The Antecedents and Consequences of Perceived Value in the Mobile Phone Services Market in Singapore

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Abstract

Increasingly, academics and the business community alike are acknowledging the growing importance of customer value as a newly dominant concept (see, for example, Woodall, 2003; Sweeney and Soutar, 2001; Day, 2000; Sweeney et al., 1999). This is because of the important role it plays in predicting purchase behaviour and driving loyalty (e.g. Sirdeshmukh et al., 2002; Oliver, 1999, Bolton and Drew, 1991).

This study expands previous research by including the roles of corporate image, trust, involvement as well as the cognitive, affective and conative components of loyalty within a model of the antecedents and consequences of perceived value. The model is tested on 301 consumers in the mobile phone services context. Findings were analysed using structural equation modelling.

Empirical results suggest that corporate image and service quality had significant positive effects on perceived value and customer trust respectively. In turn, customer loyalty was found to be positively influenced by trust and perceived value with these relationships moderated by customers’ involvement levels.

Finally, perceived value was found to be to a significant mediator between the service quality and corporate image and customer loyalty relationships. These findings have major implications for mobile phone service providers in their attempts to manage customer value and for future value research.
Acknowledgements

This thesis would never have seen the light of the day, if not for these people.

First and foremost, I am truly indebted, in a number of ways, to Professor Geoffrey Soutar, my thesis supervisor. Geoff has been extremely patient and generous with his advice. This has allowed me to keep my feet firmly on the ground. My cries for help received his almost instantaneous responses. It has been my privilege to learn from him.

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My deepest appreciation goes out to my parents, Yeo A Ti and Kar Sim, who inspired me to undertake this intellectual journey.

Finally, flowers and thanks go to my wife, Elaine, for her continued understanding of the incredible number of hours that my computer and I spend together on a project like this. I can only imagine the strain she has to endure, competing with a machine for a few stolen moments together. Interestingly, in the last few years, I noted that she has totally abandoned any attempts to modify my compulsive behaviour to undertake challenges of this dimension.

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Chapter One

An Introduction to the Research Problem

1.0 Introduction

There has been sustained interest in the value construct among marketing researchers and practitioners over the last few decades (e.g. Woodall, 2003; Ralston, 2003; Flint et al., 2002; Sweeney and Soutar, 2001; Lapierre, 2000; Sweeney et al., 1999; Sinha and DeSarbo, 1998; Woodruff and Gardial, 1996; Gale, 1994; Dodds et al., 1991; Band 1991; Zeithaml 1988; Zaltman and Wallendorf, 1983; Engel and Blackwell, 1982; Schiffman and Kanuk, 1987). The role value plays is of major and increasing concern to consumers and marketers (Dodds et al., 1991) and one of the most powerful forces in today’s marketplace (Albrecht, 1992; Buzzell and Gale, 1987). Indeed, it was seen as “emerging as the strategic imperative” for the 1990s (Vantrappen, 1992, p. 53) and this importance has not changed.

Customer value is often suggested as a means for ensuring long-term survival in today’s quickly evolving and highly competitive markets (Woodruff and Gardial, 1996; Hamel and Prahalad, 1994; Gale, 1994; Bloch and Kenyon, 1998; Dawkins, 1988; Collins and Montgomery, 1998; Porter, 1980; Daft 1992; Bolton, 1996). Specifically, customer value impacts on customer loyalty (Leung et al., 1998; Oliver, 1980; Zeithaml, 1988) and is the driving force behind customer attraction, retention and repurchase (Holbrook, 1994; Rust and Oliver, 1994; Leung et al., 1998; Oliver, 1980; Zeithaml, 1988).

Customer value, however, is far from a new concept in marketing. Though it did not attract much explicit attention until it became a watchword in the 1990s, value has always been “the fundamental basis for all marketing activity” (Holbrook, 1994, p. 22) and is closely linked to the exchange theory of marketing. According to this view, voluntary market exchange is a key constituent of the discipline (Alderson, 1957; Kotler, 1972; Houston and Gassenheimer, 1987) as such exchange only takes place if the parties involved expect to be better off after the exchange (Eggert and Ulaga, 2002).
Given this view, the present chapter outlines the nature of the present study that was undertaken to further examine value. In section 1.2, a justification is provided for the study while, in section 1.3, the research problem and its resulting research questions are discussed. Section 1.4 describes the study’s scope, while section 1.5 comments on the study’s intended scientific and managerial contributions. In section 1.6, the most important terms that are used in the study are defined, while section 1.7 gives a brief overview of the study’s structure.

1.1 A Research Justification

1.2.1 The Study’s Importance

Customer value has been a major research topic during the last few years (e.g. Silcox, 2002; Ulaga, 2001; Doyle, 2000; Patterson and Spreng, 1997; de Ruyter, Bloemer and Peeters, 1997; Zeithaml and Bitner, 1996; Holbrook, 1994; Sweeney, 1995; Spreng et al., 1993) and researchers have highlighted the importance of understanding customer’s value perceptions as a prerequisite for effective marketing (Reicheld and Sasser, 1990). This importance is further evidenced by special journal issues on customer value and relationship marketing (e.g. Journal of Customer Behaviour, 2003; Industrial Marketing Management, 2001; Journal of Academy of Marketing Science, 1997) and by conferences that have targeted the topic (e.g. Academy of Marketing Science, 2003; Emory University Conferences, 1993-1998). In addition, “understanding customers” and “assessing value to customers of firm’s actions” are ranked respectively as the “top-tier priority topic” and as a “sub-topic of greatest interest” in the Marketing Science Institute’s list of research priorities for 2002 - 2004. Further, people have recognised the increasing importance of investigating:

1. Value in consumer environments

2. The way firms can enhance customers’ value perceptions, and

3. The way customer relationship proneness affects buyer-seller relationships.

These three research opportunities are discussed next.
There is considerable evidence that value plays a pivotal role in consumption contexts (e.g. Eggert and Ulaga, 2002; Silcox, 2002; Lapierre, 2000; Anderson and Narus, 1999; Sweeney et al., 1999). More and more, consumers want to be respected and approached as individuals (Beddoe, 1995; Peppers and Rogers, 1993; Petrison et al., 1993; Rapp and Collins, 1990). Therefore, gathering and strategically using individual consumer information to enhance relationships are likely to improve a seller’s competitive position in consumer markets (De Bonis and Nucifora, 1994; Fletcher et al., 1996; McCutcheon and Wang, 1995; Nash, 1993).

As the cost of recruiting a new customer is potentially five times more than the cost of retaining an existing customer (Barsky, 1994; Reicheld and Sasser, 1990), a main objective of delivering good value is to retain customers and create loyalty (Rust and Zahorik, 1993). Loyal customers build businesses by buying more, paying premium prices and providing new referrals through positive word of mouth (Keaveney, 1995; O'Brien and Jones, 1995; Reicheld and Kenny, 1990).

The challenge for firms trying to understand customer value is even more compelling as recent research suggest “more that 70% of customers feel they gain nothing by being loyal to a company” (Gillespie, 1999) and, therefore, would move if perceived benefits were greater elsewhere. Research has also indicated that only 5% to 10% of unhappy customers complain (Dube and Maute, 1996). The “silent dissatisfieds” simply leave, and more than 50% of customers who do complain feel worse about the company’s service delivery after lodging their complaint (Hart et al., 1990). Indeed, understanding what buyers’ value, creating value for them, and managing value over time have long been recognized as essential elements of every market-oriented firm’s core business strategy (Drucker, 1985; Porter, 1985, 1998; Slater and Narver, 1998; DeSarbo et al., 2001).

Researchers are also starting to recognise that more research is needed to better understand the way firms impact value perceptions and, ultimately, loyalty (Flint et al., 2002; Barnes, 1994; Dwyer et al., 1987; Webster, 1992). Despite sellers’ apparent interests in these effects, there is little information available about how to design or implement profitable relationship strategies (Beatty et al., 1996). According to Porter
(1985), the buyer's value chain is a starting point for understanding what is valuable to a customer and it can be described as "a series of actions a buyer [i.e. customer] takes in specific contexts with the aim of producing value for that customer". Organisations need to understand what drivers create value for customers in order to build a competitive advantage (Lichtenthal and Wilson, 1992). Determining what a customer wants also helps a firm formulate a clear statement of its “value proposition” (i.e. the communication of the unique benefits and utility obtainable only from the focal product in contrast to those from its competitors). Recent focus has shifted to the compelling issue of how customers can become “co-producers of value” and, therefore, how firms can “co-opt” their competencies (e.g., Prahalad and Ramaswamy, 2000; Ramirez, 1999). Value co-production has become more likely and achievable with recent rapidly-evolving technological innovations (e.g., the Internet) and the increasing blurring of firms’ traditional boundaries.

The importance of identifying customers who are most likely to be loyal is also being increasingly recognised (Bendapudi and Berry, 1997; Christy et al., 1996). For all of the anticipated benefits of customer retention and loyalty, problems are evident (Dowling and Uncles, 1997). Central to these concerns is a realisation that not all customers should be targeted with retention and loyalty efforts and that some of a firm’s most satisfied and loyal customers might switch for reasons beyond the control of the firm and, at times, beyond the control of the customer. Although it is encouraging to note the increasing awareness that not all customers are alike in this regard (Blattberg and Deighton, 1996; Reichheld, 1993), little is known about how and why customers differ. While much attention has been given to value, remarkably few firms have the knowledge and capability to assess value and gain an equitable return for the value they deliver (Anderson and Narus, 1999, p. 3).

If organisations do not continue to innovate to protect and enhance the value they create, they will find their value-creating frontier retreating to their detriment (Grundy, 1998). A better understanding as to what constitutes “ongoing service” value and an improved awareness and targeting of customers should enable such organisations to market themselves more effectively (Silcox, 2002). Consequently, a consumer’s perception of
the extent to which a provider directs efforts at customers and these customers’ proneness to engage in buyer-seller relationships are the core topics investigated in this study.

1.2.2 Some Shortcomings of Existing Research

Given the widespread attention academics and practitioners have paid to customer value in the last few decades (Ralston, 2003; Flint et al., 2002; Sweeney et al., 1999; Naumann, 1995; Slywotzky, 1996), one would expect it to have a rich tradition of theory development, scale development and empirical research. Contrasting the rudimentary research so far undertaken at the theoretical level with the considerable efforts which have been made in practice, Sinha and DeSarbo (1998) argued that, as far as systematic description, explanation and measurement of the value construct is concerned, theoretical research in the field of marketing is lagging behind the knowledge generated in practice. In this section, we describe some conceptual and empirical shortcomings of existing research in this area.

1.2.2.1 Conceptual shortcomings

There is general agreement as to a definition of value (Flint et al., 2002; Parasuraman, 1997). The terms used included consumer value (Holbrook, 1999), perceived value (Silcox, 2002; Patterson and Spreng, 1997; Chang and Wildt, 1994; Dodds et al., 1991; Monroe, 1990; Zeithaml 1988; Zeithaml and Bitner, 2000; Sheth et al., 1991), customer value (Ralston, 2003; Gale, 1994; Holbrook, 1996; Oh, 1999; Woodruff, 1997), service value (Bolton and Drew, 1991; Jayanti and Ghosh, 1996), acquisition and transaction value (Grewal et al., 1998; Monroe, 1990) and value for money (Ashworth and Johnson, 1996). Some researchers mentioned different types of value, such as Holbrook’s (1999) eight types of value (efficiency, play, excellence, aesthetics, status, ethics, esteem and spirituality), Sheth, et al.’s (1991) five types of value (functional, social, emotional, epistemic and conditional), and Thaler’s (1985) and Grewal et al.’s (1998) acquisition and transaction values. The different types of values break the consumption experience into pieces and look at the experience from different angles. For example, a consumer may value a product because of its emotional, functional and social content. But, at the
same time, the consumer may attach a summary value judgment to the product that comes from those three value types.

Moreover, most definitions in customer value research tend to be broad, generic, or all-encompassing, which makes them less valuable for directing marketing practice and theory development. Further, few attempts have been made to examine the applicability of existing relationship marketing constructs in a consumer context (Gruen, 1995). Consequently, there is a need to determine which relational constructs are most relevant in a consumer setting and to provide better definitions of these constructs that can support empirical validation (Bagozzi, 1995; Peterson, 1995).

1.2.2.2 Empirical shortcomings

First, while there is a large body of knowledge on customer value, there is little systematic empirical research (Sweeney and Soutar, 2001; Lapierre, 2000; Holbrook, 1999; Holbrook, 1994; Woodruff, 1997). Patterson and Spreng (1997) argued that little empirical research has been conducted on buyers’ perceptions of value in either consumer or industrial settings. The present study is an attempt to provide such information by investigating the role value plays in people’s attitudes towards and decisions about a continuing service. Most previous studies have investigated perceived value from a product point of view, particularly by studying high involvement and infrequently purchased products such as consumer durables (e.g. Baker 1990; Kerin et al., 1992; Sweeney 1995; Sweeney et al., 1997, 1999). Continuing services involve an ongoing relationship with a service provider and so differ significantly from the types of exchanges that have been examined previously.

Second, Parasuraman (1997) argued that one critical aspect of the customer value theory that has not yet been fully developed concerns the sources from which customers derive value. Much of the current theory focuses on attributes related to product and service offerings and customer value is seen as inherent in or linked through the use of a product or service (Woodruff, 1997). In a hyper-competitive environment, where sources of product-based and process-based competitive advantages are quickly imitated by competitors (Jacobson, 1992; Dickson, 1992; Ghemawat, 1986), a commitment to
customer-value innovation is essential to sustaining a competitive advantage. One way to conceive of innovation in relation to customer value is to look at relational value-based drivers in addition to product and service related drivers (Lapierre, 2002). The present study attempts to do this through the inclusion of value-based drivers, such as corporate image, customer trust and ego/purchase involvement. Table 1-1 provides some quotes that support the need for the current study.

**TABLE 1: QUOTES SUPPORTING RESEARCH JUSTIFICATIONS**

<table>
<thead>
<tr>
<th>Quote</th>
<th>Reference</th>
</tr>
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<tbody>
<tr>
<td>“Control over the provision of value to customers has become a strategic imperative for the 1990s, rivalling satisfaction for management attention”</td>
<td>Sweeney, Soutar and Johnson 1999, p. 78</td>
</tr>
<tr>
<td>“[Marketing managers] are pushed to adopt customer value strategies … these strategies require that managers understand what customers want or value from products, services and supplier relationships”</td>
<td>Flint, Woodruff and Gardial, 2002, p. 102</td>
</tr>
<tr>
<td>“Recognition of the importance of the different dimensions of value should enable...marketers to develop more sophisticated positioning strategies”</td>
<td>Sweeney and Soutar 2001, p. 217</td>
</tr>
<tr>
<td>“It is more cost effective to group consumers into classes so that specific marketing strategies can be used to address different segments…value orientation is a useful construct in differentiating between consumer segments.”</td>
<td>Swait and Sweeney 2000, p. 77</td>
</tr>
<tr>
<td>“Despite a growing body of research, it is still not clear how value interacts with related marketing constructs.”</td>
<td>Eggert and Ulaga 2002, p. 107</td>
</tr>
<tr>
<td>“Only a few articles have studied perceived value as a focal construct”</td>
<td>Sinha and Desarbo 1998, p. 237</td>
</tr>
<tr>
<td>“Is measuring the satisfaction customers have with a product or service really different from the value they derive from it? If so, what exactly is the distinction? …Theoretical and empirical research addressing this question is needed to reduce the apparent operational ambiguities surrounding the two constructs and understand their inter-relationship.”</td>
<td>Parasuraman 1997, p. 155</td>
</tr>
</tbody>
</table>
Chapter Two: Perceived Value in a Consumer Context

<table>
<thead>
<tr>
<th>Quote</th>
<th>Reference</th>
</tr>
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<tbody>
<tr>
<td>“Little empirical research has been conducted in either consumer or industrial settings.”</td>
<td>Patterson and Spreng 1997, p. 414.</td>
</tr>
<tr>
<td>“Like product and service quality, a major difficulty in researching value is the variety of meanings that have been given to the term … Indeed, it is only recently that the value construct, rather than product quality and/or service quality, has received attention.”</td>
<td>Silcox 2002, p. 7</td>
</tr>
</tbody>
</table>

1.3 The Research Problem and the Research Questions

From the previous section, it is clear that, despite conceptual and empirical research efforts, there are several areas where improvement would be desirable. The research problem investigated in this study is focused at these areas. The research problem is divided into a number of research questions, namely:

1. What are the antecedents of perceived value?

2. What are the effects of perceived value, customer satisfaction and trust on customer loyalty in a continuous service setting?

3. To what extent does ego/purchase involvement moderate the effects of perceived value on customer satisfaction, trust and loyalty?

These are examined in turn.

1. What are the antecedents of perceived value?

In retail and continuous service contexts, there is general agreement about the relationships between image, risk, relative price, product and service quality and value (e.g. Silcox 2002; Johnson et. al. 2001; Cassel and Eklof 2001; Sweeney et al., 1999; Ostrum and Iacobucci 1995; Kerin et al., 1992; Dodds et al., 1991). The present study further examines these relationships in a continuous service environment.
Chapter Two: Perceived Value in a Consumer Context

2. What are the effects of perceived value, customer satisfaction and trust on customer loyalty (affective, cognitive and conative aspects) in a continuous service setting?

It is commonly agreed that value, satisfaction and trust enhance loyalty (Eggert and Ulaga 2002; Bove and Johnson 2002; Chaudhuri and Holbrook 2001; Gremler et al., 2001; Gronholdt et al., 2000; Garbarino and Johnson 1999; Bolton 1998; Tax et al., 1998; Patterson and Spreng 1997; Keaveney, 1995; Morgan and Hunt 1994; Rust and Zahorik 1993; Bitner 1990; Crosby and Stephens, 1987). Therefore, it can be expected that the levels of perceived value, satisfaction and trust affect the cognitive, affective and conative components of loyalty. This study empirically examines these relationships.

3. To what extent does ego/purchase involvement moderate the effects of perceived value on customer satisfaction, trust and loyalty?

