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**Switching Determinants in  
Subscription Service Markets:**

**Banking and Electricity in New Zealand**

**A thesis presented in partial fulfilment  
of the requirements of the degree  
Master of Business Studies**

**at**

**Massey University  
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## ABSTRACT

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This study examines the important role switching costs play in consumer loyalty to service providers. Banking and residential electricity consumers were studied in New Zealand using the framework developed by Burnham, Frels & Mahajan (2003). An attempt was made to replicate their measurement model using Burnham *et al.*'s eight first order constructs. An acceptable fit to the data was achieved, however, their instrument's scale items did not load as predicted indicating limited convergent and discriminant validity. In replicating Burnham *et al.*'s three factor second order model, of their three factors - procedural, financial and relational - only *relational* costs proved significant in influencing a consumer's *intention to stay* with their current service provider. A relationship between *satisfaction* with a service and a greater *intention to stay* with that service was confirmed.

Possible explanations for the poor performance of the Burnham *et al.* structural model might be that their measurement model violates some basic rules for scale development. The lack of validity of some scales leads to speculation that the significant results reported by Burnham *et al.* were the result of fortuitous fit to their USA data.

The value of a theory is in its general applicability to situations outside its original context. While the Burnham *et al.* (2003) theory may have been intuitively sound, this attempt to operationalise their model was hindered by a measurement instrument which lacked convergence, discriminance and reliability. The Burnham *et al.* model demonstrated in this replication an adequate fit to the data, but goodness-of-fit alone does not indicate a structurally sound model. It also requires validity.

The findings of this thesis are that their model may require modification to some scales before it will be universally useful.

Keywords: Customer retention, confirmatory factor analysis, structural equation modelling, switching costs, loyalty, satisfaction, switching, defection, subscription markets, services.

# 1. INTRODUCTION

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## 1.1 The Research Problem

Commerce, at its most basic relies on sales. While sales in repertoire markets occur frequently, selling activity in subscription markets is far less common. A customer of an electricity supplier, for example, can be seen as continuously purchasing a service from the supplier and thus rarely experiences selling. This rarity of selling in subscription services markets has resulted in the placing of more focus on retaining existing customers and attracting new customers from the competition, - customer retention and customer switching. With the level of competition and the cost of customer acquisition rising, companies are focusing on customer retention (Jones, Mothersbaugh, & Beatty, 2000) and thus it has become increasingly important to understand what drives customers to stay with or switch from their current service provider.

In consumer fast moving good markets significant progress has been made in identifying what drives loyalty and switching. It is understood that much buying of fast moving consumables is stochastic and consumer behaviour is dominated by patterns of repertoire buying and switching. These patterns have become well known through the Negative Binomial Distribution and Dirichlet model studies (Uncles, Ehrenberg, & Hammond, 1995). Resulting in a series of generalisations useful for prediction. Generalisations such as polygamous loyalty and multi-brand buying are becoming increasingly accepted in literature (Ehrenberg, Uncles, & Goodhardt, 2004). Do these generalisations hold for subscription services markets? Is consumer in repertoire markets transferable to subscription markets or is there consumer behaviour unique to subscription markets?

While it has been identified that subscription service markets do have some Dirichlet elements amongst their characteristics, it is also apparent that switching behaviour in service markets is rare (Sharp, Wright, & Goodhardt, 2002). This rarity of behaviour results in difficulties in using behavioural measures to build and validate predictive models, and a reliance on attitudinal measures; behavioural intention or self reported predictions of behaviour (probabilities) to identify likely behaviour.

Researchers have come to believe that many service markets are different to fast moving consumer good markets in that, they are characterised by high *switching costs*, high levels of *personal interaction* and high levels of *loyalty* (switching is rare). The extent to which these three components interact to determine loyalty and switching behaviour is not well known. What is well known is that *satisfaction* plays a substantial part in this behaviour (Szymanski & Henard, 2001).

In the last ten years there have been several attempts to clarify the importance of *switching costs*, *personal interactions* and *satisfaction* in services (Gremler, 1995; Klemperer, 1995; Jones, Mothersbaugh, & Beatty, 2002; Burnham, Frels, & Mahajan, 2003). Out of this activity has come some understanding of measurement scales for researching service markets and the constructs that make up loyalty. The results, however, have been inconsistent, as researchers have worked on confirming the work of others to a limited extent, focusing instead on the creation of alternative models. This thesis attempts to validate a recent study by Burnham, Frels and Mahajan (2003) who developed a typology for switching by focusing on *switching costs* along with their antecedents and consequences in long distance calling and credit card services. The approach in this thesis was to 'reverse engineer' the Burnham *et al.* (2003) study and use this knowledge to replicate their survey and analysis. The survey instrument derived from this process was then used to collect data from New Zealand consumers in the banking and electricity markets. Data from these industries was then used to validate the measurement model and a series of structural models proposed by Burnham *et al.* (2003).

The overall objective was to determine whether the *switching costs* components proposed by Burnham *et al.* (2003) in their typology can be sustained in a test of their model on New Zealand data from two further service industries. In this thesis, the antecedents of *switching costs* were not considered. Only the *switching costs* and *consequences* identified in Burnham *et al.*'s (2003) model were included. See Chapter Six for the detailed objectives of this thesis.

The strategy was one of replication and close extension. The choice of Burnham *et al.* over other worthy studies is somewhat arbitrary because without replication there is no reason to believe the Burnham *et al.* (2003) typology is more valid than any other, however, they drew on much of the work that has gone before, and thus serves as a

useful first point of reference for one of first replications in the field of subscription services *switching costs*.

## 1.2 Main Findings

- There does not appear to be adequate support from this thesis to accept Burnham *et al.*'s. second order model.
- There was strong support for a relationship between *satisfaction* and *intention to stay*.
- The only construct with any substantive or significant support was *relational*
- The Burnham *et al.* finding that an interaction does not exist between *satisfaction* and *switching costs* was confirmed with the condition that it is based on the Burnham *et al.* second order model, which in itself has doubtful support.
- The Burnham *et al.* measurement instrument has some design flaws related to the number of questions chosen for the study. *Intention to stay* and *monetary loss cost* both had scales with only two items. This violates the minimum requirement for reliable scales (Ding, Velicer, & Harlow, 1995).
- Not all Burnham *et al.*'s. scale items are uni-dimensional in the New Zealand context. Questions 8, 9, 10, 15, 16, and 22 showed significant multi-dimensionality that would typically rule them out of as scale items.
- Not all Burnham *et al.*'s. scale items loaded onto the construct Burnham *et al.* had intended they would. Questions 9, 10, 11, 13, 16, 29, 30, 31 all loaded heavier onto a construct other than intended.
- Some questions were difficult for respondents to answer or perhaps seen as irrelevant by respondents, which was demonstrated by large numbers of missing responses for questions 21 and 24.

## 1.3 Organisation of this Thesis

- Chapter Two is brief discussion of the main themes of switching in services and discusses how best to define switching.
- Chapter Three is a discussion of the literature on the determinants of subscription market switching and particularly; *satisfaction, personal relationships*, and *switching costs*.
- Chapter Four describes the three key pieces of research that relate most closely to the objectives of this thesis. They are Gremler's (1995) doctoral thesis, Jones, Mothersbaugh, Beatty (2002), and Burnham, Frels and Mahajan. (2003).
- Chapter Five briefly covers the literature on the need for and problems with undertaking replication.
- Chapter Six covers the research objectives.
- Chapter Seven describes the procedure, sample and research instrument. The similarities and differences between this study and the original by Burnham *et al.* (2003) are covered, along with the limitations of the research design for both studies.
- Chapter Eight describes the validation of Burnham *et al.*'s (2003) measurement scale items against New Zealand data.
- Chapter Nine describes the validation of Burnham *et al.*'s (2003) first order measurement model against New Zealand data.
- Chapter Ten describes the validation of the Burnham *et al.*'s. (2003) second order measurement model against New Zealand data.
- Chapter Eleven describes the validation of the Burnham *et al.*'s. (2003) structural models, along with a test of the Burnham *et al.* hypotheses Seven, Eight and Nine.
- Chapter Twelve covers discussion, conclusions, limitations and avenues for further research.

## 2. AN INTRODUCTION TO SWITCHING

---

### 2.1 Introduction

Our knowledge of subscription market switching behaviour is limited, arguably because research into market-switching is dominated by work on fast moving consumer goods markets where repertoire-buying behaviour dominates. Any research into the determinants of subscription switching has been mainly focussed on single predictor variables such as *satisfaction* or *switching costs*. More recent work indicates that loyalty and switching behaviour in subscription markets is driven by a more complex structure than just *satisfaction* alone (Gremler, 1995; Jones *et al.*, 2000; Burnham *et al.*, 2003). Loyalty is much higher in subscription markets (Sharp *et al.*, 2002) and if we are to understand what drives this higher level of loyalty, we need to understand the determinants of switching and their relative impact on switching behaviour. The instruments to measure switching are not well developed although Burnham *et al.* (2003), Jones *et al.* (2002) and Gremler (1995) have all contributed to a growing understanding through their models of switching determinants. This thesis assists in development of generalised of switching determinant measures, doing this by building on the work of Burnham *et al.* (2003), Jones *et al.* (2002), and Gremler (1995) by replicating and extending Burnham *et al.* (2003).

Although some research has been done on identifying switching models for service markets, there are substantial gaps in the empirical evidence. In particular, gaps are evident in the measurement of the 'scope and scale' of determinants. It is the literature on these switching influences (determinants) that is surveyed in depth in this and the following two chapters. As the focus is on being able to predict switching, there is limited attention paid to repeat purchase behaviour or *word of mouth* except where it might indicate switching behaviour. Throughout the review, the theme adopted is that the prediction of switching is considered measurable by attention to *past behaviours*, *future self-reported purchase probabilities* or *intention to purchase*. In the literature much of the ground on switching is covered by the parallel concept of loyalty, therefore throughout this review the focus is on both loyalty and switching. To make it clear which construct (loyalty or switching) is being discussed, the original term is used, so for the most part, the terms loyalty and switching are intermingled to ensure that the

source meaning is not lost. Where an author has been inclined to use loyalty in a general way when referring to a specific concept such as repeat purchase behaviour, positive word of mouth, switching, intention to purchase or probability of purchase, the more specific term is used without explanation.

## 2.2 The Development of Switching Research

There are two main camps of 'switching' researchers. One is based around the application of stochastic models and developed by researchers of fast moving consumer goods markets who have observed multi-brand loyalty and random (stochastic) purchasing by consumers within a well-defined purchase repertoire. The second camp is based on deterministic concepts and recognises that the market, the product and the consumer's environment shape the consumer's buying patterns. This latter school of thought has been the foundation for almost all research in services with some notable exceptions (Sharp *et al.*, 2002). This deterministic conceptual framework has been used to frame the discussion in this review, motivated by the findings of Sharp, Wright & Goodhardt (2002) that loyalty is polarised between repertoire and subscription markets. This has brought into focus the need to understand that while subscription markets are apparently Dirichlet in some aspects, they are, also unlikely to have high levels of stochastic behaviour as observed in repertoire markets. The deterministic approach is thus seen as potential complementary view to the Dirichlet in service markets whereas it tends to compete with the Dirichlet in fast moving consumer goods.

In the last decade there has been a significant increase in the level of research on consumer service switching behaviour. This work has been primarily focused on the identification of those factors that could determine the extent that consumers might switch away from a service provider. Gremler (1995) defined the determinants of switching as:

*Those facets of purchase behaviour, purchase situation and consumer attitude that determine the propensity to switch.*

(Adapted from: Gremler & Brown, 1996)

Earlier researchers focused only on single determinants such as *satisfaction*. These researchers also tended to promote single construct models such as ‘loyalty is purely attitudinal’, ‘loyalty is purely behavioural’ or ‘loyalty is purely stochastic’ (Szymanski & Henard, 2001). More recently researchers have investigated a wider range of switching determinants and have generally focused on the development of typographies of switching determinants and testing the internal validity of the resulting models (Czepiel & Gilmore, 1987; Bowen, 1990; de Ruyter, Wetzels, & Bloemer, 1998; Jones *et al.*, 2000; Jones *et al.*, 2002; Burnham *et al.*, 2003).

Some researchers have striven to identify the differences in switching behaviour between markets (Ehrenberg, 1988; Sharp *et al.*, 2002) whilst others have worked more directly on the individual determinants of switching (Dick & Basu, 1994; Gremler, 1995; Chen & Hitt, 2002; Jones *et al.*, 2002; Burnham *et al.*, 2003). The latter authors have identified a range of factors that are likely determinants of switching. These determinants include the dominant construct of *satisfaction* along with *switching costs* and the level of *personal relationship* involved in the purchase and consumption of the service. Also identified are less well-researched constructs of ‘consumer inertia and variety-seeking’, ‘salience’, ‘value of competitive offers’ and ‘consumer involvement’ in the product use. As not all of these factors will be considered in this thesis, the elements that will be considered are developed in detail in the literature review. However, to understand how the research has developed we need to understand how researchers define switching in various situations.

## 2.3 Defining Switching

First off, it is useful to define what purchasing behaviour means. A simple definition might be:

*Purchasing is the act of acquiring the right to consume goods and services through a transaction involving money.*

Now it is possible to discuss switching because without purchasing behaviour, no switching can occur by definition.

A basic definition of switching behaviour is:

*...The act of purchasing a different product or service from that which was purchased last time a similar purchase need and situation arose...*

(Guiltinan, 1989; Gremler, 1995)

### **2.3.1 Two type of purchase behaviour.**

In the last twenty years, an understanding has been developed of a continuum of purchase behaviour with the two ends anchored by two very distinctive phenomena. At one end is repertoire purchasing as studied by East (1996), and Ehrenberg *et al.* (2004). At the other end is subscription or continuous purchasing (Bolton, 1998; Smith & Bolton, 1999; Bolton, Kannan, & Bramett, 2000; Sharp *et al.*, 2002; Ranaweera & Prabhu, 2003)

### **2.3.2 Markets where repertoire purchase behaviour is common**

In repertoire markets,<sup>1</sup> consumers generally exhibit polygamous loyalty

*.... where, consumers maintain a portfolio of preferred products (typically 3 or 4) from which they regularly purchase, although, one product is often preferred noticeably over others within this share of category.<sup>2</sup>*

(Adapted from: Ehrenberg *et al.*, 2004)

---

<sup>1</sup> Typically FMCG markets

<sup>2</sup> Polygamous loyalty is sometimes referred to as divided loyalty (Ehrenberg *et al.*, 2004);(Romaniuk & Sharp, 2003). This is not the same as promiscuous buying as buyers are typically not buying from the full range of available products, but from a pre-selected set of products.

### 2.3.3 Markets with continuous purchasing (subscriptions)

*Subscription markets are those where a large proportion of a consumer's share of category requirements are ascribed to one brand, say 85 percent or greater. In other words, sole brand loyalty, or near sole brand loyalty, is quite typical behaviour.*

(Adapted from: Sharp & Wright, 1999)

### 2.3.4 Switching versus loyalty

Loyalty is conceptually the inverse of switching and tends in modern research to be considered as a multi-dimensional construct recognising both behavioural and attitudinal components. For example the Gremler & Brown (Gremler & Brown, 1999) definition below:

*Product or service loyalty is the extent to which a consumer exhibits repeat purchase behaviour towards a product or service, exhibits a positive attitude to that product or service and considers only that product or service provider when a need to purchase arises.*

(Adapted from: Gremler & Brown, 1999).

### 2.3.5 Switching

The expression 'switching' is generally used to describe decisions to change brand or supplier. Many people believe that there are two distinct behaviours that of switching temporarily to another favoured brand or permanent defection from one brand to another. There are, however, difficulties in these simple definitions, because in some markets switching behaviour of any kind is rare and it is not often clear if the reason no switching occurs is because there has been a permanent defection from that product or service or that the purchase cycle for that product category is long. There are essentially two types of switching, defined on a temporal basis:

### **Not buying for a long time: Defection**

A purchase behaviour where a consumer does not purchase for an extended period a brand previously purchased regularly even though the product category is still purchased is typically described as defection. In repertoire markets, this behaviour results in switching of products 'into' and 'out of' the repertoire, which we could think of as *repertoire modification* where a purchase repertoire is: that set of regularly purchased brands in a category (typically 3-4 brands). In markets characterised by continuous purchasing the concept of a repertoire of brands is not so useful as purchasers do not switch regularly.

### **Not buying for a short time: Switching**

A purchase behaviour where a consumer does not purchase for a short time period a brand previously purchased regularly even though the product category is still purchased is typically described as switching. Within a purchase repertoire this switching, could be thought of as *intra-repertoire switching*, and is the well-known repertoire buying pattern. In markets characterised by continuous purchasing the switching away then back in a short time period is an abnormal behaviour and has no specific definition.

This thesis focuses on defection in service markets characterised by continuous purchasing. Most literature does not recognise the distinction between continuous purchase markets and repertoire markets in terms of switching versus defection. So unless otherwise stated the generic term 'switching' is used in preference to 'defection' throughout the following chapters. The next chapter examines the literature on the determinants of service switching.

## 3. THE DETERMINANTS OF SWITCHING

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### 3.1 Introduction

Substantial consensus exists across both marketing (Jones *et al.*, 2000) and economics (Klemperer, 1987) on what are considered the core determinants of switching behaviour. Despite differing root philosophies, research techniques and nomenclature, there are three factors which nearly all researchers agree are the fundamental determinants of switching behaviour in services: *satisfaction*, *switching costs*, and interpersonal relationships. Two other dimensions often mentioned are: inertia and variety seeking, however, research on how these affect switching behaviour has not been consistent enough for them to be included in the major typographies. The following sections describe the literature covering the primary candidates for inclusion in a model of subscription market switching.

### 3.2 Satisfaction

#### 3.2.1 Introduction

*Satisfaction*, the first of the core determinants, is commonly expressed as consisting of; (i) length of experience (Bolton, 1998), (ii) product quality (Zeithaml, Berry, & Parasuraman, 1996; de Ruyter *et al.*, 1998) and (iii) personal relationships (Gremler, 1995). The predominant paradigm in *satisfaction* research is the disconfirmation theory (Oliver & Balakrishnan, 1994) and is based on the extent to which pre-purchase expectations are met.

The literature on *satisfaction* differs greatly in the way that it defines *satisfaction*. There are some common elements:

*Satisfaction is a response (cognitive or emotive) to a focus (product, experience) at a particular time (based on the experience; possibly accumulated experience).*

Adapted from Giese & Cote (2000)

Much of the earlier marketing literature researching customer retention has focussed on the importance of customer *satisfaction* in preventing switching. Customer *satisfaction* is a commonly accepted prerequisite for loyalty and therefore necessary to limit switching (Anderson & Fornell, 1994; Oliver, 1999). This reinforces the prevalent theory that *satisfaction* is one of, if not the most important factor in determining switching behaviour. Effectively this assumption about the substantial role of *satisfaction* has been the dominant driver of practice and theory in many areas of marketing. From Szymanski & Henard's (2001) meta-analytic review of the literature, it is also apparent that *satisfaction* research continues at a substantial rate. Yet there is mixed support for this focus on *satisfaction* alone, as demonstrated by the modest proportion of switching behaviour variance explained by *satisfaction* in some research (Szymanski & Henard, 2001). There appears to be strong evidence for the notion that a wide range of factors, not just *satisfaction*, determines switching (Jones *et al.*, 2002; Burnham *et al.*, 2003). Nevertheless, as *satisfaction* is a strong component of most switching models, it cannot be ignored.

### **3.2.2 Satisfaction in service markets**

This common acceptance of customer *satisfaction* as a primary determinant of loyalty and hence a major influence on switching is especially true of service markets (Szymanski & Henard, 2001). A whole industry has built up around *satisfaction* management and reporting for businesses. Many customer *satisfaction* programmes have been introduced which are designed to enhance *satisfaction* levels, giving rise to the new discipline of customer relationship management (CRM). The increase in customer *satisfaction* metrics currently receives a heavy weighting in the constitution of many management bonus schemes, reflecting the assumption that *satisfaction* is the only condition necessary for the development of loyalty and thus the prime vehicle in the limitation of switching. This point is clearly enunciated by Heskett, Jones, Loveman & Sasser *et al.* (1994) who state that loyalty results directly from customer *satisfaction*. *Satisfaction* has even been considered a necessary and sufficient condition for loyalty (Cunningham, 1967; Oliver, 1980; Jackson, 1985; Anderson & Fornell, 1994). Hitherto, research has provided generally mixed results in proving this relationship between *satisfaction* and repeat purchase loyalty (Gremler, 1995) although some studies have demonstrated empirical evidence supporting *satisfaction* as a leading determinant of loyalty (Jackson, 1985; Rust & Zahorik, 1993; Bolton & Drew, 1994).

### 3.2.3 The Disconfirmation Paradigm

The overriding influence in *satisfaction* research is the disconfirmation paradigm, widely attributed to Oliver (1980). This paradigm is based on the comparison between expected service levels and those actually experienced by the consumer, with the test being did the experience exceed, meet or not meet the consumer's expectations? Garland (2001) observes that the disconfirmation theory seems to be a more complex concept than just a 'mere' one-dimensional arithmetic comparison of expected and received results. Garland pointed to Oliver & Bearden (1985) suggesting that there were different types of disconfirmation and also to later descriptions of 'subjective' and 'objective disconfirmation' (Oliver & Swan, 1989). Functioning parallel to the disconfirmation construct is the concept of the 'ideal level of service' and the extent to which the purchase transaction experience meets the ideal (Cadotte, Woodruff, & Jenkins, 1987). It is clear that this 'ideal experience' is highly subjective and individual, as for example, when dining out, one individual may desire and enjoy a highly flamboyant 'flambéed at the table' dessert while others may shy away from such an experience. Everyone's ideal is somewhat different and generalising from these reactions to aggregate experiences has long been of concern (Anderson & Sullivan, 1993). Thus measuring customer *satisfaction* seems to be potentially problematic.

Over and above the problem the disconfirmation theory requires a measurable construct for *satisfaction*, there are additional issues concerning the stability of the 'ideal service' concept, and how consumers feel about that service provider (and themselves and the world at large) both at the time of the initial experience and over time. These issues seem to accumulate within the *satisfaction* construct making it difficult to both define and measure.

### 3.2.4 Satisfaction's relationship to loyalty and switching

The relationship of *satisfaction* and loyalty is thought to be non-linear. In fact, Heskett, Sasser & Schlesinger (1997) infer a threshold effect of *satisfaction* on loyalty with an increasing 'return to scale'.<sup>3</sup> Mittal & Kamakura (2001) observed a similar increasing return to scale of *satisfaction* with repurchase behaviour.<sup>4</sup> Lam *et al.* (2002) observed

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<sup>3</sup> Return to scale is an economic term describing the change in one factor as a related factor changes size.

<sup>4</sup> The Mittal & Kamakura (2001) study also found a decreasing return to scale relationship between *satisfaction* and intention to purchase.

that the level of *switching costs* acts as a moderator of the sensitivity of loyalty to *satisfaction* levels. Rather controversially, Shankar, Smith & Rangaswamy (2003) have suggested that customer switching and repeat purchase behaviour could have a reciprocal effect on *satisfaction*.

Oliver (1999) reminds us that *satisfaction* has a temporal or experience element and suggests that *satisfaction* levels accumulate. Garland (2001) proposed that this temporal dimension of *satisfaction* is arguably the most important and goes on to explain that the variation within *satisfaction* levels may well be the result of the interaction of 'transaction specific' *satisfaction* with accumulated overall levels of 'global' *satisfaction*. The concept of 'global' *satisfaction* is like a storage bank of previous experiences with the same service provider where additional transactions either add to or subtract from overall *satisfaction* (Anderson & Fornell, 1994). This concept gives some insight into anecdotal evidence that customers do not necessarily switch after one bad experience and sometimes switch after only a minor problem.

Mittal & Kamakura (2001) related *satisfaction* ratings to repurchase intention and repurchase rates for the automotive industry. They discovered that the relationship between *satisfaction* and repurchase intention was both asymmetrical and non-linear. That is, the level of impact on repurchase intention for a given change in *satisfaction* was different depending on the direction of that change and that the rate of change in purchase intention was not linear over their testing range. They found the same to be true for intention to purchase and *satisfaction*. From this they concluded that intention and behaviour could not be used interchangeably, supporting the notion, that intensity of *satisfaction* did not have a linear relationship with either repeat purchase intention or behaviour. Their finding indicates the possibility that switching determines *satisfaction* rather than the other way round. Oliva *et al.* (1992) also contend that the *satisfaction* and repeat buying relationship is not linear and suggest examples where increasing *satisfaction* does not lead to increasing intention to repeat purchase.

### **3.2.5 Satisfaction determinants**

It is well accepted that *satisfaction* is a multi-faceted construct with, Oliva *et al.* (1992), Gremler (1995), Gwinner, Gremler & Bitner (1998) providing examples of supportive models. *Satisfaction* appears to be inextricably linked to consumer perceptions of service quality. One of the first studies to assess the relationship of the quality of service to *satisfaction* was by Bitner & Hubbert (1994) who tried to address the

relationship between encounter (transactional) *satisfaction*,<sup>5</sup> 'overall' (global) *satisfaction* and quality. They found that global *satisfaction* is highly correlated with quality, but also that they were different constructs, that is, ranking top on quality does not automatically mean ranking top on *satisfaction*. Transactional *satisfaction* was not correlated in any great way to *satisfaction*. Service quality will not lead to transaction-by-transaction *satisfaction*, possibly indicating that consumers recognise actual quality levels vary from transaction to transaction. Contemporaneously, Rust & Zahorik (1993) treated quality of a service and *satisfaction* as the same thing and made no clear distinction between transactional and overall *satisfaction*. It is therefore not clear from the literature just how *satisfaction* and perceptions of service quality are related. Finally, there is growing evidence of interaction between length of patronage and *satisfaction*. However, it is not clear whether length of patronage is derived, or determines *satisfaction* which Bolton (1998) proposes.

### **3.2.6 Satisfaction's contribution to loyalty**

It does appear from the empirical evidence that *satisfaction's* influence on switching behaviour is much less than was previously thought. The Szymanski & Henard (2001) study indicates that about 25 percent of switching behaviour is explained by *satisfaction*. That *satisfaction* explains a modest proportion of switching behaviour is further endorsed by a 2003 study by Burnham, Frels & Mahajan who found that *satisfaction* contributed only around 15 percent to the explanation of the variation in switching intention. Other studies tending to support the view that *satisfaction* is not a proxy for customer retention measures are Biong (1993); Oliva (1992); and Wind (1970). Jones & Sasser (1995) observed that *switching costs* determine about 30 percent of the variance in consumers' *intention to stay* with a current provider but they were not able to provide proof of a valid causal relationship.

The possibility that *satisfaction* is not a big determinant of switching behaviour is further supported by Jones & Sasser (1995) who found that a surprising number of satisfied customers do switch. They observed that customers were six times more likely to switch providers if they were 'merely' or 'just' satisfied compared with if they were totally satisfied. Similarly, Cottrell (1993) found that rising *satisfaction* levels corresponded with increased likelihood to repurchase.

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<sup>5</sup> Bitner and Hubbert (1994) refer to it as encounter *satisfaction*.

### 3.2.7 Satisfaction as a predictor of purchasing

There is literature linking customer *satisfaction* to repurchase intention particularly the work of Oliver (1980; 1981; and 1989), but also Anderson & Sullivan (1993) and Fornell (1992). Literature by Fornell (1992), Anderson & Sullivan (1993), Heskett *et al.* (1994), Gremler (1995) and Mittal & Lassar (1998) also supports the notion that the intensity of a consumer's *satisfaction* with a product or service affects the sensitivity of that consumer to competitive offerings. Clearly, the relationship that exists between the level of satisfaction and loyalty is extensively researched.

### 3.2.8 Less than adequate prediction of purchasing

Studies in the services context have demonstrated a less than perfect correlation between *satisfaction* and purchase loyalty. Kelly, Hoffman & Davis (1993) found that customers may stay with a service provider even if not satisfied with the service. The Young *et al.* (1994) study of service providers suggested that not all customers are loyal to their service provider because they were satisfied, but rather because they do not want to undertake the effort and financial costs involved in switching. Conversely, Keaveney (1995) found that some customers switched despite both being satisfied and having to overcome significant barriers to switch. Certainly this was supported by Mittal & Lassar (1998) who noted that of their 'top box'<sup>6</sup> respondents for *satisfaction* respondents, 20 to 30 percent indicated an inclination to switch<sup>7</sup>.

This is a point made clear in the recent study by Ganesh, Arnold & Reynolds (2000) where customers satisfied with their previous product or service were likely to be the least satisfied consumers after switching. That repurchase intent is a doubtful proxy for behavioural loyalty when compared with some other measures has long been claimed by Juster (1966).

Therefore, while *satisfaction* has been studied in some depth as a way to manage consumer defection, it is also clear that it is far from being the sole determinant of customer retention and that there are a surprising number of satisfied consumers who do switch. It appears that as *switching costs* increase; the influence of *satisfaction* on retention is reduced.

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<sup>6</sup> Top-box refers to respondents who responded at the high extreme on the scale.

<sup>7</sup> Some available techniques for identifying such consumers were suggested by, Bloemer, Brijs, Vanhoof & Swinnen (2003).

### 3.2.9 Satisfied customers do switch

We have seen in the previous section how *satisfaction* may not be as dominant a determinant of switching as previously thought. In fact, there is a body of literature (Cottrell, 1993) indicating that many satisfied customers do switch (Reichheld & Sasser, 1990; Reichheld, 1996). As early as 1973, Newman & Werbel's study of consumer purchasing of major household durable products found that not all satisfied consumers were brand loyal and conversely those that were not completely satisfied did not always switch. In a panel study of fast moving consumable products,<sup>8</sup> Newman & Werbel (Newman & Werbel, 1973) they observed that about 23 percent of consumers reported high *satisfaction* with their previous brand although they subsequently switched to other products.<sup>9</sup> A similar result was observed by Kasper (1988) for household durables with 17 percent of satisfied customers intending switching and 46 percent of dissatisfied customers intending repeat buying. The next section discusses the role of *switching costs* in the determination of loyalty and switching behaviour.

