variables. Malhotra (1993) suggests that KMO values above .50 indicate factor analysis is an appropriate tool for further data analysis. The KMO measure of sampling adequacy equalled 0.93 confirming the appropriateness of the correlation matrix for multivariate analysis, in this case factor analysis.

9.8.2 Correlation of Customer Loyalty Attributes

The data from the 18 items used to measure customers' attitudinal and cognitive loyalty to their main bank were examined to help determine their suitability for subsequent multivariate analysis. Inspection of the correlation matrix (see Table A9.2 in the Appendix) showed the presence of an underlying structure, with intervariable correlations as high as 0.85. Dimensionality can be interpreted within the customer loyalty attributes. For instance the attributes comprising the *Relationship Commitment* dimension (regarded by commentators such as Dick and Basu (1994); Denison and Knox (1995); Gremler (1995) as an expression of genuine loyalty) are all strongly correlated. (Again, where values of r are included, $p<0.05$ unless stated otherwise.)

- (L1) *This bank is clearly the best one for me* and (L2) *I really like doing business there* = 0.85 (and) (L3) *I consider myself to be a loyal customer* = 0.61 and (L4) *Compared to other banks I've used, I'm very satisfied with my main bank* = 0.77 and (L14) *As long as the present service continues, I doubt that I would switch from my main bank* = 0.62.

- (L2) *I really like doing business there* and (L3) *I consider myself to be a loyal customer* = 0.62 and (L4) *Compared to other banks I've used, I'm very satisfied with my main bank* = 0.80 and (L14) *As long as the present service continues, I doubt that I would switch from my main bank* = 0.63.

- *(L3) I consider myself to be a loyal customer* and (L4) *Compared to other banks I've used, I'm very satisfied with my main bank* = 0.67.

- (L4) *Compared to other banks I've used, I'm very satisfied with my main bank* and (L14) *As long as the present service continues, I doubt that I would switch from my main bank* = 0.64.

The *Familiarity & Personal Bonds* dimension within the construct of customer loyalty is evident too:

- (L9) *I am personally recognised whenever I visit my bank* and (L12) *My bank's employees treat me a bit special* = 0.67 and (L16) *I feel there is a special bond between me and my bank's employees* = 0.64.

- (L12) *My bank's employees treat me a bit special* and (L16) *I feel there is a special bond between me and my bank's employees* = 0.80

Predictably, the *All-in-one Banking* dimension (specific only to this research in that this dimension was derived from the qualitative phase of the research) is present. There are strong intercorrelations between (L17) *It is better to do all your banking in one bank because then they have a better overall picture of your finances* and (L18) *I would rather do all my banking business with one bank even if another bank offered a slightly better deal on a loan or an investment account* = 0.70.

Further evaluation of the customer loyalty correlation matrix (see Table A9.2) reveals that two of the attributes that address the notion of *Habit/Inertia* in loyalty are somewhat low in their correlations with other variables. (L5) *For me, the cost in time, money and effort to switch banks would be high* had some association with the other attributes measuring *Habit/Inertia.* It achieved correlations of 0.30 and 0.32 respectively with (L6) *I stay with this bank only because it's not worth the hassle for me to switch banks* and (L8) *A major reason I don't switch banks is better the devil you know than the one you don't.* The researcher acknowledges the difficulty encountered in verbalising these sentiments of spurious loyalty. They emerged from both the qualitative phases of the research and the academic literature on customer loyalty. Each was tested in the pilot study where they performed similarly to the above results. (L11) *Switching banks is risky* addresses another related nuance of spurious loyalty. It too had relatively low associations with the other attributes achieving a "best" association of 0.30 with (L8) *A major reason I don't switch banks is better the devil you know than the one you don't* along with the same correlations with the *All-in-one-Banking* attributes. The decision was taken to retain these attributes in further analysis.

(L13) *Lower or no fees at another bank would convince me to switch my business there,* (L10) *If another bank's branch was more conveniently located for me, I would switch to them* and (L15) *I would rather deal with a new bank in town than one of the more established banks* each aligned themselves under the *Environmental Impact* dimension in the pilot study. The same holds true in the major study and they have been retained

here even though their association with each other is somewhat low at 0.37, 0.28 and 0.37 respectively.

The Bartlett test of sphericity equalled 5333.66 (significance = .00) and the KMO measure of sampling adequacy equalled 0.85 confirming the appropriateness of the customer loyalty correlation matrix for factor analysis.

9.8.3 Correlations: Perceived Service Quality and Customer Loyalty Attributes

Given that the attributes from both of these constructs will be used as input to subsequent multivariate analysis, it seemed prudent to compute these correlations. These results can also be used to address those research objectives that examine the associations between perceived service quality and attitudinal loyalty. Attributes in the customer loyalty dimension of *Relationship Commitment* (capturing the notion of genuine loyalty) were **strongly associated** (correlations in the range 0.55 to 0.69) with the perceived service quality attributes reflecting *Reliability, Responsiveness, Assurance* and *Empathy.* It seems entirely logical that a strong direct relationship exists between customers' perceived service quality of, and loyalty to their main bank (expressed as level of commitment).

CHAPTER TEN

RESULTS AND DISCUSSION: DESCRIPTIVE ANALYSIS OF THE SERVICE-PROFIT CHAIN

10.1 Introduction

This chapter addresses the research objectives specified in Chapters One and Seven, albeit at a descriptive level using bivariate analysis. Firstly, however, study bank customers are described in more detail than in Chapter Nine, and the sample's representativeness checked against confidential secondary information with specific reference to variables associated with the service-profit chain. Then the distributions and characteristics of key discriminating variables including "share of wallet," time with main bank and account status are discussed. Here, these variables are used as explanatory variables rather than as sample descriptors. (In all cases where χ^2 tests of significance are shown, these have been calculated on cell frequencies (and not cell percentages) even though the tabular information shows percentages only. Consequently, 'the cells meet the requirements of containing sufficient numbers of respondents' (Sincich, 1992).) Thereafter, the discussion follows the linear structure of the service-profit chain in that results and their associated objectives are examined sequentially, from perceived service quality through customer satisfaction and on into customer loyalty. (Statistical relationships between these constructs in the service-profit chain and those of customer profitability are covered in Chapter Twelve.) The chapter concludes with a section on customer defection (both intended and actual) which draws on previous research by Colgate (1996, 1999) and Stewart (1998).

10.2 Banking Relationship with Main Bank

Respondents were asked to nominate their main bank (defined for them as the one where wages or salaries are paid into, or where mortgages are held, or where most banking business is done) and record all other banks they dealt with. Investigating the banking "loyalty" of study bank customers at the most general level shows (in Table 10.1) that 79% of them nominate the study bank as their "main" bank. As previously stated (AGB McNair, 1997), 64% of adults in the region have a banking relationship with the study bank, and 47% nominate it as their main bank. Thus, these data confirm the representativeness of the sample here. That is, if 79% of the sample of study bank customers see the study bank as

their main bank, then:

.79 x .64 (penetration of study bank in the region) = 0.50,

meaning half of all the region's adults nominate the study bank as their main bank, which is within sampling error of the relevant results (47%) from AGB McNair's Consumer Banking Monitor (1996, 1997). This allows the investigation of the differences between study bank customers who nominate the study bank as their main bank and those who do not. Table 10.1 shows that on average study bank customers have 1.7 banks each (with the range varying from 1 to 5 and a median of 1).

Table 10.1. Main Bank and Bank Penetration: Study Bank Customers

Banks	All Customers (1128)	
	Main Bank (Share) %	All Banks (Penetration) %
Study Bank	79	100
Competitor 1	5	18
Competitor 2	1	3
Competitor 3	4	15
Competitor 4	1	4
Competitor 5	5	11
Competitor 6	2	7
Competitor 7	3	9
Other competitors	-	2
Average number of banks		1.7

Table 10.2. Main Bank : Demographic Differences

	All Customers (1128) %	Main Bank: Study Bank (886) %	Main Bank: Competitor (242) %	χ^2	*df*	*p*
Gender						
Male	43	43	42	0.31	1	.58
Female	57	57	58			
Age						
Under 30 years	20	19	24	14.5	4	.01
30-39 years	20	19	22			
40-49 years	20	20	22			
50-64 years	14	14	15			
65+ years	26	28	17			
Education (Highest Level)						
≤ 3 years secondary school	34	35	31	4.65	5	.46
4 years or more secondary school	19	19	19			
Trade certificate	11	12	10			
Tertiary	19	18	24			
Professional qualification	13	13	13			
Refused	4	4	3			
Annual Household Income						
Under $20,000	21	22	15	32.59	6	.00
$20,000 - $29,999	16	18	11			
$30,000 - $39,999	17	17	17			
$40,000 - $59,000	20	20	20			
$60,000 - $99,999	16	14	21			
$100,000+	6	5	13			
Refused	4	4	3			

As shown in Table 10.2, there is a tendency, in the sample, for study bank main bank customers to be slightly older and from households of slightly lower annual incomes than study bank customers who nominate another bank as their main bank.

Table 10.3. Proportion of Business by Main Bank and Age

	Main Bank			Age				
	All Customers (1128) %	Study Bank (886) %	Competitor (242) %	<30 (226) %	30-39 (221) %	40-49 (224) %	50-64 (164) %	65+ (293) %
Proportion of Business								
Less than 68%	5	4	12	8	4	5	6	5
68-80%	7	5	16	6	8	6	8	7
81-90%	13	9	24	1	12	13	17	10
91-99%	24	21	35	24	30	28	22	17
100%	51	61	13	49	46	48	47	61
	χ^2= 181.64, *df* = 4, *p*<0.00			χ^2 = 30.97, *df* =16, *p*=.05				

Study bank customers in general (irrespective of their main bank) are slightly more likely to be female than average in the region's population probably reflecting past Trustee Bank history. (Traditionally, Trustee Banks were the preferred banks of non-business customers, for school children's banking, and for customers receiving any form of welfare benefit from central Government.)

Table 10.3 shows that half (51%) of the study bank's customers claim that it gets all their banking business. Where customers nominate their main bank to be another, those competitors have only 13% "completely loyal" customers. This is not surprising, as these 13% have somehow forgotten that they have a relationship with the study bank. They form just under 3% of all study bank customers.

Where the study bank is the "main bank", 61% of these customers claim that it gets all their business. Extrapolated to all study bank customers, .61 of the 79% (.79) who have the study bank as their main bank means 48% of study bank customers place all their business with the study bank, that is, they are "sole loyal" with 100% share of wallet to the study bank.

Going one step further, if the study bank has a banking relationship with 64% of the region's population (AGB McNair Consumer Banking Monitor, 1997) then it follows that .48 x .64 = 31% of the region's adult population's entire personal banking business is with the study bank. As this is expressed in customer numbers and the study bank's customer profile is overrepresented by personal banking (as opposed to business banking), this 31% does not represent all banking business in the region but rather, personal retail banking business.

Further examination of Table 10.3 shows the difference in age profile in terms of proportion of banking business ("share of wallet") transacted with customers' main banks. Youthful customers seem to place less reliance on their main bank while, in contrast, the over 65s give it a larger share of wallet. Table 10.4 shows differences by education and household income. Customers of lower educational status (secondary schooling, trade certificate) are more likely to place more of their banking business with their main bank. Indeed close to 80% of them place at least 91% of their business with that bank whereas for

customers with higher educational status (tertiary or professional qualifications), the same relationship is only 70%. Similar trends hold for proportion of business at main bank and household income. Those households with incomes under the New Zealand median household income of $40,000 transact at least 80% of their business with their main bank. This percentage falls to about 75% for customers for households earning between $40,000 and $80,000 per annum whereas above that latter level, the percentage falls to about two thirds. These inverse associations between main bank share of wallet and education status and household income status appear again in subsequent analysis. It is suggested that age is likely to be a moderating variable here in that older customers, who tend to give the highest average proportion of business to their main bank, are of lower educational status and have lower household incomes than their younger counterparts. Such results are precursors to investigating the profile of satisfied, loyal and profitable customers as well as providing context for the analysis reported in Chapters Eleven and Twelve.

Table 10.4. Proportion of Business by Education and Household Income

10.4(a)	All Customers	Education *		Trade Cert	Tertiary	Prof
		<4 yrs 2°	4+ yrs 2°			
	(1128)	(376)	(212)	(125)	(216)	(142)
Proportion of Business	%	%	%	%	%	%
Less than 68%	5	5	7	3	6	9
68 – 80%	7	5	8	9	7	10
81 – 90%	13	10	16	10	14	14
91 – 99%	24	20	22	28	32	24
100%	51	60	47	50	41	43

$\chi^2 = 40.57$, $df = 16$, $p = 0.02$

10.4(b)	Household Income **							
	<$20K	$20K – $29.9	$30K – $39.9	$40K – $49.9	$50K – $59.9	$60K – $79.9	$80K – $99.9	$100K+
	(222)	(176)	(195)	(112)	(113)	(120)	(58)	(68)
Proportion of Business	%	%	%	%	%	%	%	%
Less than 68%	5	5	5	7	7	7	12	6
68 – 80%	5	7	7	5	6	8	12	12
81 – 90%	7	12	16	13	12	13	7	22
91 – 99%	12	20	27	24	29	32	35	32
100%	71	56	45	51	46	40	34	28

$\chi^2 = 92.05$, df = 28, p = 0.00

* In the Education variable, the symbol 2° represents **secondary school** (high school)

** Missing cases are those customers who refused to answer these questions

10.3 Length of Time and Account Status With Main Bank

Customers recorded their duration (in years) of banking activity with their main bank. Details are portrayed in Table 10.5, which includes average results that are statistically significant at the .01 level on a means test (*t-tests* for two category variables or one way ANOVA for multiple category variables). For the whole sample, the mean was just over 19 years, the median = 15 years, the mode = 20 years, the range was 83 years and the standard deviation was just under 15 years. Quartiles were at 7, 15 and 28 years, respectively.

Table 10.5. Average Duration of Banking Relationship with Main Bank

10.5(a)

		Main Bank		Age				
	All Customers (1128) %	Study Bank (886) %	Competitor (242) %	<30 (226) %	30-39 (221) %	40-49 (224) %	50-64 (164) %	65+ (293) %
Mean	19.05	19.77	16.46	8.92	14.53	17.94	21.92	30.07
Standard deviation	14.80	14.50	15.61	6.19	10.87	11.10	12.98	18.14
		t=9.09, df=1, p=.003		F=92.7,df=4, p=.00				

10.5(b)

	All Customers	Education		Trade Cert		
		<4 yrs 2°	4+ yrs 2°		Tertiary	Prof
	(1128)	(376)	(212)	(125)	(216)	(142)
Mean	19.05	22.39	17.54	18.44	14.29	17.84
Standard deviation	14.80	16.31	13.49	14.10	11.72	13.12
		F=13.10, df=4, p=.00				

10.5(c)

	Household Income							
	<$20K (222)	$20K – $29.9 (176)	$30K – $39.0 (195)	$40K – $49.9 (112)	$50K – $59.9 (113)	$60K – $79.9 (120)	$80K – $89.9K (58)	$100K+ (68)
Mean	21.64	21.66	17.22	19.37	18.03	16.72	13.16	17.80
Standard deviation	16.88	16.26	14.15	13.97	12.93	11.46	9.37	15.69
				F=3.78, df=7, p=.00				

The study bank as "main bank" enjoys a slightly longer relationship with its customers than other "main banks" do with the duration averaging close to 20 years compared to 16 years. Naturally, duration with main bank and age are positively related (with, for example, customers aged under 30 being with their main bank about 9 years whereas for the over 65s the average duration is 30 years) whereas for education status and annual household

income, there is an inverse association. Again, age is likely to be the moderating variable here in that older customers tend to have lower educational status and lower annual household incomes than their younger counterparts.

Possession of joint accounts, usually to reflect household (rather than personal) level transactions, is relatively common and this sample's incidence of joint accounts is 61%. As shown in Tables 10.6 and 10.7, males, customers aged 30-64 years, and those from higher income households ($50,000 + p.a.) are overrepresented. Interestingly, joint accounts are relatively less prevalent among the Study Bank's "main bank" customers.

Table 10.6. Joint Account Status by Main Bank, Gender and Age

10.6(a)		Main Bank		Gender	
	All Customers	Study Bank	Competitors	Males	Females
	(1128)	(886)	(242)	(481)	(647)
Joint Account	%	%	%	%	%
Yes	61	59	70	65	59
No	39	41	30	35	41
		χ^2= 9.52, *df* = 1, *p* = .002		χ^2= 6.14, *df* = 1, *p* = 0.05	

10.6(b)	Age				
	<30	30-39	40-49	50-64	65+
	(226)	(221)	(224)	(164)	(293)
Joint Account	%	%	%	%	%
Yes	44	74	75	74	47
No	56	26	25	26	53
	χ^2= 100.10, *df* = 4, *p* = 0.00				

Table 10.7. Joint Account Status by Household Income

		Household Income							
	All Customers	<$20K	$20K-$29.9K	$30K-$39.9K	$40K-$49.9K	$50K-$59.9K	$60K-$79K	$80K-$99.9K	$100K+
	(1128)	(222)	(176)	(195)	(112)	(113)	(120)	(58)	(68)
Joint?	%	%	%	%	%	%	%	%	%
Yes	61	33	54	67	73	80	76	83	78
No	39	67	46	33	27	20	24	17	22
	χ^2=151.31, *df* = 7, *p* = 0.00								

10.4 Perceived Service Quality Received From Main Bank

Now the analysis moves into the first link or construct in the service-profit chain, that is, the perceived service quality received from one's main bank. In order to examine customers' perceptions of their main bank's performance in terms of service delivery, 22 service quality attributes (discussed above in Chapters Eight and Nine) were rated on a standard seven point agreement scale where '1' was labelled as "strongly disagree" and '7' as "strongly agree". To summarise the sheer amount of data, the analysis below is based on means (or more correctly, mean scores); the closer a mean score is to '7', the stronger is the agreement for that particular attribute of service quality.

Table 10.8. Perceived Service Quality by Main Bank

	All Customers (1128)	Main Bank			
		Study Bank (886)	Competitors (242)		
Perceived Service Quality	mean	mean	mean	*t-test*	*p*
Tangibles					
Adequate parking	4.26	4.44	3.61	5.33	.00
Clear signage	5.76	5.82	5.54	2.58	.01
Modern looking equipment	6.17	6.21	6.04	1.84	.07
Neatly dressed staff	6.55	6.61	6.36	3.83	.00
Tidy writing counters	6.30	6.32	6.20	1.64	.10
Reliability					
Value as a customer	5.90	5.93	5.78	1.64	.10
Keep time promises	6.02	6.06	5.88	2.00	.05
Sincere in problem fixing	6.01	6.05	5.86	2.02	.05
No queues	5.25	5.23	5.35	-1.16	-.25
Responsiveness					
Always willing to help	6.13	6.17	5.97	2.31	.02
Never too busy	6.03	6.07	5.91	1.84	.07
Assurance & Empathy					
Consistently courteous	6.20	6.22	6.13	1.09	.28
Product knowledge	6.03	6.08	5.85	2.55	.01
Individual attention	6.13	6.17	6.00	2.06	.04
Knowledge bank procedures	6.08	6.12	5.93	2.21	.03
Confident doing business there	6.06	6.13	5.82	3.32	.00
Staff willing to listen	6.01	6.06	5.85	2.18	.03
Pricing					
Investment interest rates good	4.78	4.90	4.35	4.63	.00
Mortgage interest rates good	4.94	5.13	4.32	6.38	.00
Environmental					
Supports local community	6.31	6.63	4.71	12.91	.00
Extras like prize draws	5.68	6.11	3.93	14.06	.00
Strong reputation	6.30	6.53	5.40	11.57	.00

Table 10.9. Perceived Service Quality by Proportion of Business with Main Bank

	All Customers	Proportion of Business With Main Bank						
Perceived Service Quality	(1128) mean	<68% (64) mean	68-80% (78) mean	81-90% (138) mean	91-99% (265) mean	100% (562) mean	*F*	p
Tangibles								
Adequate parking	4.26	3.59	4.01	4.03	4.02	4.52	4.35	.00
Clear signage	5.76	5.43	5.46	5.59	5.58	5.95	4.84	.00
Modern looking equipment	6.17	5.95	5.87	6.12	6.06	6.30	4.46	.00
Neatly dressed staff	6.55	6.38	6.31	6.39	6.53	6.66	7.77	.00
Tidy writing counters	6.30	6.24	6.07	6.10	6.30	6.38	3.15	.01
Reliability								
Value as a customer	5.90	5.29	5.63	5.69	5.87	6.06	6.05	.00
Keep time promises	6.02	5.45	5.56	5.86	6.02	6.17	6.97	.00
Sincere in problem fixing	6.01	5.57	5.67	5.71	6.01	6.16	5.54	.00
No queues	5.25	4.79	5.22	5.22	5.25	5.31	1.36	.24
Responsiveness								
Always willing to help	6.13	5.67	5.89	5.95	6.12	6.25	5.05	.00
Never too busy	6.03	5.63	5.75	5.72	6.00	6.19	6.73	.00
Assurance & Empathy								
Consistently courteous	6.20	5.92	6.03	5.93	6.18	6.33	4.34	.00
Product knowledge	6.03	5.48	5.76	5.79	6.03	6.18	7.53	.00
Individual attention	6.13	5.67	5.82	5.85	6.15	6.27	6.79	.00
Knowledge bank procedures	6.08	5.56	5.76	5.79	6.08	6.25	8.29	.00
Confident business there	6.06	5.40	5.74	5.74	6.06	6.25	9.72	.00
Staff willing to listen	6.01	5.44	5.64	5.75	6.09	6.15	7.69	.00
Pricing								
Investment interest rates good	4.78	4.49	4.59	4.54	4.61	4.98	3.17	.01
Mortgage interest rates good	4.94	5.00	4.29	4.43	4.82	5.21	6.31	.00
Environmental								
Supports local community	6.31	5.80	5.63	5.82	6.15	6.63	16.92	.00
Extras like prize draws	5.68	5.19	4.66	5.05	5.36	6.15	19.92	.00
Strong reputation	6.30	5.68	5.83	5.98	6.17	6.57	16.78	.00

Table 10.10. Perceived Service Quality by Time with Main Bank

	All Customers	Time with Main Bank (Quartiles)					
	(1128)	Up to 7 yrs (282)	8-15 yrs (269)	16-29 yrs (261)	30+ yrs (265)		
Perceived Service Quality	mean	mean	mean	mean	mean	*F*	*p*
Tangibles							
Adequate parking	4.26	3.84	4.16	4.31	4.72	9.27	.00
Clear signage	5.76	5.52	5.64	5.80	6.04	7.78	.00
Modern looking equipment	6.17	5.98	6.20	6.19	6.30	4.12	.01
Neatly dressed staff	6.55	6.50	6.58	6.54	6.59	0.81	.49
Tidy writing counters	6.30	6.22	6.23	6.32	6.41	2.49	.06
Reliability							
Value as a customer	5.90	5.51	5.79	5.97	6.29	18.84	.00
Keep time promises	6.02	5.73	5.91	6.13	6.28	11.26	.00
Sincere in problem fixing	6.01	5.70	5.94	6.07	6.29	10.71	.00
No queues	5.25	5.09	5.16	5.20	5.53	5.26	.00
Responsiveness							
Always willing to help	6.13	5.96	6.02	6.11	6.39	8.71	.00
Never too busy	6.03	5.82	5.92	6.04	6.30	9.86	.00
Assurance & Empathy							
Consistently courteous	6.20	6.00	6.05	6.29	6.45	10.50	.00
Product knowledge	6.03	5.76	6.05	6.03	6.24	9.00	.00
Individual attention	6.13	5.85	6.09	6.16	6.40	12.10	.00
Knowledge bank procedures	6.08	5.80	6.05	6.12	6.33	10.90	.00
Confident doing business there	6.06	5.82	5.93	6.12	6.36	11.17	.00
Staff willing to listen	6.01	5.76	5.88	6.06	6.32	11.92	.00
Pricing							
Investment interest rates good	4.78	4.60	4.81	4.62	5.04	4.08	.01
Mortgage interest rates good	4.94	4.55	4.96	4.92	5.31	7.79	.00
Environmental							
Supports local community	6.31	5.98	6.34	6.45	6.44	7.26	.00
Extras like prize draws	5.68	5.34	5.77	5.71	5.90	5.12	.00
Strong reputation	6.30	6.03	6.29	6.40	6.47	8.00	.00

Table 10.11. Perceived Service Quality by Age

	All Customers	Age						
	(1128)	<30 (226)	30-39 (221)	40-49 (224)	50-64 (164)	65+ (293)		
Perceived Service Quality	mean	mean	mean	mean	mean	mean	*F*	*p*
Tangibles								
Adequate parking	4.26	3.69	3.76	4.31	4.29	5.09	19.70	.00
Clear signage	5.76	5.27	5.38	5.87	5.91	6.26	21.31	.00
Modern looking equipment	6.17	5.73	6.06	6.28	6.24	6.48	16.11	.00
Neatly dressed staff	6.55	6.37	6.48	6.57	6.61	6.70	6.16	.00
Tidy writing counters	6.30	6.02	6.17	6.37	6.33	6.53	10.41	.00
Reliability								
Value as a customer	5.90	5.16	5.74	5.85	6.13	6.52	40.45	.00
Keep time promises	6.02	5.49	5.80	6.03	6.19	6.47	23.38	.00
Sincere in problem fixing	6.01	5.44	5.82	6.04	6.10	6.52	24.81	.00
No queues	5.25	4.60	5.04	5.30	5.27	5.89	26.75	.00
Responsiveness								
Always willing to help	6.13	5.66	6.01	6.12	6.15	6.57	23.02	.00
Never too busy	6.03	5.58	5.79	6.07	6.14	6.46	23.47	.00
Assurance & Empathy								
Consistently courteous	6.20	5.64	6.08	6.27	6.34	6.61	27.37	.00
Product knowledge	6.03	5.71	5.81	6.03	6.04	6.45	17.00	.00
Individual attention	6.13	5.75	5.91	6.18	6.24	6.51	17.88	.00
Knowledge bank procedures	6.08	5.72	5.79	6.13	6.14	6.52	21.27	.00
Confident business there	6.06	5.58	5.86	6.11	6.15	6.52	22.20	.00
Staff willing to listen	6.01	5.49	5.84	6.02	6.12	6.50	24.26	.00
Pricing								
Investment interest rates good	4.78	4.39	4.53	4.71	5.02	5.18	8.46	.00
Mortgage interest rates good	4.94	4.38	4.69	4.98	5.19	5.46	10.94	.00
Environmental								
Supports local community	6.31	6.14	6.12	6.12	6.29	6.63	6.28	.00
Extras like prize draws	5.68	5.38	5.51	5.51	5.77	6.22	9.62	.00
Strong reputation	6.30	5.99	6.32	6.32	6.39	6.57	9.06	.00

Table 10.12. Perceived Service Quality by Education

	All Customers	Education						
		<4yrs 2°	4yrs+ 2°	Trade Cert	Tertiary	Prof		
	(1128)	(376)	(212)	(125)	(216)	(142)		
Perceived Service Quality	mean	mean	mean	mean	mean	mean	*F*	*p*
Tangibles								
Adequate parking	4.26	4.56	4.19	3.90	3.96	4.25	4.16	.00
Clear signage	5.76	6.03	5.54	5.78	5.41	5.71	7.96	.00
Modern looking equip	6.17	6.41	6.05	6.04	5.90	6.20	6.98	.00
Neatly dressed staff	6.55	6.65	6.50	6.57	6.41	6.53	2.92	.02
Tidy writing counters	6.30	6.46	6.25	6.34	6.03	6.28	6.16	.00
Reliability								
Value as a customer	5.90	6.19	5.66	5.79	5.64	5.79	9.53	.00
Keep time promises	6.02	6.21	5.93	6.00	5.77	5.90	5.04	.00
Sincere in problem fixing	6.01	6.25	5.87	6.07	5.73	5.83	6.32	.00
No queues	5.25	5.51	5.12	5.20	4.96	5.09	6.38	.00
Responsiveness								
Always willing to help	6.13	6.37	6.00	6.12	5.85	6.01	7.98	.00
Never too busy	6.03	6.26	5.90	6.02	5.73	5.97	7.75	.00
Assurance & Empathy								
Consistently courteous	6.20	6.47	5.99	6.13	5.99	6.14	8.84	.00
Product knowledge	6.03	6.29	5.88	6.04	5.79	5.81	9.23	.00
Individual attention	6.13	6.37	5.95	6.06	5.90	6.04	8.10	.00
Knowledge bank proceed	6.08	6.36	5.97	6.00	5.81	5.89	8.98	.00
Confident business there	6.06	6.30	5.94	6.02	5.81	5.96	6.15	.00
Staff willing to listen	6.01	6.28	5.86	6.07	5.78	5.74	8.07	.00
Pricing								
Investment interest good	4.78	4.94	4.72	4.78	4.51	4.79	2.06	.07
Mortgage interest good	4.94	5.20	4.93	4.74	4.76	4.72	2.56	.03
Environmental								
Supports local community	6.31	6.42	6.24	6.18	6.26	6.34	0.93	.46
Extras like prize draws	5.68	5.96	5.69	5.50	5.22	5.77	5.14	.00
Strong reputation	6.30	6.45	6.28	6.14	6.11	6.32	2.91	.01

In the Education variable, the symbol 2° represents secondary school (high school)

Table 10.13. Perceived Service Quality by Annual Household Income

(a)

	All Customers	Annual Household Income			
		<20K	$20K-$29.9K	$30K-$39.9K	$40K-$49.9K
	(1128)	(222)	(176)	(195)	(112)
Perceived Service Quality	mean	mean	mean	mean	mean
Tangibles					
Adequate parking	4.26	4.75	4.23	4.13	4.09
Clear signage	5.76	5.97	5.93	5.84	5.64
Modern looking equipment	6.17	6.32	6.31	6.21	6.13
Neatly dressed staff	6.55	6.62	6.61	6.61	6.50
Tidy writing counters	6.30	6.53	6.31	6.31	6.32
Reliability					
Value as a customer	5.90	6.14	6.04	5.84	5.76
Keep time promises	6.02	6.19	6.05	6.10	5.91
Sincere in problem fixing	6.01	6.22	6.11	6.14	5.75
No queues	5.25	5.63	5.37	5.23	5.02
Responsiveness					
Always willing to help	6.13	6.37	6.22	6.20	6.03
Never too busy	6.03	6.26	6.07	6.12	5.91
Assurance & Empathy					
Consistently courteous	6.20	6.44	6.26	6.16	6.15
Product knowledge	6.03	6.32	6.17	6.12	5.82
Individual attention	6.13	6.36	6.24	6.20	6.00
Knowledge bank procedures	6.08	6.31	6.21	6.11	5.98
Confident business there	6.06	6.28	6.12	6.14	5.91
Staff willing to listen	6.01	6.18	6.07	6.16	5.90
Pricing					
Investment interest good	4.78	4.84	5.04	4.82	4.78
Mortgage interest rates good	4.94	5.17	5.18	4.93	4.83
Environmental					
Supports local community	6.31	6.58	6.54	6.36	6.29
Extras like prize draws	5.68	6.11	5.86	5.63	5.77
Strong reputation	6.30	6.54	6.43	6.32	6.10

(continued next page)

Table 10.13 (b)

	Annual Household Income					
	$50K-$59.9K (113)	$60K-$79.9K (120)	$80K-$99.9K (58)	$100K+ (68)		
Perceived Service Quality	mean	mean	mean	mean	*F*	*p*
Tangibles						
Adequate parking	4.12	4.37	4.04	3.76	2.48	.01
Clear signage	5.60	5.42	5.55	5.56	2.52	.01
Modern looking equipment	6.27	5.80	5.94	5.85	3.87	.00
Neatly dressed staff	6.58	6.43	6.50	6.32	1.62	.12
Tidy writing counters	6.26	6.08	6.05	5.89	4.98	.00
Reliability						
Value as a customer	5.79	5.66	5.71	5.84	2.24	.02
Keep time promises	5.89	5.82	5.98	5.97	1.36	.21
Sincere in problem fixing	5.88	5.76	6.00	5.78	2.75	.01
No queues	5.07	4.97	4.98	5.18	3.28	.00
Responsiveness						
Always willing to help	5.98	5.84	6.02	6.00	3.08	.00
Never too busy	5.82	5.83	6.00	5.85	2.73	.01
Assurance & Empathy						
Consistently courteous	6.24	6.05	6.18	5.90	2.58	.01
Product knowledge	5.88	5.73	5.75	5.86	4.90	.00
Individual attention	6.05	5.89	5.87	5.92	3.06	.00
Knowledge bank procedures	5.93	5.90	5.94	5.77	2.95	.00
Confident business there	6.03	5.81	6.05	5.84	2.30	.02
Staff willing to listen	5.89	5.72	6.05	5.78	2.35	.02
Pricing						
Investment interest good	4.45	4.64	4.98	4.69	1.57	.13
Mortgage interest rates good	5.05	4.67	4.98	4.48	1.97	.05
Environmental						
Supports local community	6.24	6.00	6.22	5.46	6.15	.00
Extras like prize draws	5.52	5.34	5.61	4.80	4.66	.00
Strong reputation	6.31	6.11	6.09	6.06	2.97	.00

The overall impression given by the results for perceived service quality is one of customers being relatively contented with their main bank. All attributes have average scores on the "positive" side (agreement) of the scale mid-point and some are outstandingly high, exceeding '6' by quite extensive margins.