Since a relationship has been described as an intermittent exchange between two or more parties over time (Hinde 1979; Hoekstra 1994), some scholars have argued that perceived value may not be sufficient for positive relationship outcomes to occur (Christy et al., 1996; Leuthesser 1997; Park and Choi 1998). For example, Solomon et al. (1985) claimed that, in low involvement situations, treating buyers as individuals will probably not pay, whereas, in high involvement situations, buyers want personal treatment. Consequently, approaches by a seller, however well-intentioned, could be regarded by a buyer as undesirable when involvement is low (Christy et al., 1996). The present study, therefore, empirically tests the existence of three moderator effects. First, ego/purchase involvement is hypothesised to moderate the relationship between perceived value and customer satisfaction. Second, ego/purchase involvement is hypothesised to moderate the relationship between perceived value and customer trust. Third, ego/purchase involvement is hypothesised to moderate the relationship between perceived value and customer loyalty. These research questions form the building blocks for the present study. In line with these questions, the main elements of the underlying conceptual model are shown in Figure 1-1.
1.4 The Research Scope

1.4.1 The Research Setting

1.4.1.1 Single Industry
The focus of the present study is on customers’ perceptions of and propensity to engage in buyer-seller relationships (dedication-based relationships). It is assumed that such motivations are more likely to apply in competitive and transparent market environments as buyers are not constrained by limited choice or a lack of information in such markets (Frazier and Rody, 1991). Consequently, the study was conducted in the mobile phone (or wireless) sector, which is such a market.
During the last five years, the wireless sector has been one of the world’s fastest-growing businesses. Indeed, the growth and attractiveness of the industry is suggested by the following statistics compiled by InfoTech (2002):

- By 2003, 25% of all telephone minutes will be accounted for by wireless services. By 2006, American penetration in the wireless-voice market is expected to reach 189 million subscribers, while the wireless-data market is expected to increase to 38 million subscribers.

- Of all wireless customers, 70% are using digital networks that allow carriers to efficiently offer more appealing services.

- Investment in network infrastructure has increased by 17% and the number of cell sites increased by 22.3%, indicating a clear upward trend in US coverage and quality.

However, despite the growth and promise, serious problems for industry profitability have emerged, namely:

- **Consolidation:** Many of the nearly 60 original cellular companies in United States are bankrupt, bought out or struggling with heavy debts. Six players now account for 80% of the wireless pie.

- **Growth:** Subscriber growth rates in United States fell from 50% yearly to 15% to 20% in 2002 and analysts predict only 10% growth rate in 2003 (*Business Week Online*, 2002).

- **Competition:** As an obvious result (and to consumers’ delight), firms have engaged in a devastating price war that eroded revenue growth and endangered financial stability.

- **Customer Strategy:** The industry paradigm has changed from one of “make big networks, get customers” to “make new services, please customers.” In short, the
industry has moved from a customer acquisition orientation to a customer retention orientation.

As the well of wireless subscribers has begun to run dry, churn – a customer’s decision to end a relationship and switch to another company – has become a major concern. In 2002, the industry average churn rate globally was 20% to 25% annually, which means companies lose 2% of their customers every month. The reasons for the high level of churn include the variety of companies, the similarity of their offerings and the cheap prices of handsets. To this end, customer retention has been suggested as a way to obtain superior performance (Fornell and Wernerfelt, 1987; Peters, 1988; Reichheld and Sasser, 1990). In fact, one study found that “the top six US wireless carriers would have saved $207 million if they had retained an additional 5% of customers open to incentives but who switched plans in the past year” (Reuters, 2002). This has spurred much of the recent research that has attempted to understand what mobile phone customers’ value and their associated attitudes and behaviours (e.g. Ralston, 2003; Lee et al., 2001; Gerpott et al., 2001; Szyperski and Loebbecke, 1999).

1.4.1.2 Using a Single Country

While the study’s validity could be increased by examining data from different countries (Geyskens et al., 1996; Iacobucci and Ostrom, 1996; Schwartz, 1992), data were collected from one country because of budget limitations. Singapore was a natural candidate because of its high mobile penetration rate (78.2% in 2002), which is one of the highest in Asia (International Data Corp., 2001). Thus, there was a pool of sophisticated potential respondents. In addition, there are a variety of highly competitive plans provided by the three cellular service providers [SingTel (50% market share), M1 (30%) and Starhub (20%)], making the task of choosing a mobile phone a challenging one for end-users who must choose between different mobile phone models, styles and technologies.

Firms initiate a variety of activities to improve customer retention, including customer satisfaction programs (Anderson and Sullivan, 1993; Rust and Zahorik, 1993; Anderson et al., 1994; Jones and Sasser, 1995), complaint management programs (Hirschman,
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1970; Fornell and Wernerfelt, 1987), and loyalty programs (Reichheld, 1996; Dowling and Uncles, 1997). In Singapore, for example, SingTel has an integrated loyalty programme, called ‘Red Rewards’, in which customers earn points for every dollar they spend using SingTel services, such as mobile phone, paging, fixed line, International Calling Card, STD and IDD 001. Not be outdone, M1, the second largest local operator, introduced its own loyalty programme, called ‘Sun Perks’, which is similarly tied to the use of its services.

1.4.2 Unit of Analysis

In his conceptual framework, Bagozzi (1975) classified exchanges according to type. Exchange types referred to the number of parties involved in an exchange and the directions of the exchange. “Restricted exchanges” were two-party reciprocal relationships, “generalised exchanges” were reciprocal relationships between parties that give to one party but receive from another party, and “complex exchanges” were mutual relationships between at least three parties. The type of relationship investigated in the present study is a two-party reciprocal relationship between a single consumer and a single service provider.

Further, the research questions are related to a single consumer’s perceptions of a particular service provider. We did not incorporate a buyer’s relationship with a particular sales associate because considerably more research has been directed at relationships with sales associates rather than to relationships with one particular service provider/store (e.g. Beatty et al., 1996; Crosby et al., 1990; Ellis, 1995).

1.5 Intended Research Contributions

1.5.1 Scientific Contribution

In this section, the study’s intended conceptual, methodological and empirical contributions are discussed, as shown in Figure 1-2.
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FIGURE 1-2: SCIENTIFIC CONTRIBUTIONS OF THE STUDY

1.5.1.1 Conceptual Contribution

The present study contributes to perceived value theory in three ways. First, it critically examines existing theories underlying perceived value in light of their potential contribution to understanding consumer relationships. In doing so, the study attempts to reduce the contention that customer value is in its infancy (Day and Crask, 2000; Holbrook, 1994). The review of these theories provided in chapter two served as a guiding framework for selecting and developing value’s antecedents and outcomes that are relevant in a consumer context and for formulating research hypotheses about the relationships between the constructs. The extension of previous value models to an area that has not been explored (mobile phone services) was also considered to be important. One of the main indicators of the validity of a theory is that it works in a variety of circumstances. The results of the present study can also help clarify the nature of mobile phone services consumption.

The present study used a multifaceted, multidimensional model of perceived value and examined their effects on three types of loyalty (cognitive, affective and conative). The focus was on two key facets of perceived value (functional value and value-for-money), which was conceptually appealing because these dimensions have strong theoretical frameworks and facilitate a fine-grained understanding of their differential effects on consumer loyalty. Despite this, these relationships have yet to be examined empirically. Finally, in order to assess which specific firm efforts affect a customer’s value

<table>
<thead>
<tr>
<th>Area of Contribution</th>
<th>Level of Contribution</th>
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<tbody>
<tr>
<td>Conceptual</td>
<td>Replication</td>
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<td></td>
<td>Extension</td>
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<td>Methodological</td>
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<td>Empirical</td>
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<td>1.5.1.3</td>
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...
perceptions, the study distinguished between, defined and operationalised the antecedents of perceived value in the mobile phone market.

1.5.1.2 Methodological Contribution

The study also made a methodological contribution through a replication of existing methods. The method used in this study is in line with generally accepted practices (e.g. Churchill, 1979; Hair et al., 1998). Strong efforts were made to ensure the validity and reliability of the constructs included. Moreover, qualitative as well as quantitative processes were used to develop appropriate constructs, as outlined in subsequent chapters.

1.5.1.3 Empirical contribution

The present study also makes an empirical contribution by investigating buyer-seller relationships in a continuous service context as viewed from a buyer perspective. The study assessed the impact of two new constructs (seller relationship orientation and buyer relationship proneness) on relationship outcomes. Moreover, the effects of various firm activities on the level of consumer perceived value were also examined. To date, research on customer retention has been mainly concerned with over-the-counter goods sold in unconnected individual transactions in mature markets (Gerpott et al., 2001). In the mobile communications market, however, use-dependent and service-like contract goods are sold. By focusing on this type of market a less “made-to-order field of research” is investigated.

1.5.2 Managerial Contribution

The churn phenomenon (customers who switch from one operator to another or those who abandon cellular services entirely) is destroying shareholder value in the wireless industry. Increasingly, saturated and competitive markets are forcing telecommunication operators (‘telcos’) to take on more customers who cannot pay their bills. Further, mobile phone users are inundated with more choices and increasingly complex service plans with the advent of wireless internet connectivity. This, and the low switching
barriers between service providers, has led to skyrocketing churn rates (Booz-Allen and Hamilton, 2001).

According to forecasts from International Data Corporation (1999), annual industry churn rates (40% today) will rise to 57% by 2003 and cost the industry $19 billion a year. This, coupled with the fact that, on average, American companies lose 50% of their customers over a five year period (Seybold, 1998), which stunts corporate performance by 25% to 50% (Reicheld and Teal, 1996), suggests the sector is likely to have problems. As a result, several researchers have underlined the fact that keeping existing customers deserves more attention than attracting new customers (Achrol, 1997; Barnes, 1995; Kalwani and Narayandas, 1995; Naumann and Shannon, 1992; Perrien et al., 1995; Reichheld and Sasser, 1990). As Dekimpe et al. (1997) noted, it is more expensive to recruit new customers than to keep existing customers (Rosenberg and Czepiel, 1983). Loyal customers are also assumed to be less price-sensitive (Krisnamurthi and Raj, 1991), and to give a firm valuable time to respond to actions taken by competitors (Aaker, 1991). Further, loyal customers may reduce marketing costs and raise entry barriers (Sharp and Sharp, 1997).

A better understanding of how mobile phone customers value or undervalue a service provider’s offerings and what defines value for mobile phone services can provide cellular service providers with powerful guidelines for fine-tuning their efforts that are aimed at enhancing consumer relationships (Ganesan, 1994). Moreover, identifying buyers who are most prone to engage in relationships should be beneficial to service providers as such knowledge should improve the efficiency of their marketing investments (Barnes, 1995; Bendapudi and Berry, 1997; Christy et al., 1996). Thus, the present study’s purpose was to provide an understanding of customer churn behaviour and to help telcos craft differentiated customer acquisition, value assessment and customer retention strategies. The study also attempted to clarify the importance of value and loyalty to relationship management.
1.6 Defining Some Important Terms

In this section, the more important terms used in the study are defined. These concepts are further discussed in chapters two, three and four.

• **Perceived value** – A buyer’s overall evaluation of a seller’s product, service, and relationship efforts made towards the buyer. In the present context, for a service to have value, it has to be needed, be within an acceptable price range and have an acceptable quality (Sweeney and Soutar, 1995, p.59-60).

• **Corporate Image** – A buyer’s perception of an organisation through the accumulation of all received messages (Ind, 1997, p.48)

• **Perceived Risk** – A buyer’s belief about the likelihood of negative consequences (i.e., danger, loss, etc.) due to uncertainty about loss or gain in a particular transaction (It is assumed that there are financial, performance, social, psychological, safety, and time/convenience loss risks) (Brooker, 1984; Jacoby and Kaplan, 1972; Roselius, 1971).

• **Perceived Service Quality** – A buyer’s perception about how the service is being delivered (i.e. “functional service quality”) and the outcome of the interaction (“technical service quality”) (Gronroos, 1984, p.36). It is also a buyer’s belief that an offering will provide satisfaction “relative” to available alternatives” (Monroe and Krishnan, 1985, p.212; Oxenfeldt 1950, p.300)

• **Product Quality** – A buyer’s belief about the “appearance and suitability of a product for his/her needs and one that will last a long time.” (Sweeney and Soutar, 1995, p.57).

• **Relative Price** – The monetary and non-monetary sacrifice required to obtain a product (Zeithaml, 1988; Murphy and Enis, 1986).
• **Customer Trust** – A buyer’s belief in a firm’s current and future benevolence, honesty and competence to act in the best interest of the relationship in question (Moorman et al., 1992, p. 315; Morgan and Hunt, 1994, p. 23).

• **Customer Satisfaction** – A buyer’s overall evaluation, based on all purchase and consumption experiences and encounters, with a particular service provider. (Fornell, 1992; Johnson and Fornell, 1991; Bitner and Hubbert, 1993, p.77).

• **Customer Loyalty** – A buyer’s desire to maintain a strong and enduring relationship with a firm, which is enhanced by reciprocity, sustained by a perception of equity and fairness and typified by co-operative attitudes and behaviours (Aaker, 1991; Assael, 1998; Day, 1969; Jacoby and Chestnut, 1978; Jacoby and Kyner, 1973; Oliver, 1999; Tucker, 1964).

• **Ego Involvement** – The importance a buyer attaches to a product or service based on his/her self concept, values, and ego (Beatty et al., 1988, p. 150).

• **Purchase Involvement** – The importance a buyer attaches to product category based on his or her inherent needs, values and interests. (Mittal and Lee, 1989; Zaichkowsky, 1985).

### 1.7 The Structure of the Thesis

Figure 1-3 provides a summary of the structure of the present thesis. In the present chapter, the theoretical framework of the study was discussed. Chapter two provides a critical review of the focal construct of this study (perceived value). The same chapter examines the roles of product category and ego constructs as a moderator. In chapter three, five suggested value antecedents (corporate image, perceived risk, price, perceived service quality, product quality and customer trust) are examined. In chapter four, two perceived value outcomes (customer satisfaction and customer loyalty) are discussed, while chapter five outlines the model and the related hypotheses that flow from these discussions.
In part two, the empirical research is presented. Chapter six describes the research methodology and the process of item generation and testing. Meanwhile, chapter seven provides the preliminary findings from the study. Chapter eight then presents the empirical results related to testing the research hypotheses mentioned in chapter five. Finally, chapter nine discusses the main results of the study, points out its limitations, suggests several possible research directions for the future, and discusses theoretical and managerial implications.

**FIGURE 1-3 PROPOSED THESIS STRUCTURE**
Chapter Two
Perceived Value in a Consumer Context

2.0 The Importance of the Value Construct

The 1990s was called the “decade of value”, while value in itself has been labelled “a new marketing mania” (Mason, 1992). In the marketplace, value often is defined as "quality at the right price" (Schecter, 1984) and is seen as more important to consumers than quality, because value is quality that the consumers can afford. In the field of marketing, perceived value has been identified as one of the most important ways of gaining a competitive edge (Parasuraman, 1997; Johnson et al., 1999; Flint et al., 1997; Anderson and Narus, 1998) and has been argued to be the most important indicator of
repurchase intentions (Parasuraman and Grewal, 2000; Chang and Wildt, 1994; Jayanti and Ghosh, 1996; Petrick et al., 1999; Woodruff, 1997).

The concept of value is not new in marketing (Doyle, 2000; Payne and Holt, 1999). Early examples of rice merchants in ancient China (Grönroos, 1996) and traders in pre-industrial society (Sheth and Parvatiyar, 1995) illustrate that at least some buyers and sellers gained some kind of “value” from their business relationships and, therefore, continued to stay in these relationships.

Payne and Holt (1999) listed a number of marketing writers from the mid-20th century who studied value. For example, Churchill (1942), Womer (1944), and Barton (1946) all examined brand loyalty and repeat purchasing. It is interesting that the emphasis on delivering customer value and, in turn, shareholder value, was not always necessary in the past as profits could be achieved because markets were regulated, there were scarce production resources or distribution channels were controlled, or poorly performing businesses were acquired and rationalised (Doyle, 2000).

Such opportunities are now diminishing because markets are changing dramatically in terms of physical distance, time, markets, economy, deregulation, globalisation of markets, rising customer expectations, and new information technology, leading to fundamental changes in the way marketing is being practiced (Brookes, Brodie, and Lindgreen, 2002; Cram, 1994; Doyle, 2000; Hunt and Lambe, 2000; McKenna, 1991; Sheth and Sisodia, 1999; Sheth et al., 2000).

2.1.1 In the Corporate Arena

To this end, some commentators, such as Gale (1994) and Treacy and Wiersema (1995), have called for better management of perceived value as the role of marketing is "to assist the firm to create value for its customers that is superior to competition" (Tzokas and Saren, 1999 p. 53; Albrecht, 1992; Alderson, 1957; Anderson, 1982; Anderson and Narus, 1999; Doyle, 2000; Drucker, 1973; Woodruff, 1997). Reichheld and his colleagues, from Bain and Co., were among the first to advocate that companies must succeed in retaining their customers if they are to grow their profits and sales (Dawkins
and Reichheld, 1990; Reichheld, 1993; Reichheld and Kenny, 1990; Reichheld and Sasser, 1990). By delivering superior value to its customers, a company can deliver superior value to shareholders (Doyle, 2000; Rust et al., 2000) because satisfied customers tend to be loyal to the company and to continue buying from it (Bolton and Drew, 1991; Eriksson and Vaghult, 1999; Fornell, 1992; Goderis, 1998; Grönroos, 1994; Reichheld, 1996; Rust and Zahorik, 1993; Scheuing, 1995).

Customers are “value-driven” and managers need to understand what customers value and where they should focus their attention to achieve this needed market place advantage (Woodruff, 1997). Thus, value is a strategic imperative for companies in the 1990s that will continue to be important into the twenty-first century (Vantrappen, 1992; Woodruff, 1997).

2.1.2 Within the Academic Circle

From the mid-1950s, marketing academics argued that organisations achieve goals through creating, delivering, and communicating customer value to chosen target markets more effectively than competitors (e.g. Borch, 1957; Keith, 1960; McKitterick, 1957). Since then, the debate has emphasised the link between value and organisational goals, such as profitability and performance (Payne and Holt, 1999; Band, 1991; Brown, 1999; Day, 1990; Gale, 1994; Griffin, 1995; Knox and Maklan, 1998; Kohli and Jaworski, 1990; Narver and Slater, 1990; Naumann, 1995; Raphel and Raphel, 1995).