## 3.3 Switching Costs

### 3.3.1 Introduction

The second of the core determinants is *switching costs*. Despite most research being uni-dimensional, a thorough review of the literature has resulted in the uncovering of many constructs which collapse into the concept of switching costs. These include: (i) Search and evaluation costs (Samuelson & Zeckhauser, 1988; Lee, Lee, & Feick, 2001; Jones *et al.*, 2002; Burnham *et al.*, 2003), (ii) Economic uncertainty or risk costs (Jackson, 1985; Samuelson & Zeckhauser, 1988; Gultinan, 1989; Klemperer, 1995; Lee & Cunningham, 2001), (iii) Sunk costs (Jones *et al.*, 2002), (iv) Set-up costs (Farrell & Shapiro, 1988; Gultinan, 1989), (v) Learning costs (Shugan, 1980; Schmalensee, 1982; Alba & Hutchinson, 1987; Gultinan, 1989; Klemperer, 1995), (vi) Loss of loyalty benefits (Gultinan, 1989; Dowling & Uncles, 1997), and (vii) psychological and social costs (Dick & Basu, 1994; Gremler, 1995)

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<sup>8</sup> A panel study of five product classes over a purchase period of five months including, margarine, coffee, toilet tissue, paper towels and macaroni using a panel of 87 members.

<sup>9</sup> This is consistent with the substantial body of work on repertoire buying East (1996); Sharp *et al.* (2002) and Ehrenberg *et al.* (2004).

### 3.3.2 Switching costs defined

It is necessary to define *switching costs* carefully to ensure that costs are recognised for their influence at the time of switching. In this context, costs identified by a consumer post-switch are not recognised as switching determinants although they may well be a cost in switching. Other costs could be recognised after switching, but because they are not costs that are identified at the time of switching, they do not affect switching decisions. The following definition recognises this.

*Switching costs are the one-time costs that customers associate with the process of switching from one provider to another, at the time of switching.*

(Adapted from: Porter, 1980; Burnham *et al.*, 2003)

Lee & Cunningham (2001) support this definition with their observation that perceived cost is the issue when considering switching barriers.

### 3.3.3 History of the switching cost literature

Until recently, there has been limited research into a multi-dimensional services switching construct, with the exception of the work in the field of economics by Klemperer (1987; 1992; 1995). Contemporaneous marketing researchers who have considered a multi-dimensional approach to switching and loyalty were Anderson & Fornell (1994), Maute & Forrest (1993), and Dick & Basu (1994). More recently, research in this area has come from the influential doctoral thesis of Gremler (1995),<sup>10</sup> the work of Jones *et al.* (2000, 2002) and Burnham *et al.* (2003).

Burnham *et al.* (2003) have expressed concern about a focus on one-dimensional models of *switching costs* and the resultant lack of a robust typology for the costs involved in switching. Additionally, they mention the absence of substantial empirical research within marketing on the external validity of models of switching behaviour. They observe that the focus has been on loyalty, rather than switching and even within loyalty research much of the research has been limited to demonstrating face (internal) validity. While economics based researchers have extensively researched and supported the notion that a range of factors including product type, market type and customer

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<sup>10</sup> See section 4.2.1 details of some of the significant references to Gremler's work.

experience determine the nature of *switching costs*, this is not generally the case within the discipline of marketing (Klemperer, 1987). If for example, if the product is one which requires significant investment by the consumer, then prior investment and the prospect of future investment would both seem to be barriers to switching (Guiltinan, 1989; Jones *et al.*, 2002). In terms of a consumer's uptake of a line of products from a single supplier, it is possible that as the reliance on one supplier increases, then the cost of switching also increases (Klemperer & Padilla, 1997). When a firm cannot conveniently supply the full range of products and services required by consumers at one location (e.g. in the banking services industry), they would reluctantly split their 'category spend'. This reluctance may be due to the consumer's perceived costs associated with dealing with two suppliers. Implicit in this concept is the idea that if consumers face *switching costs*, a firm capturing a consumer's patronage for a new product may well win their patronage for all business the consumer might have in that category (Klemperer & Padilla, 1997).

In both industrial and consumer research, *switching costs* have been identified as having a significant impact on repeat purchase behaviour and hence the observed level of switching (Fornell, 1992; Klemperer, 1995). Research indicates a consensus across marketing and economic disciplines on the existence of *switching costs*, however, the number, nature and impact of individual switching cost factors are left unresolved (Burnham *et al.*, 2003). Given that the number of switching cost determinants observed by researchers is extensive and that no researcher appears to have defined a comprehensive list, determining the factors that should be considered relevant is important. As the selection of a list is somewhat arbitrary, some debate exists about what constitutes a sensible set of defining factors. Lam *et al.* (2002) for instance, note that although measures of *switching costs* have been developed in prior research they tend not to cover the range of determinants of switching found in a full cross-sectional review of the literature. Despite this drawback, it should be possible to design measures to understand the importance of each determinant in terms of its potential to explain a proportion of switching behaviour. This premise leads to the objective of this thesis.<sup>11</sup>

### **3.3.4 The antecedents of switching costs**

How and when *switching costs* arise are important questions for the study of switching behaviour and while antecedents of *switching costs* are not researched in this thesis, it is

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<sup>11</sup> See Chapter 6 for the objectives of this research which like previous studies does not attempt to cover the full extent of identified determinants.

important to understand the context in creation of switching costs. *Switching costs* may arise because a firm has actively pursued methods to create these for its existing customers. Anecdotal evidence indicates firms do this often while simultaneously attempting to lower the barriers of switching for its competitors' customers. A good example of the former is the use by airlines of loyalty miles that lock customers into purchasing from their existing supplier. An example of the latter phenomenon is the way in which energy companies offer to arrange the switch from a competitor on the consumer's behalf.

*Switching costs* may also occur as a result of an innovation making a consumer's investment in a firm's products incompatible with those of a potential new supplier; for example, the investment in a platform for running one type of software may inhibit the customer's ability to switch. Finally, they could arise as a result of the time and effort expended in purchasing from one's current supplier and thus are implicit costs in the transaction and emotional change of moving to a new supplier.

Thus we see that *switching costs* are occurring in the market because of a range of situational factors. From general switching theory, the way *switching costs* act on switching behaviours is that if the benefits perceived by the consumer are larger than the costs then switching will occur (Stigler, 1961). Empirical support for this concept is also to be found both in Anderson (1994) and Maute & Forrester (1993), so we have an understanding of a balanced system of perceived benefits and costs. This study restricts itself to the consideration of *satisfaction*, *personal bonds* and *switching costs*. There is no consideration of the relative benefits of competing offers, changing consumer circumstances and many other factors that build towards a complete picture of switching. A narrow or parsimonious perspective is taken based on the following two categories of switching determinants:

- Costs; (i) Economic uncertainty or risk costs, (ii) Search and evaluation costs, (iii) Learning costs, (iv) Set-up costs, (v) Loss of loyalty benefits, (vi) Sunk costs, (vii) Lost personal relationship and brand association costs
- *Satisfaction*

The following survey of *switching costs* is structured around the contents of the list above.

### **3.3.5 Economic risk costs**

Economic risk costs are the costs of accepting 'downside' uncertainty when adopting a new product or provider about which the consumer has limited information (Schmalensee, 1982; Samuelson & Zeckhauser, 1988; Guitinan, 1989; Klemperer, 1995). For example, research indicates that as the complexity of products in the market increases this leads to a consumer perception that the risks in switching have also increased (Holak & Lehmann, 1990). This is, presumably, because additional complexity could indicate more 'things to go wrong' as well as a perception that the risk of 'not knowing enough' is higher in a complex buying situation. Additionally, Zeithaml, Berry & Parasuraman (1995) note that it is likely that these uncertainty risks are higher in services due to the intangibility and heterogeneity of services.

### **3.3.6 Sunk and set-up costs**

Consumers acquire set-up costs when they take on a product or service requiring investment to support the utility of the product. For example a soda fountain required to make up home made soda drink sachets or a monitoring service required to get the 'peace of mind' benefit from a home alarm system. Other examples of set-up costs which fall on the consumer are filling out application forms and explaining the way in which one prefers to have one's hair cut (Jackson, 1985; Guitinan, 1989). The economist would say that these costs should be considered as sunk costs as they have no relevance to future decisions made by the consumer (Guitinan, 1989; Dick & Lord, 1994). It seems likely, however, that the consumer expects a payback over time for that investment and will continue to assign value to this investment accordingly. It should be acknowledged that it is possible in rare occasions to recover some of these sunk costs by selling the asset. The benefits of this activity are probably offset to some extent by the cost of the effort required to sell the asset. The impact of sunk costs on future decisions are, according to economists, purely psychological costs and should be ignored in assessing *switching costs*. Consumers do act less rationally than economic theory suggests and often assess sunk costs as real costs during switching decision-making.

### 3.3.7 Search and evaluation costs<sup>12</sup>

The cost of searching for alternatives is different for each individual; some individuals are busier, some more skilled at searching whilst others have better access to information. This affects both the *cost of time* and the *amount of time* consumed. Similarly, some unfamiliar or complex product categories might be more difficult to research for some individuals. It is possible that the greater the complexity of the product being considered relative to the currently purchased product may impede that first purchase of the alternative product, thus indicating that any consumer faced with a complex product that is unknown to them will face high evaluation costs (Gatignon & Robertson, 1992; Klemperer, 1995). The larger number of attributes thus associated with complex products makes collection and comparison of product information difficult (Holak & Lehmann, 1990).

In the services market Schmalensee (1982) observed that the greater the difference between service providers (heterogeneity), the greater the cost to the consumer in searching for a product. Similarly, limited market (domain) expertise increases the individual's search cost (Wernerfelt, 1985; Alba & Hutchinson, 1987; Klemperer, 1987). Consumers with higher levels of prior knowledge of the nature of alternative offers (high domain knowledge) face a lower cost of search for a given product category conversely the costs facing consumers with little domain knowledge tend to be higher.

Choosing to limit the search effort could presumably bring a potentially biased understanding of the benefits of switching and thus an increase in switching risk will occur. However, unless the search is limited consciously there will be no *perception* of this risk by consumers.

### 3.3.8 Learning costs

Klemperer (1995) notes that learning costs are specific to provider or product, such that skills used with one product, customer or provider may not be transferable to a new situation. For example, learning how to cut a new client's hair or how to navigate around a new software package are all learning costs, the former falling on the provider and the latter on the consumer.

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<sup>12</sup> For an assessment of how consumer evaluation processes differ between goods and services see Zeithaml (1981).

When defined in terms of the determinants of switching, learning costs are:

*The time and effort that is perceived to apply to learning how to use the new product to the same level of effectiveness as the previous product was used.*

(Adapted from: Porter, 1980; Gremler, 1995).

It might be that the actual complexity of the product is not a determinant of learning costs, rather that learning costs on average are influenced by the heterogeneity of products in the market (Shugan, 1980; Schmalensee, 1982). The implication being that if products are similar, then learning cost may be minimised. This may not apply in the case of a consumer new to the category. There are some drivers of learning costs that are unique to service markets. In these markets search and evaluation costs, for example, are often driven by the geographic dispersion of providers, the limited range of alternatives, the intangible nature of services and finally the inseparability of production and consumption.<sup>13</sup>

### **3.3.9 Loss of loyalty benefits**

Benefits lost by leaving a relationship may be particularly pertinent to some service products. Consumers who switch may lose loyalty discounts, or loyalty bonus rights which are not available to new customers. Both Dowling & Uncles (1997) and Sharp & Sharp (1997) note that loyalty programmes may have little effect in reducing defection. This is an area of research that would appear to be worth significant additional attention because, like *satisfaction* as a measure of loyalty, the effectiveness of loyalty programmes goes virtually unquestioned. This aspect of loyalty benefits, however, is not a focus of this research.

### **3.3.10 Psychological and social costs**

Consumers build attachments to elements of their shopping experience. For example, they may form an attachment to a particular shopping location, say Oxford Street in London, or to a specific brand of store, say, Harrods, or to a product category, say, designer suits, or to a specific product brand, say Nike. Clearly, it is possible that location choice, store choice and brand choice could be seen as important issues in a

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<sup>13</sup> Compare this with typical FMCG markets where these factors are usually not considered significant.

switching decision. There is some evidence (Porter, 1980; Gultinan, 1989; Klemperer, 1995) that the levels of interaction with the personnel and the brand involved in the purchase situation creates a psychological bond which is a cost to the consumer. These relationships usually have a positive or loyalty enhancing association for the consumer if broken, but if a scandal broke out over the use of sweatshops by a favoured brand then social costs might potentially be incurred if that brand continues to be purchased. Thus, whilst difficulty exists in quantifying the effects of social and psychological cost in switching, it is evident that they do have a part to play and have been recognised in a variety of ways in the models of a number of scholars including Gremler (1995), Jones *et al.* (2002) and Burnham *et al.* (2003)

### **Personal relationship costs**

These could be defined as:

*Those costs associated with losing the emotional bonds with people that have been part of the customer's purchasing experience interaction.*

(Adapted from: Porter, 1980; Gultinan, 1989; Klemperer, 1995).

These costs are often seen as more intense in services, as Prabhu (1991 p.1 cited in Gremler, 1995) says "relationships typically involve people and people are a central aspect of the service exchange" whereas they are not a big part of tangible good exchange in most cases.<sup>14</sup> Gremler (1995) suggested that interpersonal relationships were particularly important in the development of service loyalty. He felt that this was driven by three core characteristics of services, namely: intangibility, heterogeneity and the intensity of the person-to-person consumer interaction in the purchase process (Czepiel & Gilmore, 1987). Gremler (1995) felt that the influence of *satisfaction*, *switching costs* and interpersonal relationship factors could be moderated by service characteristics such as the extent of interpersonal interaction, customisation and personalisation of the service. However, scholars have tended to push the universal importance of personal relationships in services even when this interaction is intuitively not a significant part of the consumption of many services e.g. energy, telecommunications and magazine and newspaper subscriptions.

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<sup>14</sup> Any interaction that does take place in a tangible good exchange is with the retailer service. However, given the inseparability of people from potentially any sale it is clear that interpersonal interaction is in all transactions in some form. It does tend to be more intense in some services.

## **Brand relationship costs**

Belonging to a brand has costs too. For example, if the consumer has long associated with a brand, breaking this relationship has costs (Porter, 1980; Aaker, 1992). There is some evidence that consumers tend to draw an association between their purchases and their own self worth (Tidwell, Horgan, & Kenny, 1993; Hem & Iversen, 2003). A consumer may feel poorer when forced to purchase a less prestigious brand despite the likelihood of this action resulting in savings, therefore making them relatively more affluent. Yet, they ironically feel more affluent for having purchased the exclusive brand. Consumers may also feel 'safe' purchasing a familiar brand and see the insecurity of purchasing another 'unknown' brand as costly. These aspects of product purchase costs sit right on the confluences of the economic and attitudinal literature on switching and as a result have not been well covered in terms of their impact on service switching in particular.<sup>15</sup>

## **3.4 Interpersonal Relationships**

The third of the determinants of switching in services is *personal relationship losses* (or psychological and social costs). While for brands the determinants of loyalty are confined to the broad categories of *satisfaction*, *switching costs*, inertia and variety seeking in services there is a substantial unique characteristic. This characteristic of interpersonal interactions with the service provider's employees has been extensively researched (Czepiel & Gilmore, 1987; Crosby, Evans, & Cowles, 1990; Iacobucci & Ostrom, 1996). The three primary service properties of intangibility, heterogeneity and interaction intensity all produce opportunities for personal interactions (Czepiel & Gilmore, 1987). The person-to-person interactions so undertaken, can lead to the formation of strong personal bonds with the service providers own employees (Parasuraman, Zeithaml, & Berry, 1985). The interaction requirements of some services are such that the customer can become a co-producer of the service through specifying the design and delivery of the service (Bowen, 1986). Bowen also contends that customers are not completely driven by economic needs and may value interaction with the service employee. In a similar vein Crosby, Evans & Cowles (1990) found that the quality of the relationship between a salesperson and the customer could determine the probability of the continuance of the exchange.

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<sup>15</sup> A search on a range of bibliographic search engines found no significant research on this aspect.

Extensive studies suggest that the factors involved in the interpersonal contact tend to emphasise one central antecedent of loyalty: 'trust'. Trust itself tends to be dominated by two structures: (i) Trust in the provider's staff (Dick & Basu, 1994) and (ii) Trust in the brand or provider organisation (Porter, 1980; Gultinan, 1989; Aaker, 1992; Gremler, 1995; and Klemperer, 1995).<sup>16</sup> Which kind of trust is dominant appears to be related to the involvement of the consumer in the service delivery. For example, employee trust is likely to be more important in healthcare and insurance services than in a lower order involvement service like electricity or gas supply (Crosby *et al.*, 1990).

## **3.5 Variety-seeking and Inertia**

### **3.5.1 Variety seeking**

As *switching costs* are lowered or product differentiation increases variety-seeking behaviour will result in increased levels of switching, alongside utility and *satisfaction*-based decisions. These characteristics are well documented in the literature on polygamous loyalty where convenience appears to drive stochastic style purchasing in a market and *satisfaction* might drive a degree of preference for one brand over another in a consumer's repertoire.

### **3.5.2 Inertia**

The concept of brand choice inertia first came to prominence with Jeuland (1979a; 1979b), who builds on the stochastic model concept of entropy in consumer switching by asserting the tendency in repeat purchase is short-term loyalty or inertia. Jeuland observes that this construct of inertia is linked with market share and brand choice heterogeneity in the Dirichlet distribution of the long term switching probability of a consumer. Jeuland's (1979b) work has been extended and confirmed through Trivedi, Bass & Rao (1994) and Chintagunta (1998). The concept is that consumers are most likely to purchase this time what they purchased last time (or more correctly out of all their past purchases the choice of what they will purchase next is likely to be what they purchased last). However, this stream of work has not yet got beyond the refinement of an internally validated model i.e. the datasets have been described but there has been not descriptive/predictive use of these models that might indicate their usefulness in

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<sup>16</sup> Of a similar nature, but often seen as related purely to durable product, is 'involvement with the product or service' (Traylor & Joseph, 1984).

predicting switching behaviour. The construct of inertia and its impact on switching does not appear to be discussed within the psychological literature.

In explaining the inertia construct researchers have identified the simplification of regular search and purchase decisions, timing of purchases and timing of market policies as factors (Jeuland, 1979b; Chintagunta, 1998). Carry over effects (Kotler, 1971) are sometimes included in the inertia construct, as are the relative value of competitive offers (Bitner & Hubbert, 1994; Zeithaml *et al.*, 1996; Sirdeshmukh, Singh, & Sabol, 2002).

Inertia is generally considered a determinant of switching in purchase situations where there is low consumer involvement and low product differentiation.<sup>17</sup> <sup>18</sup> A risk in recognising inertia exists, in that the construct taken to its logical conclusion leads to a concept of dichotomous, that is, you are either loyal or you are not (Cunningham, 1956; Tucker, 1964; Cunningham, 1967; McConnell, 1968a, 1968b). It is possible that like variety-seeking, the construct of inertia is contained within the wider concept of *satisfaction*. Inertia has not been included within the primary determinants of switching in this thesis as inertia has not been included in the comprehensive models of switching of Jones *et al.* (2002); Burnham *et al.* (2003); and Gremler (1995).

Significant progress has been made recently in developing models of switching accommodating *satisfaction* and other costs, such as *switching costs*, into a comprehensive model of switching behaviour (Klemperer, 1987, 1995; Jones *et al.*, 2002; Burnham *et al.*, 2003). Inertia and variety-seeking currently appear not to be part of the mainstream thrust for a comprehensive switching model and are thus not further considered in this review.

## **3.6 The Limitations of Existing Research**

### **3.6.1 Measuring loyalty and switching**

Loyalty is frequently separated into cognitive and behavioural components. The measurement of consumer loyalty has tended to be assessed by past behavioural measures such as repeat purchase behaviour for a specific brand (Dick & Basu, 1994).

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<sup>17</sup> These are typically characteristics seen in FMCG markets rather than in service markets. For more detail on such markets see Goodhardt *et al.* (1984) and Sharp *et al.* (2002).

<sup>18</sup> In contrast, Filser (1994) characterises true brand loyalty as the repeat purchase of the same brand under conditions of strongly perceived differences between brands combined with strong involvement.

Behaviour is clearly defined as a measurement of an observable purchase, although in practical terms it is not always an ideal indicator. Notably, word of mouth is often included as a behavioural indicator of loyalty when quite clearly this is primarily an indicator of an internal or cognitive preference for a brand not a measure of behaviour. Mittal & Lassar (1998) note that while behaviour is a reasonable indicator to measure loyalty in fast moving consumer goods markets, it is not so for service markets where in general switching behaviour is much less frequent. Day (1969) also criticised the adequacy of behaviour as the sole indicator of loyalty switching. For services (particularly for high involvement services), Mittal & Lassar felt that instruments measuring predisposition to future behaviour would be more suitable. This is a view reported earlier by Danenberg & Sharp (1996).

Cognitive process models are the typical frameworks for assessing the predisposition to be loyal in marketing theory. Cognitive loyalty (a predisposition to purchase) is generally measured one of two ways, as a consumer's repurchase intention for a specific product or by the assessed likelihood of a consumer switching to a specified new product. Both methods have supporters from polarised schools of thought, but neither can be said to be entirely accurate on its own.

A dilemma thus exists caused by the difficulties in the practical observation (measurement) of loyalty in switching. When purchase situations and thus behaviours are rare, then a cognitive or affective approach to measuring loyalty seems most practical. On the other hand, if purchase behaviours are commonplace then the measurement of behaviour seems the most practical measure of loyalty.

In the case of cognitive approaches one common approach relies on the measurement of a respondent's 'intention to consider only that product' going on to purchase accordingly. A useful alternative method is to use a probability approach to the prediction of future purchasing in which a consumer is asked to assess the likelihood of their purchase behaviour in the future. This neither requires the use of past data to predict nor relies on the stated intention of consumers, but rather on the consumer's understanding of all factors influencing a future purchase. The work of Burnham *et al.* (2003) uses *intention to stay* to measure the loyalty component of their model and this is a cognitive measure of loyalty. This thesis adds just one item to the loyalty measurement scale in the Burnham *et al* (2003) study and that item is a question based

around 'the likelihood of switching' in the future. This sort of scale is thought to be more reliable than cognitive scales.

### **3.6.2 Future likelihood measures**

The models of consumer behaviour underlying most future likelihood measures operate on the idea that behaviour can be predicted by measuring consumer belief, attitude and intention. The Fishbein & Ajzen (1975) model is a good example of this type of model. Unfortunately, linking intention to future behaviour has proved difficult and this has been well documented by Foxall (1982) and Kraus (1995) who suggest more direct measurement of behaviour. Kraus, in fact, observed that only about 10 percent of observed purchase behaviour could be explained by attitudes. Additionally, Castleberry, Barnard, Barwise, Ehrenberg & Dall'Olmo Riley (1994) noted that the stability of attitudinal response measures has been shown to be low, with typically only 50 percent of respondents giving the same attitudinal response when re-interviewed.

The measures suggested by Foxall (1982) use explicit subjective probabilities instead of attitudes or intention. The argument for this sort of measure comes from researchers such as Sudman & Bradburn (1974) who suggest that behavioural questions can be verified while attitudinal questions cannot. Jacob & Chestnut (1978) suggested the use of Juster's (1966) scale<sup>19</sup> as a suitable measurement of loyalty. There are however, difficulties with using probabilistic measures when the behaviour to be measured is rare or irregular.

### **3.6.3 The multi-dimensional nature of switching and loyalty**

There are additional limitations to the research based more on practical than theoretical issues. Burnham *et al.* (2003) for example, observed that switching cost research had focussed primarily on three approaches; (i) measuring one or a narrow set of switching determinants specific to the research context (Heide & Weiss, 1995), (ii) measuring *switching costs* as a one-dimensional global construct (e.g. how would you rate the cost of switching?) (Eliashberg & Robertson, 1988; Karakaya & Stahl, 1989; Ping, 1993), and (iii) measuring responses to or shifts in *satisfaction* as a measure of the sum total of

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<sup>19</sup> Juster (1966) had already demonstrated that measuring intention and attitudes was not a reliable method to predict purchase behaviour. Juster's experiments indicated that a probabilistic purchase measure made a substantially better job of measuring future purchases than did either attitudinal or intention measures. Juster's work has been replicated many times in many markets, categories and research modes and demonstrates a consistent level of accuracy by probabilistic scales in measuring purchasing.

all switching (Fornell, 1992; Anderson & Sullivan, 1993; Klemperer, 1995). These Burnham *et al.* (2003) observations go right to heart of the problems in loyalty switching. That the structures used in research are one-dimensional while the switching environment is multi-dimensional, *satisfaction* can be used as a global indicator of switching likelihood and that *switching costs* can be comfortably assessed in one dimension without significant respondent conditioning to capture all facets of costs to a switching consumer. This leads to the conclusion that attempting to capture all factors of switching in a switching model is also likely to be problematic.

### **3.7 Summary and Discussion**

Conflicting literature implies that the exact relationship between *satisfaction* and *switching costs* is not clear. Jones *et al.* (2000) for example, suggest that the influence of *satisfaction* on repurchase intention decreases in situations of high *switching costs*. More recently, Burnham *et al.* (2003) when researching the long distance calling and credit cards services have found no evidence of any interaction between *switching costs* and *satisfaction*. Additionally, Jones & Sasser (1995), Jones *et al.* (2000) and Oliva (1992) observe that as *switching costs* rise, the influence of *satisfaction* subsides and vice versa, indicating the possibility that the impact of *satisfaction* in subscription services with high switching barriers is lower than often assumed. Given this unsettled state of the literature, marketing researchers need to be aware of the need to replicate, extend and meta analyse current research to find which findings are true most often.

The next chapter analyses three key empirical studies of switching determinants including the target article for this thesis, Burnham *et al.* (2003), thus providing the context for the objectives of this research.

## 4. KEY EMPIRICAL STUDIES

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### 4.1 Introduction

There were some notable exceptions to the dearth of marketing research into service switching and in particular, empirical studies of the determinants of switching. Zeithaml (1981), for example looked at the differences in how consumers evaluate services compared to the way they evaluate branded tangible goods, and Guitinan (1989) who, in the context of examining switching determinants made a comprehensive study of *switching costs* in relationship marketing. In the following year, Bowen (1990) provided a taxonomy of services and although this was developed primarily to allow the development of strategic insight, it has also provided significant support to work that followed.

The next most significant empirical study was arguably Gremler's (1995) unpublished doctoral thesis. This was the first significant study to consider a multi-dimensional model for switching that included *satisfaction*, *switching costs* and interpersonal relationships. Previously, *satisfaction* had been given extensive coverage in the marketing literature (Tucker, 1964; Oliver, 1980; Anderson & Sullivan, 1993) and *switching costs* been researched almost exclusively in economic literature (Klemperer, 1987, 1992, 1995).

Following Gremler (1995), Jones, Mothersbaugh Beatty (2000; 2002) developed the multi-dimensional nature of service switching research with a study on the relationship of switching barriers to repurchase intention. This was a relationship Gremler (1995) had studied but not achieved conceptual closure on, despite having enough data to support conclusions on this matter. More recently, Burnham Frels and Mahajan (2003) provided further clarification of the relationships between determinants of switching and purchasing with their study and typology of *switching costs*, their antecedents and consequences. The next three sections in this chapter cover these last three studies in depth to provide context for the current study.

## 4.2 The Gremler (1995) Study

### 4.2.1 Introduction

Gremler's (1995) study sought to examine repeat purchase behaviour in services and the factors leading to the development of loyalty and to thus develop a suitable loyalty model. Little had been published on service loyalty by the time Gremler completed his doctoral dissertation in 1995. Consequently, his work influenced significant later research (Jones *et al.*, 2000; Butcher, Sparks, & O'Callaghan, 2001; Mathwick, Malhotra, & Rigdon, 2001; Jones *et al.*, 2002; Srinivasan, Anderson, & Ponnnavolu, 2002; Anderson & Srinivasan, 2003),<sup>20</sup> partly due to his work being the first in this area. Some of the most important findings have not had the coverage they deserve, due to Gremler's limited number of published articles. In this section the original text of his thesis has been explored in depth and with significant enlightenment being drawn from some of the areas neglected by Gremler (1995) in published work derived from his doctoral thesis.

Looking at the objectives of Gremler's (1995) study, he intended to address two particular issues: 'What is service loyalty and how should it be measured?' and... 'What factors lead customers to become loyal to service organisations?' Gremler's review of the literature led him to propose three separate dimensions; behavioural loyalty, attitudinal loyalty and cognitive loyalty. Gremler then built on these three dimensions of loyalty with a definition:

*"Service loyalty is the degree to which a customer exhibits repeat purchases behaviour from a service provider, possesses a positive attitudinal disposition towards the provider, and considers using only this provider when a need for this service arises".*

Gremler 1995.<sup>21</sup>

To consolidate the concept contained in this definition Gremler focused on three primary antecedents to service loyalty; *satisfaction*, *switching costs* and inter-personal

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<sup>20</sup> See Gremler's publications ([http://www.gremler.net/personal/professional\\_information.htm](http://www.gremler.net/personal/professional_information.htm))

<sup>21</sup> This is consistent with the Zeithaml, Parasuraman and Berry (1990) 5-item scale for loyalty.

bonds. This is arguably the first time these components had been investigated in a single study outside of the theoretical modelling by Klemperer (1987).

#### 4.2.2 Gremler's hypotheses

Hypothesis One: High service loyalty is a three-dimensional construct composed of: Repeat purchase behaviour (i.e. behavioural loyalty), positive feelings towards the service firms (i.e. attitudinal loyalty) and consideration of using only this provider when the need for this service arises (i.e. cognitive loyalty).

Hypothesis Two: Overall *satisfaction* with the services provided by a service provider is positively related to service loyalty.

Hypothesis Three: The perceived costs of switching service provider (i.e. *switching costs*) are positively related to service loyalty. Here the *switching costs* are represented by six constructs of habit/inertia, perceived set-up costs, search costs, leaving costs, contractual costs, and continuity costs.