Results have been presented using the well-recognised structure of the SERVQUAL instrument (PZB, 1987, 1991, 1994) as discussed in Chapters Two, Eight and Nine where perceived service quality attributes are categorised into several dimensions: *Tangibles, Reliability, Responsiveness, Assurance, Empathy* and two dimensions specific to this project, namely *Pricing* and *Environment*. The attributes that form each of these dimensions are labelled as such in Tables 10.8 to 10.13. Nevertheless, these dimensions did not hold this recognised structure in subsequent multivariate analysis reported in Chapter Eleven.

In terms of *Tangibles,* only *parking facilities*, and to some extent *clear directions* (signs) on where to go in the bank are perceived as lacking. All other aspects of the *Tangibles* dimension are perceived as a strength.

For the *Reliability* dimension, its three attributes each receive average ratings of close to '6' whereas the *no queues* attribute is somewhat of an outlier (being associated with *Tangibles* as well) at a mean score of 5.25. All the attributes of *Assurance* and *Empathy* receive ratings in the range 5.01 – 6.20 demonstrating high levels of perceived service quality. The *Pricing* dimension (which is sometimes left out of service quality measurement because it is not strictly part of service delivery) has attributes covering interest rates for investment and for borrowing. Mean score values of 4.78 and 4.94 respectively were registered, and can be classified as "moderately satisfactory". Finally, an *Environmental* dimension with its three attributes of community *support, extras like price draws* and main bank's *overall reputation* was included. The first and third of these were scored almost identically at 6.30 and 6.31, respectively, demonstrating a strong reputation in the community for respondents' main banks.

Further analysis has been conducted using one way analysis of variance (ANOVA) and statistically significant relationships between perceived service quality attributes and

independent variables (addressing banking and demographic characteristics) are reported above. The output for this analysis appears in Tables 10.8 to 10.13. It should be noted that perceived service quality did not vary by gender nor by "closing business with a bank in the last 12 months" (except for two attributes for the latter - adequate *parking* and *little or no waiting time in* queues – which suggests these may have some influence in the closure decision).

When perceived service quality for main bank is analysed by study bank versus competitors, on almost every attribute (18 of the 22) for customers whose main bank is the study bank registered higher ratings (see Table 10.8).

Only on *tidy writing counters*, (a *Tangible* attribute) two aspects of *Reliability (value me as a customer* and *little or no waiting time in queues*) and on *consistently courteous* were there no established significant differences at the p = 0.05 level. Turning to "share of wallet" (proportion of business with main bank) and "time as a customer with main bank" (Tables 10.9 and 10.10) reveals very predictable relationships with perceptions of service quality. Almost without exception, the greater the proportion of one's banking business devoted to one's main bank, the higher will be the perception of service received. Similarly for time spent as a customer of one's main bank – the direct association between number of years and perceived service quality ratings are undeniable in Table 10.10. Not unexpectedly, the same direct relationships hold for age of customer – older customers are "happier" with their main bank than their younger counterparts (see Table 10.11) on every single attribute of perceived service quality.

Tables 10.12 and 10.13 display perceived service quality by education (highest level attained) and by annual household income. In each of them the reader can observe statistically significant indirect associations, that is, the lower the level of education and income, the higher the perception of service quality.

Perhaps then it is hardly surprising that the associations noted here between perceived service quality with main bank and various banking and demographic characteristics are very similar to the results on satisfaction with main bank discussed below. Perceived service quality is an important component of satisfaction which is often characterised in

the academic literature as an "umbrella or all encompassing" attitude.

10.5 Satisfaction With Main Bank's Performance

As discussed in Chapter Three, customer satisfaction is a key ingredient in services management research. It is also an essential link in the service-profit chain. An underlying notion of any enquiry into the construct of satisfaction is that satisfaction is an antecedent of loyalty. In turn, loyalty is inextricably linked to customer retention, and by inference, to customer profitability.

In this thesis, customer satisfaction has been measured at more global levels than the concomitant measurements of perceived service quality and customer loyalty. Thus, customers of the study bank were invited to express their level of satisfaction with their main bank's tellers, automatic teller machines (ATMs), telephone banking facilities, borrowing and investment sections, and then, overall performance. Choice of these specific variables for satisfaction measurement arose out of the qualitative pre-research, from discussions with study bank staff, and from bank marketing literature such as Jain et al (1987), Lewis (1989), and Selnes (1994). Colgate (1999) used similar satisfaction measurement in his general study of New Zealand personal retail banking. A standard seven point Likert scale was used with the poles labelled as *extremely dissatisfied* (1) and *extremely satisfied* (7). Not all customers have experienced each facility or "section" at their main bank necessitating the inclusion of a "not applicable" response code (0) as per question 6 of the questionnaire attached as an Appendix. For each of the six satisfaction measures, analysis has been conducted on the sub-samples of respondents who were able to offer an assessment. The relevant details are summarised in Table 10.14.

Table 10.14. Summary Statistics of Satisfaction with Main Bank

		Satisfaction with Main Banks					
		Tellers %	ATMs %	Telephone Banking %	Borrowing Section %	Investments Section %	Overall Performance %
Level of Satisfaction							
Extremely dissatisfied	(1)	1	3	2	2	1	-
	(2)	1	2	4	2	1	1
	(3)	3	4	3	5	4	2
	(4)	9	8	11	10	10	6
	(5)	16	15	16	14	20	14
	(6)	29	29	23	26	26	31
Extremely satisfied	(7)	41	39	41	41	38	46
Sample size		1088	888	457	624	622	1106
% of total Sample		96	79	41	55	55	98
Mean		5.94	5.74	5.68	5.73	5.73	6.08
Standard Deviation		1.21	1.47	1.54	1.50	1.36	1.14

Whereas almost everyone was able to offer an opinion about their level of satisfaction with their main bank overall, and its (branch) tellers, diminishing proportions of customers recounted their satisfaction with ATMs, borrowing, investments, and telephone banking. Nevertheless, for each facility or section, the mean level of satisfaction was high and in a narrow range between 5.68 and 5.94. Hence standard deviations were quite low (between 1.21 and 1.54) on the seven point satisfaction scale, and perusal of Table 10.14 shows that median values were all at scale point '6'. Overall satisfaction with main bank performance was outstandingly high at 6.08 and an extremely low standard deviation of 1.14, demonstrating that the study bank's customers as a whole are relatively content with their banking relationships.

Investigation of the extent of customers' satisfaction (measured by mean scores) cross-analysed by several independent variables is contained in Table 10.15. Using means as the statistic for analysis enables comparisons by one way analysis of variance (ANOVA) and statistically significant differences at the p=0.05 level or "better" (that is, 95% confidence) are noted in the ensuing commentary. It should also be noted that no significant differences emerged for any of the satisfaction measures by gender.

10.5.1 Satisfaction with Tellers

Virtually everyone (96%) in the sample of customers assessed their satisfaction with their main bank's tellers and satisfaction was high at 5.94 (weighted average). Yet satisfaction is significantly higher (5.98) with the study bank's tellers than with those of competitors (5.79) and it comes as no surprise that the longer customers have done business with their main bank or the greater the share of their banking business they give to their main bank, the higher their level of satisfaction with its tellers. A strong positive association is evident with these variables as shown in Table 10.15. In contrast, customers who have defected from another bank in the last 12 months are (perhaps understandably) a little more circumspect (5.70). The strong positive association with age and the equally strong inverse associations with educational status and annual household income prevail again. Such results parallel those obtained in the quarterly American Customer Satisfaction Index (Fornell et al, 1996) where satisfaction rises with age, and where socioeconomic status is inversely associated with satisfaction.

10.5.2 Satisfaction with ATMs

Nearly eight in every ten customers (79%) assessed their level of satisfaction with ATMs and the sample average was 5.74. No differences emerged with the banking behaviour variables (see Table 10.15) but did so by demographic and social status variables. Customers from higher income households were less enamoured of ATMs while the elderly (65+ years) were satisfied (6.15) which was reflected in their educational status (less than four years secondary school: 5.89).

Table 10.15. Average Levels of Satisfaction by Banking Behaviour, Demographic and Social Status Variables

	Mean Satisfaction with Main Bank's ...					
	Tellers	ATMs	Telephone Banking	Borrowing Section	Investments Section	Overall Performance
Variables	mean	mean	mean	mean	mean	mean
Main Bank						
Study Bank	5.98	5.74	5.54	5.77	5.83	6.20
Competitors	5.79	5.71	5.98	5.64	5.32	5.64
t-test	2.21	1.33	-7.54	3.52	2.55	5.95
p	0.03	0.19	0.00	0.00	0.01	0.00
Time with Main Bank						
Up to 7 years	5.61	5.62	5.59	5.53	5.24	5.77
8-15 years	5.77	5.80	5.72	5.61	5.58	5.96
16-29 years	5.97	5.69	5.75	5.86	5.74	6.12
30+ years	6.35	5.86	5.59	6.04	6.12	6.41
F	19.28	1.21	0.33	3.31	11.53	15.44
p	0.00	0.31	0.81	0.02	0.00	0.00
Proportion of Business						
<68%	5.59	5.52	5.59	4.61	5.16	5.28
68-80%	5.55	5.48	5.18	5.18	5.36	5.61
81-90%	5.71	5.55	5.62	5.53	5.68	5.81
91-99%	5.85	5.71	5.86	5.67	5.67	6.00
100%	6.10	5.84	5.71	6.02	5.87	6.32
F	5.87	1.39	1.15	7.98	3.01	17.02
p	0.00	0.23	0.33	0.00	0.01	0.00
Defected last 12 months?						
Yes	5.70	5.57	5.56	5.59	5.63	5.82
No	6.04	5.85	5.73	5.76	5.82	6.14
t-test	-2.73	-0.21	-0.79	-1.42	-0.77	-2.33
p	0.01	0.84	0.43	0.16	0.44	0.02
Age						
<30 years	5.27	5.72	5.63	5.21	5.19	5.65
30-39 years	5.73	5.51	5.64	5.52	5.24	5.86
40-49 years	6.02	5.75	5.82	5.95	5.53	6.10
50-64 years	6.01	5.62	5.29	5.87	5.90	6.09
65+ years	6.53	6.15	6.08	6.33	6.28	6.57
F	4.96	4.54	2.58	8.68	17.63	24.49
p	0.00	0.00	0.04	0.00	0.00	0.00

Table 10.15 continued

	Mean Satisfaction with Main Bank's ...					
	Tellers	ATMs	Telephone Banking	Borrowing Section	Investments Section	Overall Performance
	mean	mean	mean	mean	mean	mean
Highest Level of Education						
<4 years secondary school	6.27	5.89	5.88	6.07	6.08	6.34
4+ years secondary school	5.73	5.58	5.45	5.62	5.50	5.94
Trade certificate	5.84	5.93	5.39	5.52	5.61	6.04
Tertiary	5.60	5.53	5.65	5.45	5.41	5.80
Professional	5.74	5.72	5.70	5.65	5.51	5.92
F	14.68	2.99	2.42	4.12	6.40	9.22
p	0.00	0.01	0.04	0.00	0.00	0.00
Annual Household Income						
<$20,000	6.27	6.08	5.83	6.01	5.97	6.39
$20,000 - $29,000	5.99	5.60	5.46	5.74	5.94	6.15
$30,000 - $39,000	5.95	5.70	6.68	5.76	5.79	.06
$40,000 - $49,000	5.79	6.50	5.89	5.87	5.37	6.05
$50,000 - $59,000	5.79	5.78	5.50	5.84	5.72	5.90
$60,000 - $79,000	5.69	5.70	5.76	5.45	5.41	5.85
$80,000 - $99,999	5.70	5.50	5.31	5.57	5.47	5.90
$100,000+	5.81	5.40	5.97	5.65	5.77	5.84
F	3.68	2.22	0.84	1.41	2.01	3.78
p	0.00	0.03	0.57	0.19	0.04	0.00
Eligible (Total) Sample	5.94	5.74	5.68	5.73	5.73	6.08

10.5.3 Satisfaction with Telephone Banking

Only 41% of customers could assess this relatively new facility at their main bank and while their overall average is 5.68 (relatively high satisfaction) this is somewhat lower than satisfaction with tellers. The study bank's "main bank" customers were less happy (5.54) than those whose main banks were competitors (5.98). Differences did emerge by age and educational status but with no easily identified trends.

10.5.4 Satisfaction with Borrowing and Investments Sections

Just over half (55%) of customers were able to answer this question for either borrowing or investing, and their overall satisfaction averaged out at 5.73 for both "sections". The longer one has banked with one's main bank and the greater the "share of wallet or purse" that bank has of one's banking business, the higher the level of satisfaction with borrowing or investment sections.

Additionally, the direct association with age and the indirect association with educational status emerge.

10.5.5 Overall Satisfaction with Main Bank

A sample average of 6.08 suggests that customers' satisfaction with their main bank is high. Indeed, perusal of Table 10.14 shows that only 3% of customers used the "dissatisfied" end of the scale. The study bank's "main bank" customers were especially bullish (6.20) as were the long-standing customers and those giving all or almost all of their banking business to their main bank. Predictably, the strong direct association with age, and inverse associations with educational and household income status are present too.

10.6 Customers' Loyalty to Their Main Bank

Customers were requested to rate their opinions of their loyalty to their main banks using the 18 customer loyalty attributes discussed above in chapters three, eight and nine. These attributes were rated using the standard seven point agreement scale where '1' was labelled as "strongly disagree" and '7' as "strongly agree". The analysis below is based on weighted averages; the closer a mean score is to '7', the stronger is the agreement for that particular notion of customer loyalty. Additionally, analysis has been conducted using one way ANOVA and statistically significant relationships (at a minimum of p=0.05) across several banking and demographic characteristics are discussed below.

As discussed in Chapters Eight and Nine (the methodological chapters) above, customer loyalty attributes can be classified under several dimensions: *Relationship Commitment, Habit/Inertia, Familiarity and Interpersonal Bonds*, and two dimensions specific to this project, namely *Environmental Impact* and *All-in-one Banking*.

The overall impression given by the results in Tables 10.16 to 10.21 is one of strong commitment to main bank, which is based on business-like considerations (*All-in-one Banking*) and *Familiarity and Interpersonal Bonds* rather than more spurious loyalty dimensions like *Habit/Inertia* and switching for short-term advantage (*Environmental Impact*). Therefore each of the attributes forming the *Relationship Commitment* dimension was rated at close to '6' while those forming the *Familiarity and Interpersonal Bonds* dimension were rated close to '4.5' ("some agreement"). The *All-in-one-Banking* dimension with its two attributes reflecting the longer term advantages of an enduring relationship with a bank were scored close to '5' while short term

advantages of lower fees, convenience and new bank promotions received strong disagreement. Conversely, while switching costs are recognised as relatively high in terms of time, effort and money (4.37), mean scores for attributes on the *Habit/Inertia* dimension were close to 3.5, suggesting that many customers do not feel constrained to their main bank just because of being "locked in", as exemplified by the attribute *not worth the hassle of switching* receiving a mean rating of 3.06.

As seen in Table 10.16, customers nominating the study bank as their main bank claim to have stronger commitments to their main bank and see more advantages in long term banking relationships (and less in short term relationships). They are somewhat more "bonded" to the study bank by *Familiarity and Interpersonal Bonds* than customers nominating a competitor bank as main bank and there is some suggestion they may be more resistant to switching although the general tenor of sentiment on switching was rather ambivalent (means in the '3-4' range).

As might be expected, loyalty to one's main bank intensifies with increasing proportions of one's banking business and with time (Tables 10.17 and 10.18). Nevertheless, being "locked in" to a relationship with one's main bank by switching costs does not vary by these variables although the risk of changing banks does.

Table 10.19 shows that older customers have stronger commitments to their main bank and are more risk averse than younger customers although older customers will still overcome the "hassle" of switching just like any other customer. However, the same direct associations between cognition (attitudes of satisfaction and perceived service quality discussed above) and age hold for customer loyalty. Indeed these associations are again evident by education and annual household income too (Tables 10.20 and 10.21) but in the inverse direction (higher levels of education and income are associated with lower loyalty to main bank). Only on the *Environmental Impact* dimension of short term gain for convenience, lower fees or to deal with a new bank in town are most customers alike – most tend to shun the idea of switching main bank for these "benefits." The only exceptions here were female customers who were just slightly more likely to switch for convenience (males 2.58, females 2.82, $F = 4.17$, $p = .04$) and for lower fees (males 3.43, females 3.88, $F = 10.27$, $p = .00$). Only on these two attributes was there

any difference between male and female customers; all other loyalty attributes showed no difference by gender. Yet, really the results are clear. Likelihood of switching for convenience or lower fees is low, and the significant differences between males and females are spurious and not helpful for any type of managerial action.

Table 10.16. Customer Loyalty by Main Bank

	All Customers (1128)	Main Bank			
		Study (886)	Competitors (242)		
Item	mean	mean	mean	*t-test*	p
Relationship Commitment					
Best bank for me	5.94	6.19	5.00	10.56	.00
Like doing business there	5.97	6.15	5.31	8.07	.00
Loyal to this bank	6.18	6.38	5.48	8.09	.00
Very satisfied (comparatively)	6.13	6.32	5.52	7.45	.00
Status quo – no switch	6.11	6.26	5.56	5.91	.00
Habit/Inertia					
Switching costs would be high	4.37	4.34	4.49	-.89	.38
Not worth hassle switching	3.06	2.88	3.69	-4.74	.00
Better devil you know	3.49	3.45	3.60	-.96	.34
Switching banks is risky	3.69	3.75	3.48	1.65	.10
Familiarity & Interpersonal Bonds					
Gives unique privileges	4.68	4.85	4.10	4.86	.00
Personally recognised	4.56	4.63	4.37	1.53	.13
Treated a "bit special"	4.40	4.46	4.21	1.76	.08
"Bond" with bank staff	4.41	4.51	4.08	2.77	.01
Environmental Impact					
Switch for convenience	2.72	2.61	3.15	-3.67	.00
Switch for lower fees	3.69	3.50	4.40	-5.64	.00
Rather deal with new bank	2.12	2.01	2.51	-3.68	.00
All-in-one Banking					
All-in-one banking best	5.07	5.26	4.35	6.06	.00
Stay even if better elsewhere	4.84	4.96	4.38	3.88	.00

Table 10.17. Customer Loyalty by Proportion of Business with Main Bank

	All Customers	Proportion of Business With Main Bank						
		<68%	68-80%	81-90%	91-99%	100%		
	(1128)	(64)	(78)	(138)	(265)	(562)		
Item	mean	mean	mean	mean	mean	mean	*F*	*p*
Relationship Commitment								
Best bank for me	5.94	4.71	5.12	5.47	5.88	6.33	30.08	.00
Like doing business there	5.97	4.97	5.26	5.59	5.88	6.31	28.24	.00
Loyal to this bank	6.18	4.87	5.34	5.80	6.20	6.52	39.07	.00
Very satisfied (comparatively)	6.13	5.10	5.61	5.76	6.07	6.45	24.48	.00
Status quo – no switch	6.11	4.95	5.62	5.87	6.12	6.35	14.57	.00
Habit / Inertia								
Switching costs would be high	4.37	4.00	4.19	4.32	4.24	4.53	1.52	.18
Not worth hassle switching	3.06	3.26	3.43	3.17	2.83	3.06	1.44	.21
Better devil you know	3.49	3.08	3.61	3.38	3.13	3.73	3.18	.01
Switching banks is risky	3.69	3.15	3.26	3.47	3.41	4.03	5.17	.00
Familiarity & Interpersonal Bonds	4.68	4.07	4.27	4.36	4.36	5.07	7.54	.00
Gives unique privileges	4.56	3.75	3.97	4.17	4.37	4.93	7.92	.00
Personally recognised	4.40	3.55	3.75	4.06	4.44	4.65	7.77	.00
Treated a "bit special"	4.41	3.25	3.55	4.17	4.23	4.79	12.52	.00
"Bond" with bank staff								
Environmental Impact								
Switch for convenience	2.72	3.03	3.17	2.72	2.67	2.61	1.53	.00
Switch for lower fees	3.69	4.46	4.24	3.78	3.80	3.40	4.22	.01
Rather deal with new bank	2.12	2.75	2.35	1.98	2.21	1.98	3.11	.01
All-in-one Banking								
All-in-one banking best	5.07	3.29	3.43	4.40	4.81	5.78	48.50	.00
Stay even if better elsewhere	4.84	3.00	3.47	4.29	4.64	5.47	35.29	.00

Table 10.18. Customer Loyalty by Time with Main Bank

	All Customers	Time with Main Bank (Quartiles)					
		Up to 7 yrs	8-15 yrs	16-29 yrs	30+ yrs		
	(1128)	(282)	(269)	(261)	(265)		
Item	mean	mean	mean	mean	mean	*F*	*p*
Relationship Commitment							
Best bank for me	5.94	5.52	5.95	5.96	6.28	15.19	.00
Like doing business there	5.97	5.58	5.92	6.02	6.34	17.33	.00
Loyal to this bank	6.18	5.61	6.14	6.42	6.52	31.84	.00
Very satisfied (comparatively)	6.13	5.82	6.09	6.22	6.41	10.89	.00
Status quo – no switch	6.11	5.76	6.05	6.23	6.38	9.87	.00
Habit / Inertia							
Switching costs would be high	4.37	4.08	4.44	4.39	4.56	2.12	.10
Not worth hassle switching	3.06	3.02	3.02	3.11	3.09	0.11	.95
Better devil you know	3.49	3.05	3.39	3.47	3.98	8.14	.00
Switching banks is risky	3.69	3.35	3.49	3.65	4.20	8.05	.00
Familiarity & Interpersonal Bonds							
Gives unique privileges	4.68	4.36	4.71	4.52	5.10	6.77	.00
Personally recognised	4.56	4.12	4.25	4.68	5.15	13.77	.00
Treated a "bit special"	4.40	4.00	4.17	4.42	4.96	14.00	.00
"Bond" with bank staff	4.41	3.80	4.27	4.52	5.00	17.86	.00
Environmental Impact							
Switch for convenience	2.72	2.86	2.69	2.90	2.46	2.91	03
Switch for lower fees	3.69	4.13	3.70	3.66	3.29	6.50	.00
Rather deal with new bank	2.12	2.31	2.05	1.98	2.12	1.86	.14
All-in-one Banking							
All-in-one banking best	5.07	4.75	5.01	5.00	5.45	6.64	.00
Stay even if better elsewhere	4.84	4.41	4.81	4.93	5.17	7.05	.00

Table 10.19. Customer Loyalty by Age

	All Customers	Age						
	(1128)	<30 (226)	30-39 (221)	40-49 (224)	50-64 (164)	65+ (293)		
	mean	mean	mean	mean	mean	mean	*F*	*p*
Relationship Commitment								
Best bank for me	5.94	5.45	5.67	5.83	6.14	6.49	22.75	.00
Like doing business there	5.97	5.44	5.77	5.85	6.15	6.54	27.43	.00
Loyal to this bank	6.18	5.62	6.03	6.07	6.42	6.67	26.00	.00
Very satisfied (comparatively)	6.13	5.68	6.01	6.01	6.28	6.61	18.50	.00
Status quo – no switch	6.11	5.82	5.95	6.00	6.22	6.48	8.34	.00
Habit / Inertia								
Switching costs would be high	4.37	4.22	4.11	4.17	4.37	4.93	4.78	.00
Not worth hassle switching	3.06	3.31	2.89	2.91	3.03	3.13	1.29	.27
Better devil you know	3.49	3.30	3.24	3.31	3.55	3.99	4.39	.00
Switching banks is risky	3.69	3.25	3.64	3.67	3.78	4.08	3.98	.00
Familiarity & Interpersonal Bonds								
Gives unique privileges	4.68	4.43	4.33	4.39	4.68	5.49	13.41	.00
Personally recognised	4.56	3.58	4.10	4.10	4.84	5.64	33.23	.00
Treated a "bit special"	4.40	3.65	4.01	4.01	4.79	5.34	31.29	.00
"Bond" with bank staff	4.41	3.43	3.91	3.91	4.76	5.54	42.30	.00
Environmental Impact								
Switch for convenience	2.72	2.93	2.58	2.58	2.82	2.41	3.18	.01
Switch for lower fees	3.69	4.27	3.76	3.76	3.74	2.95	11.11	.00
Rather deal with new bank	2.12	2.34	2.14	2.14	2.31	1.90	2.83	.02
All-in-one Banking								
All-in-one banking best	5.07	4.74	4.63	4.63	5.22	5.75	13.83	.00
Stay even if better elsewhere	4.84	4.39	4.48	4.48	4.88	5.50	11.93	.00

Table 10.20. Customer Loyalty by Education

	All Customers	Education						
	(1128)	<4yrs 2° (376)	4yrs+ 2° (212)	Trade Cert. (125)	Tertiary (216)	Prof (142)		
	mean	mean	mean	mean	mean	mean	*F*	*p*
Relationship Commitment								
Best bank for me	5.94	6.29	5.75	5.93	6.50	5.71	9.48	.00
Like doing business there	5.97	6.28	5.78	5.93	5.65	5.86	8.90	.00
Loyal to this bank	6.18	6.42	6.00	6.22	5.93	6.04	6.35	.00
Very satisfied (comparatively)	6.13	6.39	5.97	6.03	5.99	5.97	5.14	.00
Status quo – no switch	6.11	6.34	6.07	6.00	5.81	5.99	5.32	.00
Habit / Inertia								
Switching costs would be high	4.37	4.57	4.34	4.30	4.27	4.02	1.44	.21
Not worth hassle switching	3.06	3.15	2.95	2.99	2.81	3.12	2.99	.01
Better devil you know	3.49	4.03	3.53	3.19	2.80	3.14	10.71	.00
Switching banks is risky	3.69	4.00	3.73	3.64	3.39	3.32	3.00	.01
Familiarity & Interpersonal Bonds								
Gives unique privileges	4.68	4.96	4.83	4.34	4.46	4.29	3.99	.00
Personally recognised	4.56	5.09	4.38	4.58	3.92	4.19	11.34	.00
Treated a "bit special"	4.40	4.83	4.11	4.32	4.00	4.20	9.09	.00
"Bond" with bank staff	4.41	4.91	4.17	4.32	3.85	4.13	12.01	.00
Environmental Impact								
Switch for convenience	2.72	2.77	2.76	2.49	2.76	2.74	0.78	.57
Switch for lower fees	3.69	3.50	3.79	3.75	3.83	3.86	1.28	.27
Rather deal with new bank	2.12	1.98	2.25	2.15	2.17	2.06	1.56	.17
All-in-one Banking								
All-in-one banking best	5.07	5.59	4.96	5.07	4.54	4.49	13.04	.00
Stay even if better elsewhere	4.84	5.22	4.62	4.99	4.30	4.67	7.56	.00

Table 10.21. Customer Loyalty by Annual Household Income

(a)

	All Customers	Annual Household Income			
		<$20K	$20K-$29.9K	$30K-$39.9K	$40K-$49.9K
	(1128)	(222)	(176)	(195)	(112)
Item	mean	mean	mean	mean	mean
Relationship Commitment					
Best bank for me	5.94	6.28	6.13	6.03	5.94
Like doing business there	5.97	6.34	6.14	6.11	5.90
Loyal to this bank	6.18	6.41	6.26	6.23	6.11
Very satisfied (comparatively)	6.13	6.45	6.25	6.16	6.06
Status quo – no switch	6.11	6.28	6.24	6.06	6.01
Habit/Inertia					
Switching costs would be high	4.37	4.82	4.42	4.40	4.13
Net worth hassle switching	3.06	3.55	3.14	3.03	2.71
Better devil you know	3.49	4.20	3.79	3.36	2.97
Switching banks is risky	3.69	4.45	4.07	3.48	3.45
Familiarity & Interpersonal Bonds					
Gives unique privileges	4.68	5.25	4.97	4.80	4.34
Personally recognised	4.56	5.15	4.99	4.33	4.26
Treated a "bit special"	4.40	4.95	4.67	4.33	3.94
"Bond" with bank staff	4.41	5.03	4.89	4.34	4.00
Environmental Impact					
Switch for convenience	2.72	2.80	2.76	2.71	2.69
Switch for lower fees	3.69	3.48	3.62	3.68	3.70
Rather deal with new bank	2.12	2.20	2.12	2.03	2.24
All-in-one Banking					
All-in-one banking best	5.07	5.77	5.50	5.14	4.86
Stay even if better elsewhere	4.84	5.25	5.27	4.70	4.66

(continued next page)

Table 10.21. Customer Loyalty by Annual Household Income

(b)

	Annual Household Income					
	50K-$59.9K (113)	$60K-$79.9K (120)	$80K-$99.9K (58)	$100K+ (68)		
Item	mean	mean	mean	mean	*F*	*p*
Relationship Commitment						
Best bank for me	5.76	5.58	5.55	5.39	5.56	.00
Like doing business there	5.68	5.63	5.66	5.48	6.65	.00
Loyal to this bank	6.05	5.98	5.75	5.91	3.04	.00
Very satisfied (comparatively)	6.00	5.82	6.02	5.76	3.72	.00
Status quo – no switch	6.00	5.82	6.09	6.13	1.37	.21
Habit/Inertia						
Switching costs would be high	3.97	4.36	4.16	3.94	1.99	.05
Net worth hassle switching	2.45	3.04	2.86	2.94	3.03	.00
Better devil you know	2.88	3.28	3.25	3.30	5.12	.00
Switching banks is risky	3.47	3.68	2.85	2.88	6.31	.00
Familiarity & Interpersonal Bonds						
Gives unique privileges	4.43	4.37	4.49	3.97	4.77	.00
Personally recognised	3.99	4.26	4.41	4.28	4.89	.00
Treated a "bit special"	3.82	4.19	4.40	4.31	5.19	.00
"Bond" with bank staff	3.90	4.15	3.84	4.10	6.31	.00
Environmental Impact						
Switch for convenience	2.44	2.80	2.63	2.75	0.40	.92
Switch for lower fees	3.56	3.81	4.27	4.10	1.16	.32
Rather deal with new bank	2.11	1.96	2.50	2.00	0.86	.55
All-in-one Banking						
All-in-one banking best	4.77	4.49	4.43	4.22	9.96	.00
Stay even if better elsewhere	4.61	4.61	4.32	4.28	3.82	.00

10.7 Loyalty Intentions

To measure study bank customers' level of commitment and loyalty to their main bank for the foreseeable future, Juster's (1966) eleven-point probability scale was used again. The statements used to describe loyalty intentions were derived from various commentators in the marketing and management literature but principally Cronin and Taylor (1992), Rust et al (1994, 1995), Gremler (1995) and ZBP (1996). Hence, "positive things about...", "recommending", "encouraging friends or relatives to do business with...", "increasing or decreasing business..." and "seeking an additional Bank" are all measurable expressions of behavioural intention for future loyalty as shown in Table 10.22.