Reflecting this interest, understanding markets and delivering superior value have been identified as research priorities within the Marketing Science Institute (Parasuraman and Grewal, 2000). This interest is also reflected in conferences such as the Annual Conference of the Academy of Marketing Science and the Annual Conference of the Industrial Marketing and Purchasing Group. This has resulted in value and, in particular, relationship value receiving increased attention (e.g. Wilson and Jantrania, 1995; Ravald and Grönroos, 1996; Grönroos, 1997; Tzokas and Saren, 1998; Payne and Holt, 1999; Gummesson, 1999).
Despite the increased attention being given to customer value (Band, 1991; Gale, 1994), there has been little empirical research to develop an in-depth understanding of the concept (Sweeney and Soutar, 2001; Holbrook, 1994; Tzokas and Saren, 1999; Wilson and Jantrania, 1994). From a bibliometric study that identified papers and articles associated with customer retention, relationship marketing, customer value and relationship value from 1985 to 1998, Collins (1999) concluded that value (customer and relational) was not a significant sub-field within marketing, as the frequency of publications on value was low. Sheth, Gardner and Garrett (1988) suggested existing schools of thought, like exchange theory, do not adequately address why and how value is created, and what motivates buyers and sellers to engage in an exchange.

Woodruff (1997, p.150) echoes this, suggesting we "need richer customer value theory that delves deeply into the customer’s world of product use in their situations". Research into the systematic investigation, explication, and measurement of the perceived value construct has lagged. Although considerable analytical focus has been directed toward modelling consumers' purchase decisions using scanner data or their preference structure through conjoint analysis, only a few articles have studied perceived value as a focal construct (e.g. Silcox, 2002; Sweeney et al., 1999; Bolton and Drew, 1991; Dodds et al., 1991; Zeithaml, 1988). Tzokas and Saren (1999) speculated as to why this is so, noting that most of the research that exists, originates not from marketing, but from strategy and strategic management, the psychology and sociology of consumer behaviour, accounting and finance. Not surprisingly, this has made it difficult for marketing to “control” the value creation and delivery process.

2.2 Perspectives on Value

2.2.1 Variations to the “Value” Concept

Although perceived value has often been defined as a trade-off between quality and price, several researchers have noted that perceived value is a more complex construct, in which notions such as perceived price, quality, benefits, and sacrifice are embedded (Bolton and Drew, 1991; Holbrook, 1994) and whose dimensionality requires more systematic investigation. Given that many disciplines, such as economics, human
resource management, finance and engineering, as well as marketing, use the term value, the diversity of opinion as to its meaning suggests there could potentially be several possible applications to the term, as can be seen in Table 2-1.

**TABLE 2-1: EXAMPLES OF VALUE USED IN A NUMBER OF DISCIPLINES**

<table>
<thead>
<tr>
<th>Accounting and Finance</th>
<th>Economics</th>
<th>Purchasing and Materials Management</th>
<th>Marketing</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Recorded Value</td>
<td>• Use Value</td>
<td>• Use value</td>
<td>• Economic value to customer (EVC)</td>
</tr>
<tr>
<td>• Market Value</td>
<td>• Exchange Value</td>
<td>• Exchange Value</td>
<td>• Value-in-use (VIU)</td>
</tr>
<tr>
<td>• Replacement Value</td>
<td>• Cost Value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Assessed Value</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Appraised Value</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Earning Potential</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Liquidation Value</td>
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</tbody>
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2.2.1.1 *An Economic Perspective*

Smith and Huntsman (1997, p. 3) argued that “a fundamental premise of the value paradigm of economic theory is that individuals are motivated to maximise incremental value, and enterprises (public and private) should be motivated to create incremental value for their constituents.” Economists consider price to be the best indicator of the cost of a transaction or sacrifice and, therefore, suggest that it represents value (Monroe and Krishnan, 1985; Fischer and Dornbusch, 1983; Alchian and Allen, 1983). Reddy (1991) provided an economic definition of value by including use value and value in use, which relate to functionality and substitutability. Hirschey and Pappas (1993) also saw value in an economic sense, seeing it as being related to monetary value, price and cost.
2.2.1.2 A Social Science Perspective

Czechowicz (2001), Rokeach (1973) and Rokeach and Ball (1989), among many others, discussed value from a social science perspective, talking about human value systems, cultural values, societal values and institutional values. For example, Rokeach (1973) defined values as enduring beliefs that particular states of existence are personally or socially preferable. Kotler (1991), Kotter and Heskett (1992) and Hampton-Turner (1990) reinforced the cultural view of value, while Gutman (1982) and Corfman, Lehmann, and Narayanan (1991) linked personal values to consumption behaviour.

2.2.1.3 An Industrial Perspective

Egan (1992), Reddy (1991), Lockyer (1979) and Miles (1972) discussed value “adding”, “value analysis” and “value engineering” from an industrial perspective, suggesting it could be construed as the tools and techniques used to improve organisational performance. The first two techniques attempt to remove unnecessary costs, without affecting the functional capability of the product. Value engineering, on the other hand, attempts cost avoidance by determining the most favourable method of constructing a product.

2.2.1.4 A Relationship Marketing Perspective

Within a relational marketing context, Ravald and Grönroos (1996) and Grönroos (1997) proposed ways of measuring "the customer perceived value of an episode or total episode value" and "customer perceived value (CPV)" (as shown in Table 2-2). Grönroos (1992) also defined supplier relationship costs (relationship sacrifice) as direct costs (e.g. insurance premiums, subscription fees etc.), indirect (e.g. delayed delivery, incorrect invoices etc.) and psychological relationship costs (e.g. cognitive effort needed to worry about whether the supplier will fulfil his commitment or not etc.). The importance of these papers was that they brought into the picture the costs and benefits associated with a relationship as determinants of the value perceived by a customer. In addition, such a treatment of customer perceived value is in line with the strategic ideas
developed from Porter’s (1980) value chain framework in that it allows marketers to think in terms of developing strategies for relieving or enabling the customer.

**TABLE 2-2: TOTAL EPISODE VALUE AND CUSTOMER PERCEIVED VALUE**

| Total Episode Value | = | Episode Benefits + Relationship Benefits |
|                     |   | Episode Sacrifice + Relationship Sacrifice |

| Customer Perceived Value | = | Core Solution + Additional Services |
|                         |   | Price + Relationship Costs |

As traditional approaches that described a firm's total offering as a core product supported by surrounding services or goods (Grönroos, 1990; Kotler, 1994; Levitt, 1983) considered only one exchange, a number of relationship researchers have taken a contrary view of the value creation process that suggests value is co-created by a firm and its customers (Normann and Ramirez, 1993; Wikstrom, 1996). Tzokas and Saren (1997) went further, arguing that the value creation process is incomplete without consumers’ active involvement and, indeed, argued that the consumer, and not the firm, is the primer driver of the value creation process. However, they also noted that the "current invitation to customers for joint value creation, as a co-producer, is limited to the characteristics of the product/service and constitutes a myopic view of the customers productive means and capabilities. Customers are invited to join the value chain of the firm productively but the means offered to them are supplier specific" (Tzokas and Saren. 1997, p. 111). That is, consumers are asked to join a firm’s value chain without taking account of the unique means of value creation in the consumer’s own domain.

It is of extreme importance that organisations realise the need and significance of continuity in a customer relationship. When considering value as a means of strengthening the bonds to customers, discussion should not be limited to value-adding features in the offering. Customer-perceived value needs to get a deeper understanding - a meaning that relates not only to episodes but also to a customer’s expectations and the responsibility of the company to meet these expectations in the long-term. Customer-perceived value can then be increased at an episode, as well as, a relationship level.
2.2.2 “Value” Discussed

Not only do different professions use the term but the concept of value itself has also been described in a number of different ways. These definitions include “customer value” (Benjamin, 2000), “stakeholder value” (Bannister and Jesuthasan, 1997), “value in use” and “use value” (Reddy 1991), “value-added” (O’Higgins and Weigel, 1999; Egan, 1992; Lockyer, 1979; Miles, 1972), “best value” (Vize, 1999), ‘perceived value’ (Sheth, Newman and Gross, 1991), ‘cumulative value adding’ (Albrecht, 1990), ‘value creating management’ (McDonald, 1998), ‘perceived value’ (Reddy, 1991; Zeithaml, 1988) or as a ‘value equation’ (Bishop, 1984). These differences in meaning are not surprising as the value idea goes back at least to a Roman writer in the first century BC (Publius Syrus), who suggested a thing is worth whatever the buyer will pay for it (Tout and Rivkin, 1998). Since that time, many researchers have grappled with the concept of worth or value, with different degrees of success. The following definitions represent some of the more popular definitions, namely:

1. "Value is the ratio of attributes weighted by their evaluations divided by price weighted by its evaluation” (Sawyer and Dickson, 1984, p.7).

2. “Value is the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given” (Zeithaml, 1988, p.14).

3. “Buyers' perceptions of value represent a trade-off between the quality or benefits they perceive in the product relative to the sacrifice they perceive by paying the price” (Monroe, 1990, p.46).

4. “Customer value is market perceived quality adjusted for the relative price of your product” (Gale 1994, p. 29).

5. “Perceived value is the value buyers perceive the product to be worth. Market value is determined not only by the product’s economic value, but also by the accuracy with which buyers perceive that value and by how much importance they place on getting the most for their money” (Nagle et al., 1994, p.21).
6. "Customer value is a customer’s perceived preference for and evaluation of those product attributes, attribute performances, and consequences arising from use that facilitate (or block) achieving the customer’s goals and purposes in use situations" (Woodruff, 1997, p.144)

7. "[Value is] … the worth in monetary terms of the technical, economic, service, and social benefits a customer company receives in exchange for the price it pays for a market offering" (Anderson and Narus, 1998, p. 54).

Doyle (1990), offering a different perspective, arguing that the value of a product is not what an organisation puts into the product, but rather, what the consumer gets out of its consumption. This is similar to Zeithaml’s (1988) suggestion that value is a customer’s overall assessment of the utility of a product, based on perceptions, as to what is received and what is given. Based on these definitions, it could be argued that the concept of “value” has evolved through the years from a narrow construct of “value as a function of price and quality” (e.g. Buzzell and Gale, 1987; Zeithaml, 1988) to a broader one of “value as a multidimensional construct” (e.g. Sheth, Newman and Gross, 1991a, 1991b; Sweeney, Soutar and Johnson, 1999). This evolution is examined in the subsequent two sections.

2.2.2.1 “Value as a Function of Price and Quality” (A Narrower View of Value)

It should be highlighted that the terms quality and value have often been exchanged as one and the same, which has led to some misleading results. The two major differences between quality and value are that value is more individualistic and personal and value involves a trade off (Zeithaml, 1998). Echoing works by Monroe (1990), Yadav and Monroe (1993) and Gale and Klavans (1985), the Profit Impact of Marketing Strategies (PIMS) study conceptualised value as the relationship between quality and price (Buzzell and Gale, 1987). They suggested competitive success is obtained through the “perceived relative value” of the total package of products and services that influence customer behaviour. Relative value is the value received from a product or service, in comparison to similar offerings. According to Bojanic (1996, p. 10), “the notion of relative perceived value results in three possible value positions”, namely:
Chapter Two: Perceived Value in a Consumer Context

(1) Offering comparable quality at a comparable price

(2) Offering superior quality at a premium price or

(3) Offering inferior quality at a discounted price.

Perceived value may be altered if management changes what they are doing, a competitor changes what they are doing or if a consumer’s desires or needs change. Rust and Oliver (1994), in their work on service value, expanded these value-for-money conceptualisations by suggesting value should increase as quality increases, while describing how quality and price combine to form value.

2.2.2.2 “Value as a Multidimensional Construct” (A Broader View of Value)

Others have suggested that viewing value as a trade-off between only quality and price is too simplistic (e.g. Schecter, 1984; Bolton and Drew 1991). Porter (1990, p. 37) for example, talked about providing “superior value to the buyer in terms of product quality, special features, or after-sales service”. These views suggested earlier value constructs are too narrow and that dimensions other than price and quality would increase the construct’s usefulness.

Reddy (1991, p. 15) suggested perceived value “is the value of the total offer or, in other words, the maximum price the customer is willing to pay for the bundle of economic and non-economic attributes associated with the product”. This definition, in capturing the concepts of worth and sacrifice, also expands the concept of value by implying a consumer can perceive the worth of a thing in non-monetary ways, as well as in monetary ways. Indeed, Wilson and Jantrania (1994) argued that value should be measured using economic, strategic, and behavioural dimensions, but they did not examine the interrelationships between them.

A broader framework of perceived value was developed by Sheth et al. (1991), who argued that consumer choice was a function of multiple perceived value dimensions and that these dimensions made varying contributions in different choice situations. They suggested five dimensions (social, emotional, functional, epistemic and conditional
value), relating specifically to the perceived utility of a choice, whether at the decision to buy level (buy or not buy) at the product level (product type A or product type B) or at the brand level (brand A or brand B). While functional value was seen to be the key influence on consumer choice, Sheth et al. (1991) found the other value dimensions were influential in some situations. For example, while functional and social value dominated the decision as to whether to use filtered or unfiltered cigarettes, emotional value was key to the decision to smoke. It is clear that different value dimensions may be important depending on the decision level (e.g. buy/not buy or buy brand A/Brand B), as well as on the type of product or service being considered. Sweeney and Soutar (2001) extended Sheth, et al.’s (1991) suggestions about the multidimensionality of value by developing a perceived value (“PERVAL”) scale with four dimensions, which they termed emotional, social, quality/performance and price/value dimensions.

More recently, Parasuraman and Grewal (2000) defined perceived value as a dynamic four dimensional construct (acquisition value, transaction value, in-use value and redemption value). They defined acquisition value as the benefits received for the price paid and transaction value as the pleasure a consumer receives for getting a good deal. In-use value was defined as the utility obtained from using a product or service, while redemption value was the residual benefit received at the time of trade-in or at end of life (for products) or termination (for services).

2.2.2.3 Towards a Definition of Value

The different definitions and views refer to some form of trade off between what a consumer gives up (price, sacrifice) and what a consumer receives (utility, quality, benefits) (eg. Monroe, 1979; 1990; Young and Feigin, 1975; Green and Wind, 1975; Monroe and Petrishius, 1981; Ahtola, 1984; Monroe and Krishnan, 1985; Dodds and Monroe, 1985; Buzzell and Gale, 1987; Cravens et al., 1988; Zeithaml, 1988; DeSouza, 1989; Lichtenstien et al., 1990; Dodds 1991; Woodruff and Gardial, 1996; Jayanti and Ghosh 1996; Grewal et al., 1998; and Sweeney et al., 1999; Parasuraman and Grewal,

---

1 Functional value refers to economic utility derived from choice, while social value is associated with the value gained from the notice of others. Emotional value is derived from acquiring goods that are liked, and epistemic value is the capacity of the choice object to provide novelty. Finally, conditional value refers to situational conditions that influence choice behaviour such as the purchase of Christmas cards.
2000). For example, Dodds et al. (1991) and Monroe and Krishnan (1985) suggested that price is an indicator of the sacrifice needed to purchase an item. This sacrifice, at least in part, depends on the effort a consumer expends for “the effort invested in shopping may, under specifiable conditions, contribute [positively] to the evaluation of the product” (Cardozo 1965, p. 248). Price is not the only sacrifice a consumer makes. Time costs (Fram and Axelrod, 1990; Becker, 1965), search costs, (Bloch et al., 1986; Becker, 1965), and psychic costs (Becker, 1960) are other forms of sacrifice.

As there are various views about value, as indicated in the brief discussion on the different disciplines, it seems worthwhile to define value from a consumption point of view as it is this definition that has direct application to the present study. Thus, for the purposes of this study, for a product to have value it has to be:

(1) Needed.

(2) Within an acceptable price range, and

(3) Have an acceptable quality (Sweeney and Soutar, 1995).

2.3 A Discussion of Some Relevant Value Models

Dodds and Monroe (1985) suggested a model of perceived quality and willingness to buy, based on earlier work by Monroe and Krishnan (1985). The model was structured around perceived quality, perceived value and willingness to buy. Their model suggested price plays a dual role as the higher the price, the higher perceived quality and, thus, the higher the willingness to buy.

Zeithaml (1988) built on Dodds and Monroe's (1985) work. Her model, like Dodds and Monroe's (1985) model, investigated the relationships between price, perceived quality and perceived value and suggested the same relationships. However, her model proposed different levels of attributes impact on consumers’ perceptual processes. Perceived quality and value were seen as higher level attributes, whereas objective price was seen as a lower level attribute (Zeithaml, 1988).
Dodds et al. (1991) extended the earlier models by including brand name and store name. They argued that such external cues would influence perceptions of product quality and value and, hence, people’s willingness to buy. As expected, Dodds, et al. (1991) found price had a positive influence on perceived quality but a negative influence on willingness to buy. Additionally, an agreeable brand name had a positive impact on perceptions of quality and value and on willingness to buy.

Sweeney et al. (1997) extended the value model, building on Zeithaml's (1988) and Dodds et al.'s (1991) earlier work. They found technical service quality impacted on product quality and value perceptions and indirectly influenced people’s willingness to buy. Functional service quality influenced technical service quality as perceptions of the manner in which service is delivered affected consumers’ perceptions of the technical service quality offered. Functional service quality had an indirect influence on willingness to buy through product quality and value perceptions. Functional service quality also influenced people’s willingness to buy independently.