Hypothesis Four: The presence of *interpersonal bonds* with one or more service provider employees is positively related to service loyalty. This was measured via the following five concepts: The perception of familiarity with a provider's employees, that a service provider's employees display genuine care towards the customer, that a friendship with a service provider's employees exists, that rapport with a service provider's employees exists and there is consumer trust in a service provider's employees.

#### 4.2.3 Gremler's method and results

Gremler (1995) collected data for the study in two phases. In the first phase, in-depth interviews were conducted with customers of services and service organisations' employees<sup>22</sup> to identify salient factors affecting loyalty's development. Gremler's conceptualisation of salient factors is similar to Oliver's (1998) later discussion of loyalty as cognitive (top of mind), affective (positive attitude) and cognitive (behavioural intent).

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<sup>22</sup> A range of local service providers provided the employees for this part of the research.

An instrument containing 135 scale items was developed and pre-tested. Descriptive statistics, correlation analysis and Exploratory Factor Analysis were used on the data acquired from this survey. As a result, scale items with extremely low item-total correlations and those not loading significantly on any one factor were eliminated. The final instrument had 95 scale questions.

In the second phase, Gremler collected data from customers from two different service firms, one a dental practice, the other a bank. Four hundred and fifty dental clients were selected along with three thousand five hundred bank clients.

### **Gremler's dependent variable**

The dependent variable *service loyalty* was measured with a three-dimensional framework as follows: the *behavioural* aspect (repeat purchase) using a five-item scale based on intention to purchase; the *attitudinal* aspect with three scale items and the *cognitive* aspect (related to choice or 'top of mind'), used three items. In addition, two measures of global loyalty based on Pritchard 1991 were included.

### **Gremler's measures of the independent variables**

Independent variables were measured with a three-dimensional framework as follows: *satisfaction*, eight items were selected; *Switching costs* had scales for habit/inertia and for costs based on set-up, search, learning, contractual, continuity. The scales for *interpersonal bonds* covered the five dimensions mentioned earlier, in Hypothesis Four.

Gremler measured many other variables based around: price, value, convenience and evaluation. He also considered possible moderating variables including; perceived existence of alternatives, standardisation and customisation, judgement exercised by employees, interactive intensity of the relationship, level of risk in choosing providers and the importance of service to the client. Four items were developed to measure 'word of mouth' behaviour. Demographics were also collected.

### **Gremler's results**

The Gremler's prime hypotheses (H1) stated that service loyalty is a three-dimensional construct made up of *attitude*, *behaviour*, and *cognition*. This was not supported by the data, however, which supported only *attitudinal* loyalty and *cognitive* loyalty. Gremler found that his measures for behavioural intention and attitude towards behaviour had correlations of nearly 1.0 in both samples so they were combined into a single factor

labelled *attitudinal*. Cognitive loyalty, stood up as a separate dimension, with all four items measuring this dimension loading significantly on a single factor and with high Coefficient Alpha values. Attitudinal loyalty and cognitive loyalty had significant correlation and a high level of loading onto a single factor. More specifically:

- Gremler found that *satisfaction* was a strongly identified factor with his 9-item scale having excellent convergent and discriminant validity.
- Gremler had proposed that *switching costs* were a high order construct composed of the six low order constructs mentioned earlier. His Confirmatory Factor Analysis only supported three distinct constructs: *Effort* (which included habit/inertia), *search costs* and *set-up costs*.
- Continuity and learning costs were not distinguishable as separate factors, leading to the adoption of the single factor with four supporting scale items labelled *continuity costs*.
- Contractual costs were held up as a separate element of *switching costs* throughout the analysis. Gremler's scales were found to be reliable, convergent and discriminately valid.

### **Gremler's initial fit**

Using Confirmatory Factor Analysis, the overall fit of Gremler's (1995) model was such that, while the chi-squared statistics were significant in both markets, indicating potentially a poor fit, the other fit statistics of Comparative Fit Index (CFI) and Normed Fit Index (NFI) supported the reasonableness of the model<sup>23</sup>. Despite correlations between the items as low as 0.6 the items were all less than 1.0 by an amount not greater than twice the standardised error, supporting the discriminant validity of the scale (Bagozzi & Warshaw, 1990).

Each of Gremler's three constructs loaded slightly better than 0.3 on the first principal component providing at least some support for the validity of the concept of *switching costs* in a service loyalty model. Because of those low loadings and the observed cross-

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<sup>23</sup> The chi-square statistic is often oversensitive with large sample sizes so is often disregarded when a bank of other goodness-of-fit measures is available.

loadings on other scale items it is necessary to take caution when assessing Gremler's model as a good fit.

### **Gremler's interpersonal bonds**

Gremler's (1995) Confirmatory Factor Analysis found strong support for the lower-order constructs forming the concept of *interpersonal bonds*. They were familiarity, care, friendship, rapport and trust - in both samples analysis suggested two trust factors. One was a general factor and the other one included only the two negatively-worded items with relatively low item-total correlations. These two factor items were dropped from his model. Although not noted by Gremler negatively-worded items are often problematic in such situations (Heather, Booth, & Luce, 1998).

### **Gremler's adjusted overall model fit**

Twenty-eight items were retained to measure the five constructs in the model. Once again, chi-square values were significant, but CFI and NFI supported the Gremler (1995) model. Correlations were moderate to high but all less than 1.0 by an amount greater than the standardised error, supporting discriminant validity between any pair of constructs (Bagozzi & Warshaw, 1990). In terms of Hypothesis Three (e), contractual costs were found to be significant for banks, but not so for dental practices, possibly due to low or no *switching costs* between dentists.

In Gremler's (1995) regression models, *satisfaction* dominates over *switching cost* and *interpersonal bonds*, it is difficult to determine what effect other constructs have this dominance of *satisfaction* can clearly be seen in Table 1. on page 37.

Gremler was concerned that perhaps *satisfaction* was acting more as a mediator between *switching costs* and service loyalty and *interpersonal bonds* and service loyalty. Bitner (1990) Hubbert (1995) LaBarbera & Mazursky (1983) had found *satisfaction* to act as a mediator between a variety of constructs and behaviour or behavioural intents. Gremler also found some support in the literature for *interpersonal bonds* influencing *switching costs* (Storbacka, 1994).

Table 1. Analysis of paths and structural equations

Endogenous Variable: Service Loyalty				
Exogenous Construct	Regression Coefficient (Standardised)		t. Value	
	Banking	Dental	Banking	Dental
Satisfaction	0.917	0.943	36.4	25.5
Switching Costs	0.074	-0.001	6.2	-0.1
Interpersonal Bonds	0.021	0.056	1.8	3.4

Note  $R^2 = 0.9197$  (0.9326)

In terms of the suitability of the *switching costs* construct, Gremler (1995) found that set-up costs, habit/inertia and search costs tended to load onto a single factor. While conceptually they seem distinct, Confirmatory Factor Analysis suggested they are not empirically distinguishable. Gremler found a similar convergence onto a single factor for continuity and learning costs. He found that *switching costs* could be reasonably thought of as a higher order construct based on effort costs (set-up and inertia), continuity costs and contractual costs.

### Gremler in summary

Confirmatory Factor Analysis was employed to test Gremler's (1995) measurement models and hypotheses. The measurement models were mostly supported with two exceptions. Services loyalty appeared to Gremler (1995) to be a two-dimensional construct and only three elements of his more extensive list of *switching costs* were distinguished.

### Gremler's method: A generic assessment.

While there were a number of problems which could have occurred as a result of Gremler's (1995) use of so many scales and items such as respondent fatigue and confusion for which Gultinan (1989) provides some support. The use of many items for each of his scale does mean that scale validity and reliability was at a very high level even after culling poorly performing scale items. This resulted in a measurement model and a structural model that was robust to error. Thus while Gremler cast doubt on some of his findings because of issues of respondent behaviour and interaction with questionnaire design, it is likely that his results are very robust.

#### 4.2.4 Gremler's Contribution

He provides the first inclusion of *switching costs* and *interpersonal bonds* with *satisfaction* in an empirically-tested switching model; such a comprehensive service loyalty construct had not previously been attempted. He not only proposed scale measures but also tested the relationships and covered *switching costs* comprehensively for the first time in the marketing literature and in doing so provided corroborative support for differences in services. His scales were in the main highly valid and reliable so his observations on determinants of switching hold some weight. Both his acceptance and rejection of determinants have good support from both the scale validity and the substantial size of his banking sample

Gremler's scales, for example, were able to identify differences between *interpersonal bonds* across the banks and dentists, differences noted prior to Gremler (1995) by Iacobucci (1992) and Biong (1994). In terms of the observation that contractual arrangements were not supported as part of the model, it is likely that the answer lies with the difference in contractual arrangements within the two industries, and that he made an error in expecting a fit across the datasets when there was always going to be substantial differences between industries.

Gremler's observation that behavioural intent and attitudinal loyalty were indistinguishable is not a surprising result. However, perhaps significant is an error Gremler makes in believing these results validate a two-dimensional construct of loyalty. The reason for this concern is evidence indicating that behavioural intent is not a good indicator of behaviour (Juster, 1966; Day, 1969). In fact, behavioural intent is probably more closely related to consumer attitudes to the service than to any likelihood of purchasing, perhaps explaining Gremler's (1995) observation that behavioural intent and attitude to behaviour is indistinguishable.

Gremler did propose an alternative model, which considered *satisfaction* as a moderator of loyalty and *interpersonal bonds*. This seemed an afterthought though it is likely that this model was a good assumption given the strong impact of *satisfaction* on the model as explained earlier.

Gremler (1995) also had problems, for example with his two-item scale for learning costs as they did not load on the same factor. This is a well-known problem with the

reliability of two-item scales. Probably Churchill's (1979) advice to use a minimum of three items is important here in relation to this unsatisfactory result.

The implication for future research from Gremler's study is that much of his scale development work, while naive in terms of respondent fatigue, has ensured that his findings, give a strong empirical grounding for using his scales where they suit future theoretical model development. His misunderstanding of the impact of behaviour should have been quickly observed and led to the abandonment of that method of measuring behaviour.

## 4.3 The Jones, Mothersbaugh & Beatty (2002) Study

### 4.3.1 Introduction

This section looks at a study of *switching costs* by Jones, Mothersbaugh & Beatty, covered in two articles (Jones *et al.*, 2000; Jones *et al.*, 2002). As mentioned earlier in this thesis the role of *switching costs* in consumer markets has stimulated significant debate because of their perceived impact on consumer retention rates. Only a limited quantity of research had examined switching costs in services at the time of the Jones *et al.* (2002) study. While Klemperer (1987) and Gultinan (1989) had already suggested that a multi-dimensional approach to switching cost research was desirable and Gremler (1995) had demonstrated the potential value of a full switching cost measurement instrument, the use of multi-dimensional switching constructs in empirical marketing research was rare. It was from this background that Jones *et al.* (2002) examined the multi-dimensional nature of *switching costs*, and established their own measurement scale, which they went on to validate. In many ways their research is the natural development from prior theoretical work by Zeithaml (1981), and empirical research by Gremler (1995).

### 4.3.2 The Jones *et al.* hypotheses

Using the framework of cost benefit switching models suggesting that consumers behave according to the pressure exerted by benefits and costs, Jones *et al.* (2002) hypothesised as follows:

Hypothesis One: Each switching cost dimension relates positively with repurchase intention.<sup>24</sup>

They expected all dimensions to be associated with repurchase intention, based on the generally held view that services have a strong interpersonal component as demonstrated by Beatty, Mayer & Coleman *et al.* (1996), Czepiel (1990), Solomon, Surprenant, Czepiel & Gutman (1985) and Gultinan (1989). Jones *et al.* (2002) proposed that lost performance and sunk costs would dominate, based on the idea that a significant proportion of any service performance is determined by personal relationships. They perceived personal input to a service as a strong driver of service

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<sup>24</sup> See Anderson (1994) and Maute & Forrester (1993) for empirical support.

quality, and that quantity will be lost if switching occurs. In the same vein, they felt that the build up of personal relationships over time meant that sunk costs would be high because of 'time accumulated benefits'. That is, of the things lost on switching, some came from service features and others from personal relationships. They felt that this investment in time was sunk.<sup>25</sup>

Hypothesis Two: Lost performance costs have a stronger relationship with perceived service quality than with other switching cost dimensions.

Hypothesis Three: Lost performance costs and sunk costs have a stronger relationship with interpersonal relationships than other switching cost dimensions.

Hypothesis Four: Lost performance costs and sunk costs have a stronger relationship with repurchase intention than other switching cost dimensions.

Hypothesis Five: Consumer perceptions of (a) uncertainty costs and (b) pre-switching search and evaluation costs are higher for hairstylists than for banks.

### **4.3.3 The Jones *et al.* method and results**

The Jones *et al.* (2002) study looked at respondents' perceptions of service quality, a concept with a close relationship to *satisfaction* (Bitner & Hubbert, 1994; Iacobucci, Ostrom, & Grayson, 1995), interpersonal relationships and intention to repurchase. Their two selected markets were banks and hairstylists. Using their switching cost definitions, in-depth interview commentaries and a review of the literature, they developed scales using their own and borrowed scale items.<sup>26</sup> Initially this was a set of seven items per switching cost dimension: A pre-test review of clarity and face validity was conducted using a convenient sample of seven marketing faculty and doctoral students. Based on this review, the scale items per switching cost dimension was reduced to five.

From this point, an initial assessment of the proposed instrument was provided by a survey of 113 undergraduate students based on the barber/hairstylist service domain. After item-total correlations, Coefficient Alpha and Exploratory Factor Analysis, four

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<sup>25</sup> None of the research acknowledged Gremler (1995) at this point but went on to clearly use some of Gremler's own scale items in their instrument.

<sup>26</sup> Gremler (1995) Ping (1993), Rusbult (1980) contributed items to Jones *et al.*'s. scales.

scale items were deleted based on their low factor loadings, negative contributions to Coefficient Alpha and/or their low item-total correlation (Nunnally, 1978; Churchill, 1979). Exploratory Factor Analysis was performed on all six switching cost dimensions combined. Six factors were retained with eigenvalues greater than one. At that stage two additional scale items were deleted based on low factor loadings (<0.40) or high cross-loadings (>0.35).

That initial study provided good overall support for the proposed switching cost dimensions although some tweaking of the scale items was necessary. The final instrument had re-purchase intention assessed on a ten-point scale anchored variously at; unlikely-likely, very improbable-very probable, possible-very possible, no chance-certain (Oliver & Swan, 1989). Perceived service quality was assessed with a seven-point scale measuring agreement with two items: (a) 'quality of services is high' and (b) 'the products and services are excellent'. Perceptions of the extent of personal relationships were covered in the instrument by five items measured on a similar seven-point scale. These items assessed the extent of an agreement about the existence of a personal bond with service purchased.

Armed with this fine-tuned instrument, Jones *et al.* (2002) undertook a second larger survey study looking at both hairstylists and banks. Three thousand respondents for the study were selected randomly from a list of residents of a large metropolitan area. A questionnaire was mailed out with reminder cards two weeks later. When their questionnaire only obtained an 18 percent response rate, they assessed the potential for non-response bias. They found that the characteristics of the first 10 and last 10 percent of respondents were not significantly different across dimensions (Armstrong & Overton, 1977), making concerns about non-response bias less of an issue.

### **The Jones *et al.* Findings**

As the dimensions were virtually identical across markets, the data was collapsed together to assess scale reliability and validity. A chi-square test revealed no significant difference in demographics across markets. After initial screening with item-total correlations and Cronbach's Coefficient Alpha, all items were retained. Confirmatory Factor Analysis modelling of all items for *switching costs*, *repurchase intention*, perceived *service quality* and perceived *interpersonal relationships* was undertaken. The fit of their model was acceptable. More importantly, estimates of variance explained by each switching cost dimension all exceeded 0.50 percent, indicating high

shared variance between indicators of each dimension (Fornell & Larcker, 1981). Although chi-square was significant ( $\chi = 1140.61$ , d.f. = 467,  $p < 0.01$ ), other fit indices less sensitive to sample size also indicated acceptable model fit e.g. Tucker Lewis Index (0.92) and Comparative Fit Index (0.95). All items loaded significantly onto their respective dimensions. None of the confidence intervals of the phi estimates included one, indicating good discrimination of the model elements (Anderson & Gerbing, 1988). Their chi-square difference test of the six factor model comparing each pair of *switching costs* showed a significant reduction in fit when any two *switching costs* dimensions were combined indicating a parsimonious model.

The hypotheses on *switching costs* correlates were assessed using the phi estimates from their confirmatory model and chi-square difference tests of alternative models. Hypothesis One (H1) that switching cost dimensions are positively related to repurchase intention was supported for all dimensions. Their second hypothesis, Hypothesis Two (H2) that lost performance costs are more strongly associated with perceived service quality than other service switching cost dimensions was also supported.

Jones *et al.*'s third hypothesis, Hypothesis Three (H3) was that *lost performance costs* and *sunk costs* are more strongly associated with *interpersonal relationships* than other switching dimensions. This hypothesis was supported. Hypothesis Four (H4) proposed that *lost performance costs* and *sunk costs* are more strongly associated with *repurchase intention* than other switching cost dimensions. This proposition was only partially supported with *lost performance costs* being strongly associated with *repurchase intention* while *sunk costs* were not.

The final hypothesis, Hypothesis Five (H5) of Jones *et al.* (2002) was that perceptions of *uncertainty costs* and *pre-switching search and evaluation costs* are higher for hairstylists than banks was supported. Additionally Jones *et al.* (2002) observed that perceptions of set-up costs were significantly higher for hairstylists than for banks.

They also observed that there was likely to be substantially more heterogeneity across hairdressers, which would drive *uncertainty costs* along with *pre-switch and evaluation costs* up.

Jones *et al.* (2002) investigated the cross-industry differences in relationships among *switching costs* and their correlates. They found that while H1 was supported in the

overall sample, several of the dimensions were not supported in the individual industry samples. Search and evaluation costs and set-up costs were not supported in the bank sample and uncertainty costs were not associated with repurchase intention in the hairstylists sample. Both industries provided support for H2 and H3. H4, the proposition that *sunk costs* would be more strongly related to *repurchase intention* compared with *uncertainty costs* was not supported in the banking dataset and had mixed support in the hairdresser sample. A general observation was that *lost performance costs* had the strongest relationship with *repurchase intention*. Additionally Jones *et al.* noted a higher overall mean level of uncertainty, search and evaluation and set-up costs in hairstylists than in banking. They proposed that this might have been because of the greater heterogeneity and intangibility of hairstylists' services.

One significant observation outside of their main objectives was that in the hairstylist sample all switching cost dimensions with the exception of uncertainty costs were strongly associated with repurchase intention. This was despite the relatively high level of perceived uncertainty costs in the industry (Mean = 5.27 on 7 point scale), substantially higher than for banks. Clearly, we have a warning, to avoid mixing up the magnitude of a dimension and its relationship with another dimension. In this case, the variance of the hairdresser sample's uncertainty is low indicating that any relationship with another dimension is low. One interpretation that could be put on this point is that having a perception that some element of switching is costly does not necessarily indicate a strong impact on the likelihood of repurchasing. Similarly, where the variation in the data is low one cannot say that there is a weak relationship just that we do not know the slope of the relationship.

### **Jones *et al.* in summary**

Jones *et al.* (2002) found that their 24 scale items were reliable, discriminant and convergent. They observed that the six cost dimensions they had proposed; lost performance, uncertainty, pre-switching search and evaluation costs along with post switching behaviour, cognitive, set-up, and sunk costs, were all positive and significantly associated with repurchase intention. They found that the association was particularly strong for lost performance costs.

## 4.4 The Burnham, Frels & Mahajan (2003) Study

### 4.4.1 Introduction

Because Jones *et al.* (2002) was not likely to have been published at the time that the Burnham *et al.* (2003) study was submitted for publication there is no cross-citing between the two works, making them an interesting comparison given their similar themes.

It is well known that firms regularly make decisions based on the belief that *switching costs* exist for consumers. It is not clear, however, how consumers perceive *switching costs* and how they affect their purchase decisions. As discussed in the previous chapter there is an unfortunate absence of a comprehensive typology for labelling, testing and understanding *switching costs*. Gremler (1995) had defined some excellent scales with good reliability but they had not been adopted, as such findings should have. At the same time his excellent measurement instrument validity and large sample meant it was possible for him to empirically identify some important constructs within the loyalty framework. Gremler, however, had not been able to confirm a truly robust typology although he had identified the potential for *satisfaction* to be a moderator of *switching costs* and *intention to stay*. The Jones *et al.* study had also defined some excellent scales and these were more succinct on the use of items thus minimising respondent fatigue in comparison with Gremler (1995). Although the Jones *et al.* study was effectively a typology of switching costs, the creation of such a typology was not a specific intention.

Burnham *et al.* (2003) studied *switching costs*, *satisfaction* and intention to repurchase, however their primary focus was on the defining of switching cost constructs and the antecedents of *switching costs*. Burnham *et al.* investigated consumers' perceptions of *switching costs* and identified three broad categories, which are described as: *procedural*, *financial* and *relational*. They also investigated antecedents of switching and found that perceptions of product complexity, provider heterogeneity, consumer's breadth of product use, experience of alternative providers and switching experience were substantial drivers of perceptions of *switching costs*. Additionally, they found that the *switching costs* they identified influenced consumers' *intention to stay* with their current service provider and explained more variance than *satisfaction*, to date the most studied and recognised contributor to loyalty.

#### **4.4.2 The Burnham *et al.* hypotheses**

Gatignon & Robertson (1992) constructed a model of switching costs, which influenced the development of Burnham *et al.*'s. (2003) study. Burnham *et al.* distilled the earlier Gatignon and Robertson antecedents of switching into two main characteristics, that of 'product complexity' and 'provider heterogeneity', which were then integrated into the Burnham *et al.* study.

##### **Product complexity**

Product complexity can be defined as the extent to which the consumer perceives the product to be difficult to understand. Consumers are likely to see the purchase of such products as being risky as there is more perceived uncertainty with a complex product (Holak & Lehmann, 1990). Additionally, complex products will be seen as having greater learning costs, require more pre-purchase assessment and result in more perceived sunk costs when consumers consider switching away. It is in this context that Burnham *et al.* (2003) hypothesised that, "greater perceived product complexity will be associated with higher procedural, financial and relational costs" (p.113).

##### **Provider heterogeneity**

In markets where providers are seen as very different from each other we say that the providers are heterogeneous. That is, we understand them to be non-substitutable and that knowledge gained with one provider is of limited value when purchasing from a new provider, thereby increasing the perceived risk and learning effort associated with switching. From this, Burnham *et al.* (2003) hypothesise that "greater perceived provider heterogeneity will be associated with higher procedural, financial, and relational *switching costs*"(p.113).

Investments in the provider are described by Jackson (1985) and characterised by Burnham *et al.* (2003) as the 'breadth of use' of the supplier's products. One of these investments relates to the extent of modification (customisation) of the product to suit the consumer's needs. Such investments with the provider are an important driver of *switching costs*. They hypothesise that, "greater breadth of incumbent provider use will be associated with higher procedural, financial, and relational *switching costs*". Additionally "greater modification of the incumbent product will be associated with higher *procedural, financial and relational switching costs*" (p.114).

As an aside, while it documented that consumers are increasing their investment with a provider when they buy a wide range of product and when they modify the products they receive from their provider (Bharadwaj, Varadarajan, & Fahy, 1993), they may also increase their investment when they adopt procedures which optimise their effort in interacting with a service. This is a point which seems to have escaped mention in the literature surveyed by Burnham *et al.* (2003).

Domain expertise is described by Alba & Hutchinson (1987), Klemperer (1987) and Wernerfelt (1985) and represented in the Burnham *et al.* (2003) study as 'alternative experience' and 'switching experience'. They suggest that domain expertise (knowledge of products and providers) determines the ease with which new product-related information can be evaluated. This is not a controversial point with a range of researchers supporting the idea that domain expertise is a substantial determinant of *switching costs* (Park, Mothersbaugh, & Feick, 1994). The characteristics of this expertise appear to be dominated by the consumers experience with alternative product and providers and their experience with the switching activity itself (Nilssen, 1992). In line with their view of the literature, Burnham *et al.* hypothesise that "greater prior experience with alternative providers will be associated with lower procedural and relational *switching costs*" and that "greater switching experience will be associated with lower procedural, financial and relational *switching costs*" (p.115).

Burnham *et al.* (2003) also argue that the primary managerial interest in *switching costs* is derived from the premise that, "these costs impede customer switching and hence improve customer retention" (p.115). From this observation and their understanding of *satisfaction* as a key contribution to retention (lack of switching) they proposed two overarching hypotheses linking through to customer retention. The first being, "greater *satisfaction* will be associated with higher *intention to stay* with an incumbent provider" and the second being that, "greater (a) procedural, (b) financial, (c) relational *switching costs* will be associated with higher consumer *intention to stay* with an incumbent provider" (p. 115).

Finally, in recognition of the literature on the interaction of *switching costs* and *satisfaction* (Oliva *et al.*, 1992; Jones & Sasser, 1995; Jones *et al.*, 2000), they proposed the idea that "The relationship between *satisfaction* and consumer *intention to stay* with an incumbent will be weaker (stronger) when consumers perceive higher (lower) (a)

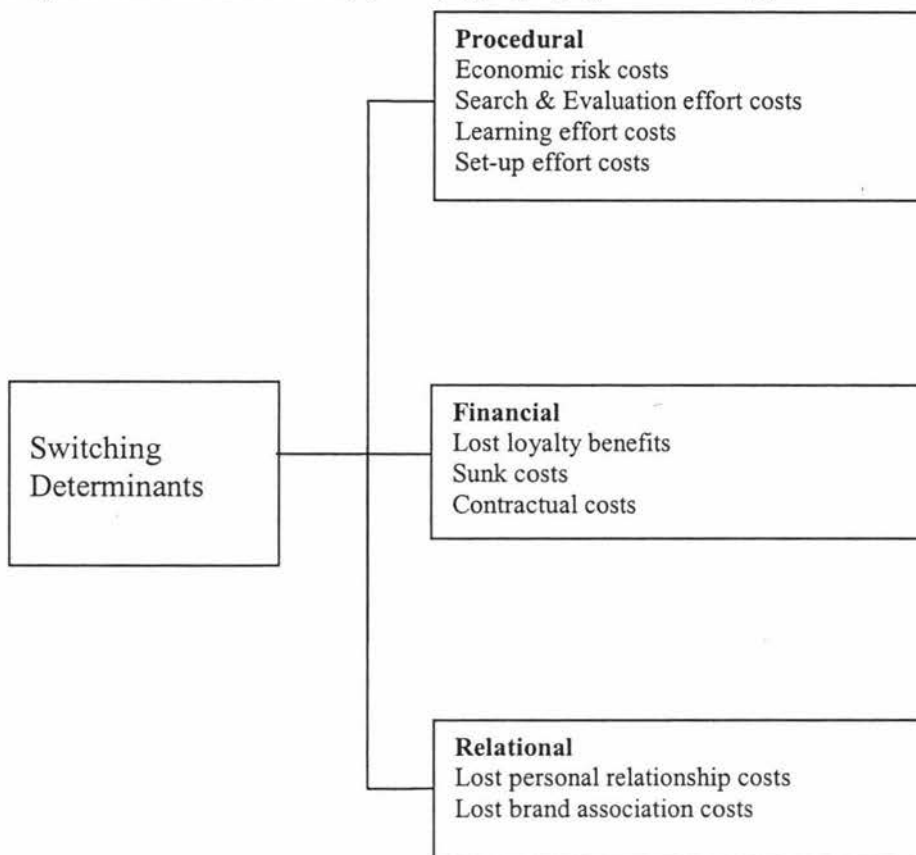
procedural *switching costs*, (b) financial *switching costs*, and (c) relational *switching costs*” (p.115).

#### **4.4.3 A typology of switching determinants**

It is noticeable that despite significant work on identifying the potential facets of *switching costs* (Porter, 1980; Jackson, 1985; Guiltinan, 1989; Klemperer, 1995) there is little empirical evidence to support these facets of switching models. The tendency has been to build lists, rather than rank the efficacy of possible. This problem may not be one of omission by researchers, but as Fornell (1992) said, “A direct measure of switching barriers is difficult to obtain”. Fornell felt that as all costs associated with changing providers are *switching costs*, any list is clearly not likely to be exhaustive and may not explain all of the potential switching barriers.

The Burnham *et al.* (2003) typography covered in Figure 1. on page 49 is based on the identification of the costs involved in the switching and focuses on a construct framed around procedural, financial and relational costs. The framework below provided the guidance for the review of the switching cost literature in the previous chapter. Additionally, Burnham *et al.* (2003) have proposed that there are three groups of consumer-centric antecedents of *switching costs*. They are perceptions of product and market characteristics (Gatignon & Robertson, 1992), investments with the provider (Jackson, 1985), and domain expertise (Alba & Hutchinson, 1987). These three consumer-centric determinants are not covered in the review of literature in any depth and are not tested in this thesis.

Figure 1. Burnham *et al's.*, (2003) typography of switching costs



Adapted from: Burnham *et al.* (2003)

#### 4.4.4 The Burnham *et al.* method and results

Burnham *et al's.* study looked at consumers' perceptions of *switching costs* in two subscription service markets in the United States. These were the credit card and long distance toll call markets. Using interviews with managers in the selected markets, consumer focus groups and the switching literature, they drew up a list of the potential costs facing switching consumers, along with a list of potential antecedents and consequences.

A pre-testing survey was conducted using a convenient sample of 120 non-academic university staff at a USA university. This survey was used to refine the multi-item scale elements via Confirmatory Factor Analysis<sup>27</sup> to identify eight potential switching cost categories. The final versions of multi-item scales demonstrated good reliability and convergent and discriminant validity. This final survey was posted to 287 credit card

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<sup>27</sup> For the value of this approach see; Churchill (1979) and Anderson & Gerbing (1988).

holders and 288 long distance toll consumers and their response rate was 53 percent (158 returned) and 50 percent (144 returned) respectively. Once again, they used Confirmatory Factor Analysis and, this time, found that a model incorporating eight switching cost facets was a good fit to the data. The convergent and discriminant validity of their model was examined, and all items loaded significantly on their intended construct, indicating possible convergent validity. Discriminant validity was also indicated. The eight resultant switching cost facets were *switching costs* related to; economic risk, evaluation, learning, set-up, benefits loss, financial loss, personal relationship loss and brand relationship loss. By-submitting composite measures for the eight constraints to Varimax-rotated Exploratory Factor Analysis, three higher-order switching cost types were identified. They tested this three-factor model using second order Confirmatory Factor Analysis; this second order three-factor model also fitted the data well.