Table 10.22. Future Loyalty Intentions by Main Bank and Time with Main Bank

	Main Bank*					Time with Main Bank (Quartiles)*					
	All Customers (1128)	Study Bank (886)	Com-petitors (242)	*t-test*	*p*	Up to 7 yrs (282)	8-15 yrs (269)	16-29 yrs (261)	30+ yrs (265)	*F*	*p*
For Main Bank, chances that you will...											
Say positive things	73	76	62	6.92	.00	67	73	73	78	6.72	.00
Recommend to others	76	80	61	8.82	.00	70	74	77	81	8.78	.00
Encourage friends etc	66	71	51	8.71	.00	61	66	67	72	5.06	.00
Increase business next yr	46	47	42	2.02	.05	48	47	47	42	1.76	.15
Decrease business next yr	18	17	20	-1.67	.10	19	17	17	20	0.77	.51
Open account(s) next yr	14	13	17	-2.37	.01	20	16	12	8	11.74	.00

* Results in Table 10.22 are mean proportions.

Table 10.22 shows that the probability of positive reinforcement about, or recommending one's main bank, to others, stands at close to three-quarters of customers. Encouraging friends and relatives to patronise your main bank stands at two thirds. Just under half the customers intended to increase their banking business at their main bank next year whereas 18% suggested a decrease. One in seven (14%) intended to open accounts at another bank (thereby diluting their loyalty to current main bank) in the next year. Understandably there is little correlation between increasing business at main bank and opening accounts at another bank (correlation 0.03, p=.313) but there is some correlation between decreasing business and "adding" another bank (correlation 0.32, p=.00).

Table 10.22 also shows that overall, the study bank's main bank customers are rather more

committed to it than those customers who regard another bank as their main bank. This is a recurring theme throughout the subsequent analysis. Predictably, only on the "decreasing business" with main bank and "opening accounts" elsewhere did the study bank's "main bank" customers have lower probabilities than those customers who nominated a competitor as main bank.

Table 10.23. Future Loyalty Intentions by Proportion of Business and Gender

10.23 (a)

	Proportion of Business in Main Bank*							
	All Customers (1128) %	<68% (64) %	68-80% (78) %	81-90% (138) %	91-99% (265) %	100% (562) %	*F*	*p*
Chances that you will...								
Say positive things about main bank to others	73	56	66	66	74	78	12.91	0.00
Recommend main bank to someone who wants advice	7	53	63	69	77	81	23.80	0.00
Encourage relatives to do business with main bank	66	46	55	58	66	73	27.86	0.00
Increase banking business at main bank next year	46	36	41	46	47	48	13.81	0.00
Decrease banking business at main bank next year	18	26	28	18	19	15	4.61	0.00
Open account(s) at another bank next year	14	22	17	16	10	5	18.69	0.00

10.23 (b)

	Gender*			
	Males (481) %	Females (647) %	*t-test*	*p*
Say positive things about main bank to others	75	72	-1.25	.22
Recommend main bank to someone who wants advice	78	74	-1.98	.05
Encourage friends/relatives to do business with main bank	69	65	-2.03	.04
Increase banking business at main bank next year	49	44	-2.18	.03
Decrease banking business at main bank next year	18	18	.64	.52
Open account(s) at another bank next year	14	13	.69	.49

* Results in Table 10.23 are mean proportions

Length of time spent as a customer with one's main bank is a crucial element of behavioural loyalty in that loyalty intentions are positively related to longevity of banking relationship. Proportion of business that one has with one's main bank is associated positively with

customers' loyalty intentions as portrayed in Table 10.23. The relationships reported here are especially strong with, for example, average probabilities among those whose only bank is their main bank (100%) being 20 percentage points higher than customers who give less than two thirds of their banking business to their main bank. These differences are all statistically significant at the 99% confidence level. On some issues of reinforcing and recommending one's main bank, female customers are slightly more reticent than men. Gender is statistically significant at the .05 level in three of the six items shown in Table 10.23 (b) although the mean proportions (derived from the Juster scale) for males and females are quite similar. One might argue that "increasing banking business" is dependent upon extraneous factors such as the need for a new mortgage or the desire for a loan. Given stereotypical male/female roles, females may be less likely *per se* to increase banking business in a 12 month period. Virtually nowhere else in this thesis is gender a discriminating variable.

Table 10.24 Future Loyalty Intentions by Age and Education

10.24(a)	Age*							
	All Customers (1128) %	<30 (226) %	30-49 (221) %	40-49 (224) %	50-64 (164) %	65+ (293) %	*F*	*p*
Chances that you will...								
Say positive things about main bank to others	73	67	72	71	75	80	8.43	0.00
Recommend main bank to someone who wants advice	76	70	74	74	77	82	7.37	0.00
Encourage friends/relatives to do business with main bank	66	61	63	65	72	73	6.39	0.00
Increase banking business at main bank next year	46	48	49	49	51	38	5.83	0.00
Decrease banking business at main bank next year	18	20	19	19	20	14	1.94	0.10
Open account(s) at another bank next year	14	22	17	16	10	5	18.69	0.00

10.24(b)	Education*						
	<4yrs 2° (376) %	4+yrs 2° (212) %	Trade Cert (125) %	Tertiary (216) %	Prof (142) %	*F*	*p*
Chances that you will ...							
Say positive things about main bank to others	76	70	73	73	74	2.40	.04
Recommend main bank to someone who wants advice	79	72	77	74	76	2.42	.03
Encourage friends/relatives to do business with main bank	71	64	67	63	67	2.71	.02
Increase banking business at main bank next year	44	49	48	47	49	1.21	.30
Decrease banking business at main bank next year	17	18	19	19	21	1.36	.24
Open account(s) at another bank next year	10	15	17	16	17	3.24	.01

*Results in Table 10.24 are mean proportions

Tables 10.24 and 10.25 consolidate further the variation between respondents on their intended loyalty to their main bank. Loyalty to one's main bank intensifies with age, particularly, because "opening accounts at another bank" is three-four times more likely among the under 40s than the over 65s. Educational status (which is strongly associated with age) shows some inverse associations with intended loyalty, that is, the lower the status, the higher the intended loyalty. Hence, tertiary and professionally qualified customers are somewhat more likely than anyone else to open accounts with competitive banks next year. Relationships between intended loyalty and household income (Table 10.25) display similar trends: customers from higher income households are somewhat less

likely to "recommend" but more likely to seek out other banks. Yet these customers also report higher probabilities of increasing banking business with their main bank too.

Table 10.25. Future Loyalty Intentions by Household Income

		Annual Household Income*					
10.25(a)	All Customers (1128)	<$20K (222)	$20K-$29.9K (176)	$30K-$39.9K (195)	$40K-$49K (112)		
Chances that you will...	%	%	%	%	%		
Say positive things about main bank to others	73	77	73	73	74		
Recommend main bank to someone who wants advice	76	80	77	76	77		
Encourage friends/relatives to do business with main bank	66	72	69	64	67		
Increase banking business at main bank next year	46	42	43	47	51		
Decrease banking business at main bank next year	18	16	17	17	15		
Open account(s) at another bank next year	14	10	11	16	14		
10.25(b)	$50K-$59.9K (113)	$60K-$79.9K (120)	$80K-$99.9K (58)	$100K+ (68)			
Chances that you will ...	%	%	%	%	*F*	*p*	
Say positive things about main bank to others	71	68	75	72	1.13	.34	
Recommend main bank to someone who wants advice	74	69	77	70	2.25	.02	
Encourage friends/relatives to do business with main bank	63	63	68	62	1.65	.11	
Increase banking business at main bank next year	47	53	50	49	2.33	.02	
Decrease banking business at main bank next year	23	19	20	20	1.31	.24	
Open account(s) at another bank next year	17	14	19	20	2.46	.01	

*Results in Table 10.25 are mean proportions

In summary then, intended loyalty to the sample's main bank seems relatively high. Nonetheless, several trends differentiate customers from one another. The higher the proportion of business with one's main bank, the more "loyal" one is - a strong, positive relationship. Similar trends are evident for age whereas the relationships between future loyalty and education, and future loyalty and household income are inverse ones.

10.8 Bank Defection

10.8.1 Past Defection Behaviour

In his earliest paper on New Zealanders' self-reported defection rates from banks, Colgate (1996) concluded that the annual customer defection rate was about 8%. Then in a subsequent study in 1999 he found that banking customers' annual switching rate (self-reported again) is actually only 4% although 15% expressed an intention to switch. Defection from banks is an important issue to both banks themselves and researchers because, on the one hand, customer retention tends to be a marketing strategy while on the other, defection rates are likely to affect measurements of perceived service quality, customer loyalty and even customer profitability.

In this thesis, customers were requested to state if they had ever ended business with a bank and then further, had they done so in the last 12 months. Additionally, they were invited to state a probability of leaving their main bank, that is closing all accounts and terminating business. Then one year after this information was collected, the study bank provided data for the sample respondents allowing the author to calculate a defection rate as well as a comparison of predicted defection versus actual defection. The utility of such a measurement for customer retention forecasting is obvious.

Table 10.26 Past Bank Defection Behaviour by Main Bank, Age and Education

10.26(a)

	Main Bank			Age				
	All Customers (1128) %	Study Bank (886) %	Competitors (242) %	<30 (226) %	30-39 (211) %	40-49 (224) %	50-64 (164) %	65+ (293) %
Ever Defected?								
Yes	54	57	43	49	56	62	58	48
No	46	43	57	51	44	38	42	52
	$\chi^2 = 13.93$ df = 1, $p<0.00$			$\chi^2 = 12.72$, df = 4, $p = 0.01$				

10.26(b)

	Educational level				
	4yrs 2° (376) %	4+yrs 2° (212) %	Trade Cert (125) %	Tertiary 3° (216) %	Prof (142) %
Ever Defected?					
Yes	47	52	60	62	66
No	53	48	40	38	34
	$\chi^2 = 35.98$, df=4, $p=0.00$				

Table 10.27. Past Bank Defection Behaviour by Household Income

	Annual Household Income							
	<$20K (222) %	$20K-$29.9K (176) %	$30K-$49.9K (195) %	$40K-$49.9K (112) %	$50K-$59.9K (113) %	$60K-$79.9K (120) %	$80K $99.9K (58) %	$100K+ (68) %
Ever Defected?								
Yes	39	52	59	61	56	58	76	61
No	61	48	41	39	44	42	24	39

$\chi^2 = 40.57$, df=7, p=0.00

Somewhere, sometime, just over half (54%) of the study bank's customers have closed all accounts and terminated business with a bank either by necessity (leaving the country or the region) or by choice. Nevertheless, the study bank's "main bank" customers, people aged 40-64, customers with higher educational status, and those from middle and upper income households are rather more likely to have "defected".

Those who had "defected" in the past were then asked about such recent behaviour. Table 10.28 shows that 8% of the entire sample (or 14% of "defectors") claim to have closed all accounts and terminated business with a bank in the previous year, with the under 30s over-represented. Also, customers from households earning annual incomes in the $40,000-$60,000 category and the over $100,000 category are more likely to have "defected".

Table 10.28. Defection in Last 12 Months

10.28(a)		Age				
	All Customers (1128) %	<30 (226) %	30-39 (211) %	40-49 (224) %	50-64 (164) %	65+ (293) %
Defected last 12 mths?						
Yes	8	12	6	7	7	7
No	92	88	94	93	93	93

$\chi^2 = 17.95$, df=4, p=0.01

10.28(b)	Household Income							
	<$20K (222) %	$20K-$29.9 (176) %	$30K-$39.9 (195) %	$40K-$49.9 (112) %	$50K-$59.9 (113) %	$60K-$79.9 (120) %	$80K-$89.9 (58) %	$100K+ (68) %
Defected last 12 mths?								
Yes	6	8	7	11	11	3	7	17
No	94	92	93	89	89	97	93	83

$\chi^2 = 15.9$, df = 7, p = 0.05

10.8.2 Probable Defection Behaviour

Using Juster's (1966) eleven-point probability scale, respondents were requested to state their probability of closing all accounts and terminating the relationship with their main bank in the next 12 months. (Results derived from Juster's scale can be expressed as probabilities or proportions, which are weighted averages in this case, of customers who intend to complete this action.)

Table 10.29. Probability of Defection by Time with Main Bank and Past Defection Behaviour

		Time with Main Bank (Quartiles)				Defected in last 12 months?	
	All Customers (1128) %	Up to 7yrs (282) %	8-15yrs (268) %	16-29yrs (259) %	30+ (260) %	Yes (88) %	No (1040) %
Probability of...							
Defecting in next 12 months	10.1	14.4	9.1	7.5	8.6	13.8	9.8
		F = 5.18, p = 0.00				*t = 0.39, p = 0.17*	

Table 10.30. Probability of Defection by Gender and Age

	All	Gender		Age				
	Customers (1128) %	Males (481) %	Females (647) %	<30 (226) %	30-49 (221) %	40-49 (224) %	50-64 (164) %	65+ (293) %
Probability of...								
Defection in next 12 months	10.1	8.4	11.3	12.3	11.0	9.8	11.7	6.8
		t = 2.19, p = 0.03			*F = 2.39, p = 0.05*			

Note: Gender codes = female (1), male (2), hence t value is positive

Table 10.31. Probability of Defection by Household Income

	All Customers (1128) %	<20K (222) %	$20K-$29.9K (176) %	$30K-$39.9K (195) %	$40K-$49.9K (112) %	$50K-$59.9K (113) %	$60K-$79.9K (120) %	$80K-$99.9K (55) %	$100K+ (68) %
Probability of...									
Defecting in next 12 months	10.1	8.7	8.2	9.0	14.0	10.0	9.7	7.5	18.7
				F = 2.09, p = 0.03					

Juster's scale is best used for prediction of a population's behaviour as discussed in

Chapter's Four (section 4.3.1) and Nine (section 9.6). Using the scale to predict what individuals do is fraught with problems (and has proved to be so) given that probability-based scales should be used for prediction only at the macro (population) level. Tables 10.29 to 10.31 show that one in every ten customers expect to defect in the next 12 months. Those who have banked with their main bank less than eight years, are female customers, the under 40s (especially the under 30s) and the richest households ($100,000+ annual income) show an above average predisposition to defect. These results closely mirror customers' claimed recent defection behaviour. Interestingly, those who had defected in the last year were no more likely (in statistical terms) to defect again than anyone else, though the small sample of recent defectors (n=88) tends to affect this result. Their probable defection rate of nearly 14% suggests that any bank should look closely at customers they acquire from other banks and prepare themselves for some on-going defection. Notably, intended defection from main bank was no more prevalent among customers who listed their main bank as the study bank. Yet Table 10.26 has past defection behaviour significantly higher for study bank "main bank" customers. Undoubtedly the study bank "main bank" sample includes proportionately more of those customers with the predisposition to defect but once variables such as age, educational status and annual household income are held as constants, it appears that intended defection from the study bank is no more or no less than from competing banks. Perhaps also once a customer joins the study bank propensity to switch decreases.

Study bank management provided retention/defection data for the original sample (n=1700) one year after the survey. These data revealed the following:

	(1700)	
	f	%
Dormant: account untouched in 3+ years	30	1.76
Defected for unknown reason	21	1.24
Died since survey	14	0.82
Moved out of region, overseas etc.	10	0.59
Defected to another bank	9	0.53
Total defectors	84	4.94
No change in status	1616	95.06

Therefore, approximately 5% of the study bank's customers can be expected to leave the bank in a year if the 1997-1998 data are representative. Within the actual processing sample for this thesis (n=1128) were 23 people who defected in the year after the survey.

Being only 2% of that sample, this rate seems low and the subsample of 23 precludes any testing for statistical significance. What appears to have happened is that the true defection rate of 5% is masked by survey response issues like terminally ill customers or those about to leave the region or those who have not accessed their accounts in at least three years not responding to a mail survey. Nevertheless, a brief analysis of the results for the n=23 actual defectors reveals no differences by their main bank (study bank or competitor) or proportion of banking business with main bank or past defection behaviour. However, half of the defectors banked with their main bank fewer than eight years (compared to 25% of all customers) and one in three for less than five years (compared to 13% for all customers). On the whole defectors were younger than the sample average (56% of defectors aged under 40 as against 40% of the total sample under 40) and from lower income households (73% under $40,000 p.a. versus 53% for the total sample). These results fit quite closely with those discussed above regarding past defection behaviour.

Finally, did these actual defectors predict their defection a year ago? Three of the 23 died since the survey (and each had no intention of leaving their main bank) leaving 20 to investigate further. Two of these had 90% or 99% probabilities of defecting while the other 18 had very low probabilities (no chance or 10% chance). Hence, the actual defectors' estimates of their own defection one year ago (11%) were almost identical to the total sample (10%). With the actual overall defection rate registering 4.94% (5%), it appears that predictions of defection using the Juster scale's probability measurement procedure are overstated. However, circumstances that lead to defection from one's main bank may not be easy to predict (only two of the 23 defectors could predict their defection a year ago).

10.9 Summary

This chapter has addressed interrelationships between the first three constructs of the service-profit chain (popularised by Heskett et al, 1994), namely perceived service quality, customer satisfaction and customer loyalty. In particular, customers who exhibited differing results on these constructs have been identified along with the variables that help show such discrimination. Customers' ages, their educational status, their household's annual income, the share of wallet they give their main bank (the depth

of their relationship) and their length of time as a client of their main bank (the length of their relationship) all act as strong discriminators.

Results show high levels of perceived service quality, of satisfaction with and loyalty to customers' main banks. And the same groups of customers score each of these three service-profit chain constructs in the same ways. Associations with age, time with main bank and main bank's share of wallet are all direct. Hence older customers, longer serving customers and "100% of personal banking business to main bank" customers are all stronger in their perceptions of, satisfaction with and loyalty to their main bank. Conversely, the associations between the three service-profit chain constructs and educational status and annual household income are inverse ones. More educated and higher income customers tend to be less enamoured of, less satisfied with and less loyal to their main bank.

The high degree of consistency in the results is compelling enough, albeit on this bivariate level analysis, to conclude that customers who perceive their main bank to exhibit quality service will be both satisfied and loyal. These claims are tested further in the next two chapters.

Finally, defection from one's main bank in the last year was claimed to be 8% by the sample's customers and their probability of defection in the next 12 months was 10%. Yet when intended behaviour was measured against actual behaviour one year later, the actual defection rate was 5%. This result corresponds very closely with that obtained by Colgate (1999) in a nation-wide study of personal retail banking customers.

CHAPTER ELEVEN

RESULTS AND DISCUSSION: MULTIVARIATE ANALYSIS OF THE SERVICE-PROFIT CHAIN

11.1 Introduction

The analysis conducted in the preceding chapters has established the foundation for the multivariate analysis discussed in this chapter. Previously, Chapter Eight discussed sampling issues, the testing of the measurement instruments and some preliminary multivariate analysis using factor analysis. Then Chapter Nine (major study's Methodology chapter) repeated some of this analysis, this time for the large (n=1128) sample, with particular emphasis on the attitudinal data's (perceived service quality and customer loyalty) suitability for further multivariate analysis. Issues like data distribution, correlation between attitudinal dimensions, instrument validity and instrument reliability were all discussed there. Then Chapter Ten (the major study's Descriptive Results) investigated, in detail, relationships between the variables of interest at the bivariate level. All this preceding analysis has established the data's ability to discriminate between respondents.

The present chapter, Chapter Eleven, discusses the results derived from factor analysis, and then cluster analysis, of the major study's attitudinal data. Until now this thesis has placed considerable emphasis upon results derived from behavioural variables. However, it can be argued that observing patterns of behaviour does not always fully explain that behaviour, giving rise to the investigation of the attitudes that might lie behind those behaviours.

11.2 Underlying Dimensions of Perceived Service Quality and Customer Loyalty

The attitudinal dimensions of perceived service quality and of customer loyalty cannot be measured directly. Instead these dimensions can be regarded as labels 'that characterise responses to related groups of variables' (Norusis, 1988, pB41) and in this thesis the variables in question took the form of statements to which respondents applied their level of agreement (using the standard Likert scale). Thus perceived service quality

and attitudinal customer loyalty are not single measurable entities but multidimensional constructs derived from measuring other, observable variables. Factor analysis (described in Chapters Eight and Nine) can be used to discover these unobservable, underlying dimensions, and 'one goal is to represent relationships among sets of variables parsimoniously. That is, we would like to explain the observed correlations using as few factors as possible' (ibid, 1988, pB43). This sentiment is discussed further below where three, four and five factor solutions for both perceived service quality and customer loyalty data are presented.

11.2.1 Perceived Service Quality

Before settling on the preferred factor solutions for perceived service quality, recognition was given to the pilot study's results (Chapter Eight). There a five factor solution seemed to yield the most explanation but with some loss of reliability (via low Cronbach alpha coefficients) in the fourth and fifth factors. Determining the number of factors needed to adequately represent the original data calls for the researcher's intervention, usually with "objective" criteria. For example, the amount of variance explained by each factor (using eigenvalues>1 and examination of the Cattell (1966) scree plot), how well each factor solution (in this case three, four and five) describes the original variables (the proportion of variance explained by each – the communality) and reliability coefficients (such as Cronbach's alpha) for each factor are often used. Yet the factor solution adopted still requires the researcher's judgement. The decision to examine factor solutions containing between three and five factors arose from each solution's scree plot that showed a marked change of slope in those areas. Additionally, eigenvalues were always set to exceed one. What then for the major study's perceived service quality data?

Following varimax rotation, three, four and five factor solutions were computed. The three-factor solution is presented as Table11.1 whereas the four and five factor solutions are presented in the Appendix as Tables A11.1 and A11.2. Table 11.1's three factor solution shows high levels of reliability (Cronbach's alpha coefficients all exceeding 0.75) but at the expense of some explanation. Four of the five original SERVQUAL dimensions (PZB, 1991; 1994) have coalesced into one predominant *"Customer Service"* dimension leaving the other two factors as *Tangibles* (almost always a separate dimension in any empirical study) and a factor that combines pricing and marketing mix variables specific to personal retail banking. Recognising the low communalities of

pricing variables (interest rates) in the three factor solution and cognisant of the low correlations (below 0.35) between these and all other perceived service quality variables, a four factor solution was invoked that suppressed the two pricing variables. Table A11.1 in the Appendix shows the results. The predominant *"Customer Service"* dimension (a compilation of PZB's (1991; 1994) *Reliability-Responsiveness-Assurance-Empathy* factors) is still present, accompanied by the *Tangibles* dimension, by the *Environmental* dimension (specific to personal retail banking) and by a weak *"Parking and Queuing"* dimension (Cronbach's alpha coefficient of 0.51). Clearly this factor solution is not especially helpful either.

Hence a five-factor solution with all 22 variables (just like in the pilot study reported in Chapter Eight) was derived as seen in Table A11.2. This solution still features the large *"Customer Service"* dimension (factor I) and the rather nebulous *"Parking and Queuing"* dimension (factor V) with its poor reliability seen in the previous solution. *Tangibles*, as always, have coalesced well together, while the Pricing variables have split away from the other marketing mix elements (the *Environmental* dimension) to form a factor on their own. Nevertheless, the reliability results for these last two factors (0.56 and 0.51, respectively) in Table A11.2's five factor solution leave a lot to be desired.

Each factor solution has its strengths and weaknesses but the weaknesses of the four and five factor solutions' reliability have been judged to outweigh their extra explanatory power. Therefore the three-factor solution for perceived service quality with its dimensions of *Customer Service*, *Tangibles* and *Personal Retail Banking* characteristics has been chosen as the preferred solution. Hair et al (1992) suggest that if the factor solution is "tight" and highly reliable, then cluster analysis is an appropriate multivariate technique for further investigation.

Table 11.1 Perceived Service Quality: Factor Loadings for the Three Factor Solution

		Factor			
	Item	I	II	III	Communality
P17	Staff willing to listen	**.85**	.19	.16	.78
P08	Sincere in problem fixing	**.82**	.27	.15	.77
P14	Individual attention	**.80**	.18	.27	.74
P16	Confident doing business there	**.79**	.33	.20	.78
P10	Always willing to help	**.79**	.20	.26	.73
P06	Value as a customer	**.78**	.17	.24	.70
P11	Never too busy	**.78**	.27	.29	.76
P12	Consistently courteous	**.75**	.12	.31	.67
P15	Knowledge bank procedures	**.75**	.25	.25	.69
P13	Product knowledge	**.72**	.26	.25	.65
P07	Keep time promises	**.69**	.24	.26	.61
P09	No queues	**.61**	.18	.16	.43
P21	Extras like prize draws	.22	**.80**	.04	.69
P20	Supports local community	.12	**.78**	.14	.64
P22	Strong reputation	.25	**.71**	.15	.58
P19	Mortgage interest rates good	.10	**.59**	.17	.39
P01	Adequate parking	.19	**.52**	.15	.33
P18	Investment interest rates good	.26	**.46**	.00	.27
P03	Modern looking equipment	.31	.16	**.81**	.78
P02	Clear signage	.19	.27	**.72**	.63
P04	Neatly dressed staff	.41	.11	**.71**	.69
P05	Tidy writing counters	.41	.10	**.71**	.68
	Eigenvalues	10.77	1.86	1.35	
	% of variance "explained"	48.9	8.4	6.1	(63.4%)
	Cronbach's alpha coefficient	.96	.75	.79	

11.2.2 Customer Loyalty

The 18 attributes used to measure the attitudinal dimensions of customer loyalty were subjected to extensive preliminary analysis in Chapters Eight and Nine. Ultimately a five factor structure was extracted from the pilot study's sample (n=160) which aligned quite closely with previous research by Jain et al (1987), Dick and Basu (1994), Denison and Knox (1995) and Gremler (1995) into the underlying dimensions of customer loyalty. However that five-factor structure had a worrying weakness in the reliability of factors four and five *(Environmental Impact and Familiarity/Interpersonal Bonds)* which prompted a change in the major study's measurement of customer loyalty. The wording of several attributes were modified and some attributes added to strengthen the representation of these dimensions.

Data from the major study's (n=1128) battery of 18 customer loyalty attributes were subjected to factor analysis, with varimax rotation, and three, four and five factor

solutions extracted as displayed in Tables A11.3 and A11.4 (in the Appendix) and Table 11.2 below. As seen in Table A11.3, the three-factor solution extracts the dimensions of *Relationship Commitment*, *Habit/Inertia* and to some extent *Familiarity/Interpersonal Bonds* quite well. Yet the context for customer loyalty in personal retail banking (the *Environmental Impact* and *All-in-one Banking* dimensions) has been suppressed in this solution which only explains 54% of the variance in the original variables.

Table A11.4 presents a four-factor solution. Here the *Environmental Impact* dimension has emerged to join the three dimensions described in the three factor solution above but the *All-in-one Banking* dimension is still missing. The reliability result (Cronbach's alpha coefficient) for the fourth factor has fallen to 0.57 but explained variance has risen to 61%.

Perusal of Table 11.2 shows a five factor solution for customer loyalty with relatively clear depiction of each dimension (Factor I: *Relationship Commitment*; Factor II: *Familiarity/Interpersonal Bonds*; Factor III: *All-in-one Banking*; Factor IV: *Habit/Inertia*; Factor V: *Environmental Impact)* reflected in the explained variance at 66%. Reliability measures for factors IV and V (Cronbach's alpha coefficients of 0.66 and 0.57, respectively) are rather low but are considered acceptable within the context of extracting five factors from only 18 attributes. Overall then, attitudinal customer loyalty in personal retail banking can be depicted as a five-dimensional construct and these five dimensions are described more fully in Table 11.3.

Table 11.2 Customer Loyalty: Factor Loadings for the Five Factor Solution

	Item	Factor I	II	III	IV	V	Communality
L01	Best bank for me	**.84**	.24	.17	-.08	-.12	.81
L02	Like doing business there	**.83**	.29	.18	-.10	-.12	.83
L03	Loyal to this bank	**.71**	.07	.20	.13	-.18	.60
L04	Very satisfied (comparatively)	**.85**	.20	.08	-.05	-.12	.78
L14	Status quo – no switch	**.67**	.11	.18	-.06	-.10	.51
L07	Gives unique privileges	.45	**.48**	.07	.12	.04	.45
L09	Personally recognised	.16	**.84**	.05	.02	-.03	.73
L12	Treated a "bit special"	.23	**.84**	.20	.10	-.03	.81
L16	"Bond" with bank staff	.26	**.78**	.36	.03	-.06	.81
L17	All-in-one banking best	.28	.27	**.76**	.05	-.13	.74
L18	Stay even if better elsewhere	.27	.18	**.81**	.03	-.01	.76
L11	Switching is risky	.15	.11	**.48**	.29	.27	.42
L05	Switching costs be high	.23	.05	-.11	**.76**	-.04	.65
L06	Not worth hassle switch	-.31	-.04	.11	**.73**	.21	.69
L08	Better devil you know	-.11	.14	.25	**.73**	.11	.64
L13	Switch for lower fees	-.04	-.23	.00	.04	**.73**	.59
L15	Rather deal with new bank	-.13	.10	-.11	.11	**.71**	.56
L10	Switch for convenience	-.22	.02	.13	.06	**.69**	.54
	Eigenvalues	3.82	2.64	1.88	1.82	1.75	
	% of variance "explained"	21.2	14.6	10.5	10.1	9.7	(66.1%)
	Cronbach's alpha coefficient	.86	.83	.69	.66	.57	

The labels applied to each dimension in Tables 11.2 and 11.3 reflect the weight of their factor loadings. Generally these are self explanatory although the *Environmental Impact* dimension is heavily influenced by the notion of competition in personal retail banking and consumers' abilities to switch banks if they are sufficiently chagrined by their former bank or sufficiently enticed by their new bank.