Sweeney et al. (1999) extended their model, by introducing risk, which was found to play a significant role in determining people’s willingness to buy, which supports previous research by Bauer (1960), Kahneman and Tversky (1979), Dowling (1986) and Grewal, et al., (1994). Sweeney et al.'s (1999) model suggested that functional quality, technical quality and perceived product quality impact on perceived value for money and that these quality components reduce perceived risk. “Perceived risk was found to play an important role in the perceived product and service quality-value for money relationship and was found to be a significant mediator of this relationship. Perceived value for money was also found to be a significant mediator of perceived quality, price, risk and willingness to buy” (Sweeney et. al. 1999, p.77)

Apart from risk being an important antecedent of a consumer’s value perceptions, the two service components [technical and functional] influenced perceptions of value, with functional service quality having a positive influence on technical service quality that, in turn, influenced product quality perceptions. There was a strong positive association between perceived value and consumers’ willingness to buy.
As was widely reported, in 1989, Sweden became the first country in the world to have a cross-company, cross-industry national measurement instrument of customer satisfaction and evaluations of quality of products and services, which was called the Swedish Customer Satisfaction Barometer (the SCSB) (Fornell, 1992). The SCSB has been adopted and adapted for use as the American Customer Satisfaction Index (ACSI) (Fornell et al., 1996). The successful experiences of the Swedish and American customer satisfaction indices inspired the creation of the European Customer Satisfaction Index (ECSI) by the European Organization for Quality (EOQ), the European Foundation for Quality Management (EFQM) and the European Academic Network for Customer-oriented Quality Analysis, with support from the European Commission. Developed by Gronholdt (2000) and Martensen (2000) the ECSI is similar to Sweeney, et al.'s (1999) model as it includes perceived value, perceived quality – ‘hard ware’ and perceived quality – “human ware” (service), as well as image, expectations, customer satisfaction and customer loyalty. Gronholdt, et al. (2000) found customer satisfaction had a positive effect on customer loyalty.

Most recently, Silcox (2002) extended value research by examining an ongoing service context, adding relationship commitment and satisfaction to the model. In addition, rather than a single value construct, he included the four subscales developed by Sweeney and Soutar (2001).

2.4 A Review of Relevant Value Scales

While these frameworks help our understanding of perceived value, they do not offer ways to measure perceived value. Perceived value is most commonly measured by a self-reported, unidimensional measure that asks respondents to rate the value they received for their purchase (Gale, 1994). The problem with a one-dimensional measure is that it assumes consumers have a shared meaning of value. Zeithaml (1988, p. 471) argued that “quality and value are not well-differentiated from each other and from similar constructs such as perceived worth and utility”. Thus, it has been argued that a one-dimensional measure lack validity (Woodruff and Gardial, 1996). Another problem
is unidimensional measures result in the knowledge of how well one is rated for value, but give no specific direction as to how to improve value.

Kantamneni and Coulson (1996) developed a multidimensional measure of perceived value. Results suggested societal value, experiential value, functional value and market value dimensions. Societal value was defined as a product’s benefit or value to society. Experiential value was related to the way a product felt, smelt or looked, while functional value was related to whether a product was reliable and safe. Market value was a product’s worth, relating to its price.

More recently, Sweeney and Soutar (2001) developed a 19-item PERVAL scale with four distinct value dimensions (emotional, social, quality/ performance, price/value for money) in a product context. Silcox (2002) successfully used the instrument in a continuous service setting (a recreational centre). It seems the PERVAL scale can be used in both product and service contexts. Extending research by Sweeney et al. (1999) and Dodds (1996), Petrius (2002) developed a SERV-PERVAL scale to measure value in a service context, finding five dimensions (quality, emotional response, monetary price, behavioural price and reputation).

### 2.5 Some Moderators of Perceived Value

#### 2.5.1 Involvement

In addition to testing the links between perceived value and its antecedents and outcomes that will be described in detail in Chapters 3 and 4 respectively, this section takes a step toward assessing the role of involvement as a moderator that influences the effectiveness of perceived relationship investment. An examination of moderators enable marketers to understand when investing in relationships is expected to be more effective or less effective.

**2.5.1.1 Importance of the Involvement Construct**

Information processing theory suggests consumers are intelligent, rational, problem-solvers who actively seek and use information to evaluate various alternatives or
choices. Researchers have documented this information-seeking and problem-solving behavior in the past, but have also found evidence that the extent of information search, problem solving and the evaluation of alternatives varies with the significance or degree of importance of the decision to the consumer. A consumer makes many decisions each day, but only some are significant or important (Zaichkowsky, 1985). Complex and expensive purchases are likely to involve greater processing, while frequent and less expensive purchases are not.

Depending on the degree of involvement, the extent of information-seeking behavior and the degree of awareness about purchase alternatives, consumer decision making can be classified as high or low involvement. In a high-involvement decision, a consumer uses extended problem-solving (recognising the problem, actively searching for information, evaluating alternatives and making a purchase decision). Involvement leads consumers to search for more information and spend more time searching for the right selection. In a low-involvement decision, consumers do not extensively search for information and rarely evaluates alternatives or choices before making the purchase decision.

The importance of and growing interest in involvement has resulted in a great deal of research (e.g. Arora, 1982; Celsi and Olson, 1988; Day et al., 1995; Goodman et al., 1995; Greenwald and Leavitt, 1984; Laurent and Kapferer, 1985; Mittal and Lee, 1989; Morgan and Hunt, 1994; Park and Mittal, 1985; Rodgers and Schneider, 1993; Slama and Tashchian, 1985; Swinyard, 1993; Zaichkowsky, 1985). Researchers have suggested people who are highly involved with a product category are more loyal (Dick and Basu, 1994; King and Ring, 1980; Traylor, 1981 and 1983; Lastovicka and Gardner, 1979; Tyebjee, 1979; Robertson, 1976; Assael, 1987; Beatty et al., 1988) as a relationship can add value only for customers who are interested in a product. Specifically, LeClerc and Little (1997) found brand loyalty interacted with product involvement as the repeat purchase of a high-involvement product was an indicator of brand loyalty, whereas the repeat purchase of a low-involvement product was habitual purchase behaviour.

Solomon et al. (1985) claimed that, in low-involvement situations, treating customers as individuals may not pay off but, in high-involvement situations, customers want more
personal treatment. Gordon et al. (1998) found that involved buyers were more likely to participate in marketing relationships and to derive value from these relationships. Such relationships may be perceived as invasive or annoying when directed at low involvement consumers. Consequently, approaches by the seller, however well-intentioned, could be regarded as undesirable (Christy et al., 1996). If so it poses an interesting challenge to service providers as Webster (1988, 1991) found customers had limited involvement in service situations.

2.5.1.2 Towards a Definition of Involvement

There has been considerable interest in the involvement construct. There has not, however, been a common conceptual or methodological framework (Laaksonen, 1994; Jain and Srinivasan, 1990; Rothschild, 1984; Zaichkowsky, 1985; Traylor and Joseph, 1984). Involvement has been conceptualised as both a unidimensional and a multidimensional construct. For example, Zaichkowsky (1985) viewed involvement as unidimensional, whereas Laurent and Kapferer (1985), suggested involvement had five dimensions. Others have suggested involvement has cognitive and affective aspects (Mittal and Lee, 1989; Mittal, 1983; Park and Mittal, 1985; Sheth, 1974; Sirgy, 1982; Laurent and Kapferer, 1985; Peter and Olsen, 1987; Houston and Rothschild, 1977).

Whereas some defined involvement as “perceived importance” or “interest in” (Beatty et al., 1988; Laurent and Kapferer, 1985; Mittal 1995; Mittal and Lee, 1989), others defined the construct as “perceived relevance” (Day et al., 1995; Zaichkowsky, 1985). The latter meaning of involvement suggests a product’s relevance implies its importance (Mittal, 1995). This is not necessarily true. For instance, toilet paper is relevant, but not necessarily involving. Further, should we be concerned with enduring or situational involvement (Houston and Rothschild, 1978). When advertising and attentional/processing strategies are under investigation, should involvement be conceptualised as a “state of activation” (Cohen, 1983; Mitchell, 1981) or as “process involvement” (Greenwald and Leavitt, 1984; Krugman, 1966-67).

Further, there have also been issues as to whether involvement or its antecedents have been measured. For example, as noted earlier, Laurent and Kapferer (1985) suggested
there were four involvement facets (risk importance, sign value, pleasure value, and risk probability). Mittal (1995) and Mittal and Lee (1989) argued, however, that an object can be important either because it has sign value, pleasure value and/or risk. They stated that any one, but not all of these facets, needs to be present for an object to be involving. However, a product can be involving because it is exciting, but it needs not be exciting to be involving, suggesting it is not justified to sum the scores of various antecedents (Day et al., 1995; Mittal, 1995; Mittal and Lee, 1989).

Despite the various definitions of consumer involvement, two common ideas have emerged:

1. Involvement is multidimensional (McQuarrie and Munson, 1986; Laurent and Kapferer, 1985), and,

2. Involvement is a motivational force that can help explain various behavioural outcomes, (for example, number and type of choice criteria, extensiveness of information search, length of decision-making process, variety seeking, and brand switching).

The multidimensional aspect of involvement has been demonstrated by various researchers, who have suggested the dimensions include:

- **Normative involvement** - the importance of product class to values, emotions, and the ego. This has also been identified as sign involvement -the relation of self-image to the product (Higie and Feick, 1988; Lastovicka and Gardner, 1979);

- **Subjective risk** - the felt probability of making a mispurchase, or risk involvement (Knox et. al., 1994; Jain and Srinivasan, 1990; Peter and Olsen, 1987).

- **Enduring involvement** - the interest and familiarity with a product class as a whole (Beharrell and Dennison, 1995; Jain and Srinivasan, 1990; Higie and Feick, 1988; Ratchford, 1987; Vaughn, 1986);
• **Situational involvement** - the interest and commitment within a product class, e.g. loyalty to the brand choice (Beharrell and Denison, 1995; Mittal, 1989).

In sum, in tandem with views that involvement involves active participation in information processing (Engel and Blackwell, 1982; Bettman, 1979), involvement is defined in this study as “the level of interest in (or the importance attached) to a product category”.

### 2.5.1.3 A Discussion of Two Measurement Scales

Several efforts have been made to develop measurement scales for product category involvement (e.g. Bloch et al., 1986; Jain and Srinivasan, 1990; Lastovicka and Gardner, 1979; Laurent and Kapferer, 1985; Ratchford, 1987; Tigert et al., 1976; Zaichkowsky, 1985). Two frequently cited scales are Zaichkowsky’s (1985) “Personal Involvement Inventory” (PII) and Laurent and Kapferer’s (1985) “Consumer Involvement Profiles” (CIP).

Zaichkowsky (1985) attempted to construct a scale that was context-free and applicable over a range of products, purchase decisions and advertisements. Criticism of the PII arose on two counts. Park and McClung (1986) argued that some scale items were not applicable to involvement in advertising and that the scale was too long (20 items) while Vaughn (1986) and McQuarrie and Munson (1987) suggested the scale did not embrace the types of involvement conceptualised by some researchers. In addition to these views that the inventory was too simple and too long, McQuarrie and Munson (1987) were concerned with the potential attitudinal contamination of the PII as the independence of the involvement and attitudinal measures was not clear. Zaichkowsky’s (1987) consequent revision (the RPII) included ten items that took account of these views.

Mittal (1989) criticised Zaichkowsky’s original inventory on the grounds that some items were attitudinal, others hedonic and others had no bearing on purchase decision involvement (e.g. needed – not needed; essential – unessential). He suggested essential products create less purchase decision involvement than non-essential luxury products. However, this criticism was diminished by the changes made to the revised PII.
Construct validity, which exists when a measure corresponds to its intended meaning (Hair et al., 1998; Kerlinger, 1986), is an issue. While the PII was developed to measure perceived relevance, several of its items measure other aspects (Day et al., 1995; Mittal, 1995). The same remark holds for the CIP, which was developed to measure importance, but included other aspects (Jain and Srinivasan, 1990; Mittal, 1995).

2.6 Summary and Conclusions

In the present chapter, the focal construct of the study - perceived value - was discussed. First, we explained our reasons for investigating this construct and underlined its lack of empirical evidence. We observe, for example, that as marketing faces a new paradigm - relationship marketing (Grönroos, 1994), the focus is shifting from the activity of attracting customers to activities which concern having customers and taking care of them. The ability of a company to provide superior value to its customers has become a means of differentiation and a key to the riddle of how to find a sustainable competitive advantage (Christopher et al., 1991; Grönroos, 1994; Heskett et al., 1994; McKenna, 1991; Nilson, 1992; Quinn et al., 1990; Treacy and Wiersema, 1993).

Second, in tandem with earlier definitions by Silcox (2002) and Sweeney et al. (1999), we defined the concept of value as a product that is needed, within an acceptable price range and has an acceptable quality. Third, we discussed the various “value models” and scales relevant to our study. Of particular interest, are the perceived value models developed by Sweeney et al. (1999) and extended by Silcox (2002) (on which this study is predicated as well) as the PERVAL scale developed by Sweeney and Soutar (2001) (which would be tested in the present study). Finally, we discussed the moderating role of involvement in this study.

In Chapter 3, we proceed to describe the role of several suggested antecedents of perceived value namely, corporate image, technical service quality, functional service quality, product quality, customer trust, perceived risk and relative price.
Chapter Three

The Antecedents of Perceived Value

3.0 Introduction

As noted in Chapter 2, perceived value is a complex construct. For managers concerned about achieving loyalty and retention by providing value to customers, a clarification of value is important. Moreover, understanding the relationships between the antecedents and the consequences of perceived value is imperative for managing value over time (Sinha and DeSarbo, 1998). This is of even greater interest as the focus is shifting towards determining how customers can become co-producers of value as firms learn how to co-opt their competencies (Ramirez, 1999). Determining what a customer wants
in a product or a service helps firms formulate a clear statement of its value proposition (DeSarbo et al., 2001).

Prior research has suggested several antecedents to value, among which, are service and product quality (Bolton and Drew, 1991; Dodds et al., 1991), corporate image (Barich and Kotler, 1991; Fombrun, 1996), perceived risk (Sweeney et al., 1999, Agarwal and Teas, 2001), relative price (Dodds and Monroe, 1985; Zeithaml, 1988) and trust (Sirdeshmukh et al., 2002). The present chapter discusses these antecedents in turn and explores their suggested influences on perceived value.

3.1 Corporate Image

3.1.1 The Importance of Corporate Image

In today’s competitive markets, a strong corporate image is often seen as crucial (Andreassen and Bredal, 1996). Organisations have become concerned about public perceptions of their activities and, at a product/brand level, there has been a “shift in attention away from the physical aspects and functional benefits of products to their symbolic associations” (Poiesz, 1989, p. 461). Such an approach is important as, when services are difficult to evaluate, image may influence perceptions of quality, satisfaction and customer loyalty. A variety of reasons for the increased emphasis on image can be suggested, including:

- An increasing awareness of the behavioural aspects of consumer decision making.

- Society’s concern with symbolic, rather than functional, attributes.

- An increasing variety of relatively homogeneous, often complex, products and confusing messages that increase consumers’ reliance on the image aspects of products.

- Competing offerings are seen as very similar in terms of performance, price, and availability (Andreassen and Lindestad, 1998).
Cassel and Eklof (2001) added weight to the importance of image, as it is a crucial part of the European Customer Satisfaction Index (ECSI) model. Grönroos (1993, p. 229) argued, however, that image is crucial to service firms as it is “a filter which influences the perception of the operation of the company.” Consequently, image has been seen as an information cue that creates a halo effect on judgments relating, for instance, to service provider credibility or to the perceived quality of its services (Andreassen and Lindestad, 1998). Consequently, it is likely image plays an important role in attracting and retaining customers.

It is therefore interesting that there has been little services research that has examined the impact of corporate image. Grönroos (1993) noted that, although some attention has been paid to the conceptualisation of corporate image in services positioning, the concept has remained vague. Apart from early conceptual work that discussed corporate image and positioning (Lovelock, 1984), there has been little assessment of the impact corporate image has on customer value and loyalty.

Indeed, most image research has been undertaken in product markets or with retail stores (e.g. Donovan and Rossiter, 1982; Dowling, 1988; Golden et al., 1987; Mazursky and Jacoby, 1986). For the most part, image research has attempted to identify the components of a store’s image, investigated the relationship between customers’ perceptions of image and behaviour and tested various scales and approaches to measuring the construct (e.g. Abratt, 1989; Donavan and Rossiter, 1982; Dowling, 1988; Gray and Smeltzer, 1987; Hildebrandt, 1988; Keaveney and Hunt, 1992; Lindquist, 1974; Marks, 1976; Mazursky and Jacoby, 1986; Oxenfeldt, 1974-1975; Pessemier, 1980; Zimmer and Golden, 1988).

3.1.2 Towards a Definition of Corporate Image

Many image definitions have been suggested. Image has been described as subjective knowledge (Boulding, 1956), as an attitude (Nelson, 1962, p.68) and as a combination of product characteristics that are different from the physical product but are, nevertheless, identified with a product (Erickson et al., 1984).
It is posited that image has functional and emotional dimensions (Kennedy, 1977; Martineau, 1958). The functional dimension is related to tangible characteristics that can be easily measured, while the emotional dimension is associated with psychological dimensions that reflect a consumer’s feelings and attitudes towards a company. These feelings are derived from individual experiences and from the processing of information about the functional indicators of image. Corporate image is the result of a process through which customers compare and contrast various attributes.

In this aspect, MacInnis and Price (1987) suggest most researchers agree image is the result of a process. An image is formed in a consumer’s mind as information is processed, organized and stored in categories (Kosslyn, 1975; MacInnis and Price, 1987; Yuille and Catchpole, 1977). Corporate image has been described as the “overall impression” left on the minds of customers, as a “gestalt” (Zimmer and Golden, 1988), and as an “idiosyncratic cognitive configuration” (Mazursky and Jacoby, 1986).

Echoing this view, Bernstein (1985), Barich and Kotler (1991) and Kotler (1997) defined corporate image as the expression of overall beliefs and opinions people hold about an organization. Specifically, Dowling (1991) argued that two factors determine a company’s image; namely what people say about a company and what a company transmits about itself.

Thus image has an external foundation, as it is a perceived reality. Image affects how people react to a product, company, place or object, leading Barich and Kotler (1991) to argue that corporate image and marketing image are different. The former deals with people’s views of an organisation’s “social” behaviour, while the latter is “the way people view the quality of (a) company’s overall marketing offer and marketing-mix” (Barich and Kotler, 1991, p. 95). Marketing image is, in this view, related to “how customers and other publics rate the “exchange value” of the company’s offering compared to that of the competitors” (Barich and Kotler, 1991, p. 97). Perception is no longer an inner attribute, but the result of a comparison between the organization and its competitors. Gunther’s (1959, p. 62) definition captures the essence of corporate image well, as he argued “corporate image may be defined as a composite of knowledge, feelings, ideals and beliefs associated with a company as a result of the totality of its
activities.” In this study, in consonance with definitions by Ind (1997, p.48), corporate image is described as a buyer’s perception of an organisation through the accumulation of all received messages.