Using the Fornell & Larcker (1981) test for discriminant validity the three switching cost types were found to be discriminant. Of the eight lower order constructs, brand relationships and personal relationships failed to discriminate, indicating that relationships were not as important part of the switching construct as they had thought. Relationships between constructs were examined with Structural Equation Modelling. The overall support for the Burnham *et al.* (2003) model is laid out in Table 2. below.

Table 2. Support for Burnham *et al.* (2003) hypotheses

Hypothesis			Conclusion
1	Antecedent effects on Costs	Complexity	Mixed Support
2		Heterogeneity	Mixed Support
3		Breadth of use	Supported
4		Modification	Not Supported
5		Alternative experience	Supported
6		Switching experience	Supported
7	Consequences effects on Intent	Satisfaction	Supported
8a		Procedural Costs	Supported
8b		Financial Costs	Supported
8c	Relational Costs	Supported	
9a	Interaction of costs and Satisfaction	Satisfaction/Procedural	Not Supported
9b		Satisfaction/Financial	Not Supported
9c		Satisfaction/Relational	Not Supported

Specifically this research indicated that in their model 16 percent of variance in consumer *intention to stay* was explained by *satisfaction*.<sup>28</sup> Of more interest, however, was the study's finding that in their model *switching costs* explained about 30 percent of consumers' *intention to stay*. Burnham *et al.* (2003) noted that this substantial level of *intention to stay* explained by *switching costs* is even more remarkable given the relatively high level of switching that might be expected in the two industries studied. Unfortunately, they provide no information on the switching levels that actually exist so this observation must stand as conjecture. Because Burnham *et al.* found no support for the notion that *switching costs* and *satisfaction* interact it would suggest that more attention to management of switching cost to control client retention might be possible. A point that at first assessment defies intuitive thought, which suggests that any perceived manipulation of *switching costs* is likely to lower existing levels of consumer *satisfaction*. As noted earlier it is perceived costs that are important in switching decisions and it may be that a cost can be both high and acceptable. It is not clear however whether the perceived reasons for the cost manipulation would affect the switching intention. Answering this question is, beyond the scope of this thesis.

Burnham *et al.* (2003) observe that the context of switching cost is not covered by their study and suggest that the assessment of *switching costs* needs to be considered in context. Examples of relevant contexts are; adopting a new product (first time use learning effort), switching providers (*switching costs*) and sampling a new offer (trial cost). The final question they pose is whether '*switching costs* independently lead to dissatisfaction?' This question is in part, answered by their inability to see an interaction between these two facets of loyalty. However, only experiments, longitudinal studies or meta-analysis are likely to give a definitive answer to this question.

#### **4.4.5 The Burnham *et al.* contribution**

Burnham *et al.*'s (2003) is a simple one. They produced a simplified psychometric scale for *switching costs*, indicating the contribution of eight general and well-used categories of *switching costs* to *repurchase intention*. They selected three switching constructs to serve as a higher order model of *switching costs* and tested its validity. Additionally they found no interaction between *switching cost* and their *satisfaction - intention to stay* model. Burnham *et al.* found that consumer experience of other

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<sup>28</sup> This fell well within the range of typical levels in the literature as reported by Szymanski & Henard's (2001) meta-analysis of *satisfaction* studies

services and switching has an impact on perceived *switching costs* as does consumer perceptions of *switching costs*.

The following chapter discusses the need for, the implementation of and the difficulties in replicating research. It serves as a useful reminder of the value of replication and a precursor to the methodology of this thesis.

## 5. THE REPLICATION IMPERATIVE

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### 5.1 Introduction

The previous chapters cover the literature on the most frequently described determinants of switching. The following chapters investigate whether the results of the Burnham *et al.* (2003) study can be generalised to a New Zealand context as well as to two other service industries, banking and electricity. As this thesis continues research into the determinants of switching by replicating the recent work of Burnham *et al.* (2003), this chapter describes the value of replicating and extending research.

Many scientists believe that the development of generalised findings through the replication of studies stands at the very centre of the scientific method and underpins the growth of knowledge beyond 'mere speculation'. In this context, this chapter discusses accepted definitions of replication and extension from the literature. The arguments for the importance of replication are provided and followed up by an examination of the consequences of limited or no replication.

### 5.2 Background: Frequency of Replications and Extensions

Replication has been a subject of considerable debate in the social sciences over the last twenty years as scientists have come to realise that only a proportion of social science research has led to useful generalisations. The difference between the more established and the less established social sciences is remarkable in this area. As an illustration, Hubbard & Armstrong (1994) reported that while economics reported published replication rates of 21.1 percent in the top journals a similar analysis of selected top marketing journals reported replication at 1.8 percent of all published work. This figure rose to 2.4 percent if only empirical studies were considered.

An argument explaining this low replication rate suggests that the social sciences due to their relative newness focus on exploring new areas at the expense of previously studied areas. Though science by nature builds incrementally on the endeavours of others, it is probable that social science research is often built upwards and outwards from research

that has not yet been exposed to the rigours of replication and extension.<sup>29</sup> This lack of replication results in a proliferation of claims, each developed from single or limited sets of data.

### 5.3 The Difficulties in Replication

Replication as defined by Hubbard & Armstrong (1994, p.1) is the repetition of a previously published empirical study focussing on assessing whether similar finding can be obtained upon repeating that study. For a number of reasons, it is often not practical to produce an exact replication of a study. This issue is well covered in the literature (Lindsay & Ehrenberg, 1993; Ehrenberg, 1995; Stern & Ehrenberg, 1995). One reason for why a social science experiment will often be far from a perfect replication is the effect of the passage of time on a social setting (in comparison to a 'hard' science experiment which may replicate well over time). Similarly, a difference in location, or the level of knowledge of the research to be replicated might greatly affect a social science experiment while not always influencing an experiment in the hard sciences (Lindsay & Ehrenberg, 1993; Ehrenberg, 1995).

There is an argument that says that a perfectly replicated experiment is practically useless, as it is just increasing the sample size of the original study. The proponents of this argument would tend to suggest that such a replication provides no more knowledge than that provided by say "... reading the first experimental report for a second time" (Collins, 1985, p340).

The minor variations that are seen in close (rather than perfect) replications are what provide the new knowledge. A successful replication despite minor changes in conditions is thought to be a better test of a generalisable phenomenon than an exact replication. This activity is effectively a process of moving, over time, from an individual observation (one dataset) through regular observations of the same result (observed regularity) to an empirical generalisation. Use of this process has been well demonstrated by Andrew Ehrenberg and his colleagues (Lindsay & Ehrenberg, 1993; Stern & Ehrenberg, 1995). Stern & Ehrenberg (1995) propose that the aim of replication is always to extend knowledge to new conditions and to painstakingly test hypotheses about alterations in conditions to determine if the results remain unaltered.

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<sup>29</sup> It would be interesting to examine the extent to which new research is building on replicated research, however statistics from Hubbard & Armstrong (1994) would suggest that the current answer would be rare in the same way that replication is rare.

## 5.4 Types of Replication

Typically studies are considered as replications if they attempt to keep as many variables as possible the same as in the original study (*ceteris paribus*), for example, the population, the sampling method, the measurement instrument, the environment and the method of post collection analysis (Lindsay & Ehrenberg, 1993).

On the other hand, a study should be thought of as differentiated if there are deliberate, or at least observed and recorded differences (*ex post* variation) in major aspects of the study (Lindsay & Ehrenberg, 1993). This deliberate alteration of conditions while observing the phenomena is the essence of the process of creating empirical generalisations. Frequently such a differentiated study will be described as 'an extension' if the changes are fundamental in terms of subject, object or environment.

Despite this importance of differentiated replications, Lindsay & Ehrenberg (1993) suggest that close replication is useful and appropriate during the early phases of a research programme. Effectively, this ensures that repeat observations are consistent with the original findings. Along with repeating the observation, Hubbard & Armstrong (1994) note that close replication also allows for the uncovering of analysis and other errors in the execution of the original studies.

From the above, we can see that the definitions of replication and extension are related by the degree of closeness of a later study's characteristics to that of an earlier study. This leads to the consideration of Hubbard & Armstrong's (1994, p.236) definition of extension, where replication should seek to "investigate generalisability of earlier research findings ... (without altering)... the conceptual relationship involved in the original study, but... (rather testing them) by making changes in some aspects of the initial design".

Replications can result in confirmatory, ambiguous or contrary findings. In each of these cases the results should be considered as a signal for researchers to undertake further study. To extend in the case of confirmatory findings, or to further replicate until a consistent pattern is found in the case of ambiguous or contrary findings. Based on the concept of spanning or triangulation, clearly three studies with agreement on their findings should be considered as the minimum level to consider ceasing replication. Given that in the established sciences tens of replications are routinely done

to provide robust confirmation of a result, then this rule is very much a minimum standard for replication.

## 5.5 Value of Replication

Lindsay & Ehrenberg (1993) suggest three reasons for conducting replications: (i) to test for convergent validity (essentially the triangulation of the phenomenon through repeatedly similar results), (ii) extension of the scope of the phenomenon's application (thus broadening the generalisation and therefore any practical application), and (iii) to quantify the boundary conditions at which the phenomenon fails to systematically repeat. It is argued that without knowing the existence of boundary conditions under which there is a systematic theory breakdown there is little stimulus to search for more knowledge in the research area (Wright & Kearns, 1998).

This necessity to replicate is well recorded in the literature with Hendrick (1990) describing the lack of a culture of habitual replication as producing both fragmented and diffuse literature with no sense of continuity. Collins (1985) refers to replication rather colourfully as the 'Supreme Court' of the scientific method. There is, however, one risk in replications of which many authors warn. This is the risk of not being able to explain the reason for a failure to replicate if too many variables are modified in one study, thus the demand for *ceteris paribus* in experiments (Lindsay & Ehrenberg, 1993).

While replication appears to have the support of social scientists in the theoretical literature it is not well represented in empirical social sciences output. As noted earlier, the rate of replication in the social science is in the region of ten times less than in the physical sciences. As this lack of replication is endemic to the social sciences, Hendrick (1990) and others (Hubbard & Armstrong, 1994; Hubbard *et al.*, 1992; Hubbard & Vetter, 1996) specifically comment that marketing science is being impeded by the serious lack of replication research in the discipline. As Hubbard & Vetter (1996) say any, "... uncorroborated empirical research outcomes must be considered tentative (or speculative),... their successful replication... (on the other hand)... promotes confidence in the veracity of a discipline's cumulative knowledge base".

## 5.6 Summary

This chapter has covered the function of replication in the advancement of science. Replication has been defined and the importance of replication has been discussed. In

particular, the impact of the closeness of the replication on the risk of not understanding the reasons for a failed replication, and the limited value of an exact replication have been described. This thesis takes an approach based on the scientific method, which demands replication of empirical studies if confirmation of findings is to occur. Confirmation of findings is important because without this certainty researchers are unable to make decisions on what information has certainty attached to it and what is open to great doubt.

The study described in the next section is differentiated from the original Burnham *et al.* (2003) study in terms of the industry and the population surveyed, but holds true to the instrument and analysis of the original study. The following chapter looks at the research objectives.

## 6. OBJECTIVES OF THE RESEARCH

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The motivation of this thesis is the need to verify certain determinants of switching in subscription markets. It fulfills this need by replicating and extending the recent work of Burnham Frels & Mahajan (2003), which in turn builds on the modeling of some of the determinants of subscription market switching developed by Jones, Mothersbaugh & Beatty (2002) and Gremler (1995).

The following research question is the focus:

*Does the Burnham, Frels & Mahajan (2003) typology provide a useful model for the assessment of the impact of switching cost categories in subscription service on switching providers?*

From a practical standpoint the question is: Does the Burnham *et al.* (2003) model replicate fit on data from another country and drawn from two other service industries in that country, namely banking and electricity?

This replication is intended to be close in terms of instrument used and a method of analysis used, but is looking only at direct contributors to the Burnham switching model. Those contributors are *switching costs*, *satisfaction* and *intention to stay*. While Burnham *et al.* had studied the antecedents of switching costs these are not investigated in this thesis as they are by definition antecedents, to model components, and not necessary to test model veracity.

Along with assessing of the value of the model proposed by Burnham *et al.* in fitting New Zealand data and two other industries, this thesis will look at Burnham *et al.*'s. Hypotheses that relate to the drivers of customer retention or switching.

These specific hypotheses are repeated below:

- Hypothesis Seven: Greater *satisfaction* will be associated with higher *intention to stay* with an incumbent provider.
- Hypothesis Eight: Greater (a) procedural (b) financial (c) relational *switching costs* will be associated with higher consumer *intention to stay* with an incumbent provider.
- Hypothesis Nine: The relationship between *satisfaction* and consumer *intention to stay* with an incumbent provider will be weaker (stronger) when consumers perceive higher (lower) (a) procedural *switching costs* (b) financial *switching costs*, and (c) relational *switching costs*.

## 7. METHODOLOGY

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### 7.1 Introduction

The aim of this thesis is to investigate the determinants of switching in subscription markets. It does this by closely replicating part of the methodology of the Burnham *et al.* (2003) study, whilst extending that methodology into a new country and into two other services. The previous chapters have provided the framework for this research by addressing the primary determinants of switching described in the literature and the target article by Burnham, Frels and Mahajan (2003) along with key preceding studies by Gremler (1995) and Jones, Mothersbaugh and Beatty (2002) in particular.

This chapter describes how the study was undertaken from the point of view of procedure, sample and research instrument. The similarities and differences of this study, to the original study by Burnham *et al.* (2003) are covered, along with the limitations of this Thesis' research design. There is an outline of the process undertaken but the heart of the procedures is within the following four chapters on validating the Burnham *et al.* (2003) model.

### 7.2 Mail Surveys

The data in this research was collected from two concurrently run mail surveys. While mail surveys are not appropriate for all investigations they do allow for the rapid surveying of geographically dispersed samples. Additionally, there is no interviewer bias. At the same time, they can have 'time to complete' and cost advantages for researchers (Brennan, 1992). These factors combined with the intention to use the same technique employed by Burnham *et al.* (2003) motivated the choice of mail survey.

#### 7.2.1 Non-response bias

Low response rates are generally considered to create a non-response bias in surveys. In the USA literature there has been a theme of mail surveys reporting low response rates (Berry & Kanouse, 1987; Ayidiya & McClendon, 1990).

To ensure the highest possible response rates, the advice of Brennan (1992) to be persistent has been taken. Brennan recommends that one should: (i) send out at least

two reminders to non-respondents including a questionnaire with each reminder, (ii) always supply a reply paid envelope and (iii) personally addressed surveys always work better. Brennan provides evidence of consistent response rates in excess of 60 percent from surveys of the public in New Zealand in the 1980's using such techniques.

Gendall (2000) advises that a response rate of 50 percent can be acceptable, while still recommending coaxing the response rate up to 60 to 70 percent when considering the effects of non-response rates. Additionally, Armstrong and Overton (1977) suggest that non-response bias can be assessed by the comparison of the first 10 percent of and the last 10 percent of responds. However, this technique is vulnerable to understating the extent of any non-response bias when samples are small. In this study, the size of the sample was considered adequate to avoid that particular issue.

### **7.2.2 Response rate**

For the purposes of this study, and in line with convention, the term response rate applies to the ratio of 'successfully surveyed' sample units to the number of 'eligible' sample units. For more detail on survey subject eligibility criteria see the *American Association for Public Opinion Research's Standard Definitions: Final disposition of case studies and outcome rates for surveys* (2000). In this thesis:

- Successful survey sample units are individuals who have completed better than 95 percent of the questionnaire's critical questions (Q2-Q38) and returned it to the researcher.<sup>30</sup>
- Individuals who did not have a chance to complete the survey are not considered 'eligible'.<sup>31</sup>

## **7.3 Research Design**

### **7.3.1 Sample frame and sample size**

The survey for this study was undertaken via a self completion survey sent to 1500 New Zealanders between the age of 18 and 70 years selected randomly by a stratified sampling of all the General and Maori electorates on the New Zealand Electoral Roll. The Maori Roll was over-sampled by 10 percent to allow for the well-known low

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<sup>30</sup> Definitions of acceptable levels of completion do tend to vary according to the purpose of the study but questionnaires with low levels of completion or an erroneous pattern of filling out such as ticking all the first or last categories for each question do need to be accepted with care.

<sup>31</sup> Gone No Address (GNA) is the most common form of ineligible respondent, while death, being overseas, severe illness and incarceration are also considered as valid reasons for ineligibility.

response rate amongst this important ethnic minority in the New Zealand population.<sup>32</sup> Critical to the choice of sample size was the need to meet the minimum number of observations per variable to be analysed. The following description of the survey instrument indicates there are 31 variables describing consumer's attitudes to their suppliers to be analysed, three variables that describe consumer *satisfaction* and three describing *intention to stay*. As a rule, the minimum required observations per variable to be analysed is five, a more stringent rule of a ten to one ratio is advocated by Hair, Anderson, Tatham & Black (1998). The pooled data comfortably exceeded this 10:1 ratio and both banking and electricity had between eight and nine observations per variable of interest.

### 7.3.2 Survey instrument

In line with findings by Dillman (1978) and Brennan (1992) cover letters were designed to be personalised and have an altruistic appeal<sup>33</sup> (rather than an appeal for a respondent's 'opinion on an important matter'). This design is consistent with the work of Houston & Nevin (1977) and the later work of Gendall (2000).

The study's questionnaire followed the design of the Burnham *et al.* (2003) questionnaire as closely as possible given that no copy of the instrument was made available.<sup>34</sup> The questionnaire used the bank of questions in the order reported in the appendix to the Burnham, Frels & Mahajan (2003) study such that it contained scale items for *switching costs*, *satisfaction*, and *intention to stay*, but did not cover the possible antecedents of switching assessed in the Burnham *et al.* study (complexity, heterogeneity, breadth of service use).

### Likert Scale

The questionnaire mainly utilised the Likert Agreement Scale to represent the concepts of customer *switching costs*, *satisfaction*, and *intention to stay*. There are, however, potential limitations to the use of this scale as implemented by Burnham *et al.* (2003). Primarily they centre on the fact that the multivariate modelling techniques used in the Burnham *et al.* study and in this thesis are designed around the use of continuous data

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<sup>32</sup> The copy of the Electoral Roll used for sampling was four months old at the time of sampling (September 2003); however, as no newer version was available (at an acceptable cost), the GNA's reflect some of this aging in the rolls.

<sup>33</sup> Asking the respondent to help a Masters student be successful in their study.

<sup>34</sup> Thomas Burnham had been contacted in an attempt to get a copy of the instrument used in their survey but this was not forthcoming. A description of the instrument development process used by Burnham *et al.* (2003) is covered in the Burnham *et al.* section of Chapter 3

rather than the interval data provided by the Likert Scale. Despite significant theoretic controversy over the use of such interval scales in Structured Equation Modelling, its use is commonplace and this thesis is following common practice. The use of a seven-point scale or even a ten-point scale might have assisted in this area but would have meant deviating too far from the replication intent of the research. The various anchor phrases used in the questionnaire are demonstrated in the questionnaires in Appendix D.

The completed questionnaire was arranged into several sections. First, a section to screen those that should answer followed by the eliciting of the respondents' attitudes to their service provider using the exact wording provided by Burnham *et al.*'s study but modified to specify electricity supplier or bank (main financial institution) as required. All attitude scale questions were ordered under each scale item as in Burnham *et al.* (2003) rather than in random order as recommended by Ping (2004). In addition, the respondents' *intention to stay* (or switch), their experience in switching providers in this service sector and some demographic characteristics were requested from them. Respondents were assured of the confidentiality of research and that no commercial interest existed.

## **7.4 Pre-testing**

After designing the questionnaire, it was tested on five members of academic staff in the Department of Marketing at Massey University as well as on three members of the public. Feedback from this pre-testing has been incorporated into the study in two ways: If the feedback related to errors of format, readability, or fell into the demographic or conditioning sections, the advice was incorporated into the final questionnaire where possible. However, where the comments related to validity or wording of the scale items from the Burnham *et al.* (2003) study, the feedback has been used (where possible) to direct discussion in describing the results rather than in modifying the original instrument. It should be noted, in particular, that one academic skilled in survey research roundly criticised aspects of the design in a way that reflected the potential for problems with scale validity based on language usage differences between the USA and New Zealand.

## **7.5 Timetable**

The survey questionnaires were posted out on sixth of November 2003 in a clear plastic wrap in A4 format with a cover sheet printed with university crest along with the

respondent's name and postal address. The first reminder was sent to non-respondents two weeks later.<sup>35</sup> For economic reasons no replacement questionnaire or reply paid envelope was sent with the first reminder. A second reminder this time including a replacement questionnaire and a reply paid envelope was sent a further two weeks later.<sup>36</sup> Once again, this mailing was in a clear plastic wrap with an addressed cover sheet.

This survey was conducted under the rules of Massey University's Human Ethic Committee (2003) for low risk research and guidelines of the Market Research Society of New Zealand (circa 1990).

## **7.6 Response Rate and Non-response Bias**

By the time surveys were no longer accepted for coding (30<sup>th</sup> January, 2004), 679 valid responses had been received (Banking 353, and Electricity 326) of the 1,500 questionnaires mailed out. There were also 132 gone-no-address returns received (Banking 78, and Electricity 54) and 16 refusals-to-complete returns received, yielding an overall response rate across the studies of just under 52 percent (Banking 54 percent and Electricity 47 percent).

Comparing early respondents with late respondents (the first 10 percent against the last 10 percent of respondents) with a series of chi-square tests, as recommended by Armstrong and Overton (1977), no significant differences emerged across the research dimensions thus minimising any concerns about non-response error.

## **7.7 Data Treatment**

### **7.7.1 Coding**

The questionnaires were pre-coded for direct inputting into an ASCII file, which was then imported into SPSS where the data was screened and cleaned by the use of a variety of exploratory data analysis (EDA) techniques. Doubtful answers were clarified with the original questionnaires. Open-ended questions were coded and inputted and the data for respondents who had not completed better than 95 percent of critical questions was culled from the dataset. Questions that resulted in negative answers in a

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<sup>35</sup> After the removal of Gone No Address responses.

<sup>36</sup> Copies of sample survey letters, and the questionnaires are in Appendix C.

scale had their responses inverted in the database (Q9, Q13, Q15, Q18, Q 21, Q24, Q31, Q33, Q34, Q35 and Q37) before analysis. All coding was independently checked both at the beginning of research and again if any anomaly appeared in the data analysis stage.

### **7.7.2 Composite scores**

For the purpose of analysis of the second order measurement model, a composite score was computed for each of the eight instrument scales based on the items (questions) that were designed to capture each scale construct. The composite score was based on the average score across all items in the scale. A similar composite score was generated from the eight composite scores to allow testing of the three second-order constructs proposed by Burnham *et al.* (2003).

## **7.8 Data Cleaning**

The data was judiciously cleaned to ensure that there were no problems with the complex statistical methods downstream. First, all outliers were examined and corrected where possible from the original questionnaire (this affected no more than 40 questionnaires). Second, data was purged of missing data in the key questions. The criterion used was that all cases where individuals had not completed better than 95 percent of the questionnaire's critical questions (Q2-Q38) were deleted.<sup>37</sup> Interestingly, individuals were either diligent or lax in completing the questionnaires, such that there were few who had not completed the entire questionnaire after initial screening. This small number was then deleted to give zero missing values in the critical questions. The final numbers of respondents resulting from this cleaning and thus used in the modelling were banking, 288 and electricity, 262.

Within the missing data there were two patterns evident. One related to a small number of questionnaires with missing pages ( $n = 4$  questionnaires) and a second larger pattern related to questions that respondents found problematic to answer.

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<sup>37</sup> Definitions of acceptable levels of completion do tend to vary according to the purpose of the study but questionnaires with low levels of completion or an erroneous pattern of filling out such as ticking all the first or last categories for each question do need to be accepted with care.

Table 3. The most missed scale questions in the data across both industries

Question	N (valid)	Mean (score)	Std. Deviation	Missing Count	Percent Missing
Q21	619	2.56	1.13	23	3.6
Q23	633	2.55	.96	9	1.4
Q24	619	2.55	1.04	23	3.6
Q33	635	3.34	.92	7	1.1
Q34	633	3.39	.90	9	1.4

A review of a sample of the original questionnaires indicates a pattern of comments, question and exclamation marks linked to these questions with high levels of missing data. The general impression from these marks on the questionnaires is of a question that the respondents found problematic. The two most offending questions are provided below.

Q21. "How much would you lose in credits, accumulated points, services you have already paid for, and so on, if you switched to a new supplier?"

Concerning Question 21 is it evident that that to answer this question required specific rather than general knowledge of the switching process and this may have been a contributing factor to the high level of non-response to this question. However when analysing the 'loss of benefits' scale performance the Coefficient Alpha of 0.73 was reasonable and deteriorated with the removal of Question 21. The strong item-total correlation and Squared Multiple Correlation for Question 21 also supported the retention of this question.

Table 4. Performance of benefit cost scale

Question	Mean if Item Deleted	Variance if Item Deleted	Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
Q20	5.22	3.38	0.50	0.26	0.70
Q21	6.07	3.49	0.61	0.37	0.58
Q22	6.03	3.28	0.54	0.32	0.64

Question 24. "How much money would it take to pay for all of the costs associated with switching suppliers?"

This question like Question 21 above requires the respondent to have on hand some specific knowledge of the cost of switching. The reliability statistics for this question do not indicate anything definitive because this question is one of only two in the

'Monetary Loss Scale', and the minimum number of questions for an acceptable level of reliability is three in most cases (Hair *et al.*, 1998). Thus any problem with Question 24 is only likely to exacerbate this issue of scale unreliability.

Overall, it could be supposed that any question with poor response rate may have within the valid responses a component of survey design bias that would make the question less aligned with other questions contributing to the same scale even if the measures of reliability do not indicate this.

## **7.9 Procedure for Analysis**

### **7.9.1 Background to model testing**

The validity of models in Confirmatory Factor Analysis is assessed in a two-step process, which aligns with the main components in a theoretic model. The first step is the recognition of latent or endogenous variables, which are, constructs sitting at an intermediate point between data and theory. Typically, these variables are called 'constructs'. The observed variables (from the data) are often called 'indicators'. Although as they are frequently formed from the data of a survey they are just as often described as 'items'. Assessing how indicators load onto constructs gives a level of construct validation. Little cross-loading onto other constructs indicates good discriminant validity. High on-factor loadings for items in a scale indicate good convergent validity. The reliability of scales is tested in this thesis primarily by the use of Cronbach's Coefficient Alpha.

The second step in validation of models concerns the full model. The model is not just the constructs involved but also includes any direct and indirect causal relationships. In this context, the model is assessed by chi-square tests and degrees of freedom, which measures the difference between the model and a probability estimate, thus providing a test of non-significant distance between data and model. There is ongoing debate about the measures to choose for assessment of the fit of the model. Additionally, because the validity of constructs can differ with the context of a model it is recommended that the validity of constructs is tested not only in the structural model but also in a measurement model without causal relations between constructs (Anderson & Gerbing, 1988). This was done in this thesis. Central to model testing is the concept of construct validity. Typically, convergent and discriminant validity, reliability and goodness-of-fit are assessed for the measurement model with similar tests being carried out for the

structure of theoretical model. The next section provides a concept overview of these constructs.

## **7.9.2 Construct validity**

### **Convergent and discriminant validity**

Because these two concepts are 'interlocking' concepts; they are often described and assessed together. It is on that basis that they are described below:

When measures (items) of a construct (scale) should theoretically be related to each other and are in turn observed to be related to each other then those measures are considered to be convergent.

When measures of a construct that in theory should not be related to each other, are observed not to be related to each other, then they should be able to discriminate between dissimilar constructs.

### **Reliability**

One of the most commonly used tests of reliability of scales is Cronbach's Coefficient Alpha, which is used in this thesis. There are also some critical heuristics for reliability that come from the practice of Structural Equation Modelling that are important because they relate to the need to meet certain levels of reliability for models to resolve mathematically. A suitable coverage of this issue can be found in the chapter on Structural Equation Modelling in Hair *et al.* (1998). The essential message is however that scales with three or less items are likely to be unreliable in a range of setting and can often result in a model that will not resolve without the application of constraints.

### **Goodness-of-fit**

There is substantial debate over the suitability of many measures of fit in common use, most of them suffering from sensitivity to sample size. There are statistically less controversial measures than those adopted in this thesis but they are not in common usage. The one area on which there is common agreement is that model fit is best assessed with a test bank of measures rather than as a single measure.

It is important to note that the chi-square likelihood ratio test ( $\chi^2$ ) is interpreted slightly differently in model fit scenarios. Because Structural Equation Modelling operates on a

comparison of the variance/covariance matrices for the dataset and the hypothetical model under test, the measures of interest in terms of fit are the residuals of model to data comparisons. Because of this, the null hypothesis ( $H_0$ ) proposes that all the model loadings, factor variances/co-variances and error components for the model are valid. The chi-square test examines the extent to which this is true. The probability value associated with  $\chi^2$  represents the likelihood of obtaining a value for  $\chi^2$  exceeding the value for  $\chi^2$  when  $H_0$  is true. Thus, the higher the probability of reaching a chi-square value, the better the fit. This is quite the reverse from conventional hypothesis testing. Generally, chi-square testing is not a good measure of fit in Structural Equation Modelling because as the sample size is increased the sensitivity of the chi-square test grows at a faster rate than theory indicates improved fit will grow. Thus in large samples good fitting models are often rejected by the chi-square test.

In response to the problems with chi-square testing in Structural Equation Modelling a range of indices have developed, many only five to ten years old at this date. Each goodness-of-fit index has its own characteristics. Below is a short synopsis of the relevant indices used in this thesis.