Table 11.3 Customer Loyalty in Personal Retail Banking

Relationship Commitment
- This bank is clearly the best one for me
- I really like doing business with this bank
- Compared to other banks I've used, I'm very satisfied with my main bank
- I consider myself to be a loyal customer of this bank
- As long as the present service continues, I doubt that I would switch from my main bank

Familiarity & Interpersonal Bonds
- I am personally recognised whenever I visit my bank
- My bank's employees treat me a bit special
- I feel there is a bond between me and my bank's employees
- This bank gives me particular privileges I would not get elsewhere.

Habit/Inertia
- For me, the cost in time, money and effort to switch banks would be high
- I stay with this bank only because it's not worth the hassle for me to switch banks
- The major reason I don't switch banks is better the devil you know than the one you don't.

All-in-one Banking
- I would rather do all my banking business with one bank even if another bank offered a slightly better deal on a loan or an investment account
- It is better to do all your banking in one bank because then they have a better overall picture of your finances
- Switching is risky.

Environmental Impact
- Lower or no fees at another bank would convince me to switch my business there
- I would rather deal with a new bank in town than one of the more established banks
- If another bank's branch was more conveniently located for me, I would switch.

11.3 Exploring Types of Personal Retail Banking Customer

In order to provide additional insight into "who are the satisfied, the loyal and the profitable" (one of the major objectives of this thesis), the multivariate method of cluster analysis has been used. Arguably, much of the bivariate analysis reported in Chapter Ten already gives strong "leads" as to who these types of customers are. Nevertheless, cluster analysis as used here "re-sorts" the demographic and behavioural data based on attitudinal items and dimensions into distinct groups rather different to any derived from bivariate analysis. In this case those attributes that govern customer loyalty were used. The analysis conducted so far in this thesis has been underpinned by the conceptual model of the service-profit chain, that is, the relationships between perceived service quality, customer satisfaction, customer loyalty and customer profitability. That model

reflects the findings of the services marketing and services management literature: perceived service quality and satisfaction are antecedent to customer loyalty. Submitting only those 18 customer loyalty attributes to cluster analysis is logical given that customer loyalty is the output of two antecedent constructs, perceived service quality and customer satisfaction, yet customer loyalty itself is antecedent to customer profitability. It was established in Chapters Eight and Nine that the data have the ability to discriminate between groups of respondents.

Cluster analysis is one of a number of grouping methods that search for a plausible, "natural" structure among cases based on their multivariate profile. In this thesis, cluster analysis has been used to group individuals into clusters so that people in the same clusters are more like each other and less like people in other clusters. (These clusters show high internal homogeneity and high external heterogeneity.) It must be acknowledged that cluster analysis is much more an art than a science (Hair et al, 1992), particularly in the partitioning stage. (Cluster analysis has three major stages: partitioning, interpretation and profiling.) Here, the choice of variables for computing similarity among individuals, the way such similarity should be measured, the procedure for allocating individuals to clusters, and the number of clusters themselves, are all open to debate. These choices alone usually result in arbitrary rather than objective outcomes. As Hoek, Gendall and Esslemont (1996) state, '*different clustering techniques may produce different solutions, and even the same technique may produce a different result for the same set of data because each technique requires substantial input from the researchers at various stages*' (p 27). Yet, cluster analysis is still useful to explore for additional insights in classifying retail banking customers.

The author began the cluster analysis with the nomination of five clusters to begin SPSS's Quick Cluster program. This program uses Euclidian distance as its similarity measure, or, more specifically, Mahalanbois distance (which standardises the data in the selected attributes to eliminate any bias introduced by differences in their category structure). Nonhierarchical procedures are used to allocate individuals to clusters. While choosing five clusters was an arbitrary decision, some prior analysis (not reported) with the data from the pilot study yielded an interpretable three cluster solution after beginning with five clusters.

Cluster analysis requires every variable in those chosen for clustering to be present for every respondent, that is, no missing values. Where data are missing, the cases concerned are dropped from the analysis. Meeting this condition reduced the processing sample to 578 cases, which is still regarded as a "large" sample with its error margins of plus or minus 4.1% at 95% confidence.

A five-cluster solution successfully allocated 570 of the 578 cases, leaving eight outliers that were removed from subsequent analysis. Discriminant analysis was applied to the five-cluster solution to examine the accuracy of the allocation of respondents to their "segments". Table 11.4 shows the discriminatory power of the five-cluster solution with only segment 5 falling below at least 90% correct allocation of respondent to correct segment. As discussed below, segment 5 ("Restless Potential Switchers" – the largest segment) provided the most challenge for the researcher to describe. In mathematical space segment 5 members are in the most disparate cluster as shown by reference to any territorial plot of the solution (not shown here but obtainable from the author) whereas segment 2 members are the most tightly clustered.

Table 11.4 shows the slight problem with misallocation of 30 of segment 5's (165) members into segments 2, 3 and 4. This proved to be a minor problem when, for instance, the relationship between each segment and each of the 40 perceived service quality and customer loyalty attributes was tested by correlation. The findings confirmed clear discrimination between the segments. These correlations have not been presented here – there are rather too many – but are obtainable from the author. Overall then, 90% of respondents were correctly allocated to their segment, that is 513 of the 570 allocated customers in Table 11.4.

Table 11.4 Discriminant Analysis: Prediction of 'Attitude' Segment Membership

Actual	Sample	Predicted Segment				
Segment	(578)	1	2	3	4	5
1	137	127	-	-	7	3
		93%	-	-	5%	2%
2	72	2	68	-	2	-
		3%	94%	-	3%	-
3	72	-	5	66	-	1
		-	7%	92%	-	1%
4	124	3	1	2	117	1
		2%	1%	2%	94%	1%
5	165	12	8	10	-	135
		7%	5%	6%	-	82%
Ungrouped cases	8	-	1	6	-	1

Quite obviously, the five-cluster solution discriminates well between respondents, as this is the function of cluster analysis. Nonetheless, cross tabulation results for the demographic (categorical) data, and oneway ANOVAs for the scale-based attitudinal data on perceived service quality, customer satisfaction and customer loyalty measures all reveal interpretable differences between segments. Tables 11.5 – 11.6 in the text and Tables A11.5 to A11.6 in the Appendix illustrate these differences and provide the basis for describing the five segments, named as follows:

- Segment 1: "Committed Loyalists" (24%)
- Segment 2: "Uncommitted Stayers" (13%)
- Segment 3: "Restless Stayers" (12%)
- Segment 4: "Committed and Captured" (22%)
- Segment 5: "Restless Potential Switchers" (29%).

11.3.1 Segment 1: The Committed Loyalists

Nearly one quarter of the study bank's personal retail banking customers could be termed "committed loyalists". This rather emotive term is applied to them for their exceedingly high levels of relationship commitment (see Table 11.5, segment 1).

Table 11.5 The Cluster Solution: Customer Loyalty by 'Attitude' Segment

Customer loyalty attribute	Segment						
Relationship Commitment	1	2	3	4	5	*F*	*p*
Best bank for me	6.71	4.31	4.93	6.56	5.63	85.10	.00
Like doing business there	6.65	4.53	4.93	6.66	5.71	98.50	.00
Loyal to this bank	6.67	4.97	5.82	6.67	5.90	42.00	.00
Very satisfied (comparatively)	6.73	4.68	5.40	6.67	6.00	74.40	.00
Status quo – no switch	6.53	4.89	5.40	6.69	6.01	33.70	.00
Habit/Inertia							
Switching costs would be high	3.30	4.46	5.07	5.98	3.53	46.00	.00
Not worth hassle switching	1.53	4.25	4.56	4.31	2.13	80.71	.00
Better devil you know	2.31	3.99	4.30	5.32	2.29	80.00	.00
Switching banks is risky	4.30	3.90	4.44	4.36	2.55	29.30	.00
Familiarity & Interpersonal Bonds							
Gives unique privileges	5.34	3.73	3.90	5.77	3.67	43.70	.00
Personally recognised	5.54	4.89	2.23	5.87	3.87	72.40	.00
Treated a "bit special"	5.51	4.50	2.82	5.64	3.33	109.50	.00
"Bond" with bank staff	5.53	4.32	2.74	5.89	3.22	117.90	.00
Environmental Impact							
Switch for convenience	2.15	4.54	3.32	2.60	2.61	26.20	.00
Switch for lower fees	2.61	4.35	4.50	4.11	3.98	17.20	.00
Rather deal with new bank	1.99	3.50	2.14	2.23	1.99	13.10	.00
All-in-one Banking							
All-in-one banking best	6.04	4.26	4.82	6.09	3.55	80.30	.00
Stay even if better elsewhere	5.78	4.19	4.94	5.92	3.24	73.80	.00
Processing sample size (n=570)	137	72	72	124	165		

However, their commitment to their main bank is not unconditional – they are not blind to the activities of competitors, nor does their loyalty stem from inertia or being "locked into" a relationship with their main bank. Hence the commitment to the relationship is by choice; one might suggest that segment 1 members are discerning in their banking relationship. Tables 11.6 and A11.5 show *Committed Loyalists* to be relatively mature in age – half are aged over 50 years compared to just over one third of all customers being over 50. Their educational status and annual household incomes are average but their overall satisfaction with their main bank (which happens to be the study bank – 88% - see Table A11.6) is astoundingly high (6.59 on a seven point scale). Such

satisfaction is reflected in their contentment with the performance of each department in their bank (tellers, investments etc) as well as with the perceived service quality of their main bank's *Customer Service*, *Tangibles* and *'Environmental'* performance (see Tables A11.7 and A11.8).

Committed Loyalists' banking behaviour aligns with their positive attitudes to their main bank (see Table A11.8). Over half of them have only one bank and 86% of them place at least 91% of their banking business with their main bank; half of them have been with the one bank for 16+ years. Like their *"Committed and Captured"* counterparts of Segment 4, the *Committed Loyalists* are keen to endorse their main bank to others, seem likely to increase their banking business with their main bank in the next 12 months, and have the lowest probability of defection (see Table A11.8).

11.3.2 Segment 2: "Uncommitted Stayers"

While only about one in eight customers (13%) belong to this segment, they are easily identified. Their commitment to a relationship with their main bank is the lowest of any customer type and they are ambivalent about any special bonds with their bank. While their inertia to switching is about average, their susceptibility to competitive offers is the highest of any segment and they are decidedly ambivalent about the wisdom of "all-in-one banking". These generalisations can be confirmed from perusal of the segment 2 column in Table 11.5.

Uncommitted Stayers' banking behaviour does not quite align with their ambivalent attitudes to their main bank. Many have been with their main bank for more than 16 years (see Table 11.6) suggesting that they are likely to stay but prefer an "arms length" type of relationship. Substantial proportions of these people are main bank customers of competitor banks and they may switch more business to the study bank although their intended behaviour would suggest the status quo will continue (see Table 11.6).

The *Uncommitted Stayers'* segment spans most age groups (Table 11.6) with some concentration in the forties. Education status is similarly mixed as are annual incomes, with median household incomes in the $40,000-$49,999 category. Comparatively, *Uncommitted Stayers* are not enamoured with their main bank's various departments, especially provision of ATMs, telephone banking and both lending and investment

policies. These sentiments appear to be reflected in their overall satisfaction (see Table A11.7), which is equal lowest with Segment 3, and throughout the perceived service quality measures in Table A11.8. For instance, *Uncommitted Stayers* are not very impressed (comparatively) with their main bank's customer service (especially aspects of responsiveness, assurance and empathy), its standing in the community or its "financial" performance (lending and investing rates). The reaction to mortgage interest rates (4.11 mean score) suggests some negative perceptions in this regard. Yet, their behaviour leaves an overriding impression that they will stay with their main bank, albeit somewhat reluctantly.

11.3.3 Segment 3: "Restless Stayers"

Another one in eight customers (12%) can be classified as *"Restless Stayers"*. As the term implies, the attitudes and behaviours of these personal banking customers to their main bank give an impression of restlessness. Some are "locked in" to their banking relationship by habit and inertia. Their commitment to such a relationship is quite low with no affinity or "bonding" at all with their main bank. Switching is a possibility as Table 11.5 demonstrates (see the segment 3 column - switching for lower fees is the highest of anyone) but some of these *"Restless Stayers"* customers are Dick and Basu's (1994) spuriously loyal; when their perceived service quality scores are examined in Table A11.8, they are outright lowest of anyone. Indeed there is a degree of cynicism showing through in their perceptions when compared with those of other customers but the whole banking relationship seems to have little interest for them. The *"Restless Stayers"* have similar attitudes to *"Uncommitted Stayers"* in respect of satisfaction with their bank's performance but there the comparisons stop. The *"Restless Stayers"* are younger (half under 40 years and three-quarters under 50), relatively well educated (one third have tertiary qualifications) and with medium to high annual household incomes (median $50,000-$60,000 per annum).

The banking behaviour of "*Restless Stayers*" reflects their relative youth and their lack of interest in relationships with their bank (see Table A11.6). On average, banking business is shared between two banks and an additional new bank could be contemplated but without defecting from the existing banks – banking is just not that important to them!

Table 11.6 Summary Results by 'Attitude' Segment

	Segment				
	1	2	3	4	5
Characteristics	(137)	(72)	(72)	(124)	(165)
Mean Age group (years)	50-64	40-49	30-39	40-49	30-39
Education Level (Median)	2° School	2° School	Tertiary	2° School	Tertiary
Median Household Income group	$40-49K	$40-49K	$40-49K	$30-39K	$50-59K
Main Bank (Study Bank/Competitor)	Study	Compet	Study	Study	Study
Mean Number of Banks	1.7	1.8	2.0	1.3	2.1
Main Bank Share of Wallet (%)	96	92	90	96	87
Ever Closed Account (%)	63	48	69	53	50
Closed Account Last Year (%)	11	10	14	9	16
Defected Last Year (%)	2	1	4	3	3
Mean Length with Main Bank (years)	16	21	12	24	11
Intentions Main Bank Next Year:					
Positive Word-of-Mouth (%)	87	69	70	88	38
Recommend to Others (%)	89	71	72	91	36
Encourage Friends/Relatives (%)	82	62	60	84	31
Increase Business Main Bank (%)	56	48	45	59	29
Decrease Business Main Bank (%)	12	25	15	21	36
Open Account Competitor Bank (%)	9	14	16	10	35
Defect Completely Main Bank (%)	7	10	9	7	24
Mean Satisfaction Main Bank (7 point scale) With...					
...Tellers	6.35	5.33	5.04	6.46	5.71
...ATMs	5.94	5.02	5.26	6.02	5.68
...Telephone Banking	5.87	5.02	5.04	6.08	5.68
...Lending Department	6.40	5.20	4.77	6.31	5.60
...Investment Department	6.16	4.83	5.02	6.22	5.50
...Overall Performance	6.59	5.17	5.11	6.64	5.96

11.3.4 Segment 4: "Committed and Captured"

Just over one fifth (22%) of the study bank's customers fit this description. While they have the strongest commitment to their bank through their professed loyalty and their "familiarity/interpersonal bonds", there is recognition of being "captured" from high switching costs. It would appear the *"Committed and Captured"* are only too aware of what bankers call "positive entanglement", being that state where the costs for each party to withdraw from the relationship outweigh the benefits from continuance. Reference to Table 11.5 shows the positive commitment of the *"Committed and Captured"* to their banking relationships and their conviction that "all-in-one banking" has considerable advantages. These sentiments are reflected again in Tables A11.7 and A11.8. Satisfaction levels with each banking department are universally high and perceptions of service quality are second to none. Overall satisfaction with main bank registers as an astoundingly high mean score of 6.64.

In terms of banking behaviour (Table A11.6), the *"Committed and Captured"* are the most loyal of customers with two thirds of them having all their business with their main bank and 40% of them having been there for over 30 years. They are staunchly supportive of their main bank, advocating it to others; their intentions are to increase banking business in the future.

The *"Committed and Captured"* are similar to the *"Committed Loyalists"* of Segment 1 in age and educational status (older and with high school education) but have lower median annual household incomes ($30,000-$40,000 per annum). Perhaps it is too simplistic but *"Committed and Captured"* customers seem to be what novelists might term "real salt of the earth" types.

11.3.5 Segment 5: "Restless Potential Switchers"

Close to one in three (29%) customers fit this somewhat perilous state for their main bank. Like members of segments 2 and 3, *"Restless Potential Switchers"* have loyalty attitudes somewhat at variance to their past, and intended, banking behaviour. Table 11.5 shows them to be relatively satisfied with their banking relationship but with little familiarity or bonding in the relationship. Switching could happen (see Table A11.6) and there is little inertia present; *"Restless Potential Switchers"* feel they could switch banks whenever they like. The overriding impression is one of the banking relationship

being just part of life's fabric, nothing more, nothing less! Satisfaction levels with each banking department (Table A11.7) are relatively high, as are most of the perceived service quality attributes although there are murmurings of dissent about parking, queues and mortgage interest rates. Perhaps it is understandable that the *"Restless Potential Switchers"* would focus on these tangible and pragmatic aspects of their banking.

Table A11.6 shows that the *"Restless Potential Switchers"* spread their banking business around the most of any segment. Attitudinally they are indifferent to banking, behaviourally they are somewhat polygamous. They have no strong affiliations to their main bank, do not recommend or advocate it to others, and seem prone to defect: one in four suggest they might close all accounts at their main bank in the next 12 months (see Tables 11.6 and A11.6). For a bank, these customers are rather worrying especially given their comparatively low habit/inertia scores, meaning that they perceive switching to be feasible despite the costs!

Who are the *"Restless Potential Switchers"?* They are younger than average with 29% being under 30 years and three-quarters aged under 50. Given the strong links between age and education status established in the previous chapters, it is not surprising that nearly half the *"Restless Potential Switchers"* are tertiary or professionally qualified. Their incomes reflect such status with one third from households earning annual incomes of $60,000 while their median incomes are between $50,000-$60,000 per annum.

11.4 Summary

Describing customers by their demographic, socioeconomic and behavioural characteristics is relatively straightforward. Managerially, some of these characteristics can be used for targeting marketing communications directly at chosen customer groups. However, it can be argued that observing patterns of behaviour, and those who exhibit such behaviour, does not always fully explain that behaviour. Consequently, this chapter has addressed the underlying attitudinal dimensions of perceived service quality and of customer loyalty through the use of multivariate analysis. The objective was to derive more insight, if possible, from the available data, into "who are the satisfied, who are the loyal and who are the profitable" with particular emphasis upon the construct of customer loyalty.

Subjecting the major study's attitudinal data to factor analysis resulted in the choice of a three-factor solution for perceived service quality and a five-factor solution for customer loyalty. In turn, data for the customer loyalty construct (that construct immediately prior to customer profitability in the service-profit chain) were subjected to cluster analysis and five distinct clusters of personal retail banking customers emerged. While it is acknowledged that cluster analysis requires considerable amounts of arbitrary decision making by the researcher, there is, nonetheless, evidence of substantial differentiation in the five customer segments' desire for depth in their relationships with their main bank. Such differentiation, coupled with customers' distinctive characteristics, behaviours and other attitudes led to them being labeled respectively as *"Committed Loyalists"* (24%), *"Uncommitted Stayers"* (13%), *"Restless Stayers"* (12%), *"Committed and Captured"* (22%) and *"Restless Potential Switchers"* (29%). Those customers most at risk for the study bank are the *"Restless Potential Switchers"* and the two segments of reluctant stayers (*"Uncommitted Stayers* and *"Restless Stayers")* whereas the *Committed Loyalists* are almost advocates for their main bank.

Overall then, more insight into customers' relationships with their main bank was offered by detailed analyses of attitudinal data, with particular benefits gained about customer differences in customer loyalty.

CHAPTER TWELVE

CUSTOMER PROFITABILITY: THE FINAL LINK IN THE SERVICE-PROFIT CHAIN

12.1 Introduction

This chapter describes the final link in the service-profit chain where the results of customer contribution to the study bank's profitability are linked to the preceding variables and constructs of the service-profit chain, that is, perceived service quality, customer satisfaction, and both behavioural and attitudinal loyalty. As well, the ways in which various types of customers are related to customer profitability are discussed. As a result this chapter is a critical section of the thesis in as much as it discusses the practical contribution of the issues of perceived service and usage behaviour to actual bank profitability. However, specific correlations between such factors should not be divorced from their wider context. The customer contribution results were derived from three months' data, and like all results from cross-sectional data, should be viewed with caution. Consider, for example, the case where apparently unprofitable clients may just be at that stage in their lives where they are momentarily "unprofitable" for the study bank. Then there are those customers who are unprofitable on the balance sheet yet may play a role as opinion leaders by influencing others, who are more profitable, to become customers of the study bank.

The overriding theme is that customers are assets and can be managed accordingly. Activity-based costing procedures are used to derive the customer contribution figure for each customer. The distribution of this measure of customer value is discussed along with its implications for the study bank, and for retail bank marketers in general. Ultimately, those customers classified as the "most profitable" and "least profitable" are described together with an investigation of relationships between customer contribution and the constructs of perceived service quality, customer satisfaction and customer loyalty. The academic context for this chapter can be read in Chapter Five.

12.2 Customer Contribution

At its simplest, a business's total profit is the sum of every one of its customers' contributions. In personal retail banking this definition suffices but not, of course, in wholesale banking where large sums are placed on wholesale markets for varying terms. However, in personal retail banking, which dominates the study bank's business, the contribution each customer makes requires tracing each income and cost activity. With cost centre control at branch banking level, many costs are accrued by each branch (costs like rent, utilities and staff) and the study bank's own analysis shows that 70% of its branches' functions are transaction based. Obviously there are costs in recruiting customers in the first place and costs for exiting customers too. Unfortunately none of these are reported separately in the study bank's general ledger and have to be overlooked. It is acknowledged that this thesis's customer contribution analysis gives a cross-sectional, static picture of customer relationships for a short period of time (three months). Obviously banking relationships last longer, often decades, with customer acquisition costs amortised over such time periods as stated by commentators such as Reichheld and Sasser (1990), Heskett et al (1994), Storbacka (1994), Rust et al (1995) and Loveman (1998).

The analysis presented here is better described as customer contribution rather than customer profitability because contribution is the difference between income and expenditure per customer over the time period of the analysis which, in this case, is for three months. Comparatively, the term profit is better used to describe the net of the study bank's income over expenditure for the financial year.

The contribution (income generated minus costs incurred) any one customer makes to the bank under study was depicted by Storbacka (1994) as customer relationship profitability (CRP) and for any time period can be expressed as:

Contribution = Relationship Revenue – Relationship Cost.

Given that the study bank for this thesis levies few fees on its customers (apart from the recognised "front-end" fees for establishing mortgages, buying foreign exchange, arranging insurance etc) the revenue generated per customer is relatively straightforward.

It comes almost exclusively from volume based income, being the weighted rate of return (a confidential figure but in the range 5% - 8% per annum) on individuals' average daily balances. Expressed another way, at the aggregate level, the net after tax margin between the bank's investment income and its cost of funds was 2.91% in 1998-1999 (KPMG, 1999). As stated above, the study bank does not charge its personal retail banking customers any transaction fees. However, several small fees like setting up automatic payments, changing automatic payments and the telephone banking fee ($10 per annum) which affects only 9% of personal customers (personal communication with study bank) had to be overlooked for the contribution analysis. As Connell (1997) states, *"it may have to be accepted that some data will never be available because it is just not economical to capture or generate costs for every activity. If this is the case, an acceptable error in the calculated results will need to be determined and, provided this deviation is less than the likely error in the forecast results, there will be no problems"* (p 145). Storbacka (1994) also expresses similar sentiments when accounting for the omission of cross-selling attempts (such as insurance, travel, superannuation, which are part of the study bank's portfolio), especially those that did not result in any type of sale. Nor is it possible to factor in the costs of establishing the relationship apart from the transaction costs of account opening; true longitudinal analysis to establish contribution over a customer's life cycle would require careful recording of all costs incurred in establishing, nurturing and ending the relationship.

Calculating the expenditure side of the equation – relationship costs (to the bank) – is more difficult. Interest paid out to customers on their accounts' average daily balances is relatively easy but the difficulties come with transaction costs. Connell (1997) has likened the derivation of these costs for each customer to the peeling of an onion, with each layer of costing being exposed progressively. The first layer involves activities relating to cash flow like interest and charges, balance levels for the cost of funds, etc. These have been discussed already. The next layer is direct costs, apportioned to customers, which vary in direct relationship to customer activity, such as issuing cheque books, issuing statements etc. *"The third layer adds the costs of the operational parts of the organisation that have a direct impact upon the customer. For ease of application this third part can be further divided into personnel costs, such as the wages of the branch staff, and the fixed costs of branches"* (Connell, 1997, p 146). The fourth layer includes all remaining personnel and infrastructure costs from the central departments.

In this thesis, the allocation of costs to customers was approached in a similar vein to Connell's suggestions. All items in the study bank's Annual Report's Income and Expenditure Statement were scrutinised and costs apportioned where possible. Obviously, certain assumptions were made at this stage. To take one example for illustration, telephone costs (rental and tolls) were available from the general ledger and internal bank analysis showed that 70% of telephone costs accrue to branches, 10% each to head office lending and finance sections, and the remaining 10% to head office's branch servicing facility, information services, marketing etc. Hence 70% of telephone costs are directly related to customer transactions and need to be apportioned accordingly. For the time period (in this case three months) transaction volume was divided into telephone costs yielding a per transaction telephone cost of $0.0197. Allocating transaction volume per customer per time period for telephone costs becomes easy, as does the apportioning per customer of the remaining 30% of telephone costs.

The same approach was used for direct transaction costs relating to customer activity for the following expenditure items: cleaning, computing, heating and lighting, rates and insurance, repairs and maintenance, salaries, security, staff costs and allowances, stationery, sundry costs, superannuation and training. The actual per transaction rate struck for each of these is confidential. The study bank spent six months testing its customer contribution algorithm before releasing it for use in this thesis. Interestingly, the driving forces for building the customer contribution model came from the Marketing Director and the Information Technology Director, just as predicted by Connell (1997). Further, the case for managing customers as assets has been cemented with top management, and a managerial appointment made to co-ordinate customer asset management.

12.3 Customer Contribution Results

The study bank provided the customer contribution data for each customer in the sample after its own validation testing. Data are for a business quarter (three months). Deliberately there is no extrapolation from the sample of 1128 cases in this study to the bank's entire personal retail customer population (although this has been done by the study bank) to preserve confidentiality for the study bank. Hence the following analysis is confined to the sample results. Note that all statistics (chi-squared, *t tests* and ANOVA

outputs) in Tables 12.2 – 12.8 are based on the actual frequencies in any given cell although percentages are shown in the tables so as to emphasise the relative differences between results.

An immediate reaction to Table 12.1's results is the wide range of contribution but the substantial number of customers (40%) clustered in a narrow band between -$15 and + $107. Consequently there is a high standard deviation of $797 and a mean value ($320) skewed to positive contribution by the few customers making massive contributions. The median of $45 is a more appropriate gauge of central tendency here. The non-normal distribution of the disaggregated customer contribution variable violates one of the crucial assumptions for subsequent multiple discriminant and multiple regression analyses. Hence for the purpose of subsequent analysis, customer contribution has been recoded into a three-category variable with similar sized (but meaningful) categories as depicted in Table 12.2.

Table 12.1 Descriptive Statistics of Customer Contribution

		All Customers (1128)		All Customers (1128)
		$	*Correlations with ...*	
Mean		320.02	Satisfaction with borrowing dept	0.21
Median		45.39	Age	0.19
Standard deviation		797.13	Satisfaction with investment dept	0.17
Minimum		-1,957.93	Main bank (study bank v competitors)	0.16
Maximum		11,291.12	Time with main bank	0.13
Range		13,249.05	Main bank's share of wallet	0.10
Sum		360,980.82		
Percentiles	20	-15.16		
	25	-6.93		
	40	10.79		
	50	45.39		
	60	107.78		
	75	329.40		
	80	457.27		

The major findings from Table 12.2 are that 32% (one third) of the study bank's customers were "unprofitable" (make no or negative contribution to the bank's revenue), while two thirds were "profitable", in a three-month period. Yet within the "profitable" segment there is a cogent finding: the 32% of customers who each contributed in excess

of $170 per quarter in net revenue for the study bank (the more "profitable" customers) accounted for almost all (98%) of the dollar profit.

Table 12.2 Three Category Customer Contribution

	All Customers (1128)		Contribution		Mean no. of years with main bank
Customer Contribution	n	%	$	%	Mean
Negative or $0	356	32	-15,059.98	-4	16
Small profit ($0.01-$170.84)	386	34	20,807.45	6	20
Medium-large profit (>$170.84)	386	34	355,233.35	98	21
Total			360,980.82		F =11.31, p = 0.00

Notable too is that profitable customers have banked with their main bank longer than unprofitable customers have. Identifying who the various types of "contributors" are dominates the ensuing results and discussion. It should be noted though that the proportions of unprofitable customers reported in the marketing and management literature vary across industrial sectors, with commentators such as Reichheld and Sasser (1990) and Cooper and Kaplan (1991) suggesting revision of the 80:20 rule upwards to account for even smaller numbers of profitable customers carrying many "unprofitable" customers. In studies of customer contribution in retail banking (see, for example, Storbacka, 1994; Connell, 1997; Smullen, 1997; Loveman, 1998) these examples of few customers contributing almost all the "profit" seem to hold true.

12.4 Profitable and Unprofitable Customers

The following analyses of customers, in terms of their contributions to the study bank's revenue, are supported by the results presented in Tables 12.3 – 12.8. The analyses there cover two streams of data. Firstly, there are the proportions of unprofitable and profitable customers and how they are characterised by age, household income, banking behaviour etc. These results are portrayed in the upper levels of each table and their associations (or lack of) are assessed by the accompanying chi-squared statistics. Secondly, each table carries data, in the lower levels of the table, on customer value, that allows the assessment of how much (in dollars) each group of customers contributes. Comparative testing here is by means tests and their *t test* or *F-ratio* statistics.

Table 12.3 Customer Contribution by Main Bank and Age

		Main Bank			Age				
Customer Contribution	All Cust-Omers (1128) %	Study Bank (886) %	Compet -itors (242) %		<30 (226) %	30-39 (221) %	40-49 (224) %	50-64 (164) %	65+ (293) %
Negative or $0	32	30	39		52	32	32	23	20
Small profit	34	32	44		33	27	25	38	45
Med-large profit	34	38	17		15	41	43	39	35
	$\chi^2 = 41.05$, df =2, p = 0.00				$\chi^2 = 98.86$, df = 8, p = 0.00				
Sum	$360,980	$333,960	$27,019		$33,188	$108,697	$106,801	$55,464	$56,831
Mean	$320	$376	$113		$147	$492	$477	$338	$194
	$t = 20.80$, $p = 0.00$				$F = 9.53$, $p = 0.00$				

Note that the t values refer to tests of means where the average $ amount is derived from a two category variable Otherwise results are standard ANOVAs .