### 3.2 Service Quality

#### 3.2.1 The Importance of Service Quality

Service quality is often seen as a natural extension of the product quality debate and arguments have been borrowed from the total quality management and the re-engineering movements (Kettl, 1994). Many have suggested a need to develop Total Quality Service or TQS (Sutton and Dewald, 1999). Sheehy (1988, p.170) noted that “the shift from the preoccupation with product quality to [one of] a concern with service quality is happening with amazing speed.”

Many organisations face problems, however, as they participate in markets with competitors who price aggressively. Further, customers have become more demanding and this trend is likely to continue. Consequently, organisations need to provide superior service to gain a competitive edge (Grönroos, 1988; Baker et al., 1992), to increase their chances of success in the market place (Reichheld and Sasser, 1990) and profitability (Edvardsson and Olsson, 1996). During the 1980s, service quality received a great deal of attention as a key strategic differentiating factor to increase market share and boost profits (Phillips et al., 1983; Buzzell and Gale, 1987). This is especially true for a service as, unlike a product, a service cannot be returned or fixed if it is poorly delivered (Sheehy, 1988). Quality service sustains customer faith and is essential for maintaining competitive advantage (Berry et al., 1994).

To achieve superior service quality, research suggests most employees must have a customer orientation, understand customer needs and possess empathy and respect for their customers (Bittner et al., 1994). Further, Anderson and Narus (1998) argued that, to

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2 As suggested by the examiners, the product quality construct was removed from the study. This is because the loyalty under investigation is the loyalty towards mobile phone services providers – not handset makers. Product quality was deemed as not an important factor in consumers’ decision regarding which service provider to use since the product assortment is similar among the service providers.
retain customers, suppliers must tailor service offerings to their needs and provide flexible and highly valued services. The package offered must meet consumers’ expectations, otherwise the organisation risks losing market share, as “customers know service when they miss it, and now they won’t come back” (Koepp 1987, p.48).

Superior service quality invariably leads to favourable behavioural intentions and the generation of referred customers (Zeithaml et al., 1996). The importance of service quality is further underlined in Albrecht and Zemke's (1990) study, which showed that 67% of customers changed brands because of poor service. This also supports Berry’s (1995, p. 237) comment that “the object of improving service quality, after all, is to engender customer loyalty.” Adding weight to this ongoing discussion, recent studies have found that shoppers stay longer in stores they find interesting and pay more for a product that is backed by good service.

Baker et al. (1992) found staff appearance and behaviour shape a customer’s perception of service, while Steenkamp and Wedel (1991) found good service contributes to a positive image and better product quality perceptions. Bolton and Drew (1991, pp.383-384) expanded this, noting, customers’ personal characteristics are important in assessing value, but not quality. Thus, perceived service value seems to be a “richer”, more comprehensive measure of customers’ overall evaluation of a service than service quality. Most authors have viewed value as the outcome of a trade-off between a single “overall quality” construct and sacrifice. However, these results suggest that the customers’ value function is more complex.

3.2.2 Towards a Definition of Perceived Service Quality

There is still considerable debate as to how service quality should be defined (e.g. Peters and Waterman, 1982; Buzzell and Gale, 1987; Cornish, 1988; Walton, 1989; Davidow and Uttal, 1989; Berry et al., 1989; Carlzon, 1989; Gober and Tannerhill, 1989; Albrecht, 1990; Grönroos, 1990; Zeithaml et al., 1990; Zemke and Schaaf, 1990; Conway, 1992; Clemmer, 1990; Copulsky, 1991; Whiteley, 1991; Benson, 1991; Pfau et al., 1991; Albrecht, 1992; Block, 1993; Thompson, 1998; Rucci et al., 1998). For example, the most commonly used definition of service quality, which is the discrepancy
between expectations and perceptions of performance (Lewis and Booms, 1983), is often criticised. Cronin and Taylor (1992) concluded that judgments of service quality appear to follow the evaluation of a service provider’s performance. Others criticise the ambiguity of expectation norms. Service quality is more than a technical issue (Anderson and Narus, 1998), but many “organisations fail to achieve the right balance of high technical expedience and personal attention” (Koepp, 1987, p.48). To properly manage this balance, service quality must be maintained and customers retained by meeting their expectations (Samson and Parker, 1994; Reichheld and Sasser, 1990).

Davidow (1988, p.18) defined service quality as “those things which, when added to a product, increase its utility or value to the customer” while, according to Zeithaml (1988), quality is:

1. Different from objective or actual quality.
2. A higher level abstraction rather than a specific attribute of a product.
3. A global assessment that in some cases resembles attitude.
4. A judgment usually made within a consumer’s evoked set.

Juran (1988) argued that quality has two primary elements (the degree to which a product or service meets customers’ needs and the degree to which a product or service is free from deficiencies). While such a fitness for use view (Steenkamp, 1989) is an appropriate definition of product quality, it is not when discussing services. The intangibility of services and the often non-standardised and interactive production process suggest the importance of a quality description suitable for services.³

Grönroos (1990), Clemmer (1990), Johnson and Fornell (1991) Bolton and Drew (1991) and Jones and Sasser (1995) argued that service quality is a subjective consumer assessment. Indeed, Bolton and Drew (1991, p.377) suggested “a customer’s global assessment of a service can be decomposed into a series of interrelated stages:

³ In general, services are intangible in nature. One of the examiners noted that the quality of certain services could be felt. For example, mobile phone users may be aware that they cannot receive phone messages or got poor reception when they use their phones in certain parts of Singapore.
assessment of performance, service quality, and value.” Consumers compare what they receive with what they expect. More recent research suggests service quality is a customer’s overall impression of superiority (Bitner and Hubbert, 1994) or excellence (Rust and Oliver, 1994). Perceived quality is the result of an evaluation based on a customer's experience with a service, whereas objective quality is a combination of quantifiable factors associated with the superiority of materials, the manufacturing process, workmanship and with design and aesthetics (Garvin, 1984; Jacoby and Olson, 1985).

Most research, however, recognises that service quality depends on the gap between expected and perceived performance (Anderson et al. 1994; Grönroos, 1983; Lewis and Booms, 1983; Parasuraman, Zeithaml and Berry, 1985 1988 1991; Carman, 1990; Collier, 1987). Put another way, service quality is the customer’s perception of the level of success or failure in meeting expectations (Zeithaml et al., 1990). Expectations and performance directly affect satisfaction and value perceptions (Clemmer, 1990).

To sum up this debate, for the purposes of the present study, service quality will be defined:

- In “perceived quality” terms (Garvin, 1984).
- As “the perceived ability of a product to provide satisfaction “relative” to available alternatives” (Monroe and Krishnan, 1985, p.212; Oxenfeldt 1950, p.300).
- As “the difference between expectations and performance” (Anderson et. al, 1994; Clemmer, 1990).

3.2.3 Identifying the Dimensions of Service Quality

Considerable research has focused on identifying the dimensions or components of service quality (e.g. Parasuraman et al., 1985, 1993; Zeithaml et al., 1996; Brown et al., 1993; Cronin and Taylor, 1992; Teas, 1993). The overall process through which consumers assess the quality of a service or product seems to be complicated (Hartline
Parasuraman et al. (1985, 1988) suggested that consumers assess service quality on five generic dimensions (reliability, empathy, assurance, responsiveness, and tangibles), while Grönroos (1990) argued that service quality has two dimensions (technical quality, which related to what is delivered, and functional quality, which relates to how the service is delivered).

As consumers have been found to use specific attributes or cues to infer quality, it is important for managers to identify these attributes to optimise consumers’ perception of quality (Olshavsky, 1985; Olson and Jacoby, 1972). While there is considerable empirical work that has identified the cues used in assessing the quality of a product, there is little similar research in the service sector (Zeithaml, 1988), although the SERVQUAL model, discussed in the next section, is an exception.

3.2.4 The SERVQUAL Model

The SERVQUAL scale, developed by Parasuraman et al. (1985, 1993), is the most popular way to measure service quality (Caruana and Money, 1997) and also the most criticised. The SERVQUAL model and measurement procedure is popular because it starts with expectations and perceptions of performance. This distinction made it possible to integrate the customer and the service provider in one model, whereas most other models are restricted to either the customer or the service organisation.

- **The Dimensions** - The developers found ten attributes in 1985, which were compressed to five (reliability, responsiveness, tangibles, assurance and empathy) by means of factor analysis. Their results offered possibilities to manage service quality expectations, as well as service quality performance and, therefore, to manage service quality. The SERVQUAL model appeared helpful as it made it possible to trace service delivery problems. For example, Nel and Pitt (1993), Saleh and Ryan (1991) and Samson (1994) found SERVQUAL had good descriptive power and helped managerial insight and understanding.
• **Measurement** - In order to measure service quality, a 22-item scale was developed (Parasuraman, Zeithaml and Berry, 1988) and service quality was measured as the computed differences between perceptions of performance and expectations on each item.

• **Expectations versus performance perceptions** – The 1985 model was expanded into the 1991 model. Using and integrating customer satisfaction and dissatisfaction research, the developers concluded there are two service quality gaps, namely:

1. “Perceived service superiority” or the discrepancy between perceived service performance and desired (best) service.

2. “Perceived service adequacy” or the difference between adequate (acceptable) service and perceived performance.

Both deal with what the customer believes “can” and “should” be delivered. The difference between the two was termed the zones of tolerance. If services performance lies within these zones, quality is acceptable.

Indeed, the SERVQUAL instrument has undergone several modifications due to criticisms of its expectations section (Boulding et al., 1993); problems associated with the use of difference scores (Babakus and Boller, 1992; Cronin and Taylor, 1992) and the superiority of the perception only items (Carman, 1990; Teas 1993). There is some evidence to suggest direct scales are less biased than the gap scales and may be more appropriate when expectation norms are “well formulated” due to past experience with an organisation or similar organisations (Brown et. al., 1993; Carman, 1990).

In response to these criticisms, Parasuraman et al., (1994) reduced the 22 items to 21 as customers had little access to company records, making it difficult to assess company performance in “maintaining error free records,” which was deleted. The response scale was also extended from a 7-point to a 9-point scale. A three-column format, which required one rather than two administrations of the questionnaire, was also introduced.
Finally, positively worded items were introduced for all dimensions (originally the responsiveness and empathy dimensions consisted of negatively worded items).

As service quality has been found to be multidimensional, studies that have attempted to examine it using uni-dimensional scales may be methodologically unsound (Holbrook and Corfman, 1985; Zeithaml, 1988). Further, as Zeithaml (1988) pointed out, such studies make no attempt to ensure respondents interpret “quality” in a standardised way or even in a manner intended by the researcher, which results in ambiguous outcomes.

3.3 Perceived Risk

3.3.1 The Importance of Perceived Risk

Marketers have long argued that consumers seek information from a variety of sources when faced with risk or uncertainty (e.g., Cox, 1967). Here, we consider the research into risk that is directly relevant to consumers’ evaluations of products and services. Consumers’ perceptions of risk are central to their evaluations, choices, and behaviours (e.g. Dowling, 1986).

The role of risk in the consumption of services has been addressed conceptually (e.g., Eiglier and Langeard, 1977; Zeithaml, 1981) and empirically (e.g. George et al., 1985; Guseman, 1981; Murray and Schlacter, 1990), suggesting services are seen as riskier than goods. Comparatively little attention, however, has been directed to understanding the impact of the riskier nature of services on the purchase process and the information "needs" of services consumers.

As noted, past researchers have argued that service purchases are more uncertain than the purchase of products (Murray and Schlacter, 1990; Guseman, 1981) as services are not directly perceptible, are frequently experimental and, typically, are unpredictable in their outcomes. Though varying degrees of risk characterise all consumer purchases, it seems that, by their fundamental nature, services are riskier (Guseman, 1981; Murray and Schlacter, 1990).
Services lie along a continuum from search based to credence based and the difficulty of obtaining pre-purchase information and knowledge increases along the continuum. Credence-based services are more customised (Guiltinan, 1987; Zeithaml, 1981) and require the personal intervention of a service provider (Guiltinan, 1987). The variability and the non-standardised nature of credence services lead to uncertainty about their cost and performance (Murray and Schalater, 1990) and make it difficult for a consumer to evaluate alternatives before purchase (Guiltinan, 1987). For example, a consumer, facing a lawsuit, may find it difficult to choose between lawyers, if he has not previously received legal advice from them. Moreover, a consumer may even experience opposite results (satisfaction or dissatisfaction) from different service encounters with the same provider. A consumer of a credence service faces alternatives with few perceptible differences due to customisation and having minimal information about alternatives. Hence, such a consumer is likely to purchase a service first and then evaluate and learn about it (Young, 1981), increasing risk perceptions.

Conversely, search-oriented services, such as the mobile phone services being investigated in the present study, are not likely to be tailor-made and not likely to require special judgment in the delivery of the service (Guiltinan, 1987). The standardised nature of such services makes it feasible for customers to evaluate alternatives and be aware of the buying consequences before making a purchase decision. A consumer in such a situation is aware of the service needed, forms attitudes, makes evaluations and, finally, arrives at a purchase decision.

In view of this, Zeithaml (1981) thus argued that services are more difficult to evaluate and that, as a consequence, consumers may be forced to rely on different cues and processes when evaluating them. Cox (1967, p. 604) argued that the "amount and nature of perceived risk will define consumers’ information needs, and consumers will seek out sources, types, and amounts of information that seem most likely to satisfy their particular information needs." Evidence supports this position in relation to depth of search, types of sources, types of risk, and personality factors (Capon and Burke, 1977; Locander and Hermann, 1979; Lutz and Reilly, 1973). For example, evaluations in a
specific, high-risk situation are likely to differ from evaluations in a context-free environment (Payne et al., 1993).

As such, service marketing scholars (e.g., Bateson, 1977; Booms and Nyquist, 1981; Davis et al., 1979) assert that consumers evaluate information about services in a more complex and distinctive way (vis-à-vis products).

3.3.2 Towards a Definition of Perceived Risk

Bauer (1964) suggested perceived risk helped explain phenomena such as information seeking, brand loyalty, opinion leadership, reference groups and pre-purchase deliberations. He argued consumer behaviour involves risk as any consumption action may lead to unpleasant consequences. Some did not define perceived risk as the risk inherent in a transaction (Cox, 1967) but, rather, as the importance associated with the outcome of a given event (Ross, 1975). However, many researchers (e.g. Cox, 1967; Gemunden, 1985; Peter and Ryan, 1976) have suggested risk has two dimensions. Indeed, Bauer (1960, p. 24) initially defined perceived risk as two dimensional construct (uncertainty and negative consequences), suggesting "consumer behaviour involves risk in the sense that any action of a consumer will produce consequences which he cannot anticipate with anything approximating certainty, and some of which at least are likely to be unpleasant."

Bauer’s initial specification was refined by Jacoby and Kaplan (1972), who suggested there were financial, performance, physical, psychological, and social risk dimensions. An additional parameter (time risk) was identified by Roselius (1971). This multidimensional perspective was adopted quickly as researchers integrated the work of Bauer and Jacoby and Kaplan by conceptualising and measuring the uncertainty and consequences associated with each of these various types of risk (e.g. Bearden and Mason, 1978; Peter and Ryan, 1976; Peter and Tarpey, 1975). The risk construct has also been viewed as a function of two components (the probability of a loss occurring and the importance of the loss if it occurs) (Bettman, 1975; Peter and Tarpey, 1975). Incorporating these components and dimensions, perceived risk can be viewed as the
sum of the probability of loss times the importance of the loss associated with each dimension.

Researchers outside marketing also view perceived risk as a multidimensional construct (e.g., Slovic et al., 1984) and the idea of risk as a combination of uncertainty and consequences is related to several other research streams, such as the fear appeals literature, which suggests a person’s appraisal of a potential threat is a function of the severity of the threat and his or her vulnerability to it (Rogers and Mewborn, 1976; Tanner et al., 1991). To date, studies of perceived risk have assessed decision making under uncertainty across various product classes, including automobiles (Peter and Ryan, 1976), food products (Brooker, 1983), and personal computers (Stone and Gronhaug, 1993). A review of these studies suggests the importance of the various risk dimensions varies across different products. Thus, perceived risk appears to be context-dependent (Stone and Gronhaug, 1993).

Summing up the discussion, Zikmund (1973, p. 25), who investigated the nature and dimensionality of risk for three product classes (personal stationery, metal lawn furniture and colour television sets) concluded there is “considerable evidence that perceived risk should be treated multidimensionally and with regard to the specific product (service) class.”

In this study, perceived risk has been defined as “a buyer’s belief about the likelihood of negative consequences due to uncertainty about loss or gain in a particular transaction”. This echoes earlier definitions by Brooker (1984), Jacoby and Kaplan (1972) and Roselius (1971).

3.3.3 Risk-Handling Strategies

Consumers may use specific strategies to diminish prepurchase uncertainty. First, as the total risk of the purchase situation increases, an individual’s direct observation and experience become the preferred information source (Lutz and Reilly, 1973), suggesting that, as risk increases, the search pattern for information expands and the tendency to buy without prepurchase deliberation decreases (Locander and Hermann, 1979).
Second, consumers appear to use primarily use informal or personal information when perceived risk and uncertainty have not been reduced sufficiently by formal information sources and in which uncertainty and involvement are high enough to justify seeking information through informal channels (Cox, 1963a). Perry and Hamm (1969) found the greater the perceived risk of a purchase decision, the greater the importance of personal influence, supporting a number of other studies that showed word-of-mouth is the most important source of risk-reducing information and has a greater impact on consumers than mass media (e.g., Arndt, 1967; Lutz and Reilly, 1973). Midgley (1983) noted that the nature and degree of risk distinguish different sources of interpersonal information, suggesting that, for products dominant in social aspects, information from other individuals, rather than from objective or impersonal sources, is likely to be preferred.

Third, Lutz and Reilly (1973) noted consumers use more sources of information when faced with increased performance risk and that consumers’ relative preferences for various information sources shifts dramatically, depending on such factors. Over a wide range of products that are low or moderate in performance risk, the most frequently used method of information acquisition is simply to buy the product, conceivably on a "trial" basis. However, as performance risk increases, trial purchase becomes less preferred. Lutz and Reilly (1973) also observed that direct observation and/or experience is generally preferred to secondary sources of product information. Of various external information sources, word-of-mouth is particularly useful, although independent impersonal sources are preferred when performance risk is high. In short, consumers use different amounts and types of information sources to reduce risk, depending on the amount and type of risk.