The Normed Fit Index (NFI) was one of the first indices developed and has been the classic measure in most literature since its inception, however it does tend to underestimate fit on small samples. Recently the cut-off tolerance on this test has been upgraded to 0.95 from the 0.90 level often used in the past (Hu & Bentler, 1999).

A development from the NFI is the Comparative Fit Index (CFI) by Bentler (1980), which takes into account sample size in its assessment of fit and perhaps should be used instead of NFI in all cases. NFI is reported here because it was used by Burnham *et al.*

The Incremental Fit Index (IFI) was developed by Bollen (1989) and deals with issues of sample size and model parsimony. An IFI level of better than 0.90 indicates a model of good fit.

The Tucker Lewis Index (TLI) also is an advance on the NFI, needing a value of 0.95 or greater for a good fit.

The final index reported in this thesis is the Root Mean Square Error of Approximation (RMSEA). This index looks at the degrees of freedom and the number of estimated

parameters in a model and is one of the most sensitive of measures. For this index a good fit is represented by a measure lower than 0.05, a reasonable fit by a measure lower than 0.06 and a mediocre fit by figure between 0.08 and 0.10. Fits above 0.10 are considered poor.

### **7.9.3 The process used**

After assessing for non-response bias and cleaning the data, descriptive statistics of the research variables were assessed to identify the distribution patterns of the responses. Next, a one-way analysis of variance was required for each research variable set against key demographic variables to identify if there was any significant difference in perception across the sample(s). The third step involved a correlation analysis to explore static relationships amongst variables. At that point scale validity was assessed and the measurement model tested for fit as a first order eight-factor measurement model and as a second order three-factor model. Structural models were then tested for fit. The dynamic impact of the switching cost factors on the constructs in Burnham *et al's*. models were examined, to look for any interaction between *switching costs* and a *satisfaction – intention to stay* construct.

## **7.10 Exploratory Data Analysis**

Sample demographics were assessed for similarity across the two samples. Some box plots of key sample and survey characteristic are displayed in figures 1 to 3 shown in Appendix B.

The income levels between the two samples were substantially different. The reason for this noticeable difference is not clear as all questions were identical across the industries.

As expected given intuitive knowledge of the two industries, the responses to the satisfaction and cost of switching questions varied substantially across industries.

The most important observation was that the data derived from some of the questions was extremely skewed while other questions on the same scale were near normal in distribution.

The overall requirements of Structural Equation Modelling for Multivariate Normality were clearly violated with the data from the survey. Given the identical nature of the New Zealand questionnaire to the USA instrument and the fact that the Burnham *et al.* study did not discuss Multivariate Normality directly the assumption must be that Burnham *et al.* had the same problem but did not report giving any attention to the problem. This situation is typical of Structural Equation Modelling studies with Breckler (1990) reporting that only about 19 percent of such studies acknowledge the normal theory assumptions and only about 10 percent explicitly tested for their possible violation. It might be reasonable to assume from these figures that an even smaller number attempt to mitigate the problem with the use of bootstrapping or other techniques (Byrne, 2001).

## 7.11 Methodological Issues

The deliberate inclusion of Burnham *et al.*'s. (2003) scale items without modification is an obvious issue given the English language common usage differences between the USA and New Zealand. The literature on cross-national research indicates that survey instruments adapted for each nation offers reliability and provide data with greater internal validity than tests applicable to several nations. Such adaptation is at the expense of cross-national comparability and external validity, that is, results are not as readily transferable from nation to nation. As a result the approach in this study was to focus on cross-national comparability (Berry, 1980).

Despite recommendations from Brennan (1992), this survey did not include a questionnaire with each reminder (only with the last); it is possible but not likely that this contributed to a slightly lower response rate than is typical of such studies in New Zealand (53% versus about 60%).

There was potential for non-response bias but unfortunately little is known about the characteristics of non-respondents thus if there are many non-respondents then non-response error could be substantial but cannot be easily predicted. So other than the Armstrong & Overton (1977) test for bias no other assessment was made.

All attitude scale questions were ordered under each scale item as in Burnham *et al.* (2003) rather than in random order as recommended by Ping (2004). Thus it is possible

that the systematic order effect or the cluster answering effect exist in the responses to these questions Ping (2004).

Negatively-worded items have caused measurement difficulties in other scales. For example, the inclusion of negatively-worded items in Hackman & Oldham's (1975) *Job Diagnostic Survey* seems to have caused inconsistencies in evaluating its factor structure in subsequent research efforts. Examples of such difficulties with negatively-worded questions as noted by Gremler (1995) were Harvey, Billings & Nilan (1985); Idaszak & Drasgow, (1987) and Kulik Oldham & Langner (1988). Despite the above limitation it was felt that the problems were commonplace and well reported which would allow the research to be undertaken.

When using Structural Equation Modelling to test the validity of the Burnham *et al.* model there are a number of substantive decisions on setting model parameters that need to be made during the modelling process that can effect the outcome of tests. Some of these were made by Burnham *et al.* and are included in the replication research. Others are known to be good practice in the literature and have been included if their application seemed not just reasonable but compelling. Others that are well known and seemed reasonable but looked to deviate from the theme of Burnham *et al.*'s work have been avoided to aid comparison with the Burnham *et al.* study. These restriction may have limited the usefulness of the results beyond the aim of replicating Burnham *et al.* and it is also possible that the insightfulness of the replication would have been enhanced if such additional effort was undertaken particularly in fitting parameter loading, correlations and error terms to known and reasonable values. The risk with this is that the research would have become a critical review of Burnham *et al.* rather than an attempt to replicate and as such would lose some impartiality. The ability to do this work after this thesis is there and relatively straightforward.

## 8. VALIDATING THE BURNHAM *ET AL.* (2003) MEASUREMENT SCALES

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### 8.1 Introduction

This chapter describes the validation of Burnham, Frels & Mahajan's (2003) measurement instrument on New Zealand datasets for consumer banking and residential electricity supply. In addition, potential alternative measurement models are considered. Normally in Structural Equation Modelling validation of scale items and the full first order measurement are taken together for they are essentially the one construct; the first order measurement model. In this thesis, the two items have been separated to allow a fully discussion on scale performance before the concept of the measurement model is introduced. The analysis has followed conventional processes for developing confidence in the validity of the model and the methods employed by Burnham *et al.* (2003). The basis for this portion of the replication was a model based on Burnham *et al.*'s scales (constructs from their model) and their scale items (questions from their survey).

Model validation was carried out in two phases. First, the individual scale items were assessed using Exploratory Factor Analysis and Cronbach's Coefficient Alpha. Confirmatory Factor Analysis was then used to determine the overall validity and reliability of the scales. This was based on a comparison of the goodness-of-fit of the Burnham *et al.* model to the USA data as reported in Burnham *et al.*, and the goodness-of-fit of this same model to the New Zealand data.

The fit of the measurement model to the New Zealand pooled dataset and to the two industry datasets was assessed, in an attempt to confirm equivalence of fit and therefore the potential general applicability of the Burnham *et al.* measurement instrument.

Because Burnham *et al.* had previously refined their measurement instrument using Exploratory Factor Analysis, Cronbach's Coefficient Alpha and Confirmatory Factor Analysis these multi-item scales could already be considered as conceptually equivalent

to the switching constructs included in the 'structural model'. In the initial stages of assessment the Burnham *et al.* scales were tested unmodified.

## 8.2 Switching Cost Scale Validity

The objective of this section is to demonstrate that the Burnham *et al.* (2003) measurement model scales had reliability, uni-dimensionality, convergent validity and discriminant validity. Scale validity appears, from a search of the literature, to be an area that is often poorly presented by researchers in their papers. To ensure clarity, as each test of validity is considered the concepts around the relevant test are described

### 8.2.1 Convergent validity

Convergent validity assesses a construct's consistency across multiple indicators (scale items). The objective is to see individual scale items all converge on their respective scales. One of the best ways to understand convergent validity is to pose the question; should the indicators in this construct be related to each other? That is: Can we see these items converging on the intended construct?

From a practical standpoint, the method suggested by Anderson & Gerbing (1988), for identifying convergent validity of the scales was utilised. When assessing for convergent validity, each of the scales making the measurement instrument are all usually assessed separately. In this thesis, the commonly used requirement that factor loadings exceed 0.55 has been applied<sup>38</sup>. Exploratory Factor Analysis with principal components, restricting the model to eight factors and rotating by Varimax was used to simulate the Burnham *et al.* assessment process. First, the variance extracted by the measurement model was considered. In the banking dataset, the first eight factors from the Exploratory Factor Analysis accounted for 63.5% of the variance in the data and the solution included all factors with eigenvalues one and larger. In the electricity sample the first eight factors accounted for a little over 68% of variance and included six factors with eigenvalues of one or larger and also two factors with eigenvalues lower than one (the lowest was 0.91). These levels of 'variance explained' indicate that the Burnham *et al.* model makes a reasonable job of explaining the variance provided by the constructs under study.

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<sup>38</sup> It is general practice to set the threshold for a 'high loading' at 0.60 ordinal data such as Likert scales.

Some items loaded well onto their intended scales while others did not, indicating problematic convergent validity for some scales. Because Burnham *et al.* had not reported cross-loadings in their scale validity process an assessment without consideration of cross-loadings was made. If cross-loadings were ignored, the factors loaded in accordance with the model as proposed by Burnham *et al.* (See Figure 2 on page 82 for the measurement model tested) and for factor loading comparisons with Burnham *et al.* (see Table 5. on pg 76). However, after applying the conventional rules of removing items that loaded with less than 0.55 on any one factor, and discarding those items with cross-loadings of greater than 0.35 the pattern of loading of the Burnham *et al.* model on the New Zealand data was the same as found in Burnham *et al.*<sup>39</sup> The poor factor loading and high cross-loading of questions 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 22, 29, 30 and 31 can be clearly seen in Table 5. on page 76 and would be expected to downgrade the fit of the model to this data.

It is possible that Burnham *et al.* made an error at this point in their reporting of the loadings of the scale items as their table A1 (Burnham *et al.*, 2003 page. 112) reports Standardised Item loadings which is a typical AMOS (Confirmatory Factor Analysis) output and not one available in SPSS which would have been the natural choice for Exploratory Factor Analysis. This would have meant that they had no access to cross-loading data for the factors and would not have recognised the cross-loading pattern. In order to be consistent with Burnham *et al.* loadings in their Table A1., the reported loading from this study were obtained from AMOS with Confirmatory Factor Analysis and reported this thesis's Table 5. on page 76 but the reported cross-loadings are from a separate Exploratory Factor Analysis reported in Appendix A. Tables 2 and 3.

The Exploratory Factor Analysis confirmed that, in principle the Burnham *et al.* model should fit the New Zealand data reasonably well. The loadings did indicate that not all factors were uni-dimensional, as some clearly represented more than one construct.

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<sup>39</sup> The rule of thumb to define if a factor loading of the measurement scale is significant is: All t values are larger than 0.6 and if all loadings exceed the 0.4 level then that scale can be considered valid in a convergent sense (Ford, MacCallum, & Tait, 1986).

Table 5. Switching cost scale items loadings

Q No.	Scale	US		New Zealand			
		Long Distance	Credit Card	Electricity		Bank	
				Note 1	Note 2	Note 1	Note 2
<b>Economic Risk Factors</b>							
2	I worry that service offered by others won't work as well...	0.72	0.69	0.65		0.53	
3	If I switch supplier, I might end up with bad service for a while...	0.60	0.72	0.68		0.62	
4	Switching to a new supplier will probably involve hidden costs...	0.75	0.73	0.65		0.71	
5	I am likely to end up with a bad deal financially if I switch...	0.74	0.72	0.73		0.65	
6	Switching will probably result in some unexpected hassle...	0.74	0.78	0.73		0.74	
7	I don't know what I'll end up having to deal if I switch...	0.70	0.80	0.72		0.74	
<b>Evaluation Costs</b>							
8	I can't afford the time to get the information for evaluation...	0.68	0.79	0.49	+	0.63	+
9	How much time/effort does it take to get the information... (r)	0.65	0.72	0.38	#	0.46	##
10	Comparing benefits of my supplier to others is too much effort...	0.66	0.69	0.81		0.66	##
11	It is tough to compare the other suppliers...	0.87	0.78	0.74		0.61	#
<b>Learning Costs</b>							
12	Learning to use the new supplier's features will take time...	0.68	0.78	0.64	+	0.59	
13	There is not much to understanding a new supplier well... (r)	0.77	0.69	0.57		0.54	#
14	Even after switching, it would take effort to 'get up to speed'...	0.79	0.81	0.74		0.69	
15	Getting used to how a new supplier works would be easy... (r)	0.84	0.79	0.69		0.81	+
<b>Set-up Costs</b>							
16	It takes time to switch to a new supplier...	0.64	0.67	0.64	+	0.43	##
17	Switching involves an unpleasant sales process...	0.61	0.80	0.74		0.55	
18	Starting up with a new supplier is quick/easy...(r)	0.70	0.77	0.69		0.62	*+
19	There are a lot of formalities involved in switching...	0.68	0.79	0.72		0.65	
<b>Benefit Costs</b>							
20	Switching would mean losing, credits, services and so on...	0.74	0.71	0.84		0.75	
21	How much would you lose in credits, accumulated points...(r)	0.89	0.90	0.67		0.52	
22	I will lose benefits of being a long term customer if I switch...	0.70	0.58	0.79	+	0.56	+
<b>Monetary Loss Costs</b>							
23	Switching would involve some upfront costs...	0.68	0.67	0.61		0.64	
24	How much would it cost to switch switching...(r)	0.82	0.83	0.60		0.54	
<b>Personal Relationship Loss Costs</b>							
25	I would miss working with the people at my current supplier...	0.79	0.73	0.87		0.94	
26	I am more comfortable with the people from my supplier...	0.86	0.86	0.85		0.91	
27	The people where I currently get my service matter to me...	0.81	0.86	0.90		0.82	
28	I like talking to the people from my supplier...	0.70	0.61	0.83		0.71	
<b>Brand Relationship Loss Costs</b>							
29	I like the public image my supplier has...	0.84	0.81	0.85	#	0.95	#
30	I support my supplier as a firm...	0.95	0.86	0.96	#	0.80	##
31	I don't care about the brand name of the supplier I use...(r)	0.50	0.37	0.26	*+	0.33	#

Note:

1. Standardised Item loadings from CFA
2. Based on observations of the EFA loadings
3. (r) Item with reverse meaning in the survey<sup>40</sup>
4. n Long distance = 144, Credit cards = 158, Electricity = 262, Banking = 288
5. + Had cross-loading greater than 0.35
- \* Did not load onto any factor at 0.55 or better
- # Loaded onto a factor other than predicted

<sup>40</sup> One artefact of questionnaire design found by Heather, Booth & Luce (1998) is the tendency for positively-worded and negatively-worded questions to load onto different factors.

## 8.2.2 Discriminant validity

Scale correlations were taken to study the potential for multi-collinearity problems. As can be seen in Table 6. below, the inter-scale correlations are low and without exception lower than the highest correlations found by Burnham *et al.* (2003). Burnham *et al.* had found that even their highest correlated scales of 0.60 to 0.65 still provided sufficient discriminative power. On that basis, all scales were accepted as being discriminant in this study.<sup>41</sup>

Table 6. Scale correlations

	Economic	Evaluation	Learning	Set Up	Benefit	Monetary	Personal Rel'ships
Economic Risk	1.00						
Evaluation	0.26 **	1.00					
Learning	0.15 *	0.25 **	1.00				
Set-Up	0.48 **	0.26 **	0.30 **	1.00			
Benefit	0.31 **	0.20 **	0.21 **	0.36 **	1.00		
Monetary	-0.01	0.02	0.15 **	0.19 **	0.22 **	1.00	
Personal Relationships	0.47 **	0.11	0.29 **	0.40 **	0.35 **	0.08	1.00
Brand Relationships	0.25 **	0.16 *	0.21 **	0.24 **	0.26 **	0.10	0.57 **

Note:

1. \*\* Correlation is significant at the 0.01 level (2-tailed).  
\* Correlation is significant at the 0.05 level (2-tailed).

## 8.2.3 Scale reliability

Reliability is the measure of the degree to which indicators (scale items in the case of our first order measurement model) are free from random error and therefore yield consistent results. The reliability performance (internal consistency) of the scale items was examined both at an industry level and at a pooled data level using Cronbach's Coefficient Alpha as the reliability test.

The switching cost scale items exhibited Coefficient Alphas<sup>42</sup> ranging from poor (0.51) to good (0.92).<sup>43</sup> While it was clear that some scales had performed as well as they had

<sup>41</sup> The AMOS test for discriminant validity compares an unconstrained model in which the correlations for the relevant constructs are constrained to one. A significant improvement in model fit would indicate discriminant validity. Logically, any pair of constructs with correlations of 0.5 or less must be discriminating as a constraint of zero will fit as well or better than a constraint of one.

<sup>42</sup> Also known as Cronbach's Alpha

<sup>43</sup> Using the 0.80 acceptance level as recommended by Peterson (1994), although Straub (1989) had recommended a lower cut off of 0.70. Also see Nunnally (1978) for a discussion of cut-off levels.

in the Burnham *et al.* study, others had not performed well at all as shown in Table 7. below. The poor performance of the monetary loss scale could be attributed to the well-reported problems with two-item scales mentioned in Hair *et al.* (1998). For means and standard deviation of the scales see Appendix A. Table 4.

Table 7. Switching cost scale reliabilities: Cronbach's Coefficient Alpha

Switching Cost	US		New Zealand	
	Long Distance	Credit Card	Electricity	Banking
Economic Risk	0.85	0.87	0.85	0.83
Evaluation	0.80	0.83	0.70	0.68
Learning	0.85	0.85	0.75	0.75
Set-up	0.74	0.80	0.79	0.65
Benefit	0.81	0.76	0.80	0.63
Monetary Loss	0.72	0.71	0.53	0.51
Personal Relationship Loss	0.87	0.85	0.92	0.91
Brand Relationship Loss	0.77	0.68	0.67	0.71

Note:

- n: Long distance =144, Credit cards = 158, Electricity = 262, Banking = 288

## 8.3 Consequences Scale Validity

As with the switching cost scale validity tests, the convergent and discriminant validity of the 'consequences scales' were tested using the methods proposed by Anderson & Gerbing (1988). At this point it worth noting that an additional indicator of likelihood of staying or switching was included in the survey because of concerns about the reliability of the Burnham *et al.* *intention to stay* scale.

### 8.3.1 Convergent and discriminant validity

The loadings of the *satisfaction* and *intention to stay* scale items onto their scale constructs were all comfortably above the 0.55 loading threshold with no cross-loading above 0.35 in the electricity data indicating an excellent level of convergent and discriminant validity. In the case of the banking data, however, the two sets of scale items loaded onto only one factor with moderate negative loadings for *intention to stay* onto a second factor only when the model was forced to extract two factors. Those loading are laid out in Table 8. on page 37. The correlations for assessment of discriminant validity are laid out in Table 9. on page 79 and indicate acceptable discrimination. When we revisit the loading of the banking dataset to only one factor for these scale items, it is possible that since both industries in Burnham *et al.* (2003)

and one of the industries in this study (electricity) have demonstrated both the convergent and discriminant validity of these two scales, an industry specific ‘Construct Interaction’ might be causing this failure of the two scales to converge on their constructs.

Table 8. Consequences scale items loadings

Q No.	Scale	US		New Zealand	
		Long Distance	Credit Card	Electricity	Bank
Satisfaction					
32	I am satisfied with my supplier...	0.65	0.69	0.79	0.85#
33	What I get from my supplier falls short...	0.79	0.65	0.79	0.73#
34	How does your supplier compare with the ideal...?	0.78	0.78	0.81	0.79#
35	How well does your supplier meet your needs...?	0.88	0.9	0.85	0.85#
Intention to stay					
37	How likely are you to switch during the next year...?	NA	NA	0.80	0.80#
38	Chances of staying with your supplier for next year.?	NA	NA	0.75	0.82#
39	Chances of switching suppliers in the next year...?	New	New	0.80	0.84#

Note:

1. n: Long distance =144, Credit cards = 158, Electricity = 262, Banking = 288
2. # All of these loaded onto just one factor.
3. New = Not included in Burnham *et al.* study
4. NA not assessed by Burnham *et al.*

Table 9. Consequences scale items correlations

	Satisfied	falls short	ideal supplier	meets your needs	likely to switch?	chances of staying
I am satisfied with my supplier...	1.00					
What I get from my supplier falls short..	0.59**	1.00				
How does your supplier compare with the ideal..?	0.64**	0.55**	1.00			
How well does your supplier meet your needs..?	0.72**	0.60**	0.74**	1.00		
How likely are you to switch during the next year.?	0.54**	0.44**	0.43**	0.51**	1.00**	
Chances of staying with supplier for next year...?	0.49**	0.40**	0.44**	0.52**	0.64**	1.00
Chances of switching suppliers in the next year..?	0.48**	0.39**	0.45**	0.51**	0.66**	0.60**

Note:

1. n: Long distance =144, Credit cards = 158, Electricity = 262, Banking = 288
2. \*\* Correlation is significant at the 0.01 level (2-tailed).
- \* Correlation is significant at the 0.05 level (2-tailed).

### 8.3.2 Scale reliability

The reliability performance (internal consistency) of the scale items was examined both at an industry level and at a pooled data level. The consequences scale items exhibited

Coefficient Alphas ranging from acceptable (0.70) to good (0.83) as shown in Table 10. below.<sup>44</sup>

Table 10. Consequences scale reliabilities: Cronbach's Coefficient Alpha

Scale	US		New Zealand	
	Long Distance	Credit Card	Electricity	Banking
Satisfaction	0.85	0.84	0.83	0.83
Predictions of Switching	0.87	0.84	0.70	0.83

Note:

1. n: Long distance =144, Credit cards = 158, Electricity = 262, Banking = 288
2. Does not include the Juster Scale item

<sup>44</sup> Using the 0.70 acceptance level as recommended by Straub (1989) although Peterson (1994) had recommended a lower cut off of 0.80

# 9. VALIDATING BURNHAM *ET AL'S* (2003) FIRST ORDER MEASUREMENT MODEL

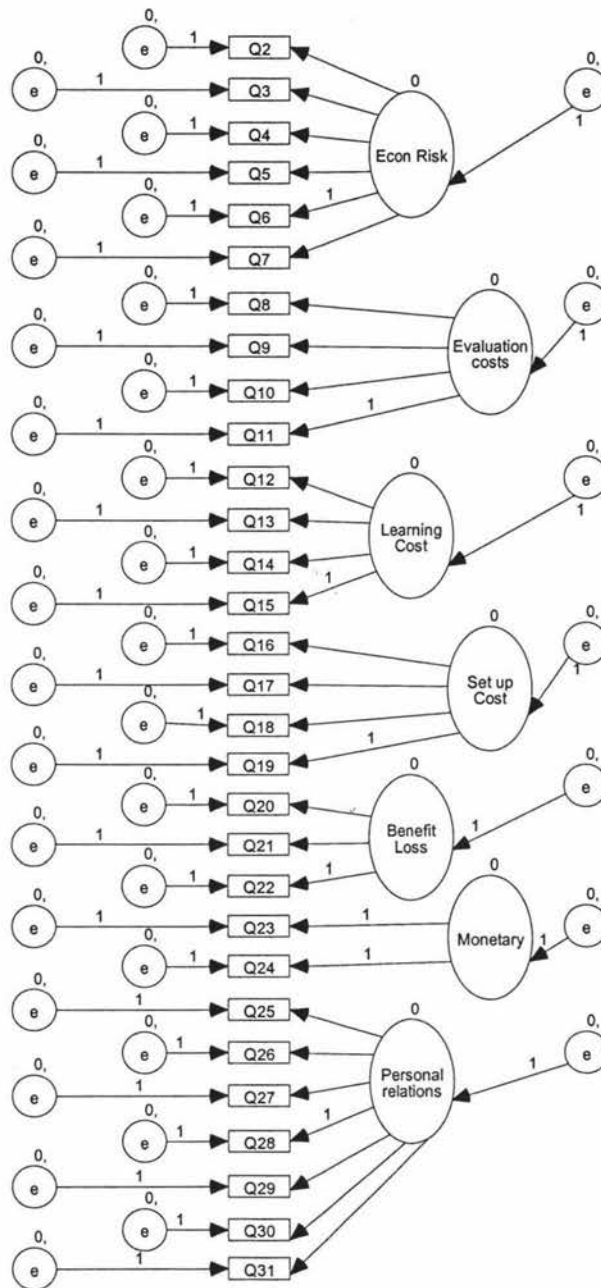
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## 9.1 Introduction

The objective of this thesis is to confirm if the measurement model proposed by Burnham *et al.* (2003) fits the observed responses in the banking and electricity markets in New Zealand. By subjecting, the Burnham *et al.* model to Confirmatory Factor Analysis using Amos 4.01, the intention was to see whether their model could be accepted unmodified.

The structure of this *a priori* designated measurement model can be seen in Figure 2. on page 82. In defining this model, it was necessary to set, for each factor, a single item loading to one so as to create an indicator item and thus scale the associated latent variable (Bollen, 1989). Initially the model did not fit because one item, Question 23 was not identified by the model and thus the modelling software failed to resolve a fit. To achieve a fit, the path from 'monetary cost' to Question 23 was constrained by giving it a loading of 1.0, thus giving both Questions 23 and 24 equal loadings onto the scale item 'monetary cost'. This can clearly be seen in Figure 2 over the page. To have to constrain the loadings in a two-item scale to achieve a resolved model was to be expected given that two-item scales are not reliable and often cause such problems (Hair *et al.*, 1998). A possible contributing factor to the poor reliability estimates for this scale would be the high numbers of missing value in the un-cleaned dataset as demonstrated in Table 3 on page 66. Certainly there is an argument for a modification to the Burnham *et al.* scales for 'Monetary costs'.


Figure 2. Burnham *et al*'s. first order switching cost measurement model.




Key:

$e(n)$  is an error term

$Q(n)$  is the scale item (question)

Constructs are represented by 

Relationships modelled are represented by 

## 9.2 Model Fit

A model's overall fit to a validation sample is statistically assessable by the chi-square test and heuristically by a number of goodness-of-fit measures. However, the chi-square measure tends not to be a good measure in this sort of work because of its sensitivity to sample size (Hair *et al.*, 1998). In large samples, even small differences in the sample co-variance matrix are statistically significant, although the differences may be practically unimportant.

The individual industry samples and the pooled two-industry sample of five hundred and fifty responses in particular are probably large enough to make the chi-square statistic significant even if extremely small relationships are present. It is deemed an unacceptable test of model fit, however it is reported here as the measure is widely used in other fields and serves as a comparison for those less aware of the specialised measures of fit used in this analysis. Marsh, Balla, & McDonald's (1988), recommendation that an assessment of the adequacy of a model's fit be undertaken using several is adopted here. It is important to note that many of the indices of goodness-of-fit also suffer from sensitivity to sample size but to a much lesser extent than in the chi-square test.

### 9.2.1 Fit to the electricity industry dataset

The electricity industry dataset was the first to be fitted to the Burnham *et al.* (2003) measurement model. The chi-square value for the model fit to that dataset was 1597.224 with 406 degrees of freedom and  $p < 0.000$ . The Comparative Fit Index (CFI) was 0.945, the Normed Fit Index<sup>45</sup> (NFI) was 0.928, the Incremental Fit Index<sup>46</sup> (IFI) was 0.946, and the Tucker Lewis Index<sup>47</sup> (TLI) was 0.937. For all of the preceding measures, an adequate goodness-of-fit is indicated if values greater than 0.90 are present. The Root Mean Square Error of Approximation (RMSEA) value of 0.106 was not acceptable given the minimum acceptable level is less than 0.080 and the desirable level is less than 0.060. The overall result is that these indices indicate an acceptable goodness-of-fit for the Burnham *et al.* model when fitted onto the electricity data.

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<sup>45</sup> (Bentler & Bonnett, 1980)

<sup>46</sup> (Bollen, 1989)

<sup>47</sup> (Carmines & McIver, 1981)

Because Burnham *et al.*'s (2003) measurement model provided a reasonable fit to the New Zealand data, that model was then tested for fit against a series of random samples of 100 responses to see if the model would replicate the level of fitness. Whilst there was a clear reduction in goodness-of-fit, most likely the result of fitting to a smaller sample, the fit remained consistently above acceptance levels across all samples, on all the key indices with the exception of RMSEA where the model generally performed poorly.

### **9.2.2 Fit to the banking industry dataset**

After the confirmation of Burnham *et al.*'s model fit to the electricity group data, the model was introduced to the banking data. This time, the chi-squared value for the model was 1393 with 406 degrees of freedom. The CFI was 0.956, the NFI was 0.939, the IFI was 0.956 and the TLI was 0.949, all indicating acceptable goodness-of-fit, except for the NFI which should be rejected in small samples in favour of the CFI. The RMSEA was outside acceptable levels at 0.092, indicating a mediocre fit.

Because there was a reasonable goodness-of-fit to the New Zealand datasets by the Burnham *et al.* measurement model, that model was then tested for fit against a series of random samples of 100 responses to see if the model would replicate the level of fitness. There was again a clear reduction in the goodness-of-fit though the key indices of model fitness remained consistently above acceptance levels across all samples, with the exception of RMSEA, on which the model performed poorly. Consequently, it was confirmed that both the banking and electricity datasets provided an acceptable fit to Burnham *et al.*'s measurement model.

### **9.2.3 Overall fit**

At this point, the suitability of pooling the data from the two industries was considered. As in the Burnham *et al.* (2003) study, the measurement model was subjected to a multi-group test constraining all loadings to be equal across the two industries' datasets. The chi-square value for the default (unconstrained) model was 2990 with 812 degrees of freedom. The CFI was 0.951, the NFI was 0.934, the IFI was 0.951 and the TLI was 0.943, all acceptable levels except for the NFI which should always be rejected in favour of CFI. The RMSEA was within acceptable levels at 0.070 indicating slightly better than mediocre fit (but not a good fit). For the constrained (equal loadings) model, the chi-square value was 3058 with 833 degrees of freedom. The CFI was 0.950, the NFI was 0.932, the IFI was 0.950 and the TLI was 0.944, all acceptable levels with the

exception of NFI which failed to meet the 0.95 threshold. The RMSEA was also within acceptable levels at 0.070. All these measures for the constrained model were similar to the unconstrained model on the same data, thus indicating degradation in fit is not substantial. The model comparison statistics for the constrained and unconstrained models were significant, however, indicating that there was a significant statistical difference in model fit (chi-square = 68.08 with DF=21 p= <0.000). The results of the goodness-of-fit tests are tabulated in Table 11 below.