Table 12.4 Customer Contribution by Household Income

		Household Income							
Customer Contribution	All Cust-omers (1128) %	< $20K (231) %	$20K-$29.9K (182) %	$30K-$39.9K (195) %	$40K-$49.9K (114) %	$50K-$59.9K (113) %	$60K-$79.9K (121) %	$80K-$99.9K (59) %	$100K+ (69) %
Negative/$0	32	43	32	32	33	22	28	22	20
Small profit	34	40	37	29	21	31	31	39	45
Med-large Profit	34	17	31	39	46	47	41	39	35
	$\chi^2 = 187.82$, df = 14, $p = 0.00$								
Sum	$360,980	$22,783	$31,648	$66,762	$58,161	$73,069	$57,811	$20,181	$20,681
Mean	$320	$99	$174	$342	$510	$647	$478	$342	$300
	$F = 7.18$, $p = 0.00$								

Table 12.5 Customer Contribution by Proportion of Business (Share of Wallet)

		Proportion of Business with Main Bank				
Customer Contribution	All Customers (1128) %	< 68% (64) %	68-80% (78) %	81-90% (138) %	91-99% (265) %	100% (562) %
Negative or $0	32	48	29	38	28	30
Small profit	34	31	40	37	38	32
Medium-large profit	34	21	31	25	34	38
	$\chi^2 = 24.82$, df = 8, $p = 0.01$					
Sum	$360,980	$4,568	$22,053	$28,380	$85,106	$214,760
Mean	$320	$71	$286	$206	$321	$382
	$F = 2.58$, $p = 0.03$					

Table 12.6 Customer Contribution by Time with Main Bank

		Time With Main Bank (Quartiles)			
Customer Contribution	All Customers (1128) %	Up to 7 yrs (282) %	8-15 yrs (268) %	16-29 yrs (259) %	30+ yrs (260) %
Negative or $0	32	40	34	31	20
Small profit	34	33	31	33	39
Medium-large profit	34	27	35	36	41
	$\chi^2 = 26.77$, df = 6, $p = 0.00$				
Sum	$360,980	$79,816	$91,920	$89,494	$87,090
Mean	$320	$282	$342	$343	$329
	$F = 0.35$, $p = 0.79$				

Table 12.7 Customer Contribution by Joint Accounts and Cluster

		Joint Accounts?		Segment				
Customer Contribution	All Customers (1128) %	Yes (691) %	No (437) %	One (137) %	Two (72) %	Three (72) %	Four (124) %	Five (165) %
Negative or $0	32	27	39	27	36	21	36	33
Small profit	34	31	39	26	29	40	32	37
Medium-large Profit	34	42	22	47	35	39	32	30
	$\chi^2 = 52.54$, df = 2, $p = 0.00$			$\chi^2 = 17.32$, df = 8, $p = 0.03$				
Sum	$360,980	$306,903	$54,079	$71,651	$20,952	$37,584	$30,008	$49,170
Mean	$320	$444	$124	$523	$291	$522	$242	$298
	$t = 22.47$, df=1, $p = 0.00$			$F = 2.33$, p = 0.05				

Table 12.8 Customer Contribution by Customer Satisfaction

	Mean Satisfaction with Main Bank's...					
Customer Contribution	Tellers Mean	ATMs Mean	Telephone Banking mean	Borrowing Section Mean	Investments Section Mean	Overall Performance Mean
Negative or $0	5.83	5.71	5.81	5.47	5.54	5.97
Small profit	5.99	5.83	5.68	5.71	5.82	6.11
Medium-large profit	5.98	5.68	5.56	5.73	5.76	6.14
F-ratio	1.83	0.93	1.02	4.96	1.98	2.35
p	0.16	0.39	0.36	0.01	0.14	0.10

12.4.1 Unprofitable Customers

Customers with negative or zero contribution are more likely than average to be youthful. Over half are aged under 30 (see Table 12.3) and while the under 30s are 20% of the study bank's customer base, they contribute only 9% of the profit, with a mean per capita profit of $147 compared to the study bank average of $320. Not unexpectedly, those with the lowest household incomes are less profitable (see Table 12.4) as are those who spread their banking business across several banks (see Table 12.5). While those with access to annual household incomes of under $20,000 make up 20% of the customers, 43% of them are unprofitable, returning only 6% of the profit, with a meagre average of $99. Even worse are the few (6%) customers who give the study bank less than 68% of their banking business (Table 12.5). Half of these customers are unprofitable, with the group as a whole returning only 1% of the profit. This trend is supported by the results in Table 12.3 where those customers nominating their main bank to be the study bank are more profitable (average of $376) than those nominating a competitor bank (average of $113).

No significant differences emerged in the results between customer contribution and gender, education and recent defection from a bank. For time with main bank (see Table 12.6), more recent customers (0-7 years) are less likely to be profitable in proportional terms, but this has no statistically significant effect in dollar terms.

The presence of joint accounts (Table 12.7) seems to be an important indicator of customer profitability with the 39% of customers with no joint accounts contributing only 15% of the profit. Turning to satisfaction constructs for a moment (Table 12.8) shows that satisfaction does not vary by customer profitability except for satisfaction with the main bank's borrowing (lending) section, where unprofitable custom ers are, on average, less enamoured. Herein may lie a predictable association between attitude and behaviour in that some unprofitable customers may have had requests for loans declined.

Finally, the composite measure provided by segmentation shows that two groups in particular, "Uncommitted Stayers" (Segment 2) and the "Committed and Captured" (Segment 4) are more likely to be unprofitable. Together they comprise 35% of customers but represent only 24% of the profit. Reference to Chapter Eleven will show that "Uncommitted Stayers" are the least committed (attitudinally) to their main bank of

any group and quite fickle in their attitudes to banking. Comparatively, customers in the "Committed and Captured" segment (a much bigger segment, encompassing 22% of customers) recognise that they are positively entangled with their main bank. These customers, however, are from lower income households and rather older than "Uncommitted Stayers". One senses some of them might even be the "gatekeepers" mentioned above in that their influence on others' banking habits could be important.

12.4.2 Low Profit Customers

Customers whose contributions were between $0.01 and $170 for the three months under analysis were more likely than average to be the over 50s and especially the over 65s (see Table 12.3). Their annual household incomes are either quite low or very high (but under-represented in the middle ranges of $30,000 - $80,000 per annum) and their banking business tends to be spread across more than one bank (see Tables 12.4 and 12.5). For the high income customers one could speculate that their main bank is not receiving much of their financial business (investments etc) as opposed to their "banking business". Higher than average numbers of these "low profit" customers have been with their main bank for more than 30 years, which aligns well with their age profile above. Little distinguishes them in terms of the segmentation variable except that few of them are "Committed Loyalists" (who tend to characterise the most profitable customer category).

12.4.3 Medium-High Profit Customers

Obviously, some profitable customers are a necessary prerequisite for successful retail banking. In the analysis in Table 12.3, the study bank had an over-representation of highly profitable customers. In turn, these customers are over-represented by middle-aged people (30-64 years) who collectively comprise 54% of customers but return 75% of the "profit". Annual household incomes are most likely to exceed $40,000 (Table 12.4), banking business tends to be concentrated mostly in one bank (Table 12.5), and there is a direct relationship between time (in years) with main bank and the number of profitable customers (Table 12.6). However, this particular relationship does not follow through to customer contribution by dollars. People with short (less than 8 year) histories yield fewer profits for the study bank, but beyond this period, time with main bank does not necessarily guarantee profitability.

Attitudinally, the medium-high profit customers are little different to the lower profit customers (Table 12.8) though notably their global satisfaction with their main bank is extremely high at 6.14 on a seven-point scale. In terms of the segmentation (Table 12.7), the "Committed Loyalists" are strongly represented as are the "Restless Stayers". The former are older customers (half over 50) while the latter are more youthful (half under 40) but with high incomes and high education status. Together they represent 36% of the study bank's customers but account for 52% of the contribution.

12.5 Relationships Between Customer Contribution and its Antecedent Constructs

The over-riding objective of this thesis was to determine the relative importance of perceived service quality, customer satisfaction and customer loyalty in explaining customer contribution, and identifying which of these antecedent constructs (and their constituent elements) contribute most to any relationship found. As well, the relative contribution of various demographics and socioeconomic variables to this relationship was tested. In so doing, the statistically significant relationships hitherto identified with bivariate analyses were to be confirmed with multivariate analysis procedures.

Multiple regression, multiple discriminant analysis and hierarchical loglinear models were the multivariate analyses chosen to address the question of the extent to which the level of customer contribution is related to the constructs alluded to above. These constructs, shown to be antecedent to customer contribution in the service-profit chain, are various compilations of banking behaviour variables, attitudes and customer demographics.

While the use of multiple regression is common in analyses such as in this thesis, commentators could quite rightly state that much of the data utilised is categorical rather than ordinal in nature. Consequently, multiple discriminant analysis and hierarchical loglinear analysis are pertinent methods. The latter uses categorical data, based on cell frequencies, to establish relationships between "determined" and "determining" variables. Indeed, to confirm the presence and nature of relationships between the links in the service-profit chain, all three methods were used, and as might be expected, the results were confirmatory.

12.5.1 Multiple Regression

Multiple regression is deemed appropriate when the research focus is upon a single metric dependent variable hypothesised to be related to several metric independent variables. *"The objective of multiple regression analysis is to predict the changes in the dependent variable in response to changes in the several independent variables. This objective is most often achieved through the statistical rule of least squares"* (Hair et al, 1992, p7).

Strictly speaking, the data used for multiple regression should meet several assumptions to ensure results are representative and consistent with the resultant predictive models. The assumptions of linearity and normally distributed data are mentioned most often. However, there is a view that regression techniques can be permissible for non-parametric data if they are carried out on large samples and there is a lack of multicollinearity. (In Chapter Nine, section 9.7, the non-parametric nature of the perceived service quality and attitudinal customer loyalty data is discussed.) For this thesis, the regression analysis reported on below is undertaken to check that conclusions found in the bivariate analysis of Chapters Ten and Eleven are substantiated by the use of a more powerful statistical technique. It is acknowledged that, for instance, the disaggregated customer contribution data (shown in Table 12.1) were non-normally distributed with more than half the cases in a narrow band around $0, several outliers, reflected in a $13,249 range, and a standard deviation of $797. Consequently, the dependent variable customer contribution was recoded into a two-category "profit/loss" variable (0,1) with the values 0 equalling "loss or $0" and 1 equalling "profit".

Interpretation of regression results relies on two main coefficients, R^2 (squared multiple correlation or coefficient of determination) and beta coefficients. R^2 is a measure of the variance of the dependent variable that is "explained" by the regression equation's independent variables. In this analysis, R^2 will show the collective capacity of several independent variables depicting perceived service quality, customer satisfaction, customer loyalty and demographics to predict customer contribution. Significance tests show whether the multiple correlation is significantly different from 0 thereby indicating a real overall relationship between customer contribution and these independent variables. Just as importantly from a marketing viewpoint is the degree of impact that any one of the independent variables has upon customer contribution. This impact is

captured by the beta coefficient. Hair et al (1992) warn that beta coefficients should only be used as indicators of relative impact when collinearity is minimal. Where such is present between two or more independent variables (called multicollinearity) it can dampen the effect each single variable has, making interpretation of the impact of each independent variable to the dependent variable more difficult. Multicollinearity can be assessed by perusing the correlations between independent variables and if they exceed 0.5 (considered high) then this state is present. In no instance did any correlations between independent variables used in the regression analysis here exceed 0.30 (age group and the habit/inertia dimension of customer loyalty had the highest correlation of exactly 0.30), suggesting that any confounding effects between variables due to multicollinearity are minimal.

Multiple stepwise regression, using the standard default settings in the analysis package SPSS for Windows, was used to generate the results in Table 12.9. However, probability for inclusion of variables into the regression was lifted from the rather severe default setting of .05 to less severe .10. Stepwise regression proceeds by identifying only those independent variables that add to the prediction of the customer contribution variable in a statistically significant way. One independent variable is added at a time to the regression equation until all statistically significant variables are included.

As stated above, the dependent variable customer contribution was recoded into a binary profit/loss variable because of the non-parametric distribution of the original, disaggregated customer contribution data. While it may have seemed apposite to use logistic regression, which relies on binary (zero-one) dependent variables, *"logistic regression is an appropriate procedure to use when data are being analysed for purposes of building a prediction equation... However, if the purpose of doing an analysis is simply to determine whether the dependent variable relates to the independent variables, or if the purpose is to compare the relative contributions of various independent variables, logistic regression is not needed. A conventional multiple regression will provide satisfactory results in these circumstances"* (Sudman & Blair, 1998, p 540). Hence its use in the following analysis.

Table 12.9 Stepwise Regression Results: Customer Contribution

Adjusted $R^2 = 0.14$ $F = 6.42$ Significance $F = 0.00$

	Variables in the Equation*			
Independent Variable	Beta	Std Error	*t*	Sig *t*
Age group	.25	.02	3.71	.00
Main Bank's Share of wallet	.20	.03	2.76	.01
Customer Loyalty: Familiarity & Interpersonal Bonds' dimension	.17	.03	2.60	.01
Household income	.16	.02	2.35	.02
Joint accounts?	-.13	.07	-1.93	.04
Customer Loyalty: All-in-one Banking dimension	-.13	.05	-1.87	.06
(Constant)	1.16	.19	5.99	-

* Probability for inclusion = .10

The results in Table 12.9 show that stepwise regression of 26 independent variables (representing perceived service quality, customer satisfaction, customer loyalty and demographics, and shown in Table A12.1) on the level of customer contribution to the study bank identified a weak relationship (adjusted $R^2 = .14$) between it and six independent variables. These explanatory variables (in their order of importance) were: age group, "share of wallet" (percentage of banking business with main bank – a measure of behavioural loyalty), the customer loyalty attitudinal dimension of *Familiarity and Interpersonal Bonds*, level of household income, the customer loyalty attitudinal dimension of *All-in-one Banking* and the presence of joint accounts.

The stepwise regression results do show a semblance of relationships between customer contribution and two key demographics, age and income, in that increases in the former result from increases in the latter. This confirms Tables 12.3 and 12.4 at the bivariate analysis level – the study bank's "better" customers are older and more "well heeled". Similarly share of wallet (Table 12.5) is reconfirmed in that the greater the share of a customer's personal retail banking business the study bank has, the more profitable that customer is to the study bank, that is, high share of wallet leads to high contribution. And the presence of joint accounts is a signal of more profitability for the study bank. (This variable had the value of 0 as having joint accounts and 1 no joint accounts, yielding the negative beta coefficient.) This confirms Table 12.7's results. Finally, those customers who do not think the banking relationship they have with their main bank is especially "familiar or bonding" also prove more profitable for the study bank. This

result seems to have arisen as a consequence of the large numbers of customers from the "Restless Potential Switchers" segment who were somewhat rather attitudinally "indifferent" about loyalty to their main bank. All-in-one Banking, signified by total commitment to just one bank, is not a preferred option for these customers. Many of them were high networth respondents who seemed to deliberately avoid placing all their banking business in one bank.

The finding that two dimensions of attitudinal loyalty (*Familiarity and Interpersonal Bonds* and *All-in-one Banking*) seem to be at variance with customer contribution requires discussion. One view is that the predictive validity of the instrument used to measure attitudinal loyalty in this thesis is less than desirable. This has already been noted. Another view is that the finding casts some doubt on the efficacy of the service-profit chain to explain all the relationships in personal retail banking. Yet another view is that the finding is less surprising when one considers that absolutely total behavioural and attitudinal loyalty is not the preferred option of the study bank's most profitable customers who are often its high networth customers.

These two somewhat problematic dimensions of attitudinal loyalty that help predict customer contribution (profitability) may prove quite important for study bank management. Profitable customers seem less likely to claim strong bonds with the personnel of their main bank suggesting a "business-like" relationship may be more to their liking. Perhaps the main issue here though is that profitable customers regard themselves as having choice in their selection of main bank – they are not necessarily "locked in" and value the discretion available to them in bank choice. Yet, results from other parts of this thesis show that reality may be somewhat different – bank defection rates are very low though most customers have more than one bank.

12.5.2 Multiple Discriminant Analysis

Customer contribution data were subjected to multiple discriminant analysis in order to accommodate the presence of a three-category dependent variable. Since the customer contribution variable used in the bivariate analysis above (Tables 12.2 – 12.8) was a three category variable (loss or $0, "small" profit, medium-large profit), the opportunity was taken to try and *"understand group differences and predict the likelihood that an entity will belong to a particular class or group based on several metric independent*

variables" (Hair et al, 1992, p 8). The weighted combination of independent variables – called the discriminant function – is the formula of the line that best discriminates among the categories of "profit" (in this case) and hence the name discriminant analysis.

Analysis presented in Tables A12.1 to A12.3 (in the Appendix) showed that the three-category customer contribution variable still only produced one discriminant function that separated loss-making customers from profitable customers. In essence the multiple regression analysis presented above does exactly the same. Nevertheless, the results in Tables A12.1 to A12.3 confirm and consolidate those presented in Table 12.9.

Discrimination between loss making and profitable customers is partially explained by age, income, main bank's share of wallet and attitudinal loyalty in respect of feelings of familiarity and interpersonal bonds with their main bank (see Table A12.3). At the next level below these variables is the entry of the All-in-one Banking attitudinal loyalty dimension, being the level of agreement for having all personal banking business devoted to one bank. Note that these two attitudinal loyalty dimensions have negative signs. The ability of the discriminant function to correctly classify customers to their rightful profit or loss status is rather disappointing at 65%, suggesting that the independent variables in this analysis give, at best, only partial explanation of what distinguishes a profitable customer from a loss making one.

12.5.3 Hierarchical Loglinear Modelling

The multivariate investigations of the determinants of customer contribution using multiple regression and multiple discriminant analysis reported above rely in part on the assumption of metric variables, linearity and normally distributed data. Manipulating the data to try and satisfy these assumptions has been discussed for each of the methods used. However, it is possible to investigate the determinants of customer contribution by using techniques specially formulated for the analysis of categorical data, that is, hierarchical loglinear models. These models are useful for uncovering complex relationships among variables in a multiway crosstabulation. While similar to multiple regression models these loglinear models assign all variables used for classification as independent variables and the dependent variable is the number of cases in a cell in a cross tabulation. To obtain a linear model the natural logs of the cell frequencies rather than the actual frequencies are used.

To help simplify the output from the hierarchical loglinear techniques reported below, only variables that had already shown some association with customer contribution were included. As well, some of these variables were recoded to two category variables to further assist interpretation. The variables that were included as probable determinants of customer contribution were the demographic and socio-economic variables age, household income and level of education; the behavioural variable "joint accounts," the behavioural loyalty variables "share of wallet" and length of time with main bank; and the attitudinal variable "overall satisfaction" with main bank. Hierarchical loglinear analysis is somewhat akin to chi-square analysis but the technique allows examination of the interaction between all variables. The goal is to find the simplest model, that is, the one that shows the most "explanation" using the smallest number of variables. Table A12.4 in the Appendix shows pairwise comparisons between customer contribution and the variables listed above. Results show that the variables most significantly associated with customer contribution are age, joint accounts, household income, length of time banking with one's main bank and main bank's "share of wallet." These results confirm the findings derived from the other multivariate analyses reported above. However, when a model of determinants of customer contribution was attempted, little was gained. In the first design of the model (the saturated model) Pearson chi-square was 1335.61 whereas what is required is a low chi-square value. Design two in the hierarchy still resulted in a Pearson chi-square of 1160.34 and subsequent designs resulted in no improvements. Thus the use of hierarchical loglinear techniques did not result in a clearly defined model of prediction of customer profitability. However, they did confirm the weak association between a number of variables (age, household income, length of time banking with main bank, share of wallet given to main bank and presence or absence of joint accounts) and customer contribution.

It is important to note that the preceding analyses are based on statistical relationships rather than causal relationships. For example, the attitudinal expressions of customer loyalty that help distinguish profitable customers from loss making ones may be more the result of having all or almost all one's banking business with one bank rather than the cause of it. Martilla and Carvey (1975) offer advice on assigning causality, and its direction, to behavioural and attitudinal relationships which is still as valid today as it was when they exhorted researchers to be more careful.

Also, one needs to be cautious in regarding "unprofitable" customers as a liability. The customer contribution data for this thesis covers only a three-month period and their consequent limitations have been noted. Noteworthy too are the findings of Storbacka (1994). He argued that some unprofitable customers are unprofitable because of the costs of their individual relationships with their main bank. With a substantial proportion of costs being fixed costs, ceasing business with unprofitable customers would mean redistributing those fixed costs across the remaining customers, driving some of the profitable ones into the unprofitable category. It is also dangerous to use purely financial criteria, based at the individual level, and at one point in time rather than longitudinally over time, to "clean up the balance sheet". Cradle-to-grave banking philosophy necessarily involves young, unprofitable customers gradually becoming less unprofitable and then substantially more profitable to the bank later in life. Similarly, some customers are gatekeepers. If those customers are influential in their households or organisations, then the flow-on effect from inducing a switch to a competitor bank may not be good business. Nevertheless, the customer contribution results presented thus far demonstrate how the study bank might grade its customers and then conduct various sensitivity analyses. Case by case analysis and subsequent management action will become part of the study bank's new customer asset management appointee's role. Obviously the most profitable customers need to be nurtured and defended against competitors. Conversely the unprofitable customers need to be investigated just as closely to assess their circumstances and evaluate possibilities for remedial action.

12.6 Testing Linkages in the Service-Profit Chain

The final section of the analysis addresses the relationships between each successive construct in the service-profit chain (see Figure 1.2 and Figure 7.1) as per the objectives set in section 1.2 and reiterated in section 7.3. So far, the intermediate direct relationships in the service-profit chain (for example, perceived service quality's impact upon customer satisfaction) have been addressed only briefly by correlation analysis (see section 9.8.3 in Chapter Nine) and by other bivariate analyses in sections 10.5 and 10.6 of Chapter Ten. However, various antecedent constructs' relationships with the final link in the chain, customer profitability (customer contribution) have been thoroughly discussed in the preceding sections of the present chapter (Chapter Twelve).

The first direct relationship to be tested in this thesis's abbreviated service-profit chain is that of perceived service quality's impact upon customer satisfaction. Chapter Eleven's multivariate analysis results showed the construct of perceived service quality comprises three major dimensions, namely *Customer Service, Tangibles* and *Personal Retail Banking* characteristics (Table 11.1 gives the factor loadings for each dimension). Respondents' factor scores on each of these three dimensions become appropriate independent variables for multivariate analysis of the relationship between perceived service quality and customer satisfaction.

Standard (ordinary least-squares) multiple regression was used to regress these three variables against the dependent variable "overall satisfaction with main bank" (which is a nominal seven point satisfaction scale). The results of this analysis are presented in Table 12.10 and they show a very strong and significant relationship (Adjusted R^2=0.58) between customer satisfaction and perceived service quality. This ought not to surprise the reader as these two constructs are derived from a common heritage as discussed at length in Chapters Two and Three. Nevertheless, the results are unequivocal: perceived service quality impacts strongly on cumulative customer satisfaction.

Table 12.10. Relationship: Perceived Service Quality and Customer Satisfaction

Adjusted R^2=0.58 F=211.54 Significance F=0.00

	Variables in the Equation*			
Independent Variable	Beta	Std Error	*t*	Sig *t*
Customer Service (Factor 1)	.61	.03	20.04	.00
Personal Retail Banking (Factor 2)	.42	.03	13.91	.00
Tangibles (Factor 3)	.19	.03	6.36	.00

* Probability for inclusion=.05

Dependent variable: satisfaction with main bank overall

The next direct link in the abbreviated service-profit chain is that between customer satisfaction and customer loyalty. Testing this linkage by multivariate methods is problematic on account of the type of data available. It has been established that customer loyalty is a multi-dimensional construct, comprising both behavioural and attitudinal dimensions. Two proxy measures of behavioural loyalty (share of wallet and time with main bank) are available but attitudinal loyalty is rather more multi-faceted,

being depicted in this thesis as a five dimensional entity (see Table 11.2, Chapter Eleven). Herein lies the dilemma for using multivariate methods for testing the customer satisfaction – customer loyalty relationship; how can customer loyalty be converted into a sensible dependent variable?

Jain et al (1987) attempted to convert attitudinal loyalty into a loyalty index but their alpha coefficient of reliability was an abysmal 0.54! Also, such an index awards each attribute an identical weight in the index and the regression results in Table 12.9 which explored (among other aims) the contribution of customer loyalty to customer profitability would suggest that this is not so.

Dick and Basu (1994) modeled customer loyalty as relative attitude and share of category but provide few answers on how the relative attitude measure can be operationalised. Therefore, testing the direct relationship between customer satisfaction and customer loyalty has been undertaken in this study by bivariate rather than multivariate analysis.

For the relationship between customer satisfaction and behavioural loyalty, all the available variables are categorical with very skewed, non-parametric distributions, restricting the test of association to chi-square derived from cross-tabulation. (Nevertheless a simple correlation has been included which, although contravening some rules for data analysis, gives some confirmation of the strength of the relationship.) Tables 12.11 and 12.12 display these results which show strong and statistically significant associations as might be expected given previous findings in Chapter Ten.

Table 12.11. Relationship: Customer Satisfaction and Behavioural Loyalty (Share of Wallet)

	All Customers	Customer Satisfaction						
		Extremely Dissatisfied	2	3	4	5	6	Extremely Satisfied
Proportion of Business	(1128)	(7)	(11)	(19)	(67)	(151)	(335)	(495)
	%	%	%	%	%	%	%	%
Less than 68%	5	57	18	16	12	7	6	3
68-80%	7	-	-	21	9	15	8	3
81-90%	13	29	18	11	24	11	16	9
91-99%	24	-	36	11	22	30	28	20
100%	51	14	28	41	33	37	42	65
		X^2=154.14, *df*=24, *p*=0.00						
		Pearson Correlation: 0.26, *p=0.01 (2-tailed)*						

Table 12.12. Relationship: Customer Satisfaction and Behavioural Loyalty (Time with Main Bank)

	All Customers	Customer Satisfaction						
		Extremely Dissatisfied	2	3	4	5	6	Extremely Satisfied
Time with Main Bank (Quartiles)	(1128)	(7)	(11)	(19)	(67)	(151)	(335)	(495)
	%	%	%	%	%	%	%	%
Up to 7 years	26	14	73	26	37	43	25	21
8-15 years	25	58	18	42	35	20	25	25
16-29 years	24	14	-	21	25	20	28	23
30 years & over	25	14	9	11	3	17	22	31
		X^2=79.24, *df*=18, *p*=0.00						
		Pearson Correlation: 0.21, *p=0.01 (2-tailed)*						

However, while the existence of a relationship between customer satisfaction and behavioural customer loyalty has been established, we have no real certainty about the direction of this relationship. As stated in the Conclusions section of Chapter Thirteen, this relationship could be a recursive linkage in that customer loyalty affects customer satisfaction.

To pursue the relationship between customer satisfaction and attitudinal loyalty, there is no single dependent variable for the latter construct. Instead, five factors, namely *Relationship Commitment, Familiarity and Interpersonal Bonds*, *Habit/Inertia*, *All-in-one Banking* and *Environmental Impact* were derived from the factor analysis (see Tables 11.2 and 11.3). Respondents' factor scores on each of these factors were used separately in a simple correlation with the global customer satisfaction measure and gave the following results (Pearson Correlations):

Satisfaction with main bank overall with *Relationship Commitment* = 0.71
Satisfaction with main bank overall with *Familiarity and Interpersonal Bonds* = 0.36
Satisfaction with main bank overall with *All-in-one Banking* = 0.11
Satisfaction with main bank overall with *Habit/Inertia* = - 0.12
Satisfaction with main bank overall with *Environmental Impact* = - 0.10

Thus, there is strong association between the *Relationship Commitment* attitudinal loyalty dimension and customer satisfaction, and some association with the *Familiarity and Interpersonal Bonds* dimension but the direction of this association is unknown. However, it can be seen that the loyalty dimensions of switching barriers (*Habit/Inertia*), *All-in-one Banking*, and the lure of new banks (*Environmental Impact*) have little association with customers' satisfaction with their main bank.

The final link in the abbreviated service-profit chain, that of customer loyalty with customer profitability (customer contribution) has already been partially addressed in the preceding sections. A proxy variable for behavioural loyalty (share of wallet) was shown to make a sizeable and real impact upon customer contribution in Table 12.9 even in the presence of many other variables. Additional separate OLS regressions were run on customer contribution using just the behavioural loyalty and attitudinal loyalty variables discussed above. No new relationships were discovered and it can be concluded that, in this instance, only behavioural loyalty (as measured by share of wallet) directly impacts customer profitability.

In summary then, linkages between successive constructs in the abbreviated service-profit chain are strong and fully support its conceptual framework.

12.7 Summary

This chapter has shown that multivariate analysis has tended to consolidate findings already derived from earlier bivariate analyses despite the difficulties noted with measuring attitudinal loyalty. Nevertheless, the multivariate results offer some comfort for the study bank and personal retail banking in general. While nothing can be done about customers' ages and incomes, there is confirmation here that older and wealthier customers are more profitable giving some credence to the "lifetime value of customers" and "cradle-to-grave" philosophies present in personal retail banking. However, in the shorter term, there are some results here of interest for marketing action. There might be some return gained by actively encouraging customer loyalty on two levels, both behaviourally, by gaining (within reason) as large a share of the customer's banking business as possible, and attitudinally by encouraging positive attitudes to this "entanglement". Rewarding "profitable" customers in inexpensive ways may be a consideration. This theme is discussed further in the next chapter, Chapter Thirteen Summary and Conclusions.

It is recognised that the relationship between customer contribution and the independent variables that help "explain" this key variable are quite weak. This does not mean that they have no effect on customer profitability but rather that other factors are more important. Without knowing for certain, it could be speculated that various financial variables would be the largest contributors to customer contribution. Hence, the terms of loans and investments that individual customers have with their banks, the terms of the accounts in which they keep their savings, the size of their average daily balances, etc will directly affect customer contribution. Logically they should and these important variables are part of the study bank's confidential calculation of the customer contribution variable. The author is not in a position to disaggregate this customer contribution variable any further. However, this thesis set out to explore the influence that variables beyond the "financials" might have upon customer profitability. Not unexpectedly, influences other than pure financial ones are somewhat weaker in their impact on customer profitability. Yet striving for a greater share of each individual customer's banking business and of their attitudinal commitment to the one bank (the direction of causality of that relationship is unknown) is the strongest managerially oriented finding of this thesis.

CHAPTER THIRTEEN

SUMMARY AND CONCLUSIONS

13.1 Overview and Summary

This study examined an abbreviated form of the service-profit chain, that is, the relationships between the constructs of perceived service quality, customer satisfaction, customer loyalty and how each of them contributes to customer profitability in personal retail banking. Evidence for the service-profit chain concept as it applies in product and service markets (other than personal retail banking) has been substantiated by the research of Reichheld and Sasser (1990), Anderson et al (1994), Heskett et al (1994) and Rust et al (1994) to name some of the major contributors to this field of study. The proposed links in the concept are easily understood. Profit is stimulated by customer loyalty; loyalty is derived from satisfaction; the levels of service delivery experienced by customers heavily influence satisfaction.