### 3.4 Perceived Price

#### 3.4.1 The Importance of Price

Explanations for the influence of price may be broadly classified into economic and psychological categories (Monroe and Della Bitta, 1978; Nagle, 1983; Rao, 1984; Tellis, 1986). The economic research stream assumes consumers behave rationally, while the psychological stream attempts to explain behaviour. A key difference between the
economic and the behavioural conceptualisation on the use of price is the assumption of perfect information. However, consumers may not be familiar with alternatives, leading Jacoby et al. (1971) to suggest expertise or familiarity may mediate the effect price has on quality perceptions and Venkataraman (1981) found this was correct. Rao and Monroe (1989) suggested novice or unfamiliar buyers tend to use price as an indicator of quality more than expert or familiar buyers and developed a conceptual framework to explain how knowledge or familiarity moderates the use of price as an indicator of product quality.

In the complex pricing environment of services, it is difficult to use objective price in value models. Most services are varied and their prices vary widely, even within a particular type of service industry. Against such a backdrop, perceived price can be defined as a customer’s judgment about a price relative to competitors. The notion of perceived price is based on the nature of the competitive-oriented pricing approach that provides information about whether customers are charged more than or about the same as competitors charge. Perceived price does not eliminate objectivity, rather it adds some subjectivity. Perceived price includes monetary as well as non-monetary costs. In service industries, non-monetary costs, such as time and effort to the consumer, must also be considered (Zeithaml, 1988).

3.4.2 Towards a Definition of Perceived Price

It is not unusual for a customer to have difficulty remembering the price paid for a product or service. Instead, customers encode prices in ways that are meaningful to them (Dickson and Sawyer, 1989; Zeithaml, 1988). It is important for firms to determine the price customers perceive they paid. Perceived price can be defined as "what is given up or sacrificed to obtain a product" (Zeithaml 1988, p. 10). When price is used as a numerical stimulus, some of the principles of price perception must be considered (Monroe 1990; Monroe and Lee, 1999), namely:

- Price perceptions are relative to other prices.
Consumers have a reference price for each discernible quality level for each purchase category and this price influences judgments of other prices.

There is a region of indifference about a reference price such that changes in price within this region produce no apparent change in perception.

The reference price may be some average of a range of prices for similar offerings and need not correspond to actual price.

Buyers do not judge each price singly. Rather, each price is compared with the reference price and other prices in the price range.

Finally, price is not only a monetary sacrifice (Murphy and Enis, 1986) but can also be used to infer quality and value (Zeithaml, 1988; Rao and Monroe, 1989), as discussed in the subsequent two sections. It appears price is used as a quality signal when quality is difficult to estimate from tangible cues, leading a customer to infer that a high price implies a good quality product.

To sum up this discussion, price is defined in the present study as the monetary and non-monetary sacrifice required to obtain a product (Zeithaml, 1988; Murphy and Enis, 1986).

### 3.5 Trust

#### 3.5.1 The Importance of Trust

Trust is central in business to business relationships (Morgan and Hunt, 1994), but it is also crucial for understanding customer service relationships (Garbarino and Johnson, 1999; Sharma and Patterson, 1999; Singh and Sirdeshmukh, 2000; Tax et al, 1998). Relationships foster trust (Gwinner et al., 1998; Sheth and Parvatiyar, 2000), but relationships cannot develop without a build up of trust between the parties (Berry, 1995, Sheaves and Barnes, 1996). Trust is important for services with high performance ambiguity, significant consequentiality and high interdependence between the parties, such as medical services and car repairs (Singh and Sirdeshmukh, 2000). The
intangibility and heterogeneousness of services, combined with a spread of consumer distrust in companies means trust is “perhaps the single most powerful relationship marketing tool available to (a) company” (Berry, 1995, p. 242), leading Hart and Johnson (1999) to argue that the absence of “trust defects” was the most important factor in explaining customer commitment to service companies.

Trust has been studied extensively in business-to-business settings (e.g. Anderson and Narus, 1990; Anderson and Weitz, 1989; Ganesan, 1994; Morgan and Hunt, 1994; Salmond, 1994; Wilkinson and Young, 1994) and in relational retail settings (e.g. Crosby et al., 1990; Dwyer et al., 1987; Schurr and Ozanne, 1989). However, interest has also developed in the role trust plays in transactional retail settings, where it seems to be closely related to the ethical code by which salespeople operate (Ebejer and Morden, 1988; Whalen et al., 1991).

At the same time, the emergence of the relationship paradigm in marketing (e.g. Cravens, 1995; Grönroos, 1990, 1993; Sullivan and Peterson, 1982; Swan et al., 1985; Crosby, Evans and Cowles, 1990, Garbarino and Johnson, 1999) has heightened interest in trust, given the pivotal role it is thought to play in the development and maintenance of business relationships. Trust, is widely accepted as the basis of relationships (Andaleeb, 1992; Cowles, 1996; Crosby et al., 1990; Grönroos, 1990; Houston et al., 1992; Moorman et al., 1993; Wicks et al., 1999; Wilson, 1995), leading Berry (1996, p. 42) to suggest that “the inherent nature of services, coupled with abundant mistrust in America, positions trust as perhaps the single most powerful relationship marketing tool available to a company.”

Not surprisingly, several conceptual (Gundlach and Murphy, 1993; Nooteboom, Berger and Noorderhaven, 1997) and empirical (Garbarino and Johnson, 1999; Tax et al., 1998) studies suggested trust was a key determinant of relational commitment. For example, Urban et al. (2000) found trust was an essential element in building strong customer relationships and sustainable market share, while Reichheld and Schefter (2000, p. 107) observed that, to “[g]ain the loyalty of customers, you must first gain their trust.”
Although trust has received attention in a wide variety of disciplines, such as sociology, anthropology, political science, law, economics, and organizational relations (Lewicki and Bunker, 1996; Tyler and Kramer, 1996), the “elusive notion of trust” (Gambetta 1988, p. 6) continues to perplex other disciplines (e.g. economics, sociology, law and communications) and other areas of business (e.g. management, human resources). Several explanations for the elusiveness of trust have been suggested. Wilson (1995) argued trust may be active or latent in different phases of the relationship and suggested it is most important at the beginning of a relationship. However, it is also conceivable that the relative importance of trust increases with relationship length and that the nature of trust changes when a customer has more experience with a company.

3.5.2 A Communications and Economics Perspective

Perspectives of trust in two areas (communications and economics) offer potentially valuable insights of the role trust plays in relationship marketing. These areas suggest the relevance of trust cannot always be assumed, regardless of the context or behaviour. Moreover, researchers in both areas have criticised the use of the term “trust” in less than definitive ways (e.g. Craswell, 1993; Williamson, 1993). For example, in the communications literature, Pearce (1974) distinguished between “trustworthy” and “trust” in developing a model of person-to-person relationships. Interestingly, his discussion parallels concerns raised by Craswell (1993) in economics, who distinguished between trust as an explanandum (i.e. what is being explained) and trust as explanans (i.e. the explanation).

Within economics, a generalised expectancy and a behavioural conceptualisation of trust have been suggested (Moorman et al., 1993; Singh and Sirdeshmukh, 2000). Expectations of an exchange partner’s trustworthiness include general expectations about their expertise, reliability and intentionality (Moorman et al., 1993) that are influenced by an organisation’s reputation (Doney and Cannon, 1997), a customer’s previous experiences and culturally defined expectations about how a partner should behave (Selnes, 1998). Expectations based on previous experiences do not distinguish trust from service quality (Grönroos, 1986).
The behavioural conceptualisation of trust refers to a customer’s behavioural tendencies towards a service provider (Singh and Sirdeshmukh, 2000), but is best viewed as an outcome of trust, not as a manifestation of it (Morgan and Hunt, 1994). On the other hand, behavioural tendencies are captured by common conceptualisations of consumer commitment. Consumer vulnerability is believed to drive behavioural trust (Moorman et al., 1993; Singh and Sirdeshmukh, 2000) and consumers of services with credence properties could be specifically vulnerable. Moorman, Zaltman, and Deshpande (1992) and Doney and Cannon (1997) both stressed that trust is only relevant in situations of uncertainty.

3.5.3 A Social Science Perspective

In social science, trust has been defined in terms of belief about the motives or intent of another party (Blau, 1964; Butler and Cantrell, 1984; Pruitt, 1981). In this definition, trust refers to the willingness of a trustor to be vulnerable to the actions of a trustee (Mayer et al., 1995). Trust implies benevolence, integrity, and ability in an exchange relationship (Mayer et al., 1995), as well as predictability (McKnight et al., 1998). Luhmann (1979, p. 42) suggested “one fundamental condition of trust is that it must be possible for the partner to abuse the trust, indeed it must not merely be possible for him to do so but he must also have a considerable interest in him doing so.” Similarly, Gambetta (1988) suggested that trusting involves future contingencies in which the partner in whom trust is bestowed has freedom to disappoint the expectations of the trusting party. Thus, Morgan and Hunt (1994) defined trust as existing when one party has confidence in the reliability and integrity of the exchange partner.

3.5.4 Towards A Definition of Trust

As mentioned previously, trust has received a great deal of attention from scholars in several disciplines, including psychology (e.g., Deutsch, 1960; Larzelere and Huston, 1980; Rempel et al., 1985; Rotter, 1980), sociology (e.g., Lewis and Weigert, 1985) and economics (e.g., Dasgupta, 1988), as well as in more applied areas like management (e.g., Barney and Hausen, 1994) and marketing (e.g. Andaleeb, 1992; Dwyer et al., 1987; Morgan and Hunt, 1994). Although this multidisciplinary interest has added
richness to the construct, such a diversity of scholarship makes it difficult to integrate the various perspectives on trust.

Our literature review reveals that several factors seem to describe trust well, namely:

- **Reliability and Integrity** – Moorman et al. (1993, p. 82) defined trust as "a willingness to rely on an exchange partner in whom one has confidence." They suggested that an expectation of trustworthiness results from an ability to perform (expertise), reliability, and intentionality. Morgan and Hunt (1994, p. 23) defined trust as the perception of "confidence in the exchange partner’s reliability and integrity." Both definitions highlight the importance of confidence and reliability in the conception of trust.

- **Confidence and Benevolence** - Some research has emphasised trust as confidence in the honesty and integrity of the other party, such as a salesperson (e.g., Crosby et al., 1990). Using a similar definition of trust, Gwinner et al. (1998) found the psychological benefit of confidence and trust was more important than special treatment or social benefits in relationships with service firms. Doney and Cannon (1997, p. 37) suggested that trust is a "calculative process" based on the ability of an object or party (e.g., a brand) to meet its obligations and on an estimation of the costs and rewards of staying in a relationship.

At the same time, Doney and Cannon (1997) pointed out that trust involves an inference regarding the benevolence of the firm to act in the best interests of the customer based on shared goals and values. Demonstrations of benevolence provide an assurance of non-opportunism. For example, when the customer believes that the salesperson cares for it and is on its side, then the customer may conclude that the purpose or agenda behind the sales person’s actions are benign.

Similar to forbearance from opportunism, benevolence involves a spirit of cooperation, not cheating, and not withholding helpful action. By providing a channel customer with useful information and recommending actions that enable it
to be more profitable, sellers can strengthen their position with that customer (Frazier and Summers, 1984; O’Neal, 1989).

- **Security and Predictability** – Most agree expectations and risk are critical components of trust. For example, Deutsch (1973) defined trust as the confidence that one will find what is desired from another, rather than what is feared. Mayer, Davis, and Schoorman (1995, p. 709) argued that trust is “the willingness of a party to be vulnerable to the actions of another party” and Barney and Hansen (1994) suggested that trust is “the mutual confidence that no party to an exchange will exploit another’s vulnerability.” In these trusting situations the sources of risk are generally related to vulnerability and/or uncertainty about an outcome. In particular, Blomqvist (1997) associated risk perception with a situation of imperfect information because, in total ignorance, it is possible only to have faith and/or gamble but, with perfect information, there is no trust but merely rational calculation. Uncertainty about other’s intentions and actions is a source of risk (Rousseau et al., 1998).

Consequently, trust is a psychological construct concerned with perceived probabilities (Bhattacharya et al., 1998), confidence (Barney and Hansen, 1994; Deutsch, 1973; Garbarino and Johnson, 1999) or expectancy. In other words, trust is based on the notion that people attempt to understand their partners in terms of acts, dispositions, and motives that would predict positive responses (Rempel et al., 1985). Further, there is recognition that people will not take unexpected actions that may result in negative consequences (Anderson and Narus, 1990). Trust is developed through repeated interactions in which one person observes the other person to be consistent, competent, honest, fair, responsible and benevolent (Altman and Taylor, 1973; Larzelere and Huston, 1980; Rotter, 1971). Thus, trustworthiness is grounded in observable behaviours and specific actions.

Although numerous definitions of trust have been suggested, many are not unlike that offered by Giffin (1967), who suggested trusting behaviour occurs when a person relies on another, risks something of value, and attempts to achieve a desired goal. This
definition is similar to that offered by Rotter (1967, p. 651), who argued trust is “a
generalized expectancy held by an individual that the word of another ... can be relied
on.”

Singh and Sirdeshmukh (2000) pointed out that although a multitude of definitions of
trust have been used, more may be needed for different types of services relationships,
even if it makes comparisons between studies difficult. Trust, like relationships in
general, has a past, a present and a future as it develops over time. The trust that
customers experience at present may differ from the one they experienced last year and
from their future expectations of trust. It may also be possible to distinguish between
pre- and post-encounter trust.

Summing up, for this purposes of this study, trust is described as a buyer’s belief in a
firm’s benevolence, honesty and competence to act in the best interest of the relationship
in question (Moorman et al., 1992, p. 315; Morgan and Hunt, 1994, p. 23).

3.6 Summary and Conclusions

Many researchers have advanced our understanding of the relationships between
perceived value and its antecedents (such as service and product quality, corporate
image, perceived risk, relative price and trust). These concepts can be difficult to
differentiate because of their various definitions, multidimensionality and the different
ways consumers determine why they remain committed to their service providers.
Despite these problems, the constructs are extremely important. By understanding how
they impact on perceived value, marketers can suggest strategies that will improve an
organisation’s position in competitive market places.
4.0 Introduction

While numerous studies have examined the determinants of brand loyalty for products (e.g. Cunningham, 1966; Jacoby and Chestnut, 1978; Tranberg and Hansen, 1986), and the most effective ways in building such loyalty (Laforet and Saunders, 1994), studies on service loyalty are less numerous. This is surprising as goods and services have distinct characteristics that require different strategies. In particular, where customer loyalty is concerned, existing research has generally focused on segmentation and measurement issues rather than on integrating loyalty into the wider body of marketing
theory (Dick and Basu, 1994; Macintosh and Lockshin, 1997). Thus, the process by which customers develop a sense of loyalty to a particular firm needs further research (Pritchard et al., 1999).

The current chapter addresses some of these issues through a discussion of two major outcomes of perceived value - customer loyalty and customer satisfaction.

**4.1 Customer Loyalty**

4.1.1 The Importance of Customer Loyalty

While customer satisfaction has been a primary focus of academics and business practitioners, it is clear that loyalty is becoming important (Uncles, 1998; Aaker, 1992; Reichheld, 1993; Jones 1995; Arnold, 1992). Interest in loyalty in marketing is long standing, dating back to Copeland (1923) and Churchill (1942). The question lingers, nevertheless, if the shift in focus is warranted. Several argue that satisfaction does not matter very much—only loyalty does (e.g. Jones and Sasser, 1995; Oliver, 1999; Stewart, 1997). Reichheld (1996, 2001), in particular, suggests that loyalty, and not satisfaction, should be the primary focus of a firm’s marketing activities.

One reason for loyalty’s growing importance is that businesses are beginning to understand the profit effect of loyal customers (Oliver, 1999; Zeithaml et al., 1996; Fornell et al., 1995; Reichheld and Sasser, 1990). For example, Raj (1985) found firms with large market shares also had larger groups of loyal consumers. Marketers with loyal consumers can expect repeat patronage to remain high until competitors find a way to close the gap either by trying to reduce the differential advantage of the leading brand, increasing the differentiation of their own brand or encouraging spurious loyalty from consumers (Dick and Basu, 1994).

This is especially so in the services sector where customers often become profitable only after some time and can even create losses during the first few years (Reichheld and Sasser, 1990; Keaveney, 1995; Zeithaml et al., 1996). Indeed, customer retention may have a stronger effect on the bottom line than market share, unit costs and other factors usually associated with firm profitability (Reichheld, 1993; Reichheld and Sasser, 1990;
Rust et al., 2000; Zeithaml, 2000), leading Reichheld (2001) to argue that the fundamental task of businesses should be managing customer loyalty.

To these ends, practitioners instigate loyalty programmes with the stated aim of “moving customers up the loyalty ladder” (Light 1994, p.20). Colombo and Morrison (1989, p.89) argued, “most marketing strategies are aimed at either increasing customers’ loyalty or attracting the competitors’ customers, the best strategies do both.”

Even though findings of loyalty to tangible goods (i.e., brand loyalty) cannot be readily generalized to service loyalty (de Ruyter et al., 1998), loyalty has not been examined in as much detail in service contexts (Gremler and Brown, 1996) for several reasons:

1. The intangibility of services makes the evaluation of service quality and satisfaction more difficult than it is for goods, which means consumers often depend on credence qualities to evaluate services (Zeithaml, 1981). This makes information about services more expensive, and may lead to consumers having less information about services than about goods.

2. The complexity of service loyalty is compounded when the object of the customer’s loyalty is considered. Whereas brand loyal consumers are often attached to the object or to the purchase of the object, service loyalty can extend beyond the core service (e.g. Pritchard et al., 1999), cognitive loyalty (e.g. Dubé and Maute, 1998; Ganesh et al., 2000; Sharma and Patterson, 1999), and future loyalty intention (e.g. Fornell, 1992; Rust and Zahorik, 1993; Sirohi et al., 1998; Zeithaml et al., 1996).