Table 11. First order measurement model fit

Fit Statistic	Pooled data		By industry	
	Equal Loadings	Unconstrained Loadings	Banking	Electricity
CFI	0.950	0.951	0.956	0.945
NFI	0.932	0.934	0.939	0.928
IFI	0.950	0.951	0.956	0.946
TLI	0.944	0.943	0.949	0.937
RMSEA	0.070	0.070	0.092	0.106

The rule of thumb for models with good fit to data is that CFI, NFI, IFI, and TLI should be at least 0.90 and preferably better than 0.95. All those indices show acceptable or close to acceptable values indicating a barely acceptable fit. In various ways the above indices use the residuals of the variances and/or co-variances of the data so these tests are sensitive to sample size (Sharma, 1996). To compensate for this sample size sensitivity the RMSEA was used as a standardised summary measure of the residuals. The rule of thumb for a minimum acceptable level of RMSEA is that it be less than 0.06 with less than 0.05 indicating a good fit. The fit of Burnham *et al.*'s model to the separate electricity and banking datasets is not acceptable, but pooling the data gives an acceptable (but not good) level of fit. The decision was made to pool the data allowing for the assessment of the second order model.

# 10. VALIDATING BURNHAM *ET AL.*'S (2003) SECOND ORDER MEASUREMENT MODEL

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Burnham, Frels and Mahajan (2003) had hypothesised that a more parsimonious structure than their baseline first order model was possible and went on to submit composite measures for the eight constructs to Varimax-rotated Exploratory Factor Analysis. They observed that results suggested three higher-order switching cost types. This was not obvious in the New Zealand data. To continue the Burnham *et al.* replication, their three higher order constructs were assumed to be a suitable reduction from the eight-factor model. From that assumption, a higher order measurement model was constructed incorporating both the eight constructs from the first model as scale indicators (items) and the three factor constructs (*Procedural, Financial, Relational*).

## 10.1 Switching Cost Second Order Scale Validity

### 10.1.1 Convergent validity

The composite scales for the eight switching cost constructs from Burnham *et al.*'s second order measuring model were tested for convergent validity by assessing their loadings onto the Burnham *et al.* switching cost constructs. Additionally, each construct's reliability and the variance extracted were examined.

An attempt was made to identify the three dimensions proposed by Burnham *et al.* utilising Exploratory Factor Analysis with principal components, restricting the model to three factors and rotating by Varimax. In the pooled dataset, the first three factors accounted for 57.6% of the variance in the data and the solution included all factors with eigenvalues of one or larger. If cross-loadings were ignored the factors loaded exactly in accordance with the model as proposed by Burnham *et al.* as shown in Figure 3. on page 90 for the measurement model and in Table 12. on page 87 for factor loading comparisons with Burnham *et al.*

Table 12. Loadings for second order measurement model

	Composite Scale	US	New Zealand
Procedural			Note
	Economic Risk Factors	0.85	0.45 #
	Evaluation Costs	0.65	0.83
	Learning Costs	0.75	0.83
	Set-up Costs	0.76	0.63 +
Financial			
	Benefit Costs	0.51	0.62 +
	Monetary Loss Costs	0.88	0.88
Relational			
	Personal Relationship Loss Costs	0.89	0.86
	Brand Relationship Loss Costs	0.87	0.89

Note:

1. + Had cross-loading greater than .35
2. # Loaded on another factor at .55 or better

After applying the conventional rules of removing items loading less than 0.55 on any one factor and discarding those items cross-loading at greater than 0.35, the pattern of loading was found to be much less aligned with the Burnham *et al.* model. The poor loading and high cross-loading of economic risk, set-up costs and benefit costs can be clearly seen and would be expected to downgrade the fit of the second order measurement model to this data. For detailed loadings see Appendix A. Table 3. While the Exploratory Factor Analysis confirmed that in principle the Burnham *et al.* model should fit the data reasonably well, the loading did not indicate that all factors were uni-dimensional.

### 10.1.2 Discriminant validity

Construct correlations were taken to study the potential for multi-collinearity problems. As can be seen in Table 13. on page 88, the inter-scale correlations are low and without exception lower than the highest correlations found by Burnham *et al.* They found that even their highest correlated scales still provided sufficient discriminative power. On that basis all scales were accepted as being discriminant in this study.<sup>48</sup>

<sup>48</sup> A reminder: The AMOS test for discriminant validity compares an unconstrained model in which the correlations for the relevant constructs are constrained to one. A significant improvement in model fit would indicate discriminant validity. Logically any pair of constructs with correlations of 0.5 or less must be discriminating, as a constraint of zero will fit as well or better as a constraint of one.

Table 13. Construct correlations

	Procedural	Financial	Relational
Procedural	1		
Financial	** 0.54	1	
Relational	**0.29	**0.43	1

Note:

1. \*\* Correlation is significant at the 0.001 level (2-tailed).

### 10.1.3 Scale reliability

The reliability performance (internal consistency) of the composite scale items was examined on the pooled data. Switching cost scale items exhibited Coefficient Alphas ranging from poor (0.55) to acceptable (0.78). While it was clear that *procedural* and *relational* had performed well as in the Burnham *et al.* study, *financial* had not performed well at all which can be seen in Table 14. below.

Table 14. Composite scale reliability: Cronbach's Coefficient Alpha

Higher Order Switching Cost	Electricity	Banking	Pooled
Procedural	0.78	0.77	0.77
Financial	0.62	0.55	0.60
Relational	0.78	0.73	0.77

## 10.2 Model Fit

The chi-squared value for the unconstrained model was 1273 with 487 degrees of freedom. The Comparative Fit Index (CFI) was 0.975, the Normed Fit Index<sup>49</sup> (NFI) was 0.958, the Incremental Fit Index<sup>50</sup> (IFI) was 0.975 and the Tucker Lewis Index<sup>51</sup> (TLI) was 0.971. All of the preceding measures indicate an adequate goodness-of-fit when values greater than 0.90 (and preferably greater than 0.95) are present. The Root Mean Square Error of Approximation (RMSEA) was inside acceptable levels at 0.050 where the minimum acceptable level is lower than 0.060 and the desirable level is less than 0.050. The overall result is that these indices indicate an acceptable goodness-of-fit for the model when fitted to the pooled data. See Table 15. on page 89.

<sup>49</sup> (Bentler & Bonnett, 1980)

<sup>50</sup> (Bollen, 1989)

<sup>51</sup> (Carmines & McIver, 1981)

Table 15. Second order measurement model fit

Fit Statistic	Pooled data	
	Equal Loadings	Unconstrained Loadings
CFI	0.971	0.975
NFI	0.953	0.958
IFI	0.971	0.975
TLI	0.967	0.971
RMSEA	0.053	0.050

### 10.2.1 Confirming the model of best fit

A CFA of this second order model was evaluated in comparison with other second order models with dimensions above and below those specified by Burnham *et al.* The result of this chi-square comparison outlined in Table 16. confirmed that the three-factor second order model fit the data significantly better than the two or four-factor models.

Table 16. Test of alternative second order models.

	Model Chi-Square	Abs Diff	DF	P	Sig.
Two Factor	454.967	46.826	2	6.7899E-11	**
Three Factor	<b>408.141</b>				
Four Factor	795.234	387.093	2	8.78664E-85	**

Note:

1. \*\* Significant at the 0.001 level
2. ABS Diff Absolute difference in models

To assess the validity of pooling the datasets at this higher level the three-factor second order model was subjected to a multi-group comparison with and without constraints on loadings and variances. As can be seen from the model comparison statistics seen in Table 17. below, pooling of the data from the two industries appeared to be unacceptable given the significant difference in fit of the model across the two industries.

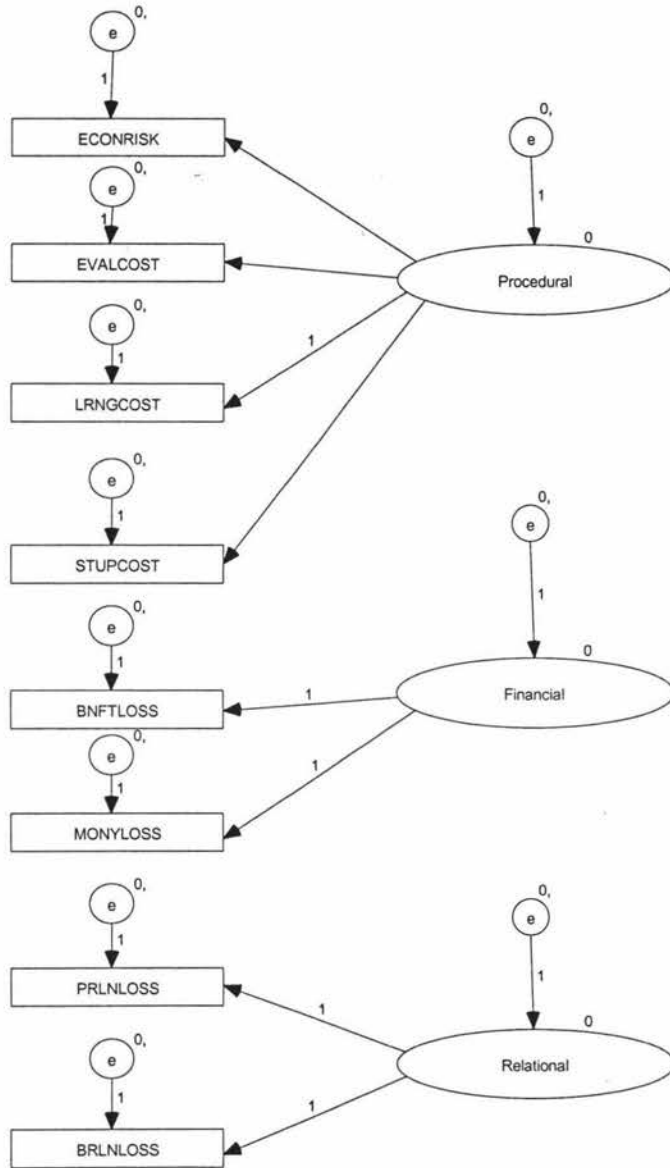
Table 17. Multi-group test of the second order measurement model

	DF	CMIN	NFI		IFI		RFI		TLI	
			P	Delta-1	Delta-2	Rho-1	Rho-2			
Constrained second order model	3	3.787	0.285	0	0	-0.003	-0.003			

Note:

1. This test assumes the unconstrained second order model to be correct.


Figure 3. Burnham *et al.*'s second order measurement model.




Key:

$e(n)$  is an error term

$Q(n)$  is the scale item (question)

Constructs are represented by 

Relationships modelled are represented by 

Note:

Both the relational and financial constructs required their paths constrained to allow the model to resolve.

# 11. VALIDATING THE BURNHAM *ET AL.* (2003) STRUCTURAL MODELS

---

## 11.1 Introduction

Burnham, Frels and Mahajan (2003) had considered three hypotheses on the relationships between the primary constructs of *switching costs*, *satisfaction*, and *intention to stay*. In this chapter, three models designed to prove or disprove these three hypotheses were tested with Confirmatory Factor Analysis to ascertain their goodness-of-fit to the New Zealand dataset. The objective being to determine if the Burnham *et al.* structural models supported their hypotheses about the relationships between constructs. The key hypotheses are H7, 8 and 9.

The models are labelled for convenience in this thesis as Model A. (*Satisfaction* and *Intention to stay*, Figure 4), Model B. (*Switching costs* and *Intention to stay*, Figure 5) and Model C. (*Switching costs*, *Intention to stay* and *Satisfaction*, Figure 6). The comparative fit of these three models to the Burnham *et al.* data and the NZ data are reported in Tables 18, 19 and 20.

Model A, which encapsulates the relationship between *satisfaction* and *intention to stay*, was developed primarily to test the relationship of *satisfaction* to *intention to stay*.

Model B captures the relationship between *switching costs* and *intention to stay* and allows for the assessment of the impact of (a) procedural, (b) financial, (c) relational *switching costs* on *intention to stay*.

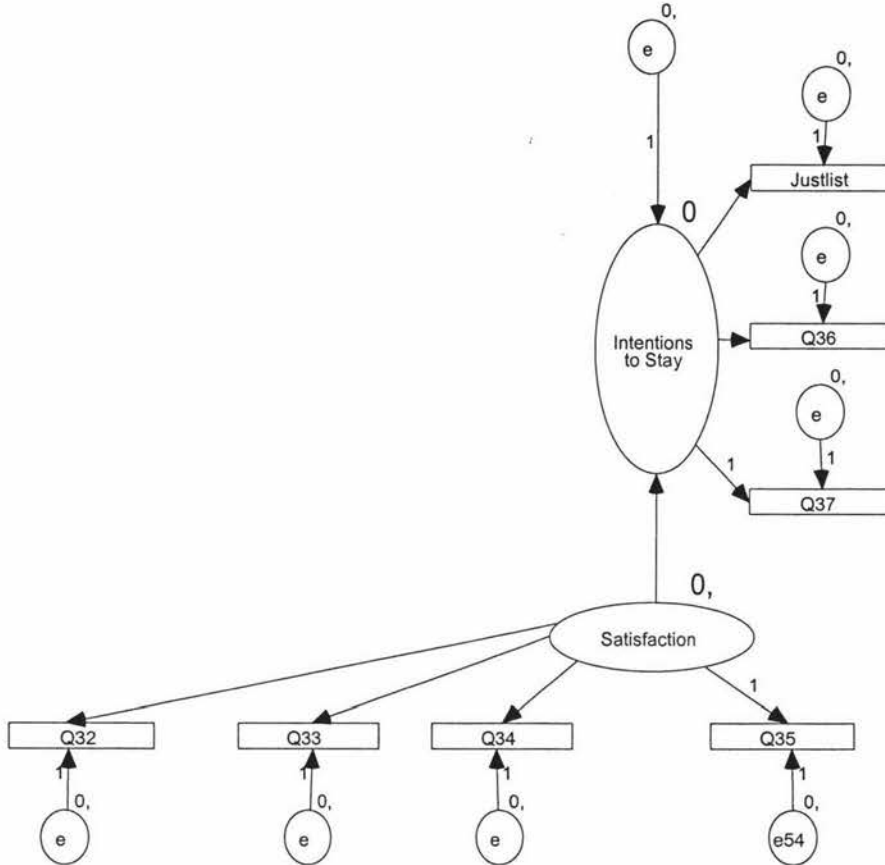
Model C had at its core the objective to see if the relationships in Hypotheses Seven and Eight were supported by the data.

Using AMOS 4.01 and its Structural Equation Modelling capabilities all three structural models indicated were specified and tested for fit to the data.

## 11.2 The Satisfaction and Intention Model

Figure 4. Structural Model A: *Satisfaction and Intention to Stay*

(shown with Juster question included)



Note:

Figure 4. shows a model with three intention indicators. The model was first tested with Burnham *et al's.* (2003) structure and again after the addition question (indicator) was added.

Table 18. Comparative fit of Model A: Effects on Intent to Stay

Fit Statistic	US pooled data		New Zealand pooled data	
	Burnham Model	Burnham Model	With three Intention items	
Chi-square	3416 (1858)	28.8 (8) ***	32.0 (13)	***
CFI	0.970	0.997	0.998	
NFI	0.930	0.996	0.997	
RMSEA	0.054	0.041	0.031	
Satisfaction SE	0.400	0.730 ***	0.721	***
Intention to stay SMC	0.160	0.533	0.520	

Note:

SE = the standardised estimate of the regression weight

SMC = squared multiple correlation

CFI = Comparative Fit Index

NFI = Normed Fit Index

RMSEA = root mean square of approximation

\* p <0.05, one tailed

\*\* p <0.01, one tailed

\*\*\* p <0.001, one tailed

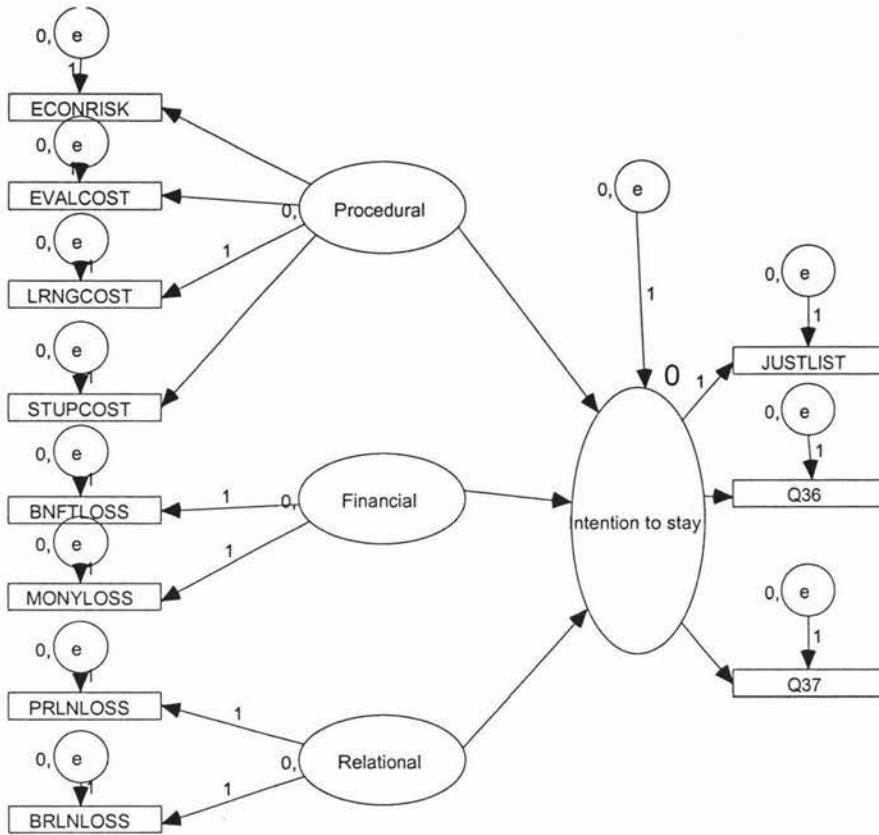
This model's fit was excellent with CFI, NFI, and RMSEA all well inside goodness-of-fit thresholds and slightly better than that achieved by Burnham *et al.* (2003). The chi-square values across the New Zealand data indicated similar levels of fit but no comparison with Burnham *et al.* (2003) was possible as their chi-square test, degrees of freedom and values don't have anything in common with our tests. A survey of the literature did not indicate how their results might have been computed. However, as is often the case with such a test on large samples, chi-square statistic was not in agreement with the other indices of goodness-of-fit and indicated a poor fit to the data.

The inclusion of an additional indicator into the two-item *intention to stay* scale to improve reliability did not improve fit to any great extent.

*Satisfaction's* impact on *intention to stay* was confirmed as strongly positive and significant., confirming Burnham *et al's.* (2003) Hypothesis Seven.

## 11.3 The Switching Costs and Intention Model

Figure 5. Structural Model B: *Switching costs and Intention to Stay*



**Note:**

Figure 5. shows a model with three intention indicators. The model was first tested with Burnham *et al*'s. structure, structure and again after the addition question (indicator) was added.

Table 19. Comparative fit of Model B: Effects on Intention to Stay

Fit Statistic Note 1.	US pooled data		New Zealand pooled data			
	Burnham Model	Note 2.	Burnham Model	Note 2.	With three Intention Items	Note 2.
Chi-square	3434 (1,858)		434 (34)	***	540 (44)	***
CFI	0.97		0.97		0.97	
NFI	0.93		0.97		0.97	
RMSEA	0.05		0.09		0.07	
Procedural Costs SE	0.15	*	-0.07		-0.07	
Financial Costs SE	0.13	*	0.00		-0.01	
Relational costs SE	0.44	**	0.48		0.46	***
Intention to stay SMC	0.30		0.24		0.22	

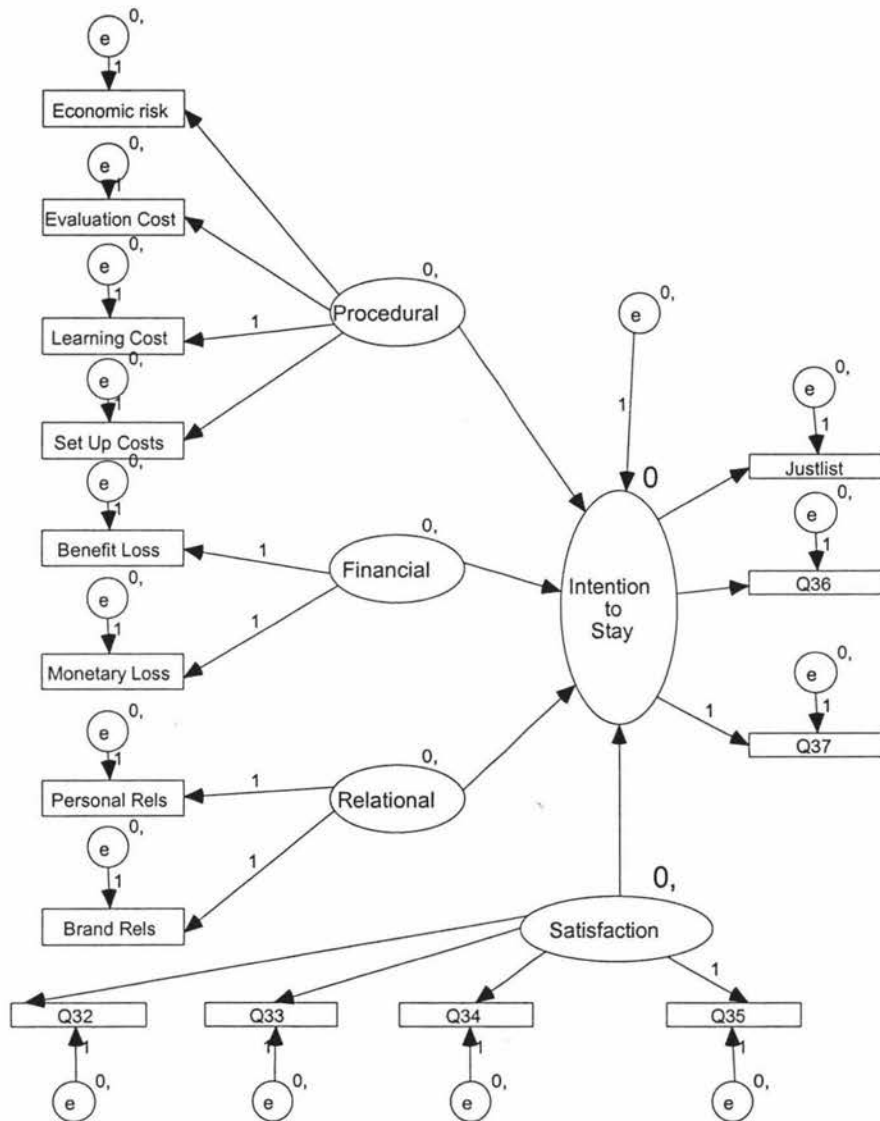
Note:

1. SE = the standardised estimate of the regression weight  
SMC = squared multiple correlation  
CFI = Comparative Fit Index  
NFI = Normed Fit Index  
RMSEA = root mean square of approximation
2. \* p < 0.05, one tailed  
\*\* p < 0.01, one tailed  
\*\*\* p < 0.001, one tailed

CFI and NFI were all well inside their respective goodness-of-fit thresholds and similar to that achieved by Burnham *et al.* (2003). The RMSEA was outside acceptable limits and was worse. The chi-square values across the two New Zealand data models indicated similar levels of fit but once again no comparison with Burnham *et al.* (2003) was possible. The inclusion of an additional indicator in the two-item *intention to stay* scale to improve reliability did improve fit to a small extent and improved the significance test of the impact of *relational costs* on *intention to stay*. *Relational costs* were the only construct from Burnham *et al.*'s second order model to be confirmed as having a substantial relationship with *intention to stay*. This impact was moderately positive and significant, confirming just one portion of Burnham *et al.*'s Hypothesis Eight.

## 11.4 The Switching Costs and Intention and Satisfaction Model

Figure 6. Structural Model C: *Switching Costs, Intention to Stay and Satisfaction*



**Note:**

Figure 6. shows a model with three intention indicators. The model was first tested with Burnham *et al*'s. Structure then the addition question (indicator) was added.

Table 20. Comparative fit of Model C: Effects on Intent to Stay

Fit Statistic Note 1.	US pooled data		New Zealand pooled data			
	Burnham Model	Note 2.	Burnham Model	Note 2.	With three Intention Items	Note 2.
Chi-square	3416 (1,858)		702 (75)		715 (88)	
CFI	0.97		0.97		0.97	
NFI	0.93		0.97		0.97	
RMSEA	0.05		0.07		0.07	
Satisfaction SE	0.30	***	0.71	***	0.70	***
Procedural Costs SE	0.20	**	0.07		0.05	
Financial Costs SE	0.15	*	0.01		0.02	
Relational costs SE	0.30	***	0.10	*	0.07	*
Intention to stay SMC	0.31		0.52		0.50	

Note:

1. SE = the standardised estimate of the regression weight  
SMC = squared multiple correlation  
CFI = Comparative Fit Index  
NFI = Normed Fit Index  
RMSEA = root mean square of approximation
2. \* p < 0.05, one tailed  
\*\* p < 0.01, one tailed  
\*\*\* p < 0.001, one tailed

CFI and NFI were both well inside their respective thresholds for goodness-of-fit and the results similar to that achieved by Burnham *et al.* (2003). RMSEA was just outside acceptable limits. The chi-square values across the two New Zealand data models indicated similar levels of fit but once again no comparison with the Burnham *et al.* (2003) could be made. The inclusion of an additional indicator in the two-item *intention to stay* scale to improve reliability did improve fit to a small extent, but did not improve the significance of any tests. *Satisfaction's* impact on *intention to stay* was confirmed as being strongly positive and significant at the 0.001 level. In addition, there was a weak but significant, at the 0.05 level, confirmation of the impact of relationships on *intention to stay*.

## 11.5 Interactions

Using Structural Equation Modelling, the interactions between the *Satisfaction – intention to stay* model and the *switching costs* component was assessed. As in

Burnham *et al.* (2003), respondents were split into high, medium and low groups based on their switching cost perceptions for each of the factors. The structural model of *satisfaction* linked to *intention to stay* (Model A) was then constrained to force equal loadings between the high and low level switching cost groups.

The constrained model in the test exhibited a significant chi-square difference in fit relative to the unconstrained model. The difference has limited practical significance as indicated by a trivial improvement in NFI, IFI, RFI and TLI (Anderson and Gerbing 1988). The magnitude of any interaction between *switching costs* and the ‘*satisfaction – intention to stay*’ model is likely to be low at best, particularly given the knowledge that the chi-square test is often overly sensitive in samples such as this. The Burnham *et al.* hypothesis of a negative interaction between *satisfaction* and *switching costs* did not appear to be supported in this model just as it was not in the original study.

Table 21. Multi-group test of the interaction of Switching on Model A.

	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI Rho-1	TLI Rho-2
Switching costs constrained	5	10.79	0.056	0.002	0.002	0.002	0.002

Note:

1. Assuming model unconstrained loadings to be correct.

## 12. DISCUSSION AND CONCLUSIONS

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Good generalisations ought to be; parsimonious, precise, useful, of sufficient scope and linked into theory, according to Barwise (1995). In the field of the determinants of switching in subscription markets, we are far from having such a generalisation fitting Barwise's criteria. This replication sought to address this lack of generalisability by adding to the existing knowledge on the influence of switching behaviour. Some differences in results from Burnham, Frels and Mahajan (2003) may be due to cultural differences between the USA and New Zealand. For the model by Burnham *et al.* (2003) to fit western industrialised markets it should at the very least generalise across a western national border as represented by USA and New Zealand in this thesis.

### 12.1 Burnham *et al.* (2003) First Order Measurement Model

The essential test for the first order model's validity is the hypotheses that *switching costs* is an eight factor construct as laid out in Figure 2. on page 49. Using Exploratory Factor Analysis the factor model was forced to eight factors. For banking, 64% of variance was explained by the model, with all eight factors loading with eigenvalues of greater than or equal to one. In the electricity sample, the factor loading for the eight constructs explained 68% of variance. The loading included six factors with eigenvalues of one or greater, along with two factors below one, the lowest being 0.91. A detailed listing of the factor loading comparison is shown in Table 5. on page 76.

On the surface this indicates an acceptable level of model fit and would in many cases result in the acceptance of the instrument. However, the analysis of the loadings showed that some scale items were loading onto constructs (factors) other than the constructs prescribed by Burnham *et al.*, indicating that the New Zealand population sample in general saw these scale items as describing something other than the construct intended in Burnham *et al.* Other scale items loaded onto constructs other than the one intended at unacceptable levels, demonstrating that these scale items were measuring more than one theoretical construct and they lacked uni-dimensionality, a critical attribute of any scale item. Burnham *et al.* did not report cross-loading in their study so it is not clear if this observation is an artefact of the New Zealand study or whether the problem also

existed in the Burnham *et al* study.<sup>52</sup> Findings of this nature at this point would have motivated a researcher building their own model to reject a number of scale items on the basis that they did support convergent validity for their constructs. Table 22. below lays out the criteria for rejection and the scale items, rejected under the criteria

Table 22. Scale items that performed badly enough to remove.