This study focused on the personal retail banking behaviour (and attitudes to this behaviour) of customers of the largest bank in one region of New Zealand. A random sample of these customers was surveyed by mail during 1997 yielding a final processing sample of 1128 and a response rate of 70%. Potential for nonresponse bias was judged to be minimal. The specific research objectives set for this thesis not only explored the associations between each link in the service-profit chain but also examined the characteristics of the "service satisfied," the "globally satisfied," the "loyal" and the "profitable."

The intangible nature of many financial services makes it quite difficult to measure their quality. Nevertheless measurement was attempted using two research instruments. The first, perceived service quality, was measured here by the SERVPERF method (Cronin and Taylor, 1992; 1994). The second, customer satisfaction, was measured by a "global" assessment of recent activity with "main bank" (and not just one episode) as well as satisfaction with key service departments of that main bank such as tellers, ATMs, telephone banking, investing and borrowing.

Customer profitability (from the study bank's viewpoint) is more correctly labeled as "customer contribution" (revenue minus costs) over a three-month period whereas the "profitability" that individual customers derive from their banking relationships was measured by their overall satisfaction with and degree of loyalty to their main bank. While personal retail banking was the environment of interest for this study, the interrelationships tested in the service-profit chain ought to typify those of many other subscription-type service industries.

Studies in the USA, Britain, Europe and Australia have found financial services' customers to be behaviourally loyal to their main bank. New Zealanders are no exception, with an annual defection rate of just 4% (Colgate, 1999). This thesis reports a similar result of 5%. Such a level of behavioural loyalty has helped make it possible for banks to have younger, less profitable or even unprofitable customers in their customer portfolios on the assumption that they will become profitable in time. Indeed, nearly one third of the study bank's customers were unprofitable at the time of the survey. For the three month period used to measure customer contribution, the 1128 customers contributed, on average, $320, showing a considerable degree of cross-subsidy of the loss making customers.

Who then are the profitable customers? Demographically and socio-economically they are people in their middle age (aged 30-64 years) with annual household incomes in excess of $40,000 who concentrate a substantial proportion of their personal retail banking business in one bank. Usually they have banked there for at least eight years and their overall satisfaction with that bank is relatively high. Attitudinally they are a mixture of "Committed Loyalists" (intensely loyal to their main bank), "Restless Stayers" (resigned to the "entanglement" of their relationship with their main bank but not especially committed attitudinally to that bank) and "Restless Potential Switchers" (for whom banking is just not high priority in their lives but their high networth makes them heavy consumers of banking services).

Analysing customers by their level of contribution (profitability) into three equal sized groups yielded a simple tripartite categorisation: loss-making customers, low-profit customers ($0.01 - $170 for three months) and medium-high profit customers ($171+ for three months). The non-normal distribution of the contribution data (40% of customers

clustered in a narrow profitability band between -$15 and +$107) precluded any form of multivariate segmentation. Hence, segmenting customers on the basis of their attitudinal loyalty to their main bank was pursued. (Customer loyalty is really two constructs, one of behavioural loyalty and one of attitudinal loyalty.) The loyalty construct in the service-profit chain is immediately prior to that of profitability and encompasses much of the antecedent influences of satisfaction and perceived service quality. The segmentation conducted here used standard cluster analysis techniques with the objective of deriving more insight into "who are the satisfied, the loyal and the profitable".

One quarter of the study bank's customers were intensely committed to their main bank (which for 79% of customers is the study bank) and these customers' loyal attitudes mirrored their loyal behaviour. These customers were the most profitable group for the study bank (at an average of $174 "profit" per month or $523 for three months) perhaps because they placed all or almost all of their banking business with the one bank by choice. Such commitment to their main bank is substantiated by their global satisfaction with that institution, their low probability of defection and their positive role as advocates (among family and friends) for their bank. Nevertheless, it should be noted that 27% of these "Committed Loyalists" were still unprofitable in the three-month measurement period, for their main bank. However, these particular customers exhibited all the traits of their more profitable peers and their roles as advocates and gatekeepers for other, potentially profitable, customers cannot be overlooked either.

Contrast these "Committed Loyalists" discussed above with the next most profitable group, the "Restless Stayers." Here the often observed dissonance between attitudinal measures and behavioural measures of the same construct is evident. The predictive validity of the measures used to describe customers' attitudinal loyalty to their main banks is rather weak. "Restless Stayers" represent one in every eight customers (12%) and though profitable, their attitudes to their main bank set them apart from other customers. They are the "spuriously loyal" (Jain et al, 1987; Denison and Knox, 1995), held in their relationships with their main bank by inertia – switching costs are perceived as just too great to move elsewhere. These "Restless Stayers" have the lowest scores for perceived service quality received from main bank and for overall satisfaction, and their past banking behaviour (in terms of account closure and bank defection) has been "restless".

Next in terms of relative profitability for the study bank was a large segment (29%) labeled "Restless Potential Switchers." Two thirds of these customers were profitable. Their descriptive label arises from a 24% intention to defect from their main bank in the next 12 months and lower levels (compared to other segments) of commitment. These "Restless Potential Switchers" are polygamous in their banking, with the lowest proportion of banking business of any segment devoted to their main bank. Their attitudes show that banking just does not enthuse them, although the pragmatic aspects of service delivery in respect to parking, branch queues and interest rates do awake some of them from their attitudinal indifference. In general these customers live in medium-high income households and many professional people are among their ranks.

The fourth segment has been labeled "Uncommitted Stayers" (13% of customers). Like the "Restless Potential Switchers" they also have less commitment to their main bank (they too are somewhat polygamous in their banking) but they differ on several key measures. They have comparatively low satisfaction, main bank service quality is perceived as low, they have defected before and acknowledge they could be easily wooed by competitive offers. However, their intentions to defect in the next 12 months are little different to members of other segments. "Uncommitted Stayers" span most age and income groups although they tend to be aged in their forties and in households with annual incomes in the $40,000 - $49,000 category.

The final segment is actually the least profitable for the study bank, being labeled as the "Committed and Captured" (22%). They are only too aware of the entanglement they have with their main bank but costs of terminating such relationships are perceived as outweighing the costs of continuance. Yet they appear to bear no grudges; levels of satisfaction and perceived service quality were astoundingly high. Their banking business is almost all in one bank, they are older than average, they have low median household incomes and they have been with their main banks for many years. As found by Storbacka (1994) in his studies of Scandinavian banks, less than full recovery of transactions costs among "heavy transaction" customers tend to account for these "Committed and Captured" customers being loss-makers for the study bank.

Noteworthy too is the context for profitability in personal retail banking. One third of the study bank's customers were unprofitable at the time of the analysis. While the

individuals who were unprofitable at that time may not always remain so, it is expected that a substantial proportion of a bank's personal retail customers will remain unprofitable. Indeed, these findings substantiate those of Storbacka (1994), Meidan (1996), Connell (1997) and Loveman (1998). Having unprofitable customers in a customer portfolio has implications for banks as they move towards managing customers as assets. Emphases change accordingly, from cultivating relationships with profitable customers, to trying to uplift unprofitable customers to a state of profitability for the bank or even to hastening their defection to the competition!

The major aim of this study was addressing relationships between the links in the service-profit chain. The results derived from the various analyses present a slight conundrum in that attitudinal loyalty to one's main bank seems to have little influence on customer contribution. However, customer contribution is the study bank's measure of the relationship with the customer whereas the preceding links in the service-profit chain are all from the customer's viewpoint. Consider too that the customer contribution measure is very short-term (covering only three months of data) whereas the construct of attitudinal loyalty is formed over a much longer time span. Perhaps then it is rather too much to expect that a cross-sectional measure of customer contribution might show strong associations with a multi-dimensional construct like attitudinal loyalty that is affected, over the long-term, by many (unknown) intervening factors.

Turning to the apparent paradox that customers with lower levels of attitudinal loyalty can still be very profitable for their main bank. Table 11.6 shows that Segment Five: "Restless Potential Switchers" account for 29% of customers. It also shows that these customers are "wealthier" than anyone else, give the lowest share of wallet to their main bank, have the shortest duration of time with their main bank and have the least favourable future intentions for business with their main bank. Table 11.5 shows their attitudinal loyalty, especially on the "Familiarity & Interpersonal Bonds" and "All-in-one Banking" factors to be rather lower than anyone else's loyalty and their attitudes to banking to be rather utilitarian. (Indeed it could be reasoned that these customers are instrumental in creating the negative relationship between customer contribution and attitudinal loyalty that emerged in Table 12.9.) Finally, Table 12.7 shows that despite all of the preceding analysis, the "Restless Potential Switchers" are still profitable for their main bank.

This thesis traces one of the few published accounts of the service-profit chain in personal retail banking from "service to profit". Most of the previous work has been limited to the service-satisfaction-loyalty "chain" and the introduction of the final link in the chain (profitability) in this study has revealed some shortcomings in the full service-profit chain. These shortcomings are centred on some inconsistency between attitudinal loyalty (measured, in this thesis, by five dimensions of customer loyalty) and customer contribution. Not always are the most attitudinally loyal customers the most profitable for their main bank. Yet, evidence is strong for the strength of relationships in just the service-satisfaction-loyalty chain and when the relationships in the service-profit chain are restricted to behavioural loyalty (length of time with main bank and share of wallet devoted to main bank). The same customers who award their main bank the highest levels of perceived service quality are also the most satisfied with, and the most loyal to, their main bank. The reverse is also true: those giving their main bank lower service quality scores are less satisfied and less attitudinally loyal. Hence satisfied customers are loyal customers and vice versa.

However, relationships with profitability are not always so strong. Indeed there is no discernible relationship between perceived service quality and profitability but there is a slight association (at the .10 level) between customer satisfaction and profitability. As stated above, less profitable customers are really only marginally less satisfied with their main bank than their more profitable counterparts. (Only in the lending department is this more pronounced. Here unprofitable customers are less enamoured with their main bank, giving rise to speculation about declined loans and the like.) Attitudinal measures such as satisfaction and customer loyalty are not linked to customer contribution. Yet there is a strong positive relationship between loyalty and customer contribution when loyalty is restricted to behavioural loyalty: in general, the greater the share of wallet (the deeper the relationship) the bank has with its customers the more profitable they are to the bank. Whether the depth of the relationship is viewed positively (by high degrees of attitudinal loyalty) or somewhat cynically by customers depends on individuals. Indeed, two of the five dimensions of attitudinal loyalty ("Familiarity and Interpersonal Bonds" and "All-in-one Banking") were negatively related to customer contribution suggesting that "close" relationships in personal retail banking are not for everyone. Really, only 24% of this study's customers ("Committed Loyalists") were happily loyal by choice while many of the rest were either indifferent or spuriously loyal.

An apparent contradiction has emerged in the finding that there is a strong, direct relationship (established in Table 12.5) between share of wallet and customer profitability. It would appear that this contradiction arises from some higher networth customers (from households with annual incomes in excess of $50,000) tending not to consolidate all their banking in one bank, that is, not have "all their eggs in one basket". Table 10.4 shows that share of wallet declines with increasing annual household income but Table 12.4 shows that customer profitability does not decline at the same rate. Hence total share of wallet is not necessary for some customers to be profitable for their main bank and this analysis shows that high networth customers with lower than average share of wallet given to their main bank are still relatively profitable.

While the multivariate results on the factors that drive customer profitability are not as unequivocal as hoped for they still offer some comfort for bank management. Nothing can be done directly about the two most potent variables – customer age and annual household income – the confirmation that older and wealthier customers are more profitable gives credence to the "lifetime value of customers" and "cradle-to-grave" philosophies prevalent among some managers. Gaining as bigger share of the customer's personal retail banking business as possible is obvious but this is unlikely without a relationship that suits customers on their terms. Perhaps rewarding "profitable" customers in inexpensive but compelling ways is appropriate.

It is recognised that the relationship between customer contribution (profitability) and the independent variables that help "explain" this crucial dependent variable are quite weak. The low levels of predictive validity of the attitudinal loyalty measure has already been discussed along with the reality that the profitability measure (customer contribution) is the study bank's assessment (and not the customer's assessment) of the customer-main bank relationship. Herein may lie some of the reasons for weak relationships between customer contribution and preceding constructs in the service-profit chain. Without knowing for certain, it could be speculated that various financial variables to do with the breadth of relationship would be the biggest contributors to customer contribution. Hence, the terms of loans and investments that individual customers have with their banks, the terms of the accounts in which they keep their savings, the size of their average daily balances, the portfolio of financial services that they have with their main bank etc will all directly affect customer contribution. These are all entwined in the

customer contribution measure used in this thesis but are impossible for the author to disaggregate. Yet this thesis set out to explore the influence that variables of the service-profit chain, that is, variables beyond the "financials" might have upon customer profitability. The answer seems to be that the attitudinal constructs of the service-profit chain are less potent than either the pure "financials" or share of wallet (behavioural loyalty).

Several sub-objectives were tested in this research, each shaped by overseas studies. Jain et al (1987) and Fornell et al (1996) found that more profitable customers tended to have less commitment to their main bank through lower than average levels of perceived service quality, satisfaction and loyalty. As shown by the analyses in this thesis, those findings do not necessarily hold true here. Certainly the "Restless Stayers" typify that description but they were outnumbered (by two to one) by "The Committed Loyalists". On the whole, profitable customers did not have higher than average propensities (or actual defection rates) to defect mainly because "profitability" for the study bank is mostly derived from "share of wallet." Often the profitable customers were those with all their banking business in one bank. Therefore the only agreement between this study and the studies used in the research conducted by Jain et al (1987) and Fornell et al (1996) is that more profitable customers are from above average income households and have higher educational status. By inference, these customers have higher networth (are wealthier).

A methodological research objective was set to test the ability of Juster's (1966) eleven-point probability scale to accurately predict bank defection. Customers' predicted defection rate from their main bank averaged out to 10%. One year later the same respondents' membership of their main bank was traced and the actual defection rate was 5%. Only two of the affected respondents accurately predicted their defection; all the rest gave relatively low probabilities for defection but overall the rate of 5% is almost identical to that reported by Colgate (1999) in his New Zealand wide banking study. Nevertheless, Juster scale probabilities were over-reported by approximately five percentage points. This is consistent with the findings reported by Danenberg and Sharp (1996) in their study of bank defection using Juster scale probabilities in South Australia. It would appear that when the incidence of actual behaviour is quite low (as found here: bank defection 5%) that there may be some kind of "floor" effect at work. Respondents

may be over-estimating their probability of defection merely because the points on the scale are not quite robust enough at the "floor" end of the scale. Consider that the two options for defection here are "no chance, almost no chance – 1 in 100" and "very slight possibility – 1 in 10." Respondents may be opting for the less definitive 1 in 10 chance when really their intention is more like a 1 in 50 or 1 in 25 chance. Obviously this is speculation by the author and does need thorough testing, but Brennan (1995) and Danenberg and Sharp (1996) have expressed these sentiments. Overall though, Juster's (1966) eleven-point probability scale performed relatively well in predicting the annual bank defection rate (that is, a population estimate of defection) reported in this study.

13.2 Conclusions

This study's overall aim was to investigate how customer profitability might be influenced by antecedent variables in an abbreviated form of the service-profit chain for personal retail banking. The study was conducted under the assumption that the service-profit chain exists although it is acknowledged that much of the academic investigation of the chain is for more generic service management environments. Nevertheless, it should be noted that most of this previous work (see, for example, Gronroos 1990a; Reichheld and Sasser 1990; Anderson et al 1994; Heskett et al 1994; ZBP 1996; Loveman 1998) was limited to the service-satisfaction-loyalty chain. The introduction of the final link, that of customer contribution (profitability), has unearthed some shortcomings in the simple linear depiction of the service-profit chain. And the construct of attitudinal loyalty (as distinct from behavioural loyalty) has proved both difficult to measure and somewhat difficult to interpret in its relationship with customer contribution. Yet the notion of the service-profit chain in personal retail banking is fully supported by this study if the loyalty construct is restricted to behavioural loyalty only.

In a retail banking context, customer satisfaction at the cumulative satisfaction level is the result of perceived value from the customer-main bank relationship where value equals perceived service quality over time, price and costs (effort required by the customer) in relation to competitive offerings. Loyalty, on the other hand, has two distinct components, being those of attitudinal loyalty and behavioural loyalty. The concept of attitudinal loyalty, as it applies to personal retail banking in this thesis, arises from customers' overall attachment to their main bank. These feelings of attachment,

expressed in terms of commitment, bonding attitudes to switching, etc (measured by five dimensions in this thesis) define customers' degrees of cognitive loyalty. Two of these five dimensions, namely "Familiarity and Interpersonal Bonds" and "All-in-one Banking" were negatively related to customer contribution, suggesting that depth of relationship in an attitudinal sense is quite personal to banking customers. In a behavioural sense, the length, breadth and depth of customers' relationships with their main bank are positively related to customer contribution (profitability). One might speculate that behavioural loyalty (when characterised by the depth of relationship measure "share of wallet") still ought to be dependent upon positive dispositions, expressed as attitudes, to the main bank.

The results of this thesis support linkages in parts of the service-profit chain, that is, the service-satisfaction-loyalty components of the chain. The relationship between perceived service quality and customer satisfaction is undisputed; the linkage between customer satisfaction and loyalty to main bank is also strong. The relationship between customer loyalty and customer contribution (profitability) is only present in behavioural measures of loyalty but contradictory for attitudinal measures of loyalty. However, in total only 14% of the variance in customer contribution is derived from loyalty and demographic variables. While somewhat low, this level of "explanation" in the customer loyalty – customer profitability relationship is not surprising, given the other factors that might influence customer contribution that are not part of the analysis. For example, none of the portfolio of banking products or services that each customer has (that is, their depth of relationship) with the study bank were available in dissaggregate form. These are available for the study bank's own "in-house" analysis but were not made available to the author.

Up until the last few years of the 1990s, profit enhancement in New Zealand retail banking had seen a focus on improving service quality. Inevitably, quality improvement and concomitant improvements in customer satisfaction probably do translate into a positive impact on profitability, but as demonstrated by the results of this thesis, the relationships are very complex. One might conclude that investment in service quality improvements should now follow a "maintenance" strategy rather than remain as the foremost profit enhancement strategy in personal retail banking.

Until recently, being unable to isolate the actual costs of their transactions and relationships with customers handicapped banks in their marketing planning. Even now the ability to value, by activity-cost accounting procedures, relationships with customers is in its infancy and this thesis reports one of the first public attempts at so doing in New Zealand. Consequently some of the precise details of the algorithm that the study bank has used to derive customer contribution have had to be kept confidential. However, the reporting of the principles used has been sufficiently detailed so as to allow anyone with access to personal retail banking data the chance to replicate the study. Interestingly, Storbacka (1994) faced exactly the same challenges in his customer profitability study of two Scandinavian banks, while Connell (1997) working in Britain reports similar circumstances. The results reported in this thesis are relatively similar to those studies. For instance, nearly 95% of profits came from 34% of the customers, demonstrating how loss-making customers are a drain on the study bank via their transaction volumes on services that are free or undercharged.

Now that banks can accurately trace the costs of conducting business with individual customers their focus for profit improvement can move to their customers and their internal operations. The latter have received considerable attention in the last few years as banks have moved to merge operations, close branches and move customers to cheaper (for the banks) forms of transactions like telephone and electronic banking. Note that the fieldwork for this thesis was conducted prior to the arrival of web-based banking, which is still in its infancy, though expanding quickly, in New Zealand. Yet it is to the management of customers as assets that the banks are turning now for profit enhancement. Management tools for better utilisation of the business potential in the customer base are receiving considerable attention.

Storbacka (1994) claimed that existing customers were an under-utilised source of business potential and the same claim could still be made today. This potential is manifested in the potential for cross-selling (increased revenue from deepening and widening financial services relationships with customers), for building relationships on longevity (based on lifetime value rather than short-term returns) and from affecting customers' buying behaviour in such a way as to steer them away from expensive (for the bank) transactions to cheaper, electronic transactions.

Perhaps the most crucial finding of this thesis is that "share of wallet" is an important and potent "driver" of customer profitability. Indeed, it is the one variable that banks can, through their marketing activity, attempt to manipulate directly with their customers. Certainly customer profitability is ultimately defined by customers' actual buying of financial services – the business volume they conduct with their main bank – but attitudes towards the main bank and attitudes to its services also affect business volume (expressed here as share of wallet).

Customers' preferred level of involvement with their main bank varies and managing relationships at an individual level still represents a challenge for New Zealand banks. For instance, satisfaction with main bank is highest among those customers who have "all their eggs in one basket". The underlying influences on this desirable state (for the study bank) of intense behavioural loyalty are a myriad of attitudes to issues of service quality and satisfaction with various departments of the main bank. As seen in Chapter Twelve's multivariate analysis, some of the profitable customers "played down" the influence of strong bonds (intense attitudinal loyalty) and were less enamoured with "All-in-one Banking" ("all their eggs in one basket") than other less profitable customers. Undoubtedly, some customers want to prescribe the type of relationship they want to have with their main bank. Some want more human contact, some want less. This finding has implications for relationship banking in that banks might consider ascertaining from their (profitable) customers how each wishes to proceed with future relationships. Nevertheless, maximising return on the customer base has been written about in financial services contexts for at least a decade (Gronroos, 1990b; Paltschik and Storbacka, 1992; Heskett et al 1994; Storbacka, 1994; Gummesson, 1999). These authors agree that such endeavours require changing banks' management systems to support a focus on long-term customer loyalty with its concomitant long-term customer profitability.

A logical extension of the findings of this thesis would be for the study bank to embark upon customer asset management. Software already exists for inspecting each customer's relationship and summarising these relationships by segmentation procedures on the basis of both existing value and further business potential seems relevant. Personal financial summaries that contain recommendations tailored to targeted customers' financial needs seem likely ways for banks to enhance "cross-selling" or "upselling" to

their existing customers. Hence personalisation of relationships to achieve greater share of wallet (that is, deepening the relationship with the main bank) is inevitable.

13.3 Limitations of the Research

There are a number of limitations in this research that should be acknowledged to allow the reader to assess the generalisability of the research findings. These limitations fall into several categories, each of which is discussed in detail below.

13.3.1 Geographical Bias

The study bank's customers used to explore the service-profit chain for personal retail banking in New Zealand all live in one region. There is the suspicion that these customers derive higher than average satisfaction from their banking than the rest of New Zealand. The research by Colgate (1999) would tend to support this contention as he found that customers in the "provinces" thought more kindly of their banks than people in the large urban centres. Having customers from just one bank is a limitation, although that bank has a relationship with almost two-thirds of the adults in the region and accounts for nearly one third of that region's personal retail banking business by dollar value. Perhaps the service-profit chain is more pronounced in these circumstances, which may or may not be a disadvantage.

13.3.2 Sample

Often, samples are criticised for being too small. Interestingly the relatively large sample here (n=1128) yields large sub-samples and in so doing quite small differences in results between sub-samples can still be statistically significant (at the .05 level) such as the difference of 5.85 and 6.20 on a seven-point satisfaction scale. Yet in terms of marketing interpretation, both these two sub-groups of customers could be viewed as each having particularly good satisfaction levels. In this case statistically significant results ought to be combined with marketing acumen to temper thoughts of hasty marketing action.

13.3.3 Sources of Error

The results of this thesis should be viewed with the customary caution associated with survey research using self-completion techniques. Obviously nonresponse can affect survey estimates. The true extent of such error remains unknown unless all respondents

originally selected (who are capable of completing the survey) ultimately complete a questionnaire. Such a census is unachievable. However, a review of nonresponse issues discussed in Chapters Eight and Nine shows that estimates based on response rates lower than achieved for this thesis are quite accurate. It is likely that the 70% response rate gained here will yield estimates that ought not to be seriously affected by nonresponse error.

Nonresponse within the questionnaire, that is, incomplete data from some respondents, is often a concern to researchers. This was recognised and the impact of individual item nonresponse discussed in Chapters Eight and Nine as well as in Ryan and Garland (1999). Misunderstanding of the survey's requirements, inaccurate recall of past behaviour and the measurement effects experienced by respondents chosen for the survey are an ever present handicap for researchers. However, the magnitude and direction of such errors remain unknown.

13.3.4 Survey Design and Analysis

Heavy reliance has been placed on the use of rating scales in this thesis. As noted with the reliability of the Juster scale in its estimation of annual bank defection, "floor and ceiling" effects might be producing some over-estimation. Likert-type scales were used to measure perceived service quality, customer satisfaction and attitudinal loyalty. No doubt similar problems as well as misunderstandings about their completion affect these rating scales. Nevertheless, the intense piloting of the survey instrument ought to have helped to minimise the effects of these forms of error.

The relatively weak explanatory power of the constructs of the service-profit chain (for example, the lack of predictive validity of the attitudinal loyalty dimensions) in accounting for customer profitability demonstrates that the item attributes included in the service quality and customer loyalty measurements did not capture the exact or the entire nature of these constructs. This is a problem faced by most researchers trying to measure attitudinal constructs but is worthy of mention. Another element of research design worthy of note in this study was the focus on variables specific to banking services as it is these that are within management's control. Yet, as seen in the multivariate results, variables such as age, household income, education level, length and depth of banking relationship, etc tended to produce relatively low R^2 values. It would appear that a simple

life cycle – profitability linkage is weak. Probably this relationship is weakened because the demographic and socioeconomic variables used are themselves simplistic. Fuller details of life cycle that impact on customers' "financial health" and networth at a personal level would require answers to intensely personal questions such as:

- Length of marriage to, or time with, the same partner
- Whether or not there are payments to previous spouses/partners or their dependents
- Rate of change of home ownership as customers seek employment elsewhere.

These examples demonstrate how the traditional family life cycle model of the 1970s is no longer useful as a predictor of "financial health", as increasing numbers of banking customers undergo the sort of disruptions in their lives that impact directly on their ability to meet financial commitments.

In terms of data analysis, much of the analysis has been restricted to non-parametric methods because of the skews in the data, discussed at length in Chapters Eight and Nine. While there may be more sophisticated forms of data analysis available, such as structural equation modeling, the compelling impression from the findings presented here is that irrespective of the methods used, the results all substantiate each other.

Also, it is recognised that cluster analysis can produce unstable solutions that are difficult for other researchers to replicate. To minimise such criticism the author chose the default options for clustering in SPSS's Quickcluster program that ought to enable replication but acknowledges that alternative solutions could have been sought from the data. Derivation of these solutions might encompass future research.

13.4 Future Research

As has been discussed previously, few studies exist in personal retail banking that trace the impact of the constructs of the service-profit chain on customer profitability. Those that do are from Northern Hemisphere locales like Scandinavia and Britain. This thesis reports one of the first studies of this kind to be conducted in Australasia. Given these geographical constraints and given the complexities of the service-profit chain's impact on customer profitability, the time-honoured call for further research is stated again here. Zeithaml (2000) echoes such a call in her review of academic research on service

quality's contribution to profitability. She states that "*few rigorous studies have yet been published documenting the moderating effect of tiers of customers on profits...much work remains to be done...indeed, developing the skill to tier customers may be the most essential step companies must take to link service quality and profitability* (Zeithaml, 2000, p80). She heralds the work of Storbacka (1994) in this regard, and then goes on to pose basic questions such as:

- How can existing customers be identified in terms of profitability?
- How can potential customers be identified in terms of profitability?
- How might customers be tiered (segmented) in terms of profitability?
- What demographic and psychographic variables are most effective in characterising profitability tiers?
- What service variables are drivers of financial performance in each tier?

Arguably, this thesis has answered several of these questions albeit at a micro-level using a personal retail banking example from one bank in one region of New Zealand. Obviously the findings reported here are but one interpretation at one time using a case study approach. Further research is required to help generalise results and to examine variations from them in different environments. This call for macro-level future research is really a form of replication research conducted to corroborate or oppose the findings reported above. As stated by Storbacka (1994), Rust et al (1994, 1995), Connell (1997) and Loveman (1998), there is still the need for empirical research in retail banking, designed to yield guidance for managerial action. Obviously the relationships between constructs in the service-profit chain warrant further research effort. As found in this thesis, measuring these relationships is not easy, and improved measurement methods would be welcomed as discussed below. And the simple linear structure of the service-profit chain as it applies to personal retail banking is questionable. Measuring customer profitability will remain contentious as long as the algorithms for its measurement remain proprietary. The relatively sparse academic literature on measuring all the linkages in the service-profit chain in the one study probably results from the difficulty of obtaining meaningful financial data on customer profitability.

Additionally, future research could address the following:

- The content and procedures used to measure service quality. For example, more detail is required on perceptions of electronic banking, branchless banking and banks' attempts to coax customers away from costly (to the banks) transactions like cheques to cheaper electronic transactions. The SERVPERF procedure adopted for this thesis still requires some refinement; addition of some form of ranking the attributes used would help management in allocation of resources for service quality improvement.

- The content and procedures used to measure customer loyalty in personal retail banking. Behavioral loyalty can be measured relatively easily but the precise nature of attitudinal loyalty is still debatable. More research is required in this regard.

- The content and time periods used to measure customer profitability. The study bank is still refining its customer profitability algorithm and no doubt such testing will continue for several years. The time period used in this thesis's customer profitability measure was only three months. Ideally one would like to use a measure based on longer time periods enabling truer reflection of "customer lifetime value." Research in personal retail banking that pushes into these frontiers would be particularly desirable for banks.

- Refinement of the identification of "defection-prone" customers and the development of "early warning" systems for customer defection. Attitudinal expressions of imminent defection still require research whereas share of wallet seems to represent a workable proxy for behavioural loyalty and propensity to defect.

- Further testing of Juster's (1966) eleven-point probability scale for behavioural intentions in personal retail banking. This thesis posits that 'floor and ceiling" effects may account for some of the variance between intention and actual behaviour. Belson's (1981) pre-testing procedures alluded to in Chapter Eight might prove useful in this context. Nevertheless, if it could be shown conclusively that the Juster scale over-predicts customer defection by about five percentage points then

compensatory allowances can be made in such predictions. Naturally this line of inquiry would interest researchers in other areas of consumer behaviour.

- Examination of the relative contribution of different marketing variables to customer contribution (profitability) and customer retention. For instance testing the various effects of "financial" incentives (fee waivers, discounts, prize draws, loyalty programmes) upon share of wallet and length of time as a customer are obvious starting points now that banks can assign their costs of business to individual customers. And conducting this type of research upon various tiers of customer (based on their current or potential profitability) would seem advisable. Obviously, before customers who are deemed unprofitable are presented, by their bank, with punitive tactics for cost recovery, their records should be explored extensively (and supplementary research conducted if necessary) to ensure that they do not act as gatekeepers for that bank's more profitable customers.

- The influence of Internet or web-based banking on customer profitability. Customers who use this banking facility have the ability to side-step several types of transaction fees as well as being able to move their on-call investment funds rapidly in an attempt to maximise investment returns. How then will Internet banking affect relationship banking or customer loyalty for that matter? Herein lies some fertile ground for future research.

13.5 Final Comments

The results presented in this thesis suggest that the general concept of a service-profit chain as applied to a personal retail banking example in New Zealand has merit. Customer profitability (or, more correctly, customer contribution) is affected positively by customers' behavioural (rather than attitudinal) loyalty. In turn, behavioural loyalty is associated with customer satisfaction. Service quality is the construct at the start of the service-profit chain. While it is positively associated with customer satisfaction it is not associated with customer profitability. As stated in the academic literature (Zeithaml, 2000) the link between these two variables at either end of the service-profit chain is complex and it is not surprising that direct relationships have not been found here

especially when one considers that the service-satisfaction-loyalty chain is derived from the customer whereas profitability is the purview of the institution.