3. Studying service loyalty is also challenging because of its complex scope. The personal interaction between employees and customers is a key service issue (Czepiel and Gilmore, 1987; Gwinner et al., 1998; Suprenant and Solomon, 1987), especially as services provide more occasions for personal interactions (Czepiel and Gilmore, 1987; Zeithaml and Bitner, 2000). This provides additional opportunities for loyalty to develop (Crosby et al., 1990; Macintosh and Lockshin, 1997; Parasuraman et al., 1985; Suprenant and Solomon, 1987).
Hence, besides being able to create stronger bonds with customers than do suppliers of goods (Czepiel and Gilmore, 1987; Zeithaml, 1981), there is a possibility of customer loyalty developing at the national or regional service corporation, an individual franchise, or an employee or customer-contact person.

4.1.2 Towards A Definition of Customer Loyalty

Jacoby and Chestnut (1978) provided an excellent review of loyalty, systematising the evidence and identified more than fifty ways of understanding loyalty. They concluded, “it is extremely interesting to find, upon reviewing this literature that no one quite agrees on exactly what … loyalty is” (Jacoby and Chestnut 1978, p.80). Although there are many definitions of loyalty, there are two basic approaches – the behavioural approach (e.g. Cunningham, 1961; Ehrenberg, 1988; Kahn et al., 1986) and the attitude-based approach (e.g. Copeland, 1923; Fournier and Yao, 1997).

In consumer research conducted in the 1960s and 1970s, customer loyalty was approached predominantly from a behavioural perspective. This is not surprising as most research originated from the field of packaged consumer goods and Jacoby and Chestnut (1978) observed that, in these studies, the focus was on interpreting patterns of repeat purchasing in primarily panel data. They concluded that using consistent purchasing as an indicator of loyalty could be invalid because of ‘happenstance’ buying or a preference for convenience and that inconsistent purchasing could mask loyalty if consumers were multi-brand loyal.

Examples of loyalty behaviour include continuing to purchase services from the same supplier, increasing the scale and or scope of a relationship or recommending the provider (Yi, 1990). In tandem with this school of thought, Neal (1999, p. 21) defines customer loyalty as “the proportion of times a purchaser chooses the same product or service in a category compared with his or her total number of purchases in the category, assuming that acceptable competitive products or services are conveniently available.” While instructive in some contexts, these narrow technical definitions do not adequately capture the richness and depth of the loyalty construct implicit in a relational framework.
They have also been criticised for a lack of a conceptual basis and for a narrow (i.e. outcome-focused) view of what is a dynamic process (Day, 1969). For instance, a low degree of repeat purchasing may well be the result of situational factors such as non-availability, variety seeking and lack of provider preference. After Bass (1974) pointed out that stochastic components (i.e. randomness that could not be explained) occur in repeat purchasing patterns, researchers began to question the adequacy of behaviour as a measure of loyalty.

Further, repeat purchasing behaviour may not be based on a preferential disposition but, rather, on various bonds that act as switching barriers (Liljander and Strandvik, 1995). Finally, the decision to buy a brand can be influenced by other moderating variables, such as social norms (Ajzen and Fishbein, 1980) and situational factors (Smith and Swinyard, 1983). It became clear that the behavioural approach to loyalty may not yield needed insight into the underlying reasons for loyalty, instead measuring a consumer’s predisposition in terms of preferences or intentions (Bloemer and Kasper, 1995; Jain et al. 1987; Gremler and Brown, 1996).

Attitude, which denotes the degree to which a consumer’s predisposition is favourably inclined, was suggested as a supplement (Ajzen and Fishbein, 1980; Fornell and Wernerfelt, 1987; Reichheld and Sasser, 1990; Reichheld, 1993, 1996; Jones and Sasser, 1995). The attitude-based approach, extended from Jacoby and Chestnut’s (1978), incorporated the concept of “relative attitude.” Relative attitude covers the extent to which a customer’s assessment of a product overrules their assessment of another product. Dick and Basu (1994) argued that the focus should be on relative attitudes as the assessment of a given product may be relatively high in an absolute sense, but if the evaluation of rival products is also high, the effect will be small. What soon became apparent was that there was no unambiguous relationship between the attitude-based approach on the one hand and behaviour on the other.

Acknowledging that loyalty is not an unambiguous concept and that both the attitude-based and the behavioural approach deserve merit, Dick and Basu (1994) developed a model that integrates both approaches; suggesting loyalty is affected by the relative strength of the relationship between attitude and behaviour. They argued that to
measure true brand loyalty, researchers must assess consumer beliefs, affect and intentions.

More specifically, the three must point to a focal brand if true brand loyalty exists. That is:

1. The brand attribute ratings (beliefs) must be preferable to competitive offerings.

2. This "information" must coincide with an affective preference (attitude) for the brand.

3. The consumer must have a higher intention (conation) to buy the brand compared with that for alternatives.

Their stance is not actually a new one. Jacoby and Chestnut (1978), in their review of the literature, reported 53 different definitions of the construct. Their conclusion was that the only way to reveal real loyalty is to measure customers’ attitudes and intentions towards the brand in question.

These definitions have been enriched by several researchers along the way. Jones and Sasser (1995, p. 94) argued that customer loyalty is “a feeling of attachment to or affection for a company’s people, products, or services.” This is reflected, for instance, in a willingness to recommend a service provider or the commitment to repatronise a preferred service provider (Gremler and Brown, 1996; Jain et al., 1987). This is akin to Morgan and Hunt’s (1994, p.23) definition of commitment as “an ongoing relationship with another that is so important as to warrant maximum efforts at maintaining it” also implies strong affective and behavioural commitment. In empirical research the term ‘loyalty’ often refers to repeat patronage, while ‘commitment’ is used to denote customers’ affective preferences (e.g. Odekerken-Schröder, 1999).

More recently, Fournier (1998, p. 343) placed loyalty within the relationship domain by observing that, “although ‘loyalty’ itself is a fertile relationship concept, its nuances have been lost in traditional brand loyalty research. Operationalizations relying on sequence or proportion of purchase perhaps better reflect a notion of inertia than loyalty
with its full relational significance.” A business relationship may be maintained involuntarily because a customer is prevented by mobility barriers from changing suppliers or dispensing with a category of service (Bliemel and Eggert, 1998). On the other hand, a customer may carry out subsequent transactions because she has a favourable attitude towards the provider and the services he supplies, and because he therefore wants to keep the business relationship going to their mutual benefit.

While the different contributions on loyalty have deepened our knowledge of its forms and determinants, they failed to analyse the development of loyalty over time, not explaining how and why different forms of loyalty emerge. A dynamic approach, if properly considered, can explain the different configurations of customer loyalty in various stages of the relationship life cycle.

One of the few attempts in this direction was undertaken by Oliver (1997 and 1999), who suggested defining customer loyalty as a condition of strong involvement in the repurchase, or reuse, of a product or brand. This involvement is strong enough to overcome “situational” and “competitive” influences that might drive a “variety seeking” or a switching behaviour.

Oliver's (1997) framework follows this cognition-affect-conation pattern and he argued that consumers can become ‘loyal’ at each attitudinal phase. Specifically, consumers become loyal in a cognitive sense, then later in an affective sense, still later in a conative manner and, finally in a behavioural sense. For example, it would seem that loyal customers must perceive their telecommunications company (telco) as better than its competitors (cognitive loyalty) and that they must like the telco better than their competitors (affective loyalty). Repurchasing and repatronising, in turn, means customers must have an intention to keep on using the telco’s services in the future (conative loyalty).

To sum up this discussion, we posit that loyalty is today dynamic (Oliver, 1999), entrenched firmly in relationship marketing (Fournier, 1998) and comprises both attitudinal and behavioural elements (Dick and Basu, 1994; Morgan and Hunt, 1994). Loyalty has thus been defined in this study as a buyer’s desire to maintain a strong and
enduring relationship with a firm, which is enhanced by reciprocity, sustained by a perception of equity and fairness and typified by co-operative attitudes and behaviours.

4.1.3 Distinguishing between Customer Loyalty and Commitment

In the relationship marketing literature, commitment has been widely acknowledged as an integral part of any long-term business relationship (e.g. Dwyer et al., 1987; Anderson and Weitz, 1992; Gundlach et al., 1995; Morgan and Hunt, 1994). Thus, it is not a surprise that the concept has been examined (Heide and John, 1990; Anderson and Weitz, 1992; Scheer and Stern, 1992). These and related studies have addressed the concept in different ways. But more importantly, in the context of our study, how is it related to customer loyalty?

Irving et al. (1997), for example, showed that different forms of employee commitment have different effects on intentions, which supports separating behavioural intentions from other forms of commitment. They found that only continuance commitment had an effect (negative) on turnover. In marketing contexts continuance commitment has been labelled calculative commitment (Geyskens et al., 1996). It is comparable to the switching costs that act as bonds in relationships (Morgan and Hunt, 1994). Calculative commitment is greater at higher levels of interdependence between firms (Geyskens et al., 1996).

Lowenstein (1997) introduced the concept of commitment into the relational paradigm by identifying what he termed “commitment-based” companies. These are firms that adopt a proactive approach to creating customer value and managing loyalty through strategies that build commitment by anticipating and responding to latent customer needs. This is consistent with Aaker’s (1991, 1996) seminal work on branding, which suggested customers who exhibit the highest level of commitment to the brand are also the most loyal.

Gundlach et al. (1995) argued that commitment has three components (an instrumental component of some form of investment, an attitudinal component that may be described as affective commitment or psychological attachment, and a temporal dimension
indicating that the relationship exists over time). This is not unlike Dick and Basu (1994)’s conceptualisation of loyalty, suggesting commitment is a necessary condition for loyalty as, without this, a customer is merely spurious loyal (Dick and Basu, 1994). Commitment can, therefore, be defined as a “pledge” that binds customers to their choice (Kiesler, 1968; Lastovicka and Gardner, 1977). As a result of explicit and extensive decision-making, as well as evaluative process, a consumer becomes committed and therefore, by definition, becomes loyal.

While commitment and loyalty have been defined as having behavioural and affective components, the affective component usually dominates in operationalisations of commitment. Morgan and Hunt (1994, p.23) defined commitment as “an ongoing relationship with another [that it] is so important as to warrant maximum efforts at maintaining it.” This implies a strong affective commitment towards the firm, and past research offer ample support for affective commitment as a good predictor of customer return intentions (Barksdale et al., 1997; Garbarino and Johnson, 1999; Odekerken-Schröder, 1999; Wetzel, 1998).

In conclusion, we observe that commitment has been weaved into definitions of customer loyalty (e.g. Oliver, 1999) and high commitment is characterised by behavioural loyalty, high relative attitude (Dick and Basu, 1994) and, manifest satisfaction (Bloemer and Kasper, 1995; Bloemer and de Ruyter, 1998). Customer commitment and loyalty are similar concepts and are thus used interchangeably in this study as), the essence of which is captured in our earlier definition of customer loyalty.

### 4.2 Customer Satisfaction

Customer satisfaction is an established concept in several sciences, including marketing (Fornell and Wernfelt, 1987; Fornell and Wernfelt, 1988; Kotler, 1991; Cadotte, Woodruff, and Jenkins, 1987; Churchill and Suprenant, 1982; Ervelles and Leavitt, 1992; Oliva et al., 1992; Oliver, 1980; Oliver and DeSarbo, 1988; Oliver and Swan, 1989; Tse and Wilton, 1988), consumer research (Yi, 1989), economic psychology
(Johnson and Fornell, 1991), welfare-economics (Simon, 1974), and economics (Van Raaij, 1981; Wärneryd, 1988).

4.2.1 The Importance of Customer Satisfaction

The pursuit of customer satisfaction has become an important goal for businesses (Levitt, 1983; Webster, 1994), especially for service firms (Jones and Sasser, 1995), especially as there is considerable empirical evidence of a link between customer satisfaction and business performance that has enhanced the interest of researchers and marketing practitioners (Anderson et al., 1994; Fornell et al., 1996; Oliver, 1980; Spreng et al. 1996; Churchill and Suprenant, 1982, Tse and Wilton, 1988, Anderson and Sullivan, 1993). Buttle (1996) noted that customer satisfaction, for some organisations, has replaced market share as a measure of marketing success and business performance, while Hanan and Karp (1989) referred to customer satisfaction as the only meaningful competitive advantage.

Consumer satisfaction is important because increasing customer satisfaction and customer retention leads to improved profits, positive word-of-mouth and lower marketing expenditures (Reichheld, 1996; Heskett et al., 1997). Satisfaction is important to the consumer because it reflects a positive outcome from the outlay of scarce resources and/or the fulfilment of unmet needs (Day and Landon, 1977; Landon, 1977).

Satisfied customers also have reduced price elasticities and greater competitive resistance and firms enjoy reduced failure costs and an enhanced reputation (Anderson et al., 1994; Fornell, 1992). Previous research has demonstrated that unsatisfactory purchases, although varying by product class or service category, are common. For example, Andreassen and Best (1977) reported that as many as one in five purchase experiences resulted in some dissatisfaction. Similarly, Day and Bodur (1978) and Day and Ash (1979) reported frequent incidences of dissatisfaction for services and durable products. Thus, minimising dissatisfaction and maximizing satisfaction are seen as important goals for both the firm and the consumer.
From a relationship marketing perspective, satisfaction has been regarded as an important component of exchange relationships (Crosby et al., 1990; Dwyer, 1980; Frazier, 1983; Robicheaux and El-Ansary, 1985; Stern and Reve, 1980) as it can affect channel members’ morale and consequent intentions to participate in joint activities (Schul et al., 1985). Hunt and Nevin (1974) noted the positive implications of satisfaction by indicating that it leads to higher morale, greater cooperation, fewer terminations of relationships, fewer lawsuits and a lower likelihood of seeking protective legislation. Lusch (1976) argued that satisfaction reduces intra-channel conflict and promotes greater channel efficiency. However, Ruekert and Churchill (1984) suggested that, despite the importance of satisfaction in exchange relationships, it remains a primitive construct that marketing scholars have not addressed effectively. Similarly, Schul et al. (1985) indicate that little is known about the range of determinants of channel member satisfaction.

Satisfaction has also been identified as a key mediating variable between loyalty and a number of antecedents in several service contexts, including value (Patterson and Spreng, 1997), interpersonal relationships and perceived switching costs (Jones et al., 2000), value-added and value-recovery strategies (Dubé and Maute, 1998), price (Bolton and Lemon, 1999), service quality (Gotlieb et al., 1994), customer participative behaviour (Ennew and Binks, 1999), and even satisfaction at an earlier time (Mittal et al., 1999). Satisfaction is also a significant antecedent to post-purchase attitude and repeat purchase intentions, as well as several other beneficial behavioral intentions (Anderson, 1994; Zeithaml et al., 1996). As discussed earlier, consumers’ satisfaction with a firm’s products is also positively related to the firm’s return on investment and profitability (Anderson et al., 1994).

Given its strategic role, customer satisfaction is thus useful to marketers in identifying three types of customers, namely:

- Customers whose expectations are not met (dissatisfied customers).
- Customers whose expectations are met or exceeded slightly (merely satisfied customers)
Chapter Four: The Outcomes of Perceived Value

- Customers whose expectations are substantially exceeded (highly satisfied or delighted customers (Jones and Sasser, 1995).

This is important as repurchase motivations differ for each group. Dissatisfied customers are more likely to actively look for alternative suppliers and leave the exchange relationship. Merely satisfied customers are likely to remain in the relationship but are not committed and might switch to a competitor when an alternative offering appears to provide superior value. Delighted customers are loyal to the relationship and, so, are less sensitive to competitors' offers and are most likely to continue to repurchase (Jones and Sasser, 1995; Rust and Zahorik, 1993; Rust et al., 1995).

Indeed, businesses of all sorts devote considerable energies to tracking customer satisfaction. A new industry on satisfaction research and consulting has come into existence (e.g. Barsky, 1994; Hayes, 1992) as leading satisfaction researchers argue, “Customer satisfaction drives future profitability”. It is a vital measure of performance for firms, industries and national economies (Anderson et al., 1994). Ervelles and Young (1992) even suggested satisfaction is recognised as “the central element in the marketing concept.”

4.2.2 Discussion of Relevant Customer Satisfaction Models

Consumer satisfaction research started as early as the 1960’s (Cardozo, 1965). As researchers conceptualised the satisfaction construct differently, different models of customer satisfaction have been suggested. Ervelles and Leavitt (1992) reviewed the characteristics of major models, noting some of the dominant models that are still widely used include:

- The expectancy disconfirmation model, which describes customer satisfaction as a function of expectations and disconfirmation resulting from a comparison of expectation with actual performance perception (Oliver, 1980; Day, 1984; Olshavsky and Miller, 1972; Olson and Dover, 1976).
• The *perceived performance* model, which suggests customer satisfaction is affected only by performance (Churchill and Suprenant, 1982). This model deviates from the expectancy disconfirmation model in that expectations play a less significant role in satisfaction formation.

• The *equity* model, which examines the relationship between customer satisfaction and fairness (Oliver and Swan, 1989). Fair treatment is measured through an equity ratio (that is, the amount of her/his return for her/his effort made) or the concept of social comparison (that is, the perceived, relative level of product/service performance that other consumers experience). Oliver (1997) divides equity into three categories (procedural fairness, interactional fairness and distributional fairness).

• The *multiple process* model, which investigates the influence and relationship of different comparison standards on customer satisfaction judgment (Tse and Wilton, 1988).

• The *norms* model, which resembles the *expectancy disconfirmation* model in that a consumer compares perceived performance with some standard for performance. In this case, however, the standard is not a predictive expectation. Rather than considering what will happen in the consumption experience, the consumer uses what should happen as the comparison standard.

• The *attribution* model, which integrates the concept of perceived causality for a product or service into the satisfaction process. Consumers use the three factors (causality, stability and controllability) to determine attribution’s effect in satisfaction. The locus of causality can be external (that is, the service provider gets the credit or blame) or internal (that is, the consumer is responsible for the product/service performance). Stable causes have more impact on satisfaction, as consumers tend to be more forgiving of product or service failures that appear to be rare events. Controllability affects attribution as a poor outcome in a consumption experience may mean that the consumer will be unsatisfied with
the product or service provider if the consumer believes the provider had the capacity, that is, control, to perform in a better fashion.