Question		Loading Note 1.		Primary reason for rejection
No.	Scale	Banking	Electricity	
8	Evaluation costs	0.63	0.49	Had cross-loading greater than 0.35
9	Evaluation costs	0.46	0.38	Did not load on to Burnham <i>et al.</i> construct
10	Evaluation costs	0.66	0.81	Did not load on to Burnham <i>et al.</i> construct
11	Evaluation costs	0.61	0.74	Did not load on to Burnham <i>et al.</i> construct
13	Learning Costs	0.54	0.57	Did not load on to Burnham <i>et al.</i> construct
15	Learning Costs	0.81	0.69	Had cross-loading greater than 0.35
16	Set-up Costs	0.43	0.64	Did not load on to Burnham <i>et al.</i> construct
18	Set-up Costs	0.62	0.69	Didn't load onto any construct at > 0.55
22	Benefit Costs	0.56	0.79	Had cross-loading greater than 0.35
23	Monetary Costs	0.64	0.61	Poor Reliability
24	Monetary Costs	0.54	0.60	Poor Reliability
29	Brand Relationship	0.95	0.85	Did not load on to Burnham <i>et al.</i> construct
30	Brand Relationship	0.80	0.96	Did not load on to Burnham <i>et al.</i> construct
31	Brand Relationship	0.33	0.26	Did not load on to Burnham <i>et al.</i> construct

Note:

1. See Table 5 on page 76 for more detail on loadings.

For another of the important concepts of scale performance, discriminant validity, the eight scales (constructs) had low levels of correlation with each other. Most correlations were below 0.35 with the highest correlation of 0.57 between personal and brand relationships. These correlations were all lower than the equivalent Burnham *et al* measures, making the discriminant validity of all the scale items acceptable. The high correlation of the personal and brand relationship factors does indicate that these scales do have some commonality.

The reliability performance of these scales was assessed with Cronbach's Coefficient Alpha. The scales for search and evaluation costs, set-up costs, benefit loss cost, monetary loss cost and brand loss cost all failed even the more relaxed Coefficient Alpha acceptance cut-off point of 0.70 proposed by Straub (1989), although the only

<sup>52</sup> The most common acceptance level of cross-loading is that they must be below 0.35 although some authors use a more stringent test of below 0.30.

very poor performer in this respect was the *monetary loss costs* factor which had an Alpha of 0.51 for banking and 0.53 for electricity.

The constructs measuring *intention to stay* and *satisfaction* could not be separated and loaded onto just one factor in the banking industry. They did load, however, onto the two Burnham *et al* constructs with acceptable levels of cross-loadings for the electricity sector, possibly due to a difference between the two industries. Consumers can act on their *satisfaction* levels and switch in the banking sector, but there is significant cost and effort in switching in the electricity sector. This is a speculative observation, but some support for this notion is evident in the New Zealand advertising media. Banks frequently advertise that they will pick up most or all of the costs to a consumer of swapping banks, whereas in a few well-publicised but indicative cases, consumers have had great difficulty switching electricity suppliers both in terms of costs and in terms of the effort or hassle experienced. The reliability of both scales measured with Cronbach's Coefficient Alpha was well inside acceptable limits adding strength to the argument that there is a unique industry characteristic at play between the two datasets.

The fit of the Burnham *et al.* first order model was assessed for both industries and found to be acceptable but not a good fit. A multi-group test for pooling the data indicated that there was a significant difference between the fit across the data. Which on one level indicates the potential for the model to discriminate but on an other level places some doubt on the veracity of pooling the data to allow further assessment.

## **12.2 Burnham *et al.* (2003) Second Order Measurement Model**

An attempt was made to replicate the second order measurement model by forcing composite scale items created from the average scale item scores for the eight Burnham *et al.* switching cost constructs onto three factors. It was found that the Burnham *et al.* model held up if cross-loadings were ignored, with 57.6% of variance in the composite measures being explained by the three higher order constructs. As with the Burnham *et al.* first order model, when the conventional rules for on-factor loading (0.55 minimum) and cross-loading (0.35 maximum) were applied, a number of composite scale items would need to be removed for this models design to be acceptable to someone building a model from scratch. They are laid out in Table 23. on page 102.

Table 23. Rejected composite scales

Composite Scale	Loading	Primary reason for rejection
Economic risk cost	0.57	Did not load on to Burnham <i>et al.</i> construct
Set-up costs	0.63	Had cross-loading greater than 0.35
Benefit costs	0.62	Had cross-loading greater than 0.35

The discriminant validity of the second order constructs was acceptable. However the ‘financial’ composite scale had poor Cronbach’s Coefficient Alpha at 0.62 for the electricity market and 0.55 for the banking market dataset, thus indicating that its composite scale items did not form a reliable construct. The rejection of the ‘economic risk cost’ composite scale provides an interesting insight into the nature of structural equation models because in the item scale assessment in Chapter Eight, ‘economic risk cost’ was a strongly reliable and convergent scale and only appeared to have slight problems with discriminant validity in that there were two correlations above 0.40. In other techniques of analysis, such results would have provided a researcher great comfort as to the quality of the scales. In this case, however, the model specified as second order construct rejects ‘economic risk costs’ as valid. To determine if this is an artefact of the Burnham *et al.* model or a characteristic of switching itself requires further research, which is beyond the scope of this thesis.

In attempting to confirm the fit of this second order model to each industry dataset, the model was subjected to a multi-group analysis. The model achieved acceptable fit with CFI, NFI, IFI and TLI all passing the acceptance level along with the much more stringent sample size adjusted measure of RMSEA.

It did however fail the chi-square difference test, which may have been overly sensitive to the sample size. The Burnham *et al.* model thus provides a good fit to the pooled New Zealand data. The existence of poor convergence onto individual constructs as identified by Burnham *et al.* with in their second order model does indicate that the model may not be adequately represent the market structure despite its good fit. Given the convergence problems in the lower order model on which it was based, this result is perhaps predictable. Consequently, the Burnham *et al.* second order measurement model cannot be rejected outright but would need to be accepted with caution. However despite that it does fit better than a two-factor or three-factor model based on the same eight composite switching cost constructs.

## 12.3 Burnham *et al.* (2003) Structural Model

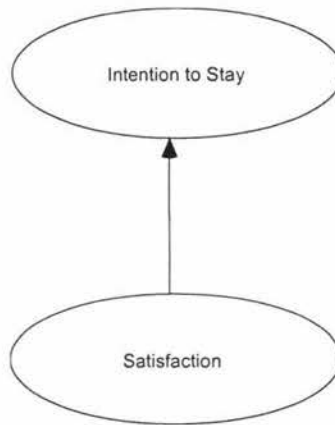
Three models were developed to look at Burnham *et al.*'s. three hypotheses related to the interaction of *satisfaction*, *intention to stay*, and *switching costs*.

### 12.3.1 The Burnham *et al.* (2003) Hypotheses

The first model was designed to assess the relationship of *satisfaction* to *intention to stay* is represented by Figure 7. below.

Hypothesis Seven: “greater *satisfaction* will be associated with higher *intention to stay* with an incumbent provider”

Figure 7. Hypothesis seven.



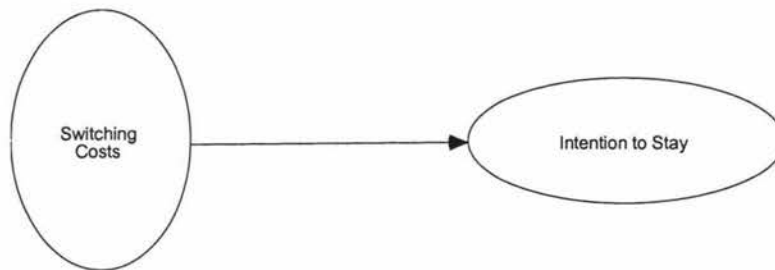
Note:

1. This model is presented in detail as Figure 4 on page 92.

This model had excellent fit to the data with all measures except the chi-square difference test being well within acceptable limits. The *satisfaction* construct loaded both highly (0.73) and significantly ( $p < 0.001$ ) onto the *intention to stay* construct, thus confirming Burnham *et al.*'s. hypothesis.

The second model, designed to test Hypothesis Eight is represented by Figure 8. below.

Figure 8. Hypothesis Eight



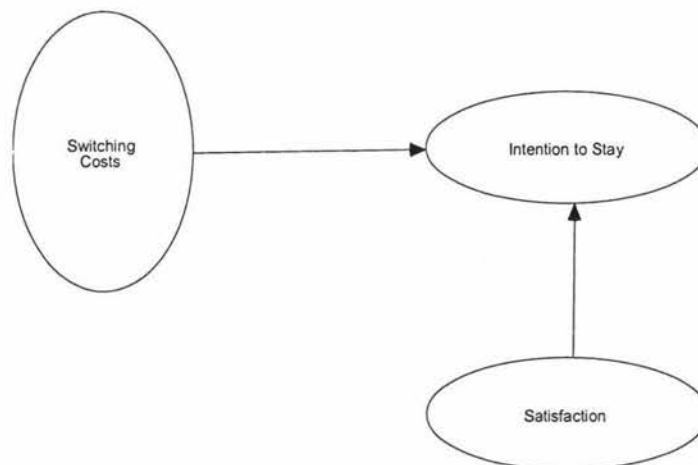
Note:

1. This model is presented in detail as Figure 5. on page 94.

Hypothesis Eight: “greater (a) procedural, (b) financial, (c) relational *switching costs* will be associated with higher consumer *intention to stay* with an incumbent provider”. This model had excellent fit with CFI, NFI and RMSEA all well within acceptable limits and all better than that achieved by Burnham *et al.* Of the three switching constructs, only *relational* cost loaded significantly ( $p < 0.001$ ) on to *intention to stay* and then only to a modest level (0.46). The other two constructs neither loaded substantially or significantly. These results support the previous concerns about the validity of this second order model.

The third construct this time designed to confirm the full Burnham *et al.* theoretic model by is represented by Figure 9. below.

Figure 9. The hypothesised Burnham *et al.* model.



Note:

1. This model is presented in detail as Figure 6. on page 96.

The model in Figure 9 above had excellent fit with CFI, NFI and RMSEA all well within acceptable limits. None of the three switching constructs loaded onto the model and only *relational* cost was significant ( $p < 0.05$ ). *Satisfaction* dominated, loading both highly (0.70) and significantly ( $p < 0.001$ ), adding further concerns about the validity of this second order model.

The final hypothesis, Hypothesis Nine: “the relationship between *satisfaction* and consumer *intention to stay* with an incumbent will be weaker (stronger) when consumers perceive higher (lower) (a) procedural *switching costs*, (b) financial *switching costs*, and (c) relational *switching costs*” was tested as follows:

The respondents were split into three groups (high, medium, low) based on their aggregated ranking on switching cost perceptions. The interaction was then tested by constraining loadings to be equal between models fitted to the high and low switching cost groups. The constrained model in the test exhibited a significant chi-square difference in fit relative to the unconstrained model. The difference in fit measured by NFI, IFI, RFI and TLI was trivial, thus the test found no negative (or positive) interaction between *satisfaction* and *switching costs*, thus Hypothesis Nine was not supported. Burnham *et al.* had found a similar result in their study.

## 12.4 Conclusions

- There does not appear to be adequate support from this thesis to accept Burnham *et al.*'s. second order model.
- 
- There was strong support for a relationship between *satisfaction* and *intention to stay*.
- The only construct with any substantive or significant support was *relational*
- The Burnham *et al.* finding that an interaction does not exist between *satisfaction* and *switching costs* was confirmed with the condition that it is based on the Burnham *et al.* second order model, which in itself has doubtful support.

- The Burnham *et al.* measurement instrument has some design flaws related to the number of questions chosen for the study. *Intention to stay* and *monetary loss cost* both had scales with only two items. This violates the minimum requirement for reliable scales (Ding *et al.*, 1995).
- Not all Burnham *et al.*'s. scale items are uni-dimensional in the New Zealand context. Questions 8, 9, 10, 15, 16, and 22 showed significant multi-dimensionality that would typically rule them out of as scale items.
- Not all Burnham *et al.*'s. scale items loaded onto the construct Burnham *et al.* had intended they would. Questions 9, 10, 11, 13, 16, 29, 30, 31 all loaded heavier onto a construct other than intended.
- Some questions were difficult for respondents to answer or perhaps seen as irrelevant by respondents, which was demonstrated by large numbers of missing responses for questions 21 and 24.

## **12.5 Limitations**

### **12.5.1 Introduction**

The most substantial limitation of this research was arguably the need to reverse engineer the instrument design and analysis from the target article's publish methodology and results, rather than from a research report or thesis. This meant significant detective work and use of assumptions at many decision points in the research. A list of specific limitations inherent in this thesis is outlined below.

### **12.5.2 Unexamined factors contributing to loyalty**

As this thesis examined just one model there are as a result a series of possible contributing factors, which were not examined. Examples of concepts that affect purchase behaviour but not included in this research are, inertia and variety seeking (Trivedi *et al.*, 1994; Sivakumaran & Kannan, 2002), the value of competing offers (Klemperer, 1992), the salience and importance to the consumer of the product on offer (Mittal & Kumar, 1999).

### **12.5.3 Sample non-response bias**

There is always some level of non-response in a mail survey and this case is no exception. While the data was tested using the Armstrong & Overton (1977) test for non-response bias and found to be acceptable, it is not clear if non-response bias exists in these results.

### **12.5.4 The use of the Burnham *et al.* (2003) model**

As the objective was to replicate the target study, opportunity was foregone to examine other potential models. Decisions were made affecting the results to ensure the closest possible replication from the outset. For example, there is a growing literature on the need to consider cross-border differences when ‘importing’ scales from another country (Sing, 1995; Patterson & Smith, 2003). However the decision was made to restrict changes from the Burnham *et al.* study to ensure that scale wording was consistent across studies (Ryan, Chan, Ployhart, & Slade, 1999). Later in the study there were opportunities to fit better models by deleting or reallocating scale items (or composite scale items in the second order model case) to achieve a better fit to the data, however these opportunities were also foregone in the interests of making as direct a replication as possible.

### **12.5.5 Size of the datasets**

While the datasets used were substantially larger than those of Burnham *et al.* many of the findings were not statistically significant. Often statistical significance is not the most important issue in a research finding. With replication, however, significance has a special importance, as the research is not only looking for substantive research results but also to see that those results are not substantively different from those of the original authors. A larger sample would have undoubtedly offered more significant results. However, the use of many measures to ‘triangulate’ problems in this thesis does make the results useful despite some insignificant results.

## 12.6 Directions for Future Research

Burnham *et al.* suggested additional research be undertaken to extend and build on their findings. This thesis has not been able to reproduce some of Burnham *et al.*'s results in some key areas, casting doubt on their initial findings.

It would be unwise to extend or build on the Burnham *et al.* (2003) model in ways other than to attempt replication given the results of this thesis. Further scale development is necessary to establish a generalisable measurement model

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## 14. APPENDIX A. SUPPORTING TABLES

Table 24. Switching Cost Scale Reliability: Item and Scale Coefficient Alpha's.

Scale	Corrected Item-Total Correlation	Squared Multiple Correlation	Alpha if Item Deleted
<b>Economic Risk Factors</b>		Scale Alpha	0.84
I worry that service from others won't work as well	0.55	0.40	0.82
If I switch supplier, I might end up with bad service	0.63	0.46	0.81
Switching to a new supplier will probably involve hidden costs	0.60	0.40	0.81
I am likely to end up with a bad deal financially if I switch	0.63	0.42	0.81
Switching will probably result in some unexpected hassle	0.64	0.49	0.81
I don't know what I'll end up having to deal if I switch	0.64	0.48	0.81
<b>Evaluation Costs</b>		Scale Alpha	0.69
I can't afford the time to get the information for evaluation	0.49	0.25	0.61
How much time/effort does it take to get the information	0.38	0.17	0.68
Comparing benefits of my supplier to others is too much effort	0.52	0.34	0.59
It is tough to compare the other suppliers	0.49	0.31	0.61
<b>Learning Costs</b>		Scale Alpha	0.75
Learning to use features offered by new supplier will take time	0.52	0.30	0.71
There is not much to understanding a new supplier well	0.46	0.25	0.74
Even after switching, it would take effort to 'get up to speed'	0.58	0.39	0.67
Getting used to how another supplier works would be easy	0.63	0.41	0.65
<b>Set-up Costs</b>		Scale Alpha	0.73
It takes time to switch to a new supplier	0.46	0.23	0.70
Switching involves an unpleasant sales process	0.52	0.28	0.67
The process of starting up with a new supplier is quick/easy	0.54	0.29	0.66
There are a lot of formalities involved in switching	0.56	0.31	0.64
<b>Benefit Costs</b>		Scale Alpha	0.73
Switching would mean losing, credits, services and so on,	0.61	0.37	0.58
How much would you lose in credits, accumulated points	0.50	0.26	0.70
I will lose benefits of being a long term customer if I switch	0.54	0.32	0.64
<b>Monetary Loss Costs</b>		Scale Alpha	0.52
Switching would involve some upfront costs	0.35	0.12	.
How much would it cost to switch switching	0.35	0.12	.
<b>Personal Relationship Loss Costs</b>		Scale Alpha	0.92
I would miss working with the people at my current supplier	0.86	0.76	0.88
I am comfortable with the people from my current supplier	0.82	0.72	0.90
The people where I currently get my service matter to me	0.84	0.70	0.89
I like talking to the people from my supplier	0.75	0.60	0.92
<b>Brand Relationship Loss Costs</b>		Scale Alpha	0.70
I like the public image my supplier has	0.67	0.60	0.42
I support my supplier as a firm	0.63	0.58	0.48
I don't care about the brand name of the supplier I use	0.31	0.10	0.87

Table 25. EFA Factor Loading for Banking Dataset

Scale	1	2	3	4	5	6	7	8
<b>Economic Risk Factors</b>								
I worry that service offered by others won't work as well		0.52						
If I switch supplier, I might end up with bad		0.65						
Switching to a new supplier will involve hidden costs		0.75						
I am likely to end up with a bad deal financially if I switch		0.66						
Switching will probably result in some unexpected hassle		0.71						
I don't know what I'll end up having to deal if I switch		0.70						
<b>Evaluation Costs</b>								
I can't afford the time to get the information for evaluation				0.50			0.37	-0.46
How much time/effort does it take to get the information				0.64		0.36		
Comparing benefits of my supplier is too much effort			0.57				0.41	
It is tough to compare the other suppliers			0.59					
<b>Learning Costs</b>								
Learning to use features from a new supplier will take time			0.65					
There is not much to understanding a new supplier well				0.73				
After switching, it would take effort to 'get up to speed'			0.80					
Getting used to how another supplier works would be easy			0.58	0.49				
<b>Set-up Costs</b>								
It takes time to switch to a new supplier			0.64			0.40		
Switching involves an unpleasant sales process						0.56		
The process of starting up with a new supplier is quick/easy				0.49		0.41		
There are a lot of formalities involved in switching						0.73		
<b>Benefit Costs</b>								
Switching would mean losing, credits, services and so on,					0.73			
How much would you lose in credits, accumulated points					0.63			
I will lose benefits of being a long term customer if I switch					0.53		0.35	
<b>Monetary Loss Costs</b>								
Switching would involve some upfront costs							0.65	
How much would it cost to switch switching							0.37	
<b>Personal Relationship Loss Costs</b>								
I would miss working with the people at my supplier	0.88							
I am more comfortable with the people from my supplier	0.84							
The people where I currently get my service matter to me	0.85							
I like talking to the people from my supplier	0.80							
<b>Brand Relationship Loss Costs</b>								
I like the public image my supplier has	0.69							
I support my supplier as a firm	0.75						0.36	
I don't care about the brand name of the supplier I use								0.73

Table 26. EFA Loadings for Electricity Dataset

	Scale							
Economic Risk Factors	1	2	3	4	5	6	7	8
I worry that service offered by others won't work as well		0.64						
If I switch supplier, I might end up with bad service		0.74						
Switching to a new supplier will involve hidden costs		0.66						
I am likely to end up with a bad deal financially if I switch		0.72						
Switching will probably result in some unexpected hassle		0.69						
I don't know what I'll end up having to deal if I switch		0.69						
<b>Evaluation Costs</b>								
I can't afford the time to get the information for evaluation					0.5			0.57
How much time/effort does it take to get the information								0.71
Comparing benefits of my supplier is too much effort					0.7			
It is tough to compare the other suppliers					0.7			
<b>Learning Costs</b>								
Learning to use features from a new supplier will take time			0.5		0.4			
There is not much to understanding a new supplier well			0.7					
Even after switching, it takes effort to 'get up to speed'			0.6		0.4			
Getting used to how another supplier works would be easy			0.7					
<b>Set-up Costs</b>								
It takes time to switch to a new supplier			0.4	0.6				
Switching involves an unpleasant sales process				0.7				
The process of starting up with a new supplier is quick/easy				0.6				
There are a lot of formalities involved in switching				0.7				
<b>Benefit Costs</b>								
Switching would mean losing, credits, services and so on,						0.8		
How much would you lose in credits, accumulated points						0.7		
I will lose benefits of being a long term customer if I switch	0.4					0.6		
<b>Monetary Loss Costs</b>								
Switching would involve some upfront costs							0.6	
How much would it cost to switch switching							0.6	
<b>Personal Relationship Loss Costs</b>								
I would miss working the people at my current supplier	0.8							
I am more comfortable with the people from my supplier	0.8							
The people where I currently get my service matter to me	0.8							
I like talking to the people from my supplier	0.8							
<b>Brand Relationship Loss Costs</b>								
I like the public image my supplier has	0.8							
I support my supplier as a firm	0.8							
I don't care about the brand name of the supplier I use					-0.4		0.4	

Table 27. Switching cost scale means and standard deviations

Switching Cost	Means				Standard Deviation			
	Long	Credit	Electricity	Banking	Long	Credit	Electricity	Banking
	Distance	Card			Distance	Card		
Economic Risk	3.37	3.02	2.48	2.68	0.81	0.94	0.97	1.00
Evaluation	3.55	3.26	2.61	2.66	0.84	0.98	0.99	1.03
Learning	2.93	2.88	2.88	2.79	0.91	0.94	0.86	0.91
Set-up	3.13	3.04	2.69	2.54	0.85	0.97	0.85	0.79
Benefit	2.50	2.84	2.99	2.79	1.15	1.28	1.08	1.06
Monetary Loss	2.58	2.41	3.13	2.89	0.98	1.01	0.95	0.98
Personal Relationship Loss	2.52	2.25	3.45	2.94	0.89	0.89	0.97	1.08
Brand Relationship Loss	3.12	3.12	3.07	2.71	0.99	0.97	0.78	0.97

Table 28. Factor loading of Burnham et al's. second order measurement model

Composite Scale	Procedural	Financial	Relational
Economic Risk Factors	0.45	0.57	
Evaluation Costs	0.83		
Learning Costs	0.83		
Set-up Costs	0.63	0.48	
Benefit Costs		0.62	0.39
Monetary Loss Costs		0.88	
Personal Relationship Loss Costs			0.86
Brand Relationship Loss Costs			0.89

# 15. APPENDIX B. EXPLORATORY DATA ANALYSIS

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Figure 10. Basic Demographics

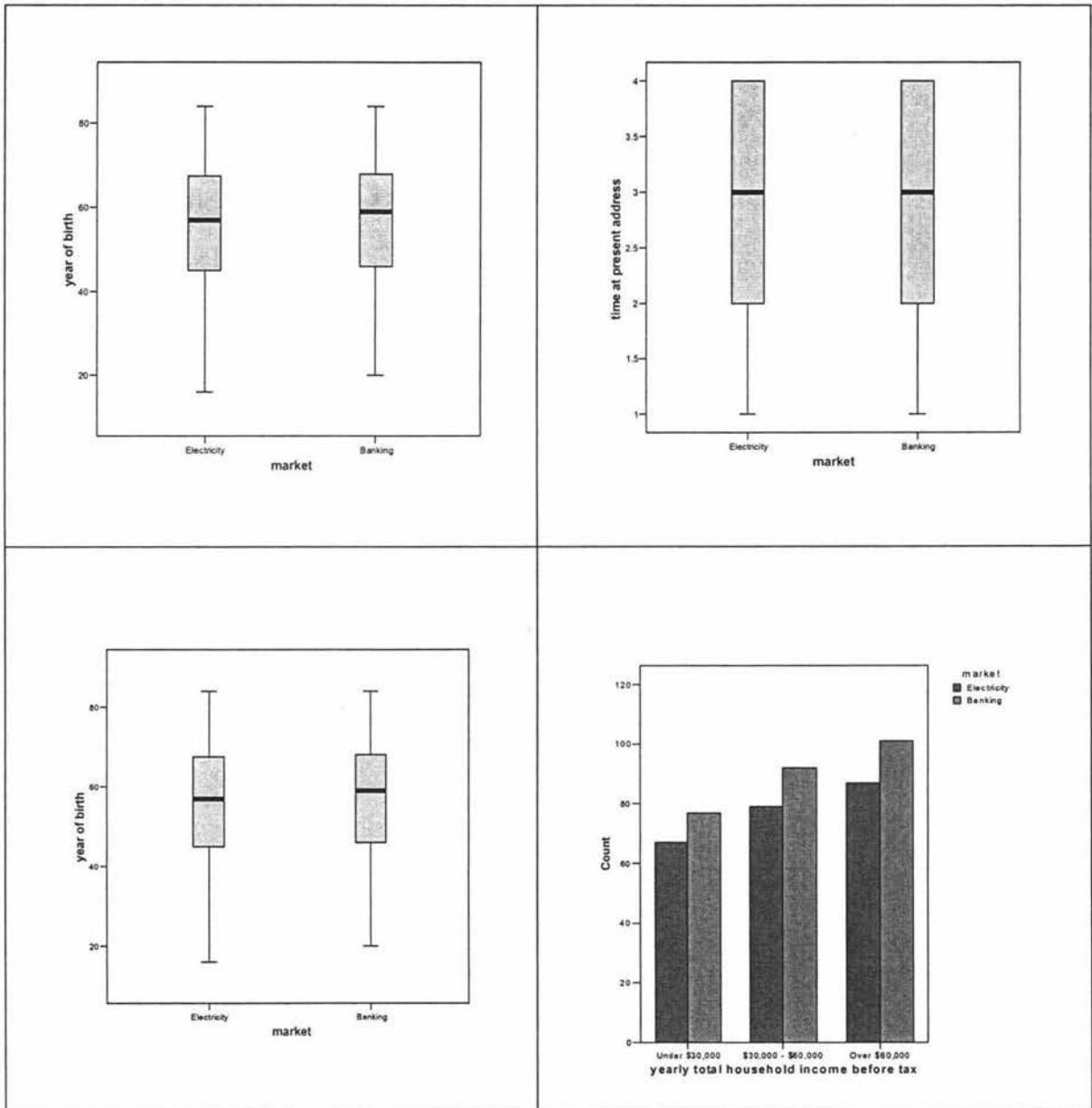


Figure 11. Distribution of Switching History

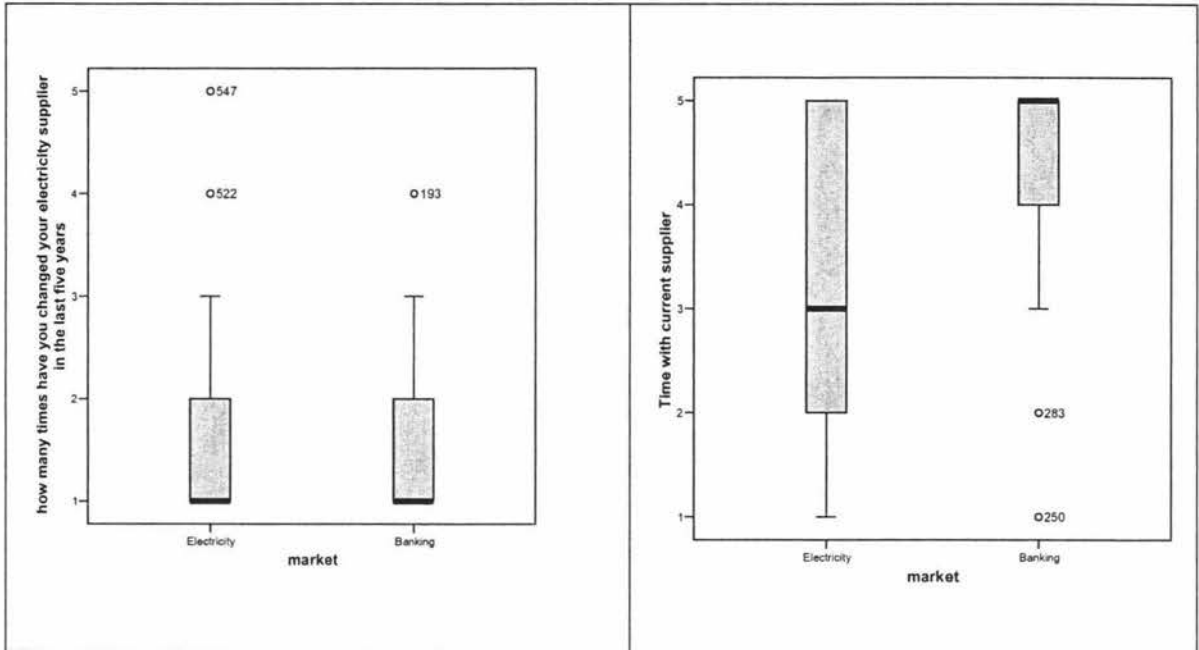
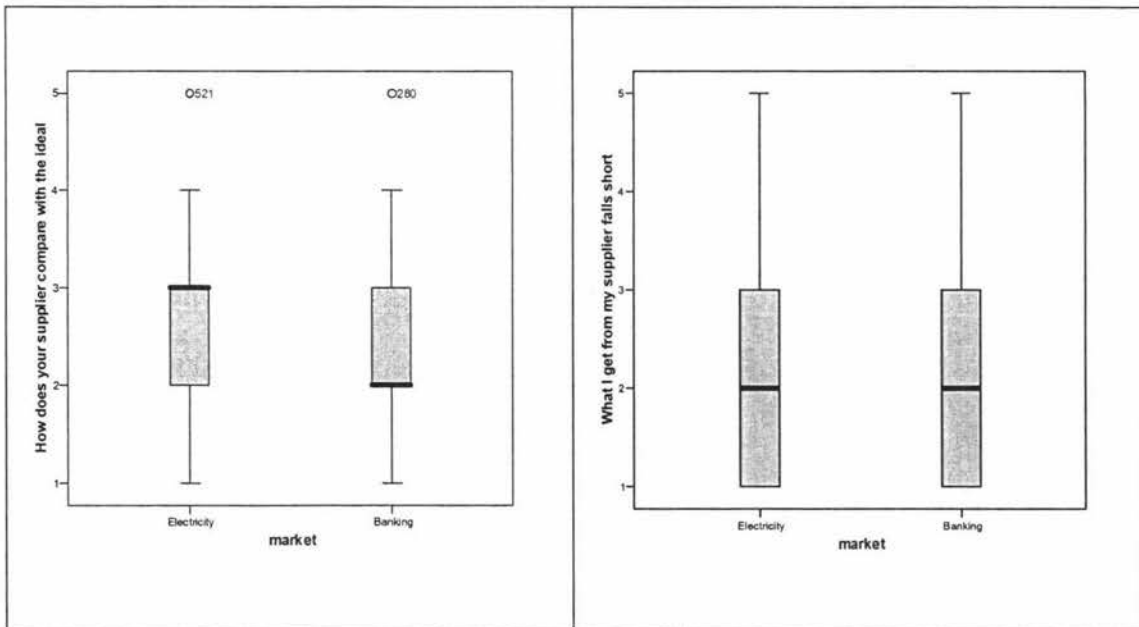


Figure 12. Distribution of Satisfaction



## 16. APPENDIX C. KEY STUDY SCALE ITEMS

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### 16.1 Gremler (1995) scale items

Each question is grouped by the construct it is intended to measure. All items except when noted are measured on 7 point scales anchored by Strongly disagree =1 and Strongly agree = 7

#### Service Loyalty

##### Behavioural Loyalty (intentions)

- A3 I say positive things about this dental office to other people
- A4 I intend to continue doing business with this office over the next few years
- A8 I encourage friends and relatives to do business with this dental office
- A10 I seldom consider switching to another dental office
- A14 As long as the present service continues, I doubt that I would switch dental practices

##### Attitudinal Loyalty

- A5 I really like doing business with this dental office
- A6 To me, this dental practice is clearly the best one with which to do business
- A13 I believe this is a good dental practice.