The most compelling result of this thesis is the strong positive relationship between share of wallet (a measure of behavioural loyalty) and customer profitability. Conclusions are posited that careful management of their customers as "assets" could enhance financial returns to banks once these customers have been segmented by various levels of profitability. This enhancement is likely to involve actively promoting customer loyalty to targeted customers on two levels, that is, by gaining as bigger share as possible of individuals' banking business (share of wallet) and by encouraging positive attitudes to this large commitment of "all, or almost all, your eggs in one basket."

This thesis has made several contributions to knowledge about the service-profit chain and the measurement of customer profitability. Customer loyalty in the form of share of wallet (behavioural loyalty) has been confirmed as a key driver in customer profitability in personal retail banking. One might speculate that share of customer expenditure is likely to be an important variable in any market. Profitable customers have been identified and their characteristics and traits examined carefully. Measurements to predict customer defection have been carried out and the reliability of Juster's (1966) eleven-point probability scale for this prediction tested. Results look promising in spite of the usual provisos attached to such measurement.

Potential errors and sources of bias in the results have been acknowledged and discussed. None appear to be of major concern in their effect upon the thesis's results. Further research at both the macro level (service-profit chains in marketing per se) and the micro level (service-profit chains in personal retail banking) was discussed. This included replication of parts of this study in different environments, and heed was taken of Zeithaml's (2000) call for validation of research into *investigating service quality, profitability, and the economic worth of customers* [where] *many opportunities for improvement on this framework and for future empirical research exist* (Zeithaml, 2000, p 83).

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APPENDICES

APPENDIX ONE: Additional Tables for Chapters Nine – Twelve

APPENDIX TWO: Research Instruments for Qualitative Pre-Research

APPENDIX THREE: Research Instruments for Pilot Study

APPENDIX FOUR: Research Instruments for Major Study

APPENDIX ONE: ADDITIONAL TABLES

Chapter Eight: Preliminary Research

Table A8.1. Correlation Matrix: Service Quality

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22
P1	*																					
P2	.23	*																				
P3	.14	.54	*																			
P4	.22	.29	.53	*																		
P5	.15	.34	.53	.56	*																	
P6	.25	.38	.45	.51	.69	*																
P7	.18	.25	.28	.34	.36	.43	*															
P8	.28	.33	.32	.27	.41	.57	.55	*														
P9	.24	.35	.34	.52	.49	.47	.32	.52	*													
P10	.32	.37	.47	.43	.64	.74	.35	.58	.48	*												
P11	.32	.31	.36	.33	.50	.49	.48	.64	.41	.68	*											
P12	.22	.18	.32	.28	.63	.61	.19	.41	.44	.71	.55	*										
P13	.31	.24	.28	.27	.33	.41	.45	.65	.37	.53	.73	.45	*									
P14	.23	.29	.33	.45	.49	.66	.26	.55	.43	.63	.45	.56	.58	*								
P15	.23	.33	.32	.32	.29	.42	.44	.61	.35	.52	.66	.38	.74	.56	*							
P16	.30	.35	.55	.43	.53	.71	.45	.50	.42	.76	.51	.57	.42	.54	.49	*						
P17	.23	.15	.36	.28	.39	.51	.33	.59	.29	.57	.52	.56	.70	.60	.52	.60	*					
P18	.13	.14	.05	.13	.14	.10	.20	.13	.24	.08	.22	.06	.18	-.02	.09	.14	.09	*				
P19	.04	.10	-.10	.01	.03	.06	.09	.07	.02	.06	.10	.04	.18	.02	.10	.14	.12	.46	*			
P20	.18	.30	.25	.36	.29	.34	.36	.19	.21	.35	.20	.27	.13	.25	.16	.50	.26	.25.	.21	*		
P21	.19	.35	.33	.40	.32	.32	.33	.39	.42	.40	.32	.27	.29	.30	.25	.47	.35	.21	.19	.66	*	
P22	.13	.21	.32	.44	.32	.36	.41	.22	.27	.40	.28	.29	.17	.25	.20	.55	.33	.23	.13	.76	.66	*

Table A8.2 Correlation Matrix: Customer Loyalty

	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17
L1	*																
L2	.84	*															
L3	.64	.65	*														
L4	.40	.49	.51	*													
L5	-.09	.02	.09	.22	*												
L6	-.01	.05	.06	.10	.66	*											
L7	.38	.38	.26	.25	.33	.29	*										
L8	.24	.24	.22	.35	.30	.31	.33	*									
L9	.23	.29	.24	.28	.10	.10	.27	.09	*								
L10	-.13	-.09	-.09	-.06	.14	.02	.04	-.02	-.09	*							
L11	.19	.20	.19	.28	.29	.33	.43	.42	.33	.16	*						
L12	.20	.24	.22	.39	.53	.20	.36	.11	-.01	.32		*					
L13	-.10	-.13	-.08	.02	.16	.17	-.03	.20	-.22	.28	.08	.17	*				
L14	.49	.45	.58	.46	.09	.04	.31	.26	.22	.28	.14	.25	-.13	*			
L15	-.12	-.05	-.17	.02	.14	.09	.01	.13	.07	.30	.20	.09	.26	-.04	*		
L16	.19	.22	.26	.05	.05	-.01	.08	.12	.14	-.08	.12	.18	.13	.27	.01	*	
L17	.24	.34	.35	.12	.21	.13	.23	.09	.31	-.02	.22	.25	.04	.21	.13	.63	*

Table A8.3. ANOVAs for attitudinal items by "level of business" and "combined income"

	Share of Wallet (% Business)					Combined Income						
Item	<80%	81-99%	100%	*F*	*p*	<30K	30-49K	50-79K	80K+	Refuse	*F*	*p*
P1	3.68	3.21	3.73	1.15	.32	3.83	3.73	3.00	3.2	3.1	1.21	.31
P2	4.90	4.77	5.43	2.11	.12	5.10	5.59	4.51	5.29	5.00	1.45	.22
P3	5.43	5.57	6.26	5.13	.01	6.00	6.12	5.38	6.00	5.70	1.41	.24
P4	6.09	6.15	6.60	3.49	.03	6.41	6.46	6.03	6.60	6.27	0.96	.43
P5	6.05	5.90	6.27	1.61	.20	6.19	6.37	5.50	6.33	6.09	2.82	.03
P6	5.64	5.71	6.05	1.32	.27	5.80	6.27	5.19	6.13	6.27	3.10	.02
P7	5.45	5.13	5.88	2.44	.09	5.03	6.27	5.06	6.33	5.73	3.66	.01
P8	5.64	5.66	5.93	0.50	.61	5.52	6.20	5.36	6.33	6.27	2.02	.09
P9	5.41	4.92	5.39	1.51	.22	5.39	5.27	4.64	5.33	5.64	1.35	.25
P10	6.05	5.85	6.04	3.96	.02	6.09	6.50	5.61	6.47	6.36	3.18	.02
P11	6.00	5.77	6.08	0.84	.43	5.90	6.22	5.39	6.47	6.27	2.47	.05
P12	5.81	6.05	6.32	1.68	.19	6.20	6.22	5.72	6.40	6.50	1.43	.23
P13	5.00	5.74	5.90	2.48	.09	5.73	6.02	5.27	6.13	5.30	1.42	.23
P14	5.68	5.85	6.34	3.18	.04	6.33	6.20	5.36	6.27	6.00	3.05	.02
P15	5.62	5.54	5.74	0.19	.83	5.31	6.08	5.25	6.33	5.64	0.84	.50
P16	5.41	5.73	6.38	5.98	.00	5.97	6.10	5.70	6.33	6.18	0.67	.61
P17	5.05	5.89	6.15	4.62	.01	6.02	5.88	5.58	6.33	5.64	0.84	.50
P18	3.59	4.21	4.14	0.54	.58	3.95	3.88	4.39	4.13	4.64	.38	.82
P19	3.18	3.26	3.30	0.02	.98	2.38	3.93	4.06	3.67	2.60	3.34	.01
P20	4.18	5.10	5.91	4.56	.01	5.27	5.61	5.03	5.27	6.00	0.43	.79
P21	3.95	4.85	5.53	3.96	.02	5.11	5.49	4.73	4.67	4.73	0.64	.64
P22	5.23	5.79	6.28	2.91	.06	6.02	6.17	5.49	5.87	6.27	0.71	.59
L1	5.53	5.51	6.48	6.72	.00	5.93	6.41	5.58	5.73	6.10	1.26	.29
L2	5.00	5.69	6.30	5.85	.00	5.85	6.20	5.36	6.27	6.00	1.33	.26
L3	5.82	5.84	6.49	3.74	.03	6.19	6.37	5.72	6.07	6.45	0.97	.43
L4	5.55	5.82	5.73	0.16	.85	5.71	5.80	5.40	5.87	6.36	0.43	.79
L5	4.72	5.18	4.31	1.83	.16	3.91	5.18	5.55	5.00	4.27	2.66	.04
L6	4.64	5.13	4.47	1.10	.34	4.60	5.07	5.09	4.00	4.64	0.66	.62

Table A8.3. Continued

	Share of Wallet (% Business)					Combined Income						
Item	<80%	81-99%	100%	*F*	*p*	<30K	30-49K	50-79K	80K+	Refuse	*F*	*p*
L7	3.77	4.10	4.42	0.59	.55	3.98	4.93	4.30	3.80	3.18	1.41	.24
L8	3.86	4.39	4.18	0.33	.72	4.12	4.08	4.42	4.40	4.40	0.12	.97
L9	4.41	4.92	4.89	0.47	.63	4.72	5.25	4.42	5.47	4.27	1.14	.34
L10	2.09	2.18	1.89	0.46	.63	1.80	2.02	2.42	1.73	2.45	0.94	.44
L11	2.86	2.72	3.31	0.96	.39	2.65	3.43	3.29	2.87	2.73	0.69	.60
L12	4.05	4.47	4.26	0.25	.78	3.98	4.88	4.09	4.47	4.73	0.90	.46
L13	3.82	3.76	3.03	2.04	.13	3.10	4.10	3.21	3.33	3.45	1.20	.31
L14	5.45	6.03	6.47	5.17	.01	6.29	6.15	5.97	6.07	6.27	0.31	.87
L15	1.59	1.76	1.89	0.30	.74	1.58	1.68	1.88	2.73	1.91	1.57	.19
L16	2.23	4.72	5.80	26.8	.00	5.43	4.90	4.24	4.80	4.09	1.79	.13
L17	2.32	3.74	4.97	12.7	.00	4.60	4.28	3.19	4.07	3.72	1.87	.12

Table A8.4 ANOVAs: Service Quality by Segment

	Segment				
	1	2	3	*F*	*p*
P1 Parking	3.18	4.41	2.62	8.31	.00
P2 Signposts	4.54	6.19	4.52	19.13	.00
P3 Mod equipm	5.36	6.47	5.76	9.14	.00
P4 Neat dress	6.09	6.78	6.43	6.55	.00
P5 Tidy counter	4.90	6.56	6.05	13.21	.00
P6 Valued cust	4.55	6.61	5.43	9.86	.00
P7 Promises	4.36	6.64	5.90	29.53	.00
P8 Fix problem	4.64	6.61	5.57	25.40	.00
P9 Queuing	4.91	5.83	4.81	6.21	.00
P10 Help	5.45	6.67	6.00	14.41	.00
P11 Busy	5.18	6.58	5.67	17.96	.00
P12 Courtesy	5.90	6.61	5.95	5.63	.01
P13 Knowledge	5.64	6.50	5.62	11.55	.00
P14 Attention	5.45	6.61	5.86	11.38	.00
P15 Procedures	6.00	6.39	5.81	3.51	.04
P16 Confidence	5.09	6.69	5.90	24.56	.00
P17 Listen	5.54	6.55	5.95	9.38	.00
P18 Interest rate	3.18	5.61	4.90	14.77	.00
P19 Loans	3.36	5.58	3.28	19.51	.00
P20 Community	3.82	6.83	6.52	28.28	.00
P21 Prize draws	3.27	6.53	5.81	42.44	.00
P22 Reputation	4.45	6.92	6.70	55.73	.00

Table A8.5. ANOVAs: Customer Loyalty by Segment

	Segment				
	1	2	3	*F*	*p*
L1 Best bank	4.73	6.67	6.10	17.28	.00
L2 Like there	5.00	6.67	6.05	12.89	.00
L3 I'm loyal	5.00	6.75	6.00	11.06	.00
L4 Cf satisfied	5.00	6.58	5.19	6.14	.01
L5 Costly swit	4.90	5.57	5.19	0.56	.58
L6 Hassle swit	4.45	5.44	5.05	0.94	.40
L7 Privileges	2.91	5.81	4.86	10.84	.00
L8 Change no!	3.09	5.22	4.29	4.23	.02
L9 Recognised	4.45	5.89	4.52	4.84	.01
L10 Switch loc	3.27	1.75	2.33	4.46	.02
L11 Risky	1.64	3.78	3.24	4.24	.02
L12 Bothered	4.00	5.50	4.10	4.47	.02
L13 Switch fee	5.27	3.17	3.95	4.58	.01
L14 No switch	4.36	6.67	6.14	16.30	.00
L15 New bank	2.00	1.89	2.05	0.08	.93
L16 Better in 1	4.27	5.36	4.24	2.33	.11
L17 Stay put	4.27	4.63	3.81	1.06	.35

Table A8.6 ANOVAs: Satisfaction with Main Bank by Segment

	Segment				
Main bank	1	2	3	*F*	*p*
Satisfaction					
... with tellers	5.45	6.58	5.90	15.76	.00
... with ATMs	4.82	5.75	5.48	1.14	.33
... with tele banking	2.37	2.42	3.14	0.44	.65
... with lending	4.18	4.28	3.19	0.94	.40
... with investing	3.45	4.44	3.67	0.76	.47
... Overall	5.27	6.58	5.86	13.33	.00

Table A8.7. Segment Description by Demographics

	Segment					
	1	2	3	Chi square	df	*p*
	(11)	(36)	(21)			
Gender	%	%	%			
Male	64	42	52			
Female	36	58	48	1.64	2	0.44
Age	%	%	%			
Under 40 yrs	28	25	67			
40+ years	72	75	33	10.19	2	0.00
Main Bank	%	%	%			
Study bank	27	97	95			
Competitor	73	3	5	27.27	2	0.00

Chapter Nine: Major Study's Methodology

Table A9.1. Correlation Matrix: Perceived Service Quality

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22
P1	*																					
P2	.38	*																				
P3	.21	.58	*																			
P4	.14	.43	.62	*																		
P5	.21	.43	.61	.60	*																	
P6	.29	.36	.44	.41	.50	*																
P7	.19	.36	.42	.45	.48	.60	*															
P8	.30	.36	.41	.43	.46	.76	.69	*														
P9	.35	.27	.32	.29	.38	.49	.40	.52	*													
P10	.23	.37	.52	.57	.56	.71	.62	.71	.49	*												
P11	.28	.44	.50	.54	.52	.69	.60	.71	.53	.80	*											
P12	.19	.35	.48	.54	.52	.65	.53	.58	.46	.68	.72	*										
P13	.25	.34	.43	.47	.46	.56	.57	.62	.47	.63	.63	.59	*									
P14	.24	.34	.47	.53	.51	.66	.59	.68	.41	.73	.72	.61	.69	*								
P15	.29	.35	.43	.46	.49	.59	.56	.63	.45	.66	.63	.62	.76	.68	*							
P16	.29	.35	.50	.48	.49	.71	.63	.72	.47	.70	.67	.63	.70	.70	.74	*						
P17	.25	.29	.42	.44	.48	.73	.58	.70	.48	.69	.66	.68	.64	.67	.71	.76	*					
P18	.22	.17	.22	.21	.21	.26	.20	.28	.22	.31	.28	.24	.26	.26	.27	.30	.29	*				
P19	.24	.23	.26	.18	.18	.19	.25	.22	.11	.18	.17	.18	.21	.18	.16	.25	.18	.29	*			
P20	.31	.21	.24	.22	.18	.22	.25	.27	.12	.26	.30	.17	.26	.25	.27	.35	.19	.23	.34	*		
P21	.30	.25	.23	.23	.22	.27	.30	.35	.20	.33	.34	.26	.38	.31	.39	.40	.26	.33	.34	.61	*	
P22	.28	.25	.35	.31	.28	.35	.39	.36	.25	.37	.37	.31	.37	.30	.34	.47	.36	.27	.31	.51	.58	*

KMO Measures of Sampling Adequacy = .930; Bartlett's Test of Sphericity = 9762.53, df = 231, p = .00

Table A9.2. Correlation Matrix: Customer Loyalty

	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12	L13	L14	L15	L16	L17	L18
L1	*																	
L2	.85	*																
L3	.61	.62	*															
L4	.77	.80	.67	*														
L5	.06	.07	.14	.09	*													
L6	-.38	-.37	-.18	-.30	.30	*												
L7	.46	.45	.35	.42	.22	-.12	*											
L8	-.04	-.02	.05	-.03	.32	.52	.11	*										
L9	.36	.39	.27	.33	.09	-.10	.37	.12	*									
L10	-.22	-.25	-.27	-.26	.02	.35	-.11	.18	-.07	*								
L11	.18	.17	.19	.12	.20	.13	.21	.30	.12	.15	*							
L12	.41	.49	.33	.43	.16	-.06	.46	.17	.67	-.08	.26	*						
L13	-.28	-.27	-.22	-.28	-.09	.20	-.17	.03	-.16	.37	.01	-.28	*					
L14	.62	.63	.50	.64	.08	-.25	.29	-.03	.29	-.20	.17	.38	-.26	*				
L15	.18	-.20	-.18	-.14	.01	.26	-.05	.16	-.01	.37	.11	.03	.28	-.16	*			
L16	.45	.54	.33	.43	.08	-.05	.47	.21	.64	-.05	.23	.80	-.24	.41	-.02	*		
L17	.46	.47	.41	.39	.15	-.04	.37	.16	.36	-.13	.30	.49	-.23	.37	-.09	.55	*	
L18	.37	.41	.38	.33	.12	.02	.33	.18	.28	-.06	.30	.38	-.11	.35	-.05	.47	.70	*

KMO Measure of Sampling Adequacy = .847; Bartlett's Test of Sphericity = 5333.66, df = 153, p = .00

Table A11.1. Perceived Service Quality: Factor Loadings for Four Factor Solution

		Factor *				
	Item	I	II	III	IV	Communality
P17	Staff willing to listen	**.85**	.15	.14	.07	.77
P08	Sincere in problem fixing	**.83**	.14	.17	.21	.78
P14	Individual attention	**.80**	.26	.16	.05	.74
P16	Confident doing business there	**.81**	.20	.27	.11	.78
P10	Always willing to help	**.81**	.25	.14	.11	.75
P06	Value as a customer	**.79**	.22	.09	.21	.72
P11	Never too busy	**.78**	.27	.18	.17	.75
P12	Consistently courteous	**.77**	.28	.08	.01	.68
P13	Product knowledge	**.75**	.24	.21	.12	.67
P15	Knowledge bank procedures	**.73**	.26	.22	.13	.67
P07	Keep time promises	**.69**	.26	.19	.13	.59
P09	No queues	**.56**	.15	-.01	**.54**	.63
P21	Extras like prize draws	.21	.05	**.80**	.17	.72
P20	Supports local community	.12	.15	**.84**	.05	.74
P22	Strong reputation	.26	.18	**.76**	.07	.68
P19	Mortgage interest rates good					
P01	Adequate parking	.16	.07	.24	**.85**	.82
P18	Investment interest rates good					
P03	Modern looking equipment	.26	**.80**	.14	.15	.75
P02	Clear signage	.19	**.64**	.12	**.48**	.70
P04	Neatly dressed staff	.39	**.74**	.17	-.09	.74
P05	Tidy writing counters	.38	**.72**	.11	.04	.68
	Eigenvalues	10.32	1.69	1.31	1.03	
	% of variance "explained"	51.6	8.5	6.6	5.2	(71.9%)
	Cronbach's alpha coefficient	.96	.79	.78	.51	

* Note that two "pricing" items were withdrawn from the analysis on the basis of their low communalities in the three factor solution. Additionally, some academics would argue that pricing factors are not part of service quality.

Table A11.2. Perceived Service Quality: Factor Loadings for Five Factor Solution

		Factor					
	Item	I	II	III	IV	V	Communality
P17	Staff willing to listen	**.82**	.11	.10	.14	.01	.71
P08	Sincere in problem fixing	**.64**	.07	-.05	.33	.08	.53
P14	Individual attention	**.75**	.21	.12	.03	.05	.62
P16	Confident doing business there	**.74**	.20	.25	.07	-.02	.65
P10	Always willing to help	**.81**	.15	.10	.06	.16	.71
P06	Value as a customer	**.74**	.21	.09	.09	.17	.64
P11	Never too busy	**.79**	.11	.11	.05	.22	.70
P12	Consistently courteous	**.79**	.16	.10	.00	.11	.67
P13	Product knowledge	**.75**	.16	.09	.11	.13	.63
P15	Knowledge bank procedures	**.68**	.17	.15	.06	.06	.53
P07	Keep time promises	**.42**	09	-.09	**.55**	.06	.50
P09	No queues	**.56**	.10	.00	.10	**.51**	.58
P21	Extras like prize draws	.15	.04	**.71**	.20	.12	.58
P20	Supports local community	.04	.03	**.80**	.18	.06	.67
P22	Strong reputation	.28	.19	**.69**	-.06	.08	.60
P19	Mortgage interest rates good	.03	.06	.15	**.78**	.05	.63
P01	Adequate parking	.18	.03	.26	.01	**.81**	.76
P18	Investment interest rates good	.10	-.03	.23	**.74**	.01	.61
P03	Modern looking equipment	.11	**.78**	.02	.14	.14	.68
P02	Clear signage	.20	**.51**	.00	.14	**.55**	.62
P04	Neatly dressed staff	.33	**.71**	.20	-.11	-.10	.68
P05	Tidy writing counters	.32	**.72**	.09	.00	.07	.64
	Eigenvalues	8.28	1.82	1.56	1.24	1.02	
	% of variance "explained"	37.6	8.3	7.1	5.6	4.6	(63.2%)
	Cronbach's alpha coefficient	.96	.79	.78	.56	.51	

Table A11.3. Customer Loyalty : Factor Loadings for Three Factor Solution

		Factor			
	Item	I	II	III	Communality
L01	Best bank for me	**.81**	.30	-.15	.77
L02	Like doing business there	**.80**	.35	-.17	.79
L03	Loyal to this bank	**.76**	.14	.01	.59
L04	Very satisfied (comparatively)	**.81**	.24	-.16	.73
L14	Status quo – no switch	**.67**	.18	-.10	.49
L07	Gives unique privileges	**.40**	**.48**	.07	.40
L09	Personally recognised	.09	**.82**	-.05	.67
L12	Treated a "bit special"	.20	**.86**	.06	.78
L16	**"Bond" with bank staff**	.28	**.85**	.05	.81
L17	**All-in-one banking best**	**.47**	**.49**	.19	.50
L18	Stay even if better elsewhere	**.46**	**.41**	.26	.44
L11	Switching is risky	.23	.23	**.51**	.37
L05	Switching costs be high	.28	-.02	**.52**	.35
L06	Not worth hassle switch	-.21	-.05	**.75**	.60
L08	Better devil you know	.01	.17	**.71**	.53
L13	Switch for lower fees	-.17	-.22	**.43**	.27
L15	Rather deal with new bank	-.30	.05	**.42**	.28
L10	Switch for convenience	-.32	.05	**.46**	.32
	Eigenvalues	4.09	3.22	2.37	
	% of variance "explained"	22.7	17.9	13.2	(53.8%)
	Cronbach's alpha coefficient	.86	.83	.65	

Table A11.4. Customer Loyalty : Factor Loadings for Four Factor Solution

		Factor				
	Item	I	II	III	IV	Communality
L01	Best bank for me	**.84**	.25	-.09	-.14	.79
L02	Like doing business there	**.83**	.30	-.11	-.14	.81
L03	Loyal to this bank	**.73**	.10	.14	-.19	.60
L04	Very satisfied (comparatively)	**.82**	.19	-.09	-.16	.75
L14	Status quo – no switch	**.69**	.14	-.05	-.09	.51
L07	Gives unique privileges	**.42**	**.46**	.08	.00	.40
L09	Personally recognised	.12	**.81**	.00	-.07	.68
L12	Treated a "bit special"	.24	**.85**	.10	.00	.79
L16	"Bond" with bank staff	.32	**.84**	.07	-.02	.81
L17	All-in-one banking best	**.49**	**.46**	.22	.02	.50
L18	Stay even if better elsewhere	**.50**	.38	.21	.15	.45
L11	Switching is risky	.27	.21	**.38**	**.35**	.39
L05	Switching costs be high	.16	-.01	**.69**	-.11	.52
L06	Not worth hassle switch	-.28	-.02	**.75**	.22	.69
L08	Better devil you know	-.06	.19	**.76**	.14	.64
L13	Switch for lower fees	-.04	-.24	.04	**.72**	.58
L15	Rather deal with new bank	-.18	.05	.06	**.66**	.48
L10	Switch for convenience	-.18	.00	.08	**.71**	.54
	Eigenvalues	4.16	3.0	1.95	1.79	
	% of variance "explained"	23.1	16.7	10.8	9.9	(60.5%)
	Cronbach's alpha coefficient	.86	.83	.66	.57	

Table A11.5 Demographic Characteristics by Segment

	Segment							
	1 (137)	2 (72)	3 (72)	4 (124)	5 (165)			
Age	%	%	%	%	%	χ^2	df	*p*
< 30 years	11	19	24	11	29	53.10	16	.00
30-39 years	16	17	27	18	25			
40-49 years	22	28	25	23	22			
50-64 years	24	19	14	22	13			
65 years and over	27	17	8	26	11			
Education Level	%	%	%	%	%	χ^2	df	*p*
< 4 years high school	34	38	18	42	24	42.87	20	.00
4+ year high school	20	19	22	18	17			
Trade certificate	13	11	18	12	12			
Tertiary	16	21	32	11	32			
Professional qualifications	15	11	7	13	15			
Refused	2	-	3	4	-			
Annual Household Income	%	%	%	%	%	χ^2	df	*p*
< $20,000	12	13	11	24	11	45.08	32	.05
$20,000-$29,999	17	15	15	18	13			
$30,000-$39,999	19	17	17	11	15			
$40,000-$49,999	13	18	13	8	12			
$50,000-$59,999	12	8	18	5	16			
$60,000-$79,999	15	14	14	16	12			
$80,000-$99,999	4	4	4	10	8			
$100,000+	5	10	6	5	10			
Refused	3	1	2	3	3			
Median	$40-$50K	$40-$50K	$50-$60K	$30-$40K	$50-$60K			

Note that there was no differentiation by gender between the segments.

Table A11.6 Banking Behaviour by Segment

	Segment							
	1 (137)	2 (72)	3 (72)	4 (124)	5 (165)			
Main Bank	%	%	%	%	%	χ^2	df	*p*
Study Bank	88	46	83	79	78	52.00	4	.00
Competitor	12	54	17	21	22			
Average No. of Banks	1.70	1.79	2.00	1.31	2.08	t not significant		
Proportion of Business with Main Bank	%	%	%	%	%	χ^2	df	*p*
Less than 67%	2	4	8	2	16	77.25	16	.00
68-80%	2	11	11	3	16			
81-90%	10	13	21	12	20			
91-99%	31	31	32	17	22			
100%	55	41	28	66	26			
Ever Closed an Account?								
Yes	63	48	69	53	50	14.67	4	.01
No	37	52	31	47	50			
Closed Account Last 12 Months?								
Yes	11	10	14	9	16	χ^2 not significant		
No	89	90	86	91	84			
Defected from Main Bank Last 12 Months?								
Yes	2	1	4	3	3	χ^2 not significant		
No	98	99	96	97	97			
Time with Main Bank						χ^2	df	*p*
0-7 years	19	26	37	12	38	43.79	12	.00
8-15 years	31	19	29	24	30			
16-29 years	23	29	16	24	22			
30+ years	27	26	18	40	10			

Table A11.6 continued

Behavioural Intention	Segment 1 (137) %	2 (72) %	3 (72) %	4 (124) %	5 (165) %	*F**	*p*
Say positive things about main bank to others	87	69	70	88	38	73.67	.00
Recommend main bank to someone who wants advice	89	71	72	91	36	91.32	.00
Encourage friends/relatives to do business with main bank	82	62	60	84	31	61.14	.00
Increase banking business at main bank next year	56	48	45	59	29	11.50	.00
Decrease banking business at main bank next year	12	25	15	21	36	12.85	.00
Open accounts at another bank in next year	9	14	16	10	35	18.88	.00
Close all accounts at main bank in next year	7	10	9	7	24	9.43	.00

* Results derived from the Juster probability scale are really means but can be presented as %.

Table A11.7 Satisfaction with Bank Departments by Segment

Satisfaction with main bank's...	Segment 1 (137	2 (72)	3 (72)	4 (124)	5 (165)	*F*	*p*
Tellers	6.35	5.33	5.04	6.46	5.71	36.62	.00
	-	A	A	-	-		
	B	-	-	B	B		
ATMs	5.94	5.02	5.26	6.02	5.68	6.36	.00
	-	A	A	-	A		
	B	-	-	B	B		
	-	-	C	-	-		
Telephone Banking	5.87	5.02	5.04	6.08	5.68	4.84	.01
	-	A	A	-	-		
	B	-	-	B	B		
Lending	6.40	5.20	4.77	6.31	5.60	19.45	.00
	-	A	A	-	-		
	B	-	-	B	-		
	-	C	-	C	-		
	-	D	-	-	D		
Investments	6.16	4.83	5.02	6.22	5.50	19.59	.00
	A	-	-	A	-		
	-	-	B	-	B		
	-	C	C	-	-		
Overall Performance	6.59	5.17	5.11	6.64	5.96	72.91	.00
	-	A	A	-	-		
	B	-	-	B	-		
	-	-	-	-	C		

Note: Means with the same letter are not significantly different to each other.