##### Cognitive Loyalty

- A2 I try to use this dental office every time I need dental services
- A9 I consider this practice to be my primary dental office
- A11 I consider this office to be my first choice when I need dental services.
- A12 This dental office is the primary place I consider when I need to use a dentist's services.

##### Global Measures of Service Loyalty

- A7 I consider myself to be a loyal patient of this dental practice.
- A15 Overall, I am very loyal to this dental practice.

#### Satisfaction

- A1 Compared to other dental offices that I have used, I am very satisfied with this organisation
- A16 Based on all of my experiences with this dental office, I am very satisfied with the dental service it provides.
- A17 My choice to use this dental office is a wise one.
- A18 I am *not* happy about my decision to use this dental office.
- A19 Overall, I am satisfied with the decision to use this dental office.
- A20 I feel *bad* about my decision to use this dental office.
- A21 I think I did the right thing when I decided to use this office for my dental needs.
- A22 If I had it to do over again, I would choose a different office for my dental needs.
- A23 My overall evaluation of the services provided by this dental office is:  
(very poor =1 to very good =7)

## Switching Costs

### Habit/Inertia

- B1 Unless I was to become very dissatisfied with this dental office, changing to a new one would be a bother.
- B3 I would find it difficult to stop using this dental office.
- B5 For me, the cost in time, effort, and grief to switch dental offices is high.

### Set-up

- B6 It's just not worth the hassles for me to switch dental offices.
- B7 Considering everything, for me the costs of no longer using my current dental office and starting to go to a new office would be high.
- B8 It would require a lot of time and effort on my part to set up an account with my medical/dental history at another dental office.
- B13 I'd have to do a lot of paperwork in order to switch offices.

### Search

- B2 Finding information on other good dental offices is difficult for me.
- B10 It would be extremely costly for me to search information about the services provided by other dental offices.
- B18 I don't like to spend a lot of time and energy looking for other suitable dental offices.

### **Learning**

- B12 If I were to switch dental offices, I would have to learn how things work at the new office.
- B15 I am reluctant to change dental offices because I am familiar with “how the system works” at this office.

### **Contractual**

- B9 This dental office provides me with particular privileges I would not receive elsewhere.
- B14 There are several financial costs/charges I would incur if I were to stop doing business with this dental practice.
- B16 There are certain benefits I would not retain if I were to switch dental practices.

### **Continuity**

- B4 I am not sure what the level of service would be if I switched dental offices.
- B11 If I were to change dental offices, the service I might receive could be worse than what I now have.
- B16 For me, it would be risky to switch dentists since I wouldn’t know the quality of the services provided by the new dentist.

## **Interpersonal Bonds**

### **Global Measures of Interpersonal Bonds**

- C1 I have a close relationship to this person
- C3 I look forward to seeing this person when I visit the office.
- C5 I feel like there is a “bond” between this employee and myself.

**Familiarity**

- C4 This person personally recognises me whenever I visit the office.
- C6 I am comfortable interacting with this employee
- C10a This person knows my name and remembers me.
- C10b This person is familiar with me personally and knows how to best serve me.
- C10c This person has acquired specific information about what I require.
- C10d This person uses specialised knowledge to customise services especially for me.

**Care**

- C11a This employee has my best interests at heart.
- C11b This employee is interested in my needs and concerns
- C11c This employee displays concern for my wellbeing
- C11d This employee really cares about me.
- C11e This employee communicates the attitude that my problems are important to him or her.

**Friendship**

- C2 I strongly care about this employee
- C7 Our conversation often goes beyond what is required to perform the required dental services.
- C8 Since I've been using this dental office, I have developed a good friendship with this employee.
- C9 I consider this employee to be a friend.
- C12a This person has taken a personal interest in me.
- C12b This person is like a family member.
- C12c This person makes me feel good when I am around him or her.
- C12d This person talks with me on topics that are not necessary to delivery of the service.

## Rapport

- C13a This employee relates well to me
- C13b This employee creates a feeling of “warmth” in our relationship
- C13c This employee has a good sense of humour.
- C14a In thinking about my relationship with this person, I enjoy interacting with this employee.
- C14b In thinking about my relationship with this person, I have a good rapport with this employee.
- C14c. In thinking about my relationship with this person, I have a harmonious relationship with this person.

## Trust

- C15a In our relationship, this employee can *not* be trusted at times.
- C15b In our relationship, this employee is perfectly honest and truthful.
- C15c In our relationship, this employee can be trusted completely.
- C15d In our relationship, this employee can *not* be counted on to do what is right.
- C15e In our relationship, this employee is always faithful.
- C15f In our relationship, this employee is someone I have great confidence in.
- C15g In our relationship, this employee has high integrity.

## Other Variables

### Perceived Alternatives

- D1 I come to this office *only* because it is part of my dental insurance coverage/dental plan.
- E8 I really do *not* have many alternatives when it comes to where I can go for dental services.

**Perception of Price**

- D5 If another dental office were to offer better prices, I would switch to them.
- D8 This dental office offers good rates on its services-that's why I stay with them.

**Perception of Value**

- D6 To me, this dental office offers good value for the price I have to pay.

**Convenience**

- D3 If another dental office was more conveniently located, I would switch to them.

**Standardisation**

- E1 I think dental services are relatively standard and routine.

**Customisation**

- E2 Dental services can be customised to meet my specific needs and desires
- E3 Dental services provide opportunities for patients to be treated uniquely.

**Judgement**

- E4 For dental services, employees exercise considerable judgement in meeting my individual needs.

**Interactions**

- E5 There are many opportunities for customers to interact with employees in dental services.

**Risk**

- E6 Switching dentist offices is a risky thing to do.

**Importance**

- E7 Generally, my choice of where to go for dental services is a very important decision for me.

**Word of Mouth Recommendation**

- D2 I recommend this office whenever anyone seeks my advice.
- D4 When the topic of dentists comes up in conversation, I go out of my way to recommend this dental practice.
- D7 I am *not* very likely to recommend this dental office to a friend.
- D9 I have actually recommended this dental office to my friends.
- D10 If you have actually recommended this office, to how many people have you done so? \_\_\_\_\_

## 16.2 Jones *et al.* (2002) Scale Items

### Pre-Switching Search and Evaluation costs

(Alpha = 0.95)

- A1 It would take a lot of time and effort to locate a new hairstylist/barber.
- A2 If I changed hairstylists/barbers, I would not have to search very much for a new one.
- A3 If I stopped going to my current hairstylist/barber, I would have to search a lot for a new one.
- A4 It takes a great deal of time to locate a hairstylist/barber.
- A5 If I stopped using my current hairstylist/barber, I would have to call and look around for a new one to use.

### Cost of Lost Performance

(Alpha = 0.95)

- B1 This hairstylist/barber provides me with particular privileges I would not receive elsewhere.
- B2 By continuing to use the same hairstylist/barber, I receive certain benefits that I would not receive if I switched to a new one.
- B3 There are certain benefits that I would not retain if I were to switch hairstylists/barbers.
- B4 I would lose preferential treatment if changed hairstylists/barbers.

### Uncertainty Costs

(Alpha = 0.79)

- C1 I am not sure what the level of service would be if I switched to a new hairstylist/barber.
- C2 If I were to change hairstylists/barbers, the service I might receive at the new place could be worse than the service I now receive.
- C3 The service from another hairstylist/barber could be worse than the service I now receive.

## **Post-Switching Behavioural and Cognitive Costs**

**(Alpha = 0.86)**

- D1 If I were to switch hairstylists/barbers, I would have to learn how things work at the new one.
- D2 I would be unfamiliar with the policies of a new hairstylist/barber.
- D3 If I changed hairstylists/barbers, I would have to learn how the “system works”, at a new one.
- D4 Changing hairstylist/barbers would mean I would have learned about the policies of a new one.

## **Sunk Costs**

**(Alpha = 0.88)**

- E1 A lot of energy, time, and effort have gone into building and maintaining the relationship with this hairstylist/barber.
- E2 Overall, I have invested a lot in the relationship with this hairstylist/barber.
- E3 All things considered, I have put a lot into previous dealings with this hairstylist/ barber.
- E4 I have spent a lot of time and money at this hairstylist/barber.
- E5 I have not invested much in the relationship with this hairstylist/barber.

## **Set-up Costs**

**(Alpha = 0.83)**

- F1 If I changed hairstylists/barbers, it would take a lot of time and effort on my part to explain to the new hairstylist/barber what I like and what I want.
- F2 If I changed hairstylists/barbers, I would have to explain things to my new hairstylist/ barber.
- F3 There is not much time and effort involved when you start using a new hairstylist/barber.

# 17. APPENDIX D. SURVEY MATERIAL

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Exhibit 1: Sample Mail-out Coversheet (wave one & three)

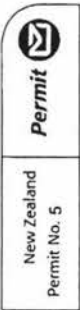
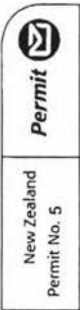

 <p>New Zealand Permit No. 5</p>	 <p>Permit</p>
 <p><b>Massey University</b> COLLEGE OF BUSINESS Kaupapa Whai Pakihi</p> <p>DEPARTMENT OF MARKETING Private Bag 11 222 Palmerston North New Zealand 1882</p> <p>Te Kōwhiri ki Pūrehoro</p>	<p>Murray MacRae 46 Tutenkamin Lane BIG SHOT CITY 5301</p>

Exhibit 2: ample Mail-Out Letter Electricity (wave 1)



**Massey University**  
COLLEGE OF BUSINESS  
Kaupapa Whai Pakihi

DEPARTMENT OF MARKETING  
Private Bag 11 222  
Palmerston North  
New Zealand  
T 64 6 350 5593  
F 64 6 350 2260  
www.massey.ac.nz  
1882

5 November 2003

Murray MacRae  
46 Tutenkamin Lane  
BIG SHOT CITY 5301

Hi, I'm a Masterate student in the Massey University Department of Marketing and am conducting research into electricity suppliers. To do this I need the person whose name is on the electricity bill to answer this questionnaire. If there are two people's names on the bill then this questionnaire should be filled out by the first person named on the bill. I would greatly appreciate it if you would complete the enclosed questionnaire. It should only take about 10 minutes.

The questionnaire asks your opinions on electricity suppliers, and asks about your likely behaviour. The results of the research will be an important part of my Masters Thesis. This research is not connected in any way with any company or product.

There are no right or wrong answers to the questions in the survey and it is *very important* that I receive completed questionnaires from as many people as possible.

You may be wondering how you came to receive the questionnaire. I chose your name randomly from the electoral roll to ensure that I get a broad cross-section of all New Zealanders' views. Your comments and responses will be *completely confidential*; the information I collect will be only be reported in a summary form and the ID number on the questionnaire cover is just to make sure I don't send you a reminder once you've returned the questionnaire.

If you have any questions please feel free to contact me, or Associate Professor Malcolm Wright, my supervisor. We are both available on Phone 06 356 9099 at Massey University. My Email is m.s.macrae@massey.ac.nz

Yours sincerely

Murray MacRae  
Masters Student

Exhibit 3: Sample Mail-Out Letter Banking (wave 1)



**Massey University**

COLLEGE OF BUSINESS  
Kaupapa Whai Pakihi

DEPARTMENT OF MARKETING  
Private Bag 11 222  
Palmerston North  
New Zealand  
T 64 6 350 5593  
F 64 6 350 2260  
www.massey.ac.nz

Stage 3

December 3<sup>rd</sup> 2003

Murray MacRae  
46 Tutenkamin Lane  
BIG SHOT CITY 5301

Hi, I am Murray MacRae and am conducting research into people's main financial institution (usually this is a bank). Last month as part of this research, I sent you a questionnaire on banking. Because I still need your help, I have sent you a second copy of the questionnaire. It should take only take about 10 minutes. The questionnaire asks your opinions on banks, and asks about your likely behaviour. The results of the research will be an important part of my Masters Thesis. This research is not connected in any way with any company or product.

It is *very important* that I receive completed questionnaires from as many people as possible. I would appreciate it if you would help me by filling out and returning the questionnaire.

Your comments and responses will be *completely confidential*; the information I collect will be only be reported in a summary form. If you have already posted the questionnaire then it is likely that it has not yet reached me so you need not to do anything.

If you have any questions please feel free to contact me, or Associate Professor Malcolm Wright, my supervisor. We are both available on Phone 06 356 9099 at Massey University. My Email is m.s.macrae@massey.ac.nz

Yours sincerely

A handwritten signature in black ink that reads "MURRAY MacRae".

Murray MacRae  
Masters Student

**Confidential**  
ID: \_\_\_\_\_

**Survey on  
Residential Electricity Services**

---

**Department of Marketing  
Massey University  
2003**



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**SECTION ONE: ATTITUDES TO RESIDENTIAL ELECTRICITY SUPPLIER**

I would like to ask you a few questions about your attitudes towards your current Residential Electricity Supplier.

If you are not sure who your Residential Electricity Supplier is you might consider it as: The one supplier from which you purchase electricity for the place you live.

1. **My Current residential Electricity Supplier is:** (tick one ✓)

Contact Energy  1

Meridian Energy  2

Trustpower  3

FreshStart Energy  4

First Electric  5

Mercury Energy  6

Bay of Plenty Energy  7

Genesis Energy  8

Energy Online  9

Empower  10

Other: (please write in)  11  
\_\_\_\_\_

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1.-2.

**Now thinking about your electricity supplier** I want you to imagine dropping this supplier in order to adopt another supplier.

Now assuming that you are considering dropping your current electricity supplier in favour of another, can you please tell me how much you agree or disagree with each of the following statements?

**LOOK AT THE NUMBERED STATEMENT ON THE LEFT AND TICK ONE BOX (✓) FOR EACH STATEMENT**

Do you agree or disagree ...	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
2. I worry that the service offered by the other electricity suppliers won't work as well as expected.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
3. If I try to switch electricity supplier, I might end up with with bad service for a while.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
4. Switching to a new electricity supplier will probably involve hidden costs or charges.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
5. I am likely to end up with a bad deal financially if I switch to a new electricity supplier.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
6. Switching to a new electricity supplier will probably result in some unexpected hassle.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
7. I don't know what I'll end up having to deal with while switching to a new electricity supplier.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

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3.

4.

5.

6.

7.

Do you agree or disagree ...		Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	OFFICE USE ONLY
8.	I cannot afford the time to get the information to fully evaluate other electricity suppliers.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	9.
How much does it take.....?		Very little	A little	Neither a little or a lot	Quite a lot	A lot	
9.	How much time/effort does it take to get the information you need to feel comfortable evaluating new electricity suppliers?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	10.
Do you agree or disagree ...		Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	
10.	Comparing the benefits of my electricity supplier to the benefits of other electricity suppliers takes too much time/effort, <i>even when I have the information.</i>	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	11.
11.	It is tough to compare the other electricity suppliers.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	12.
12.	Learning to use the features offered by a new electricity supplier as well as I use my electricity supplier would take time.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	13.

Do you agree or disagree ...	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	OFFICE USE ONLY
13. There is not much involved in understanding a new electricity supplier well.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14.
14. Even after switching, it would take effort to 'get up to speed' with a new electricity supplier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15.
15. Getting used to how another electricity supplier works would be easy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16.
16. It takes time to go through the steps of switching to a new electricity supplier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17.
17. Switching electricity suppliers involves an unpleasant sales process.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18.
18. The process of starting up with a new electricity supplier is quick/easy.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	19.
19. There are a lot of formalities involved in switching to a new electricity supplier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20.
20. Switching to a new electricity supplier would mean losing or replacing points, credits, services and so on, that I have accumulated with my current electricity supplier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	21.

						OFFICE USE ONLY
How much would you lose.....?	Lose nothing	Lose a little	Neither lose a little nor a lot	Lose quite a lot	Lose a lot	
21. How much would you lose in credits, accumulated points, services you have already paid for, and so on, if you switched to a new electricity supplier?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	22.
Do you agree or disagree ...	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	
22. I will lose benefits of being a long term customer if I leave my electricity supplier.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	23.
23. Switching to a new electricity supplier would involve some upfront costs (set-up fees, membership fees, deposits, etc).	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	24.
How much does it take?	Very little	A little	Neither a little or a lot	Quite a lot	A Lot	
24. How much money would it take to pay for all of the costs associated with switching electricity suppliers?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	25.

Do you agree or disagree ...	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	OFFICE USE ONLY
25. I would miss working with the people at my electricity supplier if I switched electricity suppliers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	26.
26. I am more comfortable interacting with the people working for my electricity supplier than I would be if I switched electricity suppliers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	27.
27. The people where I currently get my electricity matter to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	28.
28. I like talking to the people from my electricity supplier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	29.
29. I like the public image my electricity supplier has.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	30.
30. I support my electricity supplier as a firm.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	31.
31. I do not care about the brand/company name of the electricity supplier I use.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	32.
32. I am satisfied with my electricity supplier.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	33.

Do you agree or disagree ...	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
------------------------------	----------------	-------	----------------------------	----------	-------------------

33. What I get from my electricity supplier falls short of what I expect for this type of service.

1       2       3       4       5

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34.

35.

36.

37.

How well does...?	Extremely poorly	Poorly	Neither poorly nor well	Well	Extremely Well
-------------------	------------------	--------	-------------------------	------	----------------

34. Imagine an ideal electricity supplier-one that does everything a electricity supplier should do. How does your electricity supplier compare with this ideal electricity supplier?

1       2       3       4       5

35. How well does your electricity supplier meet your needs at this time?

1       2       3       4       5

How Likely ..?	Very unlikely	Unlikely	Neither unlikely nor likely	Likely	Very likely
----------------	---------------	----------	-----------------------------	--------	-------------

36. How likely are you to switch to a competing electricity supplier during the next year?

1       2       3       4       5



**SECTION TWO: ELECTRICITY SUPPLIER SWITCHING EXPERIENCE**

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**39. Now how many times have you changed your electricity supplier in the last five years?** (✓)

- Never  1
- Once  2
- Twice  3
- Three times  4
- More than three times  5

41.

**40. If you have changed electricity supplier in the last five years, what was the main reason for changing to your current electricity supplier?** (✓ TICK ONLY ONE)

- The charges from my previous electricity supplier were too high  1
- The service I received from my previous electricity supplier was poor  2
- I wanted variety, just for a change  3
- I moved house and needed a better located electricity supplier  4
- I moved work and needed a better located electricity supplier  5
- Other (write in .....  
.....  
.....).

42.

Note  
(52 onwards  
for Text)

**41. How long have you been with your current supplier?** (✓)

- Less than one year  1
- One to two years  2
- Three to five years  3
- Six to ten years  4
- More than ten years  5

43.

**SECTION THREE: ABOUT YOURSELF.** (ALL OF THE INFORMATION I COLLECT ABOUT YOU IS CONFIDENTIAL AND USED TO ENSURE I HAVE A REPRESENTATIVE SAMPLE).

OFFICE USE ONLY

44.

45.

46.

42. Are you.....? (✓) Male \_1 Female \_2

43. For how long have you lived at your present address? (✓)

Less than a year \_1

1-3 years \_2

4-8 years \_3

More than 8 years \_4

44. Including yourself, other adults and children, how many people live in your household? (✓)

One \_1

Two \_2

Three or Four \_3

Five or more \_4

45. In what year were you born? 19

OFFICE USE ONLY

47.

46. Including any partner's income, what is your yearly total household income before tax? (✓)

Under \$30,000

\$30,000 - \$60,000

Over \$60,000

48.

47. Is where you live...? (✓)

Inner city

In the suburbs

Town /small town

Rural area

49.

48. Which of these statements best describes your highest level of formal education? (✓)

No formal schooling

Primary or Intermediate school

Secondary up to 3 years

Secondary for 4 years or more

University/polytechnic for up to 3 years

University/polytechnic for 4 years or more

50.

**49. Please tick as many boxes as you need to show which ethnic groups you identify with.**

N Z Maori  1

N Z European or Pakeha  2

Pacific Island  3

Other  4

OFFICE USE ONLY
51.

**THIS IS THE END OF THE QUESTIONNAIRE.**

**Are there any comments you would like to make about this questionnaire?**

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**THANK YOU FOR HELPING ME WITH THIS SURVEY**

**Confidential**

ID: \_\_\_\_\_

# **Survey on Personal Banking Services**

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**Department of Marketing  
Massey University  
2003**



**Massey University**

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**SECTION ONE: ATTITUDES TO MAIN FINANCIAL INSTITUTION**

I would like to ask you a few questions about your attitudes towards your Main Financial Institution (for most people this is a bank).

If you are not sure what your Main Financial Institution is you might consider it as: The one that you do **most** of your banking at, **or** the one that holds your mortgage, **or** the one at which you hold your everyday accounts. **There is no right or wrong answer, just decide your main institution and continue.**

1. My Main Financial Institution (Bank) is: Tick One (✓)

- ANZ  1
- ASB/ Bank Direct  2
- BNZ  3
- Kiwi Bank  4
- National Bank  5
- PSIS  6
- Taranaki Savings Bank  7
- Westpac  8
- Citibank  9
- Hong Kong Shanghai Bank/HSBC  10
- Other: (please write in)  11

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1.-2.

**Now thinking about your bank** I want you to imagine dropping this bank in order to adopt another bank.

Now, assuming that you **are** considering dropping your current main bank in favour of another bank. Can you please tell me how much you agree or disagree with each of the following statements?

**LOOK AT THE NUMBERED STATEMENT ON THE LEFT AND TICK ONE BOX (✓) FOR EACH STATEMENT**

Do you agree or disagree ...	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	OFFICE USE ONLY
2. I worry that the service offered by the other banks won't work as well as expected.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	3.
3. If I try to switch bank, I might end up with bad service for a while.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	4.
4. Switching to a new bank will probably involve hidden costs or charges.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	5.
5. I am likely to end up with a bad deal financially if I switch to a new bank.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	6.
6. Switching to a new bank will probably result in some unexpected hassle.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	7.
7. I don't know what I'll end up having to deal with while switching to a new bank.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	8.
8. I cannot afford the time to get the information to fully evaluate other banks	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	9.

How much does it take.....?	Very little	A little	Neither a little or a lot	Quite a lot	A lot
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9. How much time/effort does it take to get the information you need to feel comfortable evaluating new banks?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
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Do you agree or disagree ...	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
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10. Comparing the benefits of my bank to the benefits of other banks takes too much time/effort, even when I have the information.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
--	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------

11. It is tough to compare the other banks.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
---	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------

12. Learning to use the features offered by a new bank as well as I use my bank would take time.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
--	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------

13. There is not much involved in understanding a new bank well.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
--	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------

14. Even after switching, it would take effort to 'get up to speed' with a new bank.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
--	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------

15. Getting used to how another bank works would be easy.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
---	----------------------------	----------------------------	----------------------------	----------------------------	----------------------------

16. It takes time to go through the steps of switching to a new bank.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
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10.

11.

12.

13.

14.

15.

16.

17.

						OFFICE USE ONLY
Do you agree or disagree ...	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	
17. Switching banks involves an unpleasant sales process.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	18.
18. The process of starting up with a new bank is quick/easy.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	19.
19. There are a lot of formalities involved in switching to a new bank.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	20.
20. Switching to a new bank would mean losing or replacing points, credits, services and so on, that I have accumulated with my current bank.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	21.
How much would you lose.....?	Lose nothing	Lose a little	Neither lose a little nor a lot	Lose quite a lot	Lose a lot	
21. How much would you lose in credits, accumulated points, services you have already paid for, and so on, if you switched to a new bank?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	22.

						OFFICE USE ONLY
Do you agree or disagree ...	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	
22. I will lose benefits of being a long term customer if I leave my bank.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	23.
23. Switching to a new bank would involve some upfront costs (set-up fees, membership fees, deposits, etc).	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	24.
How much does it take?	Very little	A little	Neither a little or a lot	Quite a lot	A lot	
24. How much money would it take to pay for all of the costs associated with switching banks?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	25.
Do you agree or disagree ...	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	
25. I would miss working with the people at my bank if I switched banks.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	26.
26. I am more comfortable interacting with the people working for my bank than I would be if I switched banks.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	27.
27. The people where I currently get my banking done matter to me.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	28.

						OFFICE USE ONLY
Do you agree or disagree ...	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	
28. I like talking to the people where I do my banking.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	29.
29. I like the public image my bank has.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	30.
30. I support my bank as a firm.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	31.
31. I do not care about the brand/company name of the bank I use.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	32.
32. I am satisfied with my bank.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	33.
33. What I get from my bank falls short of what I expect for this type of service.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	34.
How well does...?	Extremely poorly	Poorly	Neither poorly nor well	Well	Extremely well	
34. Imagine an ideal bank- one that does everything a bank should do. How does your bank compare with this ideal bank?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	35.

						OFFICE USE ONLY
How well does...?	Extremely poorly	Poorly	Neither poorly nor well	Well	Extremely well	
35. How well does your bank meet your needs at this time?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	36.
What are the chances of...?	Very unlikely	Unlikely	Neither unlikely nor likely	Likely	Very likely	
36. How likely are you to switch to a competing bank during the next year?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	37.
What are the chances of...?	0% (No chance I will stay)	25%	50%	75%	100% (I certainly will stay)	
37. What are the chances that you stay with your bank for the next year?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	38.
						19.

38. Using the scale below, how likely would you be to switch banks in the next year?

				(✓)
-	-	10	Certain, practically certain (99 in 100)	<input type="checkbox"/> 10
-	-	9	Almost sure (9 in 10)	<input type="checkbox"/> 9
-	-	8	Very probable (8 in 10)	<input type="checkbox"/> 8
-	-	7	Probable (7 in 10)	<input type="checkbox"/> 7
-	-	6	Good possibility (6 in 10)	<input type="checkbox"/> 6
-	-	5	Fairly good possibility (5 in 10)	<input type="checkbox"/> 5
-	-	4	Fair possibility (4 in 10)	<input type="checkbox"/> 4
-	-	3	Some possibility (3 in 10)	<input type="checkbox"/> 3
-	-	2	Slight possibility (2 in 10)	<input type="checkbox"/> 2
-	-	1	Very slight possibility (1 in 10)	<input type="checkbox"/> 1
-	-	0	No chance, almost no chance (1 in 100)	<input type="checkbox"/> 0

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39.-40.

**SECTION TWO: BANK SWITCHING EXPERIENCE**

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**39. Now how many times have you changed your bank in the last five years? (✓)**

- Never  1
- Once  2
- Twice  3
- Three times  4
- More than three times  5

41.

**40. If you have changed bank in the last five years, what was the main reason for changing to your current bank? (✓ TICK ONE)**

- The charges from my previous bank were too high  1
- The service I received from my previous bank was poor  2
- I wanted variety, just for a change  3
- I moved house and needed a more conveniently located bank  4
- I moved work and needed a more conveniently located bank  5
- Other (write in.....  
.....  
..... ).  6

42.

**41. How long have you been with your current bank? (✓)**

- Less than one year  1
- One to two years  2
- Three to five years  3
- Six to ten years  4
- More than ten years  5

43.

**SECTION THREE: ABOUT YOURSELF.** (All of the information we are collecting is confidential and used to ensure we have a representative sample).

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42. Are you.....? (✓)

Male  1 Female  2

43. For how long have you lived at your present address? (✓)

Less than a year  1

1-3 years  2

4-8 years  3

More than 8 years  4

44. Including yourself, other adults and children, how many people live in your household? (✓)

One  1

Two  2

Three or Four  3

Five or more  4

44.

45.

46.

45. In what year were you born? 19

46. Including any partner's income, what is your yearly total household income before tax? (✓)

- Under \$30,000  1
- \$30,000 - \$60,000  2
- Over \$60,000  3

47. Is where you live...? (✓)

- Inner city  1
- In the suburbs  2
- Town /small town  3
- Rural area  4

48. Which of these statements best describes your highest level of formal education? (✓)

- No formal schooling  1
- Primary or Intermediate school  2
- Secondary up to 3 years  3
- Secondary for 4 years or more  4
- University/polytechnic for up to 3 years  5
- University/polytechnic for 4 years or more  6

OFFICE USE ONLY

47.

48.

49.

50.

**49. Please tick as many boxes as you need to show which ethnic groups you identify with.**

N Z Maori  1

N Z European or Pakeha  2

Pacific Island  3

Other  4

OFFICE USE ONLY

51.

**THIS IS THE END OF THE QUESTIONNAIRE.**

**Are there any comments you would like to make about this questionnaire?**

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**Thank you for helping us with this survey**