Table A11.8 Perceived Service Quality by Segment

	Segment						
	1 (137)	2 (72)	3 (72	4 (124)	5 (165)	*F*	*p*
Tangibles							
Adequate parking	4.84	3.86	3.34	4.89	3.72	15.32	.00
	A	-	-	A	-		
Clear signage	6.09	5.04	5.22	6.29	5.43	19.02	.00
	A	-	-	A	-		
Modern looking equipment	6.50	5.70	5.70	6.51	5.96	17.31	.00
	A	-	-	A	-		
Neatly dressed staff	6.74	6.06	6.26	6.70	6.50	14.99	.00
	A	-	-	A	A		
	-	-	B	-	B		
	-	C	C	-	-		
Tidy writing counters	6.47	5.72	5.72	6.59	6.09	18.23	.00
	A	-	-	A	-		
Customer Service							
Value as a customer	6.45	5.24	4.62	6.56	5.64	54.57	.00
	A	-	-	A	-		
	-	B	-	-	B		
	-	-	C	-	-		
Keep time promises	6.43	5.27	5.33	6.45	5.65	31.57	.00
	A	-	-	A	-		
Sincere in problem fixing	6.46	5.28	5.04	6.58	5.77	39.44	.00
	A	-	-	A	-		
	-	B	B	-	-		
No queues	5.69	4.75	4.25	5.76	4.75	24.20	.00
	A	-	-	A	-		
Always willing to help	6.54	5.41	5.31	6.65	5.83	44.17	.00
	A	-	-	A	-		
	-	B	B	-	-		
Never too busy to help	6.40	5.22	5.21	6.55	5.72	43.15	.00
	A	-	-	A	-		
	-	B	B	-	-		
Consistently courteous	6.64	5.53	5.44	6.63	6.00	34.41	.00
	A	-	-	A	-		
	-	B	B	-	-		

Table A11.8 continued

	Segment 1 (137)	2 (72)	3 (72)	4 (124)	5 (165)	*F*	*p*
Product knowledge	6.40	5.22	5.30	6.55	5.71	41.08	.00
	A	-	-	A	-		
	-	-	-	-	B		
	-	C	C	-	-		
Individual attention	6.57	5.38	5.38	6.60	5.94	43.44	.00
	A	-	-	A	-		
	-	-	-	-	B		
	-	C	C	-	-		
Knowledge bank procedures	6.49	5.45	5.30	6.56	5.73	34.43	.00
	A	-	-	A	-		
Confident doing business there	6.60	5.19	5.14	6.65	5.79	53.40	.00
	A	-	-	A	-		
	-	-	-	-	B		
	-	C	C	-	-		
Staff willing to listen	6.46	5.46	5.16	6.49	5.77	33.66	.00
	A	-	-	A	-		
	-	B	-	-	B		
	-	C	C	-	-		
Personal Retail Banking							
Investment interest rates good	5.11	4.23	4.24	5.13	4.51	9.59	.00
	A	-	-	A	-		
Mortgage interest rates good	5.49	4.11	4.68	5.10	4.41	13.63	.00
	A	-	-	A	-		
	-	-	B	B	-		
Supports local community	6.68	5.22	6.01	6.45	6.22	15.63	.00
	-	A	-	-	-		
		-	B	B	B		
	C	-	-	C	-		
Extras like prize draws	6.14	4.36	5.17	6.28	5.34	22.66	.00
	A	-	-	A	-		
	-	-	B	-	B		
Strong reputation	6.62	5.37	5.96	6.61	6.17	22.10	.00
	A	-	-	A	-		
	-	-	B	-	B		
	-	C	-	-	-		

Note: Means with the same letter are not significantly different to each other.

Chapter Twelve: Customer Profitability: The Final Link in the Service-Profit Chain

Table A12.1 Group Means of Discriminating Variables

	Customer Contribution	
	Loss or $0	Profit
	Mean	mean
Age group	2.59	3.21
Gender	1.44	1.45
Highest Level of Education	2.58	2.80
Household Income Level	3.50	4.46
Main bank share of wallet	3.95	4.03
Time with main bank (years)	16.53	19.86
Propensity to recommend (Juster probability)	.74	.76
Propensity to increase business main bank	.52	.49
Propensity to decrease business main bank	.20	.20
Propensity to open account new bank	.17	.13
Propensity to defect from main bank	.08	.10
Perceived service quality Factor 1:	.03	-.10
Perceived service quality Factor 2:	-.14	-.07
Perceived service quality Factor 3:	.02	-.04
Customer loyalty Factor 1:	-.02	.02
Customer loyalty Factor 2:	.22	.03
Customer loyalty Factor 3:	.18	-.02
Customer loyalty Factor 4:	.13	-.05
Customer loyalty Factor 5:	.02	-.02
Satisfaction main bank tellers	5.95	5.84
Satisfaction main bank ATMs	5.06	5.15
Satisfaction main bank telephone banking	2.96	2.84
Satisfaction main bank borrowing/lending	4.31	4.59
Satisfaction main bank investments	3.16	3.96
Satisfaction main bank overall	6.00	5.98

Table A12.2. Discriminating Independent Variables for Customer Contribution

	Wilks' Lambda	*F*	*df*	Significance
Age group	.97	18.57	576	.00
Household Income	.96	22.33	576	.00
Time with main bank (years)	.99	6.15	551	.01
Propensity to seek a new bank	.99	4.57	320	.03
Satisfaction with investment department	.98	4.99	320	.03

Table A12.3. Summary Discriminant Analysis Results

Eigenvalue	Canonical Correlation	Wilks' Lambda	Chi-squared	*df*	Significance
.25	.45	.80	42.84	30	.06

Standardised Discriminant Function Coefficients

Age Group	.65	Customer Loyalty Factor 1:	ˉ.26
Gender	ˉ.07	Customer Loyalty Factor 2:	ˉ.49
Highest level of education	.19	Customer Loyalty Factor 3:	ˉ.36
Household income level	.44	Customer Loyalty Factor 4:	ˉ.01
Main bank share of wallet	.45	Customer Loyalty Factor 5:	.16
Time with main bank (years)	.12	Satisfaction with main bank tellers	ˉ.26
Propensity to recommend	.20	Satisfaction with main bank ATMs	.19
Propensity to increase business main bank	ˉ.21	Satisfaction with main bank telephone banking	ˉ.03
Propensity to decrease business main bank	ˉ.14	Satisfaction with main bank lending	.31
Propensity to open account new bank	ˉ.10	Satisfaction with main bank investing	.21
Propensity to defect from main bank	.19	Satisfaction with main bank overall	.03
Perceived Service Quality Factor 1:	.18		
Perceived Service Quality Factor 2:	.06		
Perceived Service Quality Factor 3:	.13		
		Classification: 65% of original cases were correctly classified.	

Table A12.4. Loglinear Results: Variables Associated with Customer Contribution

Customer Contribution	Variable's Category	Observed	Expected	Standardised Residual	Chi-squared
Loss or $0	<40 years	188	141.1	3.95	
Loss or $0	40+ years	168	214.9	-3.20	
Profit	<40 years	259	305.9	-2.68	
Profit	40+ years	513	466.1	2.17	37.78, p=.00
Loss or $0	<$40000	220	191.9	2.03	
Loss or $0	$40000+	136	164.1	-2.19	
Profit	<$40000	388	416.1	-1.38	
Profit	$40000+	384	355.9	1.49	13.06, p=.00
Loss or $0	<20yrs bank	222	192.8	2.10	
Loss or $0	20+yrs bank	134	163.2	-2.28	
Profit	<20 yrs bank	389	418.2	-1.43	
Profit	20+yrs bank	383	353.8	1.55	14.06, p=.00
Loss or $0	<68% wallet	31	20.1	2.42	
Loss or $0	68-80% wallet	22	24.2	-.45	
Loss or $0	81-90% wallet	52	43.4	1.30	
Loss or $0	91-99% wallet	75	83.4	-.92	
Loss or $0	100% wallet	168	176.8	-.66	
Profit	<68% wallet	33	43.9	-1.64	
Profit	68-80% wallet	55	52.8	.31	
Profit	81-90% wallet	86	94.6	-.88	
Profit	91-99% wallet	190	181.6	.62	
Profit	100% wallet	394	385.2	.45	13.19, p=.00
Loss or $0	Have joint acc	184	217.7	-2.28	
Loss or $0	No joint acc	171	137.3	2.87	
Profit	Have joint acc	507	473.3	1.55	
Profit	No joint acc	265	298.7	-1.95	19.64, p=.00
Loss or $0	Secondary only	244	231	.86	
Loss or $0	Tertiary educ	102	115	-1.21	
Profit	Secondary only	483	496	-.58	
Profit	Tertiary educ	260	247	.83	3.23, p=.07
Loss or $0	Less satisfied	91	81.9	1.01	
Loss or $0	More satisfied	260	269.1	-.56	
Profit	Less satisfied	167	176.1	-.69	
Profit	More satisfied	588	578.9	.38	1.94, p=.17

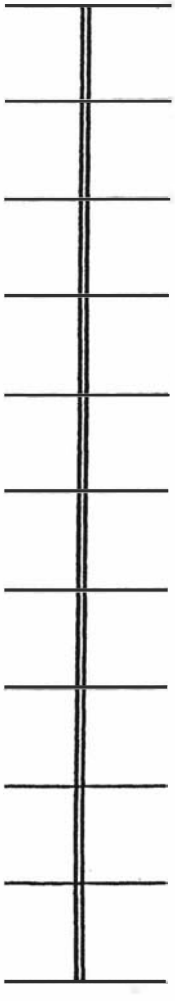
APPENDIX TWO: RESEARCH INSTRUMENTS FOR QUALITATIVE PRE-RESEARCH

CUSTOMER LOYALTY IN PERSONAL BANKING

How much do you agree or disagree with the following statements about banks?

PLEASE CIRCLE ONE NUMBER FOR EACH QUESTION

	Very Strongly Disagree	Strongly Disagree	Disagree	Agree	Strongly Agree	Very Strongly Agree	Not Sure
Unless I was very dissatisfied with my bank(s), changing a cheque account from one bank to another would be too much bother	1	2	3	4	5	6	9
Lower or no fees at another bank would convince me to switch all my business there	1	2	3	4	5	6	9
As long as the present service continues, I doubt that I would switch from my present bank(s)	1	2	3	4	5	6	9
I have never switched an account because of bad service or some annoying incident at the bank	1	2	3	4	5	6	9
I would rather deal with a new bank in town (e.g. ASB Bank, Trust Bank) than one of the established banks	1	2	3	4	5	6	9
It is better to do all your banking in one bank because then they have a better overall picture of your finances	1	2	3	4	5	6	9
I would rather do all my banking business with one bank even if another bank offered a slightly better deal on a loan or an investment account	1	2	3	4	5	6	9



10 - CERTAIN, PRACTICALLY CERTAIN (99 in 100)

9 - ALMOST SURE (9 in 10)

8 - VERY PROBABLE (8 in 10)

7 - PROBABLE (7 in 10)

6 - GOOD POSSIBILITY (6 in 10)

5 - FAIRLY GOOD POSSIBILITY (5 in 10)

4 - FAIR POSSIBILITY (4 in 10)

3 - SOME POSSIBILITY (3 in 10)

2 - SLIGHT POSSIBILITY (2 in 10)

1 - VERY SLIGHT POSSIBILITY (1 IN 10)

0 - NO CHANCE, ALMOST NO CHANCE (1 in 100)

Now I would like to know what the prospects are of you doing various things with your bank in the next few years.

On the facing page is a special scale, arranged a bit like a thermometer. If you are certain or practically certain that you will do something (e.g. change banks) in the next 12 months, you would choose the answer 10 and write it in, in the space provided beside that question. On the other hand, if there is no chance or almost no chance, the best answer would be '0'. If you are uncertain about the prospects, choose another answer from the scale.

(a) What are the prospects that you will close one or more accounts at your bank (at your main bank if you use more than one bank) in the next 12 months? [Not including investments that terminate or expire]

WRITE IN ANSWER FROM SCALE OPPOSITE

_____

(b) What are the prospects that you will open one or more accounts at a bank you do not currently deal with, in the next 12 months?

_____

(c) What are the prospects that you will leave (close all accounts and terminate business) your bank (main bank if you use more than one bank) **in the next 12 months?**

_____

(d) What are the prospects that you will leave (close all accounts and terminate business) your bank (main bank if you use more than one bank) **in the next 2 years?**

_____

(e) What are the prospects that you will leave (close all accounts and terminate business) your bank (main bank if you use more than one bank) **in the next 5 years?**

_____

Finally, a few questions about you that allow me to see if I have a good cross-section of people in my survey.

1. Are you: Male 1
   Female 2

2. What year were you born in?

_____

3. How many banks does your household do business with?

_____

4. How long have you been dealing with the bank you use most (your main bank)?

Less than 1 year 1
1 - 2 years 2
3 - 5 years 3
6 - 10 years 4
11 - 20 years 5
21 - 50 years 6
Over 50 years 7

Thanks

APPENDIX THREE: RESEARCH INSTRUMENTS FOR PILOT STUDY

CONFIDENTIAL

BANKING IN NEW ZEALAND

Ron Garland

DEPARTMENT OF MARKETING

Massey University

November 1996

Massey University

DEPARTMENT OF MARKETING

HOW TO FILL IN THIS QUESTIONNAIRE

There is an instruction in **bold type** directly after each question. Mostly all you have to do is circle the number next to the answer that you want to give.

In certain questions we would like you to write your answer in the space provided. However, if you want to tell us more about any particular issue, please feel free to do so. The back page is available for these comments.

Some examples of how to fill in the questionnaire are set out below. Please remember that this questionnaire is confidential.

Q1. Did you withdraw money from an automatic teller machine (cash machine) last week? **PLEASE CIRCLE ONE NUMBER ONLY.**

Yes . . . . . (1)
No 2

Q2. My main bank ...

	Strongly Disagree						Strongly Agree
... offers good advice to customers	1	2	3	4	(5)	6	7

---

1. **YOUR BANKS**

All the questions in this survey are about your **personal** banking (not business accounts) and any **joint** account banking you may do with another person.

1. (a) Which of the following banks do you have any dealings with now?

PLEASE CIRCLE ALL THAT APPLY IN COLUMN A

(b) And which one bank do you consider to be your **MAIN BANK**?

PLEASE CIRCLE ONLY ONE NUMBER IN COLUMN B ——→

	A Dealings with	**B** Main Bank
ANZ-Postbank	1	1
ASB Bank	2	2
Bank of New Zealand	3	3
Countrywide Bank	4	4
National Bank	5	5
TSB Bank	6	6
Trust Bank	7	7
Westpac	8	8
Other Bank (Please write in)	9	9

On the next pages you will be asked to use a scale like this to answer Q2 and Q3.

1	Strongly disagree
2 3	Disagree
4	Neither agree nor disagree
5 6	Agree
7	Strongly agree
0	No opinion

2. YOUR BRANCH OF YOUR MAIN BANK

Thinking about the **branch** of your main bank that you deal with (most), and using the scale 1 to 7, where circling a '1' means that you **strongly disagree** that your branch does that, and circling a '7' means that you **strongly agree**, how would you rate your branch on each of the following features? (There are no right or wrong answers -all we are interested in is that the number - the level of agreement you choose - reflects your feelings, so you can circle the numbers in the middle too.)

PLEASE CIRCLE ONE NUMBER FOR EACH STATEMENT

My branch/branch employees ...	**Strongly Disagree**						**Strongly Agree**	**No Opinion**
• Has adequate parking facilities	1	2	3	4	5	6	7	0
• Has clear signposts for the different areas inside the branch	1	2	3	4	5	6	7	0
• Has modern-looking equipment	1	2	3	4	5	6	7	0
• Are neatly dressed	1	2	3	4	5	6	7	0
• Has tidy writing counters, stocked with forms & pens	1	2	3	4	5	6	7	0
• Act like they value me as a customer	1	2	3	4	5	6	7	0
• When it promises to do something by a certain time, it does so	1	2	3	4	5	6	7	0
• When I have a problem, they show a sincere interest in fixing it	1	2	3	4	5	6	7	0
• Has little or no waiting time in queues	1	2	3	4	5	6	7	0
• Are always willing to help you	1	2	3	4	5	6	7	0
• Are never too busy to respond to your requests	1	2	3	4	5	6	7	0
• Are consistently courteous	1	2	3	4	5	6	7	0
• Have the knowledge to answer your questions	1	2	3	4	5	6	7	0
• Give you individual attention	1	2	3	4	5	6	7	0
• Have good knowledge of their bank's procedures	1	2	3	4	5	6	7	0
• Give you confidence in doing business there	1	2	3	4	5	6	7	0
• Has staff who are willing to listen	1	2	3	4	5	6	7	0
• Has higher than average interest rates on deposit	1	2	3	4	5	6	7	0
• Has lower than average interest rates on loans	1	2	3	4	5	6	7	0
• Supports the local community in practical ways	1	2	3	4	5	6	7	0
• Offers worthwhile "extras" like prize draws	1	2	3	4	5	6	7	0
• Has a strong reputation in our part of New Zealand	1	2	3	4	5	6	7	0

3. **LOYALTY TO YOUR MAIN BANK**

Using the same scale of 1 to 7 as you used in Section 2 above, please tell us how you feel about your **main bank** by answering the following questions.

PLEASE CIRCLE ONE NUMBER FOR EACH STATEMENT

	Strongly Disagree						Strongly Agree	No Opinion
• This bank is clearly the best one for me	1	2	3	4	5	6	7	0
• I really like doing business with this bank	1	2	3	4	5	6	7	0
• I consider myself to be a loyal customer of this bank	1	2	3	4	5	6	7	0
• Compared to other banks I've used, I'm very satisfied with my main bank	1	2	3	4	5	6	7	0
• For me, the cost in time, money & effort to switch banks would be high	1	2	3	4	5	6	7	0
• It's just not worth the hassle for me to switch banks	1	2	3	4	5	6	7	0
• This bank gives me particular privileges I would not get elsewhere	1	2	3	4	5	6	7	0
• If I were to change banks, the service I might receive could be worse than what I get now	1	2	3	4	5	6	7	0
• I am personally recognised whenever I visit my bank	1	2	3	4	5	6	7	0
• If another bank's branch was more conveniently located for me, I would switch to them	1	2	3	4	5	6	7	0
• Switching banks is risky	1	2	3	4	5	6	7	0
• Unless I was very dissatisfied with my bank, changing a cheque account from one bank to another would be too much bother	1	2	3	4	5	6	7	0
• Lower or no fees at another bank would convince me to switch my business there	1	2	3	4	5	6	7	0
• As long as the present service continues, I doubt that I would switch from my main bank	1	2	3	4	5	6	7	0
• I would rather deal with a new bank in town than one of the more established banks	1	2	3	4	5	6	7	0
• It is better to do all your banking in one bank because then they have a better overall picture of your finances	1	2	3	4	5	6	7	0
• I would rather do all my banking business with one bank even if another bank offered a slightly better deal on a loan or an investment account	1	2	3	4	5	6	7	0

10 - CERTAIN, PRACTICALLY CERTAIN (99 IN 100)

9 - ALMOST SURE (9 in 10)

8 - VERY PROBABLE (8 in 10)

7 - PROBABLE (7 in 10)

6 - GOOD POSSIBILITY (6 in 10)

5 - FAIRLY GOOD POSSIBILITY (5 in 10)

4 - FAIR POSSIBILITY (4 in 10)

3 - SOME POSSIBILITY (3 in 10)

2 - SLIGHT POSSIBILITY (2 in 10)

1 - VERY SLIGHT POSSIBILITY (1 in 10)

0 - NO CHANCE, ALMOST NO CHANCE (1 in 100)

4. YOUR FUTURE LOYALTY TO YOUR (MAIN) BANK

Now we would like to know what the prospects are of you doing various things with your **main bank** in the near future. On the **facing page** is a special scale, arranged a bit like a thermometer. It describes a series of chances that you might do something. If, for instance, we asked you how likely it is that you will visit your bank's nearest automatic teller machine (cash machine) in the next month, and you were certain or practically certain you would do this, then you would circle '10'. On the otherhand, if there was no chance or almost no chance, the best answer would be '0'. If you were less certain about your answer to this question, then you would choose an answer somewhere between 1 and 9 on this scale.

The following questions ask you to use the scale on the facing page, and then **CIRCLE THE NUMBER BETWEEN 0 and 10 THAT BEST APPLIES FOR EACH QUESTION.**

a) What are the chances you will say positive things about your main bank to others?

PLEASE CIRCLE THE NUMBER THAT BEST APPLIES

0 1 2 3 4 5 6 7 8 9 10

b) What are the chances you will recommend your main bank to someone who asks about which bank to use?

PLEASE CIRCLE THE NUMBER THAT BEST APPLIES

0 1 2 3 4 5 6 7 8 9 10

c) What are the chances you will encourage friends or relatives to do business with your main bank?

PLEASE CIRCLE THE NUMBER THAT BEST APPLIES

0 1 2 3 4 5 6 7 8 9 10

d) What are the chances that you will **increase** your banking business at your main bank in the next 12 months?

PLEASE CIRCLE THE NUMBER THAT BEST APPLIES

0 1 2 3 4 5 6 7 8 9 10

e) What are the chances that you will **decrease** your banking business at your main bank in the next 12 months (not including investments that terminate)?

PLEASE CIRCLE THE NUMBER THAT BEST APPLIES

0 1 2 3 4 5 6 7 8 9 10

f) What are the chances that you will **open** one or more accounts **at a bank you do not currently deal with**, in the next 12 months?

PLEASE CIRCLE THE NUMBER THAT BEST APPLIES

0 1 2 3 4 5 6 7 8 9 10

g) What are the chances that you will **leave** (close all accounts and terminate business) your main bank in the next 12 months?

PLEASE CIRCLE THE NUMBER THAT BEST APPLIES

0 1 2 3 4 5 6 7 8 9 10

5. SATISFACTION WITH YOUR MAIN BANK

(a) In this part of the survey we would like you to tell us how **satisfied** you are, overall, with the following sections of your main bank. To do this, please use the scale of 1 to 7, where circling a '1' means **'Extremely dissatisfied'**, and circling a '7' means **'Extremely satisfied'**.

How satisfied or dissatisfied are you with your main bank's...	**Extremely Dissatisfied**						**Extremely Satisfied**	**Not Applicable**
Tellers	1	2	3	4	5	6	7	0
Automatic teller machines (cash machines)	1	2	3	4	5	6	7	0
Telephone banking facilities	1	2	3	4	5	6	7	0
Loans/mortgages/borrowing section	1	2	3	4	5	6	7	0
Investment section	1	2	3	4	5	6	7	0

And, overall, how satisfied are you with your **main bank**? 1 . . . 2 . . 3 . . 4 . . . 5 . . 6 . . . 7

(b) What is the **single** biggest problem you have as a customer of your main bank? **PLEASE EXPLAIN**

(c) And what is the **single** most important thing your main bank could do to improve service for you? **PLEASE EXPLAIN**:

6. YOUR MAIN BANK

(a) Listed below are five important features about banks. We would like to know **how important each of these five features** is to you when you think about your **main bank**. Please give a total of 100 points among these five features *according to how important each feature is to you* - the more important a feature is to you, the more points you should give it. Please ensure that the points you give to the five features add up to 100.

1. Appearance of your **main bank's** buildings, equipment, staff, brochures etc. . ____ points
2. Ability of your **main bank** to give dependable and accurate service . . . . . ____ points
3. Willingness of your **main bank** to help customers and give prompt service . . . ____ points
4. Knowledge and courtesy of your **main bank's** staff and their ability to convey trust and confidence . . . . . ____ points
5. Caring, individual attention your **main bank** gives its customers . . . . . ____ points

TOTAL POINTS ALLOCATED 100 points

(b) And thinking about **all** the banks you deal with. What proportion (i.e. percentage) of your banking would be with your **main bank**? (If you deal with only one bank then the answer would be 100% - circle '7'.)

Less than 33% 1
33% to 49% 2
50% to 67% 3
68% to 80% 4
81% to 90% 5
91% to 99% 6
100% 7

7. ABOUT YOU

Finally, we would like to ask a few questions about you and your household so that we can ensure that we get responses from a cross-section of the public. Please be assured that this information is **completely confidential and you will not be individually identified**.

(a) Your gender

Female 1
Male 2

(b) In which year were you born?

_____

(c) Which of the following best describes your annual **household income**, that is the **combined income** of everyone in paid employment in your household, before tax?

PLEASE CIRCLE ONE NUMBER ONLY

Under $20,000 1
$20,000 - $29,999 2
$30,000 - $39,999 3
$40,000 - $49,999 4
$50,000 - $59,999 5
$60,000 - $79,999 6
$80,000 - $99,999 7
$100,000 or over 8

Thank you very much for your help.

Please place your questionnaire in the reply-paid envelope provided and return it to us as soon as you can.

APPENDIX FOUR: RESEARCH INSTRUMENTS FOR MAJOR STUDY

CONFIDENTIAL

BANKING IN TARANAKI

MASSEY
UNIVERSITY

Ron Garland

DEPARTMENT OF MARKETING

Massey University

April 1997

Massey University

DEPARTMENT OF MARKETING

HOW TO FILL IN THIS QUESTIONNAIRE

There is an instruction in **bold type** directly after each question. Mostly all you have to do is circle the number next to the answer that you want to give.

In certain questions we would like you to write your answer in the space provided. However, if you want to tell us more about any particular issue, please feel free to do so. The back page is available for these comments.

Some examples of how to fill in the questionnaire are set out below. Please remember that this questionnaire is confidential.

EXAMPLE

Q1. Did you withdraw money from an automatic teller machine (cash machine) last week? **PLEASE CIRCLE ONE NUMBER ONLY**.

Yes . . . . . (1)
No 2

Q2. My main bank ...

	Strongly Disagree						Strongly Agree
... offers good advice to customers	1	2	3	4	(5)	6	7

Several questions in the survey will ask you to use a scale like this:

1	Strongly disagree
2 3	Disagree
4	Neither agree nor disagree
5 6	Agree
7	Strongly agree
0	No opinion

---

2. (a) Thinking about **all** the banks you deal with. What proportion (i.e. percentage) of your banking would be with your **main bank**? (If you deal with only one bank then the answer would be 100% - circle '5'.)

Less than 67% (two thirds) 1
68% to 80% 2
81% to 90% 3
91% to 99% 4
100% 5

(b) How long have you been banking with your **main bank**? **PLEASE WRITE IN**:

_____ years

(c) Do you have any joint accounts (accounts with two or more people) at any bank?

Yes 1
No 2

(d) Have you ever closed all accounts and ended business with a bank?

Yes 1
No . . . . . 2 ---> Go To Question 3

(e) Have you ended business with any bank in the last 12 months?

Yes 1
No 2

4. **LOYALTY TO YOUR MAIN BANK**

Using the same scale of 1 to 7 as you used in Section 3 above, please tell us how you feel about your **main bank** by answering the following questions.

PLEASE CIRCLE ONE NUMBER FOR EACH STATEMENT

	Strongly Disagree						**Strongly Agree**	**No Opinion**
• I would rather do all my banking business with one bank even if another bank offered a slightly better deal on a loan or an investment account	1	2	3	4	5	6	7	0
• It is better to do all your banking in one bank because then they have a better overall picture of your finances	1	2	3	4	5	6	7	0
• I feel there is a "bond" between me and my bank's employees	1	2	3	4	5	6	7	0
• I would rather deal with a new bank in town than one of the more established banks	1	2	3	4	5	6	7	0
• As long as the present service continues, I doubt that I would switch from my main bank	1	2	3	4	5	6	7	0
• Lower or no fees at another bank would convince me to switch my business there	1	2	3	4	5	6	7	0
• My bank's employees treat me "a bit special"	1	2	3	4	5	6	7	0
• Switching banks is risky	1	2	3	4	5	6	7	0
• If another bank's branch was more conveniently located for me, I would switch to them	1	2	3	4	5	6	7	0
• I am personally recognised whenever I visit my bank	1	2	3	4	5	6	7	0
• A major reason I don't switch banks is "better the devil you know than the one you don't"	1	2	3	4	5	6	7	0
• This bank gives me particular privileges I would not get elsewhere	1	2	3	4	5	6	7	0
• I stay with this bank only because it's not worth the hassle for me to switch banks	1	2	3	4	5	6	7	0
• For me, the cost in time, money & effort to switch banks would be high	1	2	3	4	5	6	7	0
• Compared to other banks I've used, I'm very satisfied with my main bank	1	2	3	4	5	6	7	0
• I consider myself to be a loyal customer of this bank	1	2	3	4	5	6	7	0
• I really like doing business with this bank	1	2	3	4	5	6	7	0
• This bank is clearly the best one for me	1	2	3	4	5	6	7	0

YOUR FUTURE LOYALTY TO YOUR (MAIN) BANK

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PLEASE CIRCLE THE NUMBER THAT BEST APPLIES

0 1 2 3 4 5 6 7 8 9 10

e) What are the chances that you will **decrease** your banking business at your main bank in the next 12 months (not including investments that terminate)?

PLEASE CIRCLE THE NUMBER THAT BEST APPLIES

0 1 2 3 4 5 6 7 8 9 10

f) What are the chances that you will **open** one or more accounts **at a bank you do not currently deal with**, in the next 12 months?

PLEASE CIRCLE THE NUMBER THAT BEST APPLIES

0 1 2 3 4 5 6 7 8 9 10

g) What are the chances that you will **leave** (close all accounts and terminate business) your main bank in the next 12 months?

PLEASE CIRCLE THE NUMBER THAT BEST APPLIES

0 1 2 3 4 5 6 7 8 9 10

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FACULTY OF
BUSINESS STUDIES

DEPARTMENT OF
MARKETING

April 1997

OH GOSH! ANOTHER SURVEY ON BANKING!

Hi, I'm Ron Garland, a teacher in the Department of Marketing here at Massey University. I'm also trying to conduct research for a further degree in marketing and my interest is in people's loyalty to their bank(s). You will see a variety of questions about this topic in the enclosed questionnaire. You will also see that I've enlisted the help of TSB Bank for my research.

I am writing to you to ask for your help in completing the enclosed questionnaire. I would be grateful if you would answer and return it in the envelope provided (there is no need to put a stamp on it). The number on the questionnaire is to allow me to cross your name off once you have returned your questionnaire and ensure that I don't send you a reminder. I am a member of the Market Research Society of New Zealand and under its Code of Practice I must respect your answers in the strictest confidence.

If you choose to complete the questionnaire, you can decline to answer any question; naturally, participation in this research is voluntary. **Nowhere** do I ask for amounts of money etc. You are only asked to circle numbers besides answers or write in brief comments - about ten minutes in total!

Thank you for your help. I look forward to receiving your completed questionnaire as soon as possible.

Yours sincerely

Ron Garland

Ron Garland
Senior Lecturer in Marketing

PS If you have any questions about this survey or would like to know more about it, please write to me at the above address or Phone me on (06) 350 5581 (work).

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FACULTY OF
BUSINESS STUDIES

DEPARTMENT OF
MARKETING

May 1997

ANOTHER SURVEY ON BANKING!

Recently I sent you a questionnaire about banks and banking, but so far I haven't received a reply. I am writing to check that you received the questionnaire, to remind you of the survey and to ask again for your help.

Because only a small number of people were selected to take part in this survey it is important to get a completed questionnaire from you even if you feel you know very little about some of the topics in it. And I would like to reassure you that all your answers will be completely confidential.

Yours sincerely

Ron Garland

Ron Garland
Senior Lecturer in Marketing

PS Thank you if you have already returned your questionnaire (and please ignore this letter).

April 1997

Dear Customer

Ron Garland, a Senior Lecturer at Massey University, is researching Bank customers (selected at random) to help us learn more about our service quality.

I would be very grateful if you would take the time to complete Ron's questionnaire. Your contribution, which will be entirely confidential, will go directly to Ron. No-one from the Bank will have access to your answers.

This information is important to the Bank. It will help us better understand the needs and expectations you have of us - and improve the quality of service we provide to you. I do hope you will help us.

Thank you for banking with Bank.

Yours sincerely

Kevin Rimmington
Managing Director