- The affective model differs from previous models as it goes beyond rational processes. In these models, emotion, liking, and mood influence (dis)satisfaction feelings following the consumption experience.

The expectancy disconfirmation model has been the most popular approach (e.g. Spreng, MacKenzie and Olshavsky, 1996) in the development of national customer satisfaction indexes in Sweden (Fornell 1992) and the United States (Fornell et al., 1996). Given the popularity of the expectancy disconfirmation, comparison-level, performance and Fornell’s customer satisfaction models, subsequent sections provided a detailed discussion of these models.

4.2.2.1 The Expectancy Disconfirmation Paradigm

Having roots in social psychology (Weaver and Brinckman, 1974) and organisational behaviour, expectancy disconfirmation is two processes consisting of the formation of expectations and the disconfirmation of those expectations. To this end, it can be argued that consumer satisfaction is a function of expectations and disconfirmation, and predictive expectations are used as the standard of comparison.

Oliver (1997) expanded on this idea by suggesting that two underlying forces drive the expectancy--disconfirmation process (assimilation and contrast effects). Assimilation strategy implies a heavy reliance on expectations in arriving at satisfaction judgments, such that consumers are thought to assimilate performance toward previously held expectations (Oliver, 1997).

Like Helson’s (1964) adaptation theory, expectations are viewed as the anchor for future performance evaluations and are believed to take on increased importance under conditions of high performance ambiguity. Contrasting effects manifest themselves in satisfaction judgments, as consumers are likely to exaggerate the perceived levels of performance so that performance levels that exceed expectations tend to be rated much higher than they really are (Oliver, 1997). In effect, a consumer is believed to magnify
perceptions of performance in the direction of the performance discrepancy. Oliver (1997) notes that disconfirmation, a proxy for contrast effects, is strongest under conditions of high salience, or involvement, and when consumers are easily able to discern performance differences.

As a result, satisfaction can be perceived in terms of a singular occurrence and as an aggregated impression of a number of events. According to Oliver (1996), this is a critical feature for service providers. In addition, outcome definitions of satisfaction exist. Here, satisfaction is viewed as a state of fulfilment that is connected to reinforcement and arousal. As an end-state, several types of satisfaction have been discerned in the satisfaction-as-states framework developed by Oliver (1989). On the basis of level of reinforcement and degree of arousal the following end-states of satisfaction have been advanced: “satisfaction-as-contentment”, “satisfaction-as-pleasure”, “satisfaction-as-relief”, “satisfaction-as-novelty” and ‘satisfaction-as-surprise’. Satisfaction is thus perceived to be a post-consumption evaluation or ‘a pleasurable level of consumption-related fulfilment’ (Oliver, 1996).

Particularly in a services context, the service delivery can be designed in such a way that it exceeds expectations in terms of arousal and reinforcement as end-states (Rust and Oliver, 1994). However, it may be very difficult to reach optimal levels of satisfaction on a continual basis, because there may be many factors that influence satisfaction formation which are beyond the control of the service provider.

4.2.2.2 Comparison - Level Theory

According to Thibaut and Kelley (1959), the key to determining satisfaction and motivation to remain in a relationship is the concept of comparison levels, of which two standards are employed (the comparison level and the comparison level for alternatives). The comparison level is “the standard against which a member evaluates the “attractiveness” of the relationship or how satisfactory it is” (Thibaut and Kelley, 1959, p. 21). They argued that the comparison level moves to the level of outcomes currently being attained. Thus, a customer who has experienced declining outcomes with a
previous service provider and switches because of dissatisfaction will enter a new relationship with a reduced comparison level.

4.2.2.3 The Performance Model

The most important assumption of the performance model is that a customer’s perception of the quality of a product or service and their expectations influences satisfaction. In this connection, quality should be understood as a customer’s experience of the product or service level in relation to the price paid. The fact that the perceived quality or “value” positively influences customer satisfaction results from the notion of an existing relationship between value and perception (Westbrook and Reilly, 1983). The more the product or service is able to satisfy the customer’s demands and wishes in relation to the price, the more satisfied customers are likely to become (Churchill and Suprenant, 1982; Tse and Wilton, 1988). In other words, customer satisfaction is assumed to increase as a result of higher quality of the product or service per monetary unit (Lancaster, 1971).

Thus, it has been suggested that customer expectations have a positive and unambiguous effect on customer satisfaction (Fornell and Johnson, 1993; Van Raaij, 1989; Schelling, 1978; Oliver, 1980). Customer expectations contain essential information about the quality of products and services up to the present moment and also assumptions about future developments. The sum of this information provides a basis that is continuously adjusted as the customer obtains new information. Consequently, the determination of customer satisfaction is maintained within the limits of their expectations.

4.2.2.4 Fornell’s customer satisfaction model

The disconfirmation model and performance model each have limitations. The problem of the disconfirmation model is that the absolute level of perceived quality and expectations is not part of the model. The same disconfirmation (i.e. the same difference in expectations and perceived quality) may be caused by low expectations and low quality or by high expectations and high quality. Hence, a certain degree of disconfirmation does not reflect the absolute level of expectations and perceived quality.
As a consequence, the disconfirmation model has resulted in inconsistent conclusions (LaTour and Peat, 1979; Churchill and Suprenant, 1982). The performance model does not involve disconfirmation, which is supported by many studies (e.g. Cadotte et al., 1987; Tse and Wilton, 1988; Oliver et al., 1994).

The most common approach appears to be an integration of the disconfirmation and performance models into a joint customer satisfaction model that assumes expectations, quality and disconfirmation influence customer satisfaction (Martensen and Grønholdt, 1998). Oliver and DeSarbo (1988) examined expectations, perceived quality and disconfirmation in such a way that the effect of each variable on customer satisfaction could be estimated separately. They found all three variables had significant, considerable and direct effects on satisfaction.

4.2.3 Towards A Definition of Customer Satisfaction

Early studies conceptualised customer satisfaction as a customer’s perception of product performance (Cardozo, 1965). In services marketing, customer satisfaction was described as a judgment made on the basis of a specific service encounter (Bolton and Drew, 1991; Cronin and Taylor, 1992), suggesting customer satisfaction is a post-choice evaluation of a specific transaction (Selnes, 1993). Swan and Combs (1976) defined satisfaction as a post-purchase attitude, concurring with Oliver’s (1981) view that satisfaction is an emotional reaction that influences attitude and is consumption specific. From this perspective, Cronin and Taylor (1994) propose that the domain of customer satisfaction should be limited to transaction-specific judgments and service quality to long-term attitudes. The definition of consumer satisfaction offered by Day (1984), as a post-choice evaluative judgment of a specific purchase selection, is typical of a wide variety of approaches to consumer satisfaction that include an evaluative component (Engel and Blackwell, 1982; Tse and Wilton, 1988).

Both process and outcome (or performance) definitions of satisfaction co-exist. Westbrook (1980), for example, introduced the notion that customer satisfaction involves cognitive and affective aspects in the pre-purchase, purchase and post-purchase phases of buying goods and/or receiving services. With regard to the former, several
conceptualisations of satisfaction have been suggested (Oliver and DeSarbo, 1988; Tse and Wilton, 1991; Yi, 1990) while Tse et al. (1990) emphasised that satisfaction is a process spanning the consumption period and that research in the post-purchase phase is critical to new knowledge development. Later studies, however, have affirmed the disconfirmation of expectations (Churchill and Suprenant, 1982; Oliver and DeSarbo, 1988; Spreng and Olshavsky, 1996). Oliver (1977, p. 13) recently defined satisfaction as “the consumer’s fulfilment response… It is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfilment, including levels of under or over involvement.”

There are two distinct views of the customer satisfaction concept (transaction-specific and accumulated perception) (Boulding et al., 1993; Johnson et al., 1995 and Anderson et al., 1994). The transaction-specific definition sees customer satisfaction as an assessment made after a purchase. In other words, it examines how satisfied a customer is with a product or service after the purchase is made (Hunt, 1977; Oliver, 1977, 1980, 1993; Anderson et al., 1994).

In the accumulated customer satisfaction definition, satisfaction is the sum of a customer’s purchase and consumption experience (Johnson and Fornell, 1991; Fornell, 1992). Here, satisfaction (or accumulated satisfaction) is "an overall evaluation based on the total purchase and consumption experience with a good or service over time" (Anderson et al., 1994, p. 54).). Rather than capturing the transient and encounter-specific evaluations and emotions, applied market research tends to measure customer satisfaction as a consumer's general level of satisfaction based on all experiences with a firm. The accumulated customer satisfaction perception exists in a variety of forms (Oliver, 1997; Johnson et al., 1996). The most important of these, in a theoretical as well as empirical sense, are termed the performance model, and the disconfirmation model, which were discussed in the previous section. In this study, the focus is on a customer’s satisfaction with their overall service experience.

It is evident that customer satisfaction is a subjective concept, leading to the suggestion that satisfaction is “an evaluation rendered that the (consumption) experience was at least as good as it was supposed to be” (Hunt 1977, p. 459). Following Oliver (1999),
satisfaction can be defined as a “perception of pleasurable fulfilment.” In addition, given there is a tendency towards a cumulative view of satisfaction (Garbarino and Johnson, 1999; Sharma et al., 1999), customer satisfaction can be defined as “an overall evaluation based on all purchase and consumption experiences and encounters with that particular mobile service provider” (Bitner and Hubbert, 1993, p. 77).

In consonance with earlier views (Fornell, 1992; Johnson and Fornell, 1991; Bitner and Hubbert, 1993), customer satisfaction has been defined in this study as a buyer’s overall evaluation, based on all purchase and consumption experiences and encounters, with a particular service provider.

4.3 Summary and Conclusions

The present chapter discussed two frequently reported relationship outcomes (Customer Loyalty and Satisfaction). However, as customer satisfaction, trust, loyalty and perceived service quality are conceptually related, it is not surprising there was some discussion as to the similarity or divergence of these constructs. Existing definitions of each relationship outcome were provided and, if necessary, adapted to the present study context.

In addition, three types of loyalty central to this study (cognitive, affective and conative) were discussed. Cognitive loyalty describes the shallow consumer state in which loyalty is directed toward an alternative because of perceived performance. Affective loyalty reflects the pleasure-fulfilment dimension of satisfaction in which customers may still switch. Finally, conative loyalty refers to a customer’s future behavioural intentions through the influence of repeated episodes of affect toward the brand.
Chapter Five
Research Model and Hypotheses

5.0 Introduction

The present chapter discusses the research model examined in the present study and the related hypotheses based on the research questions that were outlined and discussed in chapter 1. In the next section, the main effects and their related hypotheses are discussed. The subsequent section introduces the moderating constructs and discusses the hypotheses relevant to the suggested moderators. The hypotheses are outlined in tabular form towards the end of this chapter to give an overview of the model and the
relationships that were examined. Each of the hypotheses, developed from the preceding literature review, is described in detail.

5.1 The Main Effects and Related Hypotheses

![Diagram of the research model](image)

FIGURE 5-1: THE RESEARCH MODEL EXAMINED IN THE CURRENT STUDY

The research model, shown in Figure 5-1, indicates the role that value was thought to play in relationship outcomes. Relationship outcomes are operationalized by the two constructs discussed in detail chapter four (customer satisfaction and customer loyalty, with affective, cognitive and conative components). Moreover, in order to gain insights into the factors influencing value, six suggested antecedents (corporate image, service quality, perceived risk, perceived relative price and trust) that represent a seller’s relationship efforts were also included in the model. Finally, involvement was included
as it is thought to moderate the model’s various relationships. The hypotheses relevant to the various constructs are discussed in turn in subsequent sections.

5.1.1 Corporate Image

A growing number of service companies have tried to build strong corporate images to create a competitive advantage (Andreassen and Bredal, 1996). Adding weight to the importance of this construct is recent research by Cassel and Eklof (2001), who found image a crucial part of the European Customer Satisfaction Index (ECSI) model.

There is evidence that image affects perceptions of product quality (Darden and Schwinghammer, 1985; Render and O’Connor, 1976; Stafford and Enis, 1969). In addition, Grönroos (1984, 1990) and Lehtinen and Lehtinen (1991) have argued that image affects perceptions of quality. Indeed, Bloemer (1999) found that image positively influenced quality perceptions, as did Johnson et al. (2001) and Andreassen and Lindestad (1998). In our study, we further differentiate between two types of quality as discussed by Gronroos (1984, 1990) and Parasuraman et al. (1985) - technical/outcome quality (which addresses whether the service delivers the core benefit or outcome that is promised) and functional/process quality (which addresses the process of service delivery).

On one hand, it seems customers’ evaluative judgements, such as service quality and satisfaction, are based on expectations, rather than these evaluations being components of image (Hildebrandt, 1988; Mazursky and Jacoby, 1986). On the other hand, customer expectations may not be significant (Anne et al., 2000). Although there is a lack of consensus as to how to define and operationalise image, image in the present study was seen as a filter to people’s perception of quality and value (Kristensen et al., 1999; Martensen et al., 2000), suggesting:

\[ H_{1a}: \text{The better the corporate image, the better the perceived value for money} \]

\[ H_{1b}: \text{The better the corporate image, the better the perceived ES functional service quality} \]
5.1.2 Perceived Service Quality

Reddy (1991) noted that, while quality is important and is likely to contribute to value, it is not value. Indeed, Sheehy (1988, p. 170) argued the debate has shifted from quality to value, as “we are quickly moving beyond an inward focused “product only” definition of quality to one that is outward focused and rooted in customer perceptions.” Quality cues are important, but only to the extent that they are a means to create value (Steenkamp, 1990).

Sweeney and Soutar (1995, p.54) clarified the difference between quality and value, arguing like Monroe and Krishnan (1985, p.61), that “quality contributes to value, without being value itself.” Zeithaml (1988), in an extensive review of the literature, argued that some consumers perceive value when there is a low price, while others perceive value when there is a balance between quality and price. Thus, for different consumers, the components of perceived value might be differentially weighted.

This conceptualisation of customer value demonstrates the relationship between quality and value. Quality seems to be an input to a value judgement, leading Johnson (1997, p. 126) to conclude, “Quality has … a direct positive effect on value.” This relationship has also been empirically tested in numerous prior research works (Bolton and Drew, 1991; Boulding et al., 1993; Zeithaml, 1988; Silcox, 2002; Steenkamp and Wedel, 1991; Zeithaml, 1988; Dodds and Monroe, 1985; Monroe and Krishnan, 1985; Olshavsky, 1985; Stanley and Sewall, 1976). Consequently, it can be hypothesised that:

- **H2a:** The greater the (ES) functional service quality (the way in which the service is delivered), the greater the perceived value.

- **H2b:** The greater the ES functional service quality, the greater the ES technical service quality.

- **H2c:** The greater the ES technical service quality (what is received from the service) the greater the perceived value.
5.1.3 Perceived Relative Price

It seems that price is extremely important when little else is known (Leavitt, 1954; Monroe and Krishnan, 1985). This is especially true when the brand is unknown as, in these cases, price is often the only cue that can be used to infer quality (Scitovsky, 1945; Leavitt, 1954; Gabor and Granger, 1966; Shapiro, 1968; Ahtola, 1984; Monroe and Krishnan, 1985; Monroe and Petrosjius, 1981).

Rao and Monroe (1989) extended the price–perceived quality relationship by exploring the links between prior product knowledge and the use of price as a product quality indicator. They found that, ‘as consumers achieve relatively higher familiarity [with a product], the ability [of the consumer] to relate intrinsic cues to quality is augmented by the ability to relate surrogates [such as price] to product attributes, and thus to quality.’

Indeed, many researchers feel that price influences value (Ahtola, 1984; Gabor and Granger, 1966; Leavitt, 1954; Monroe and Petrosjius, 1981; Monroe and Krishnan, 1985; Scitovsky, 1945; Shapiro, 1968; Olshavsky, 1985; Oxenfeldt, 1951; Morris and Bronson, 1969; Sproles, 1977; Riesz, 1978, 1979; Geistfeld, 1982). Levy (1981), expanding on this school of thought, asserted that customers see price, quality, and durability as traditional value. This definition brings quality and price back into the value construct. It suggests that value is a function of cost in terms of quality received and expected life. This view is supported by Whittaker (1998, p.46), who suggested that “best value is primarily concerned with ensuring delivery of service that the community wants at a price that it is prepared to pay”.

A higher price may reflect a high demand for superior quality or the high production costs associated with high quality. Leavitt (1954), Tull et al. (1964), Gabor and Granger (1966) and McConnell (1968) found consumers believed that high prices are indicators of better quality, a belief that “you get what you pay for”. While some buyers are motivated by low prices, however, most are concerned about value (Sweeney et al., 1999; Gronroos 1984). Malden (1987, p. 53), however, argued that “buying is about self expression in style and taste as much as quality and price.” (Olshavsky, 1985, p. 23) added weight to this viewpoint, arguing “inquiries about the validity of [the] price–
perceived quality relationship should be abandoned in favour of inquiries concerning the specific conditions when price is used as a cue to quality.” It is therefore hypothesised that:

\[ H_{3a} \]: The higher the perceived relative price, the less the perceived value.

\[ H_{3b} \]: The higher the perceived price, the better the perceived ES technical service quality

5.1.4 Perceived Risk

Perceived risk was introduced to marketing in the 1960s by Bauer and his associates (Bauer, 1960; Cox, 1967). Since then, a number of conceptualisations of perceived risk have been suggested, generally based on the premise that the consumer is sensitive to both the probability and extent of potential loss associated with a purchase (Taylor, 1974). As a further affirmation of its importance in relationship marketing, Berry et al. (1983) suggested risk reduction as a key outcome of service provider relationships.

Perceived risk seems to impact value (Jan-Benedict, 1990; Settle and Alreck, 1989; Monroe and Krishnan, 1985; Bauer, 1960). Specifically, Sweeney et al. (1999, p.99) found that “perceived risk …has a more powerful, direct effect on perceived value than the traditional antecedents of perceived relative price or perceived product quality”. They suggested that consumers do not just make judgments about product quality and sacrifice when exposed to extrinsic product cues but also make judgments about the uncertainties that may create potential long-term losses. According to Spreng et al. (1993), consumers judge the costs of future use and repair, which pose considerable uncertainty and “consumers consider these consequences a component of risk when developing perceptions of value” (Sweeney, et al. 1999, p. 81). Lending credence to this argument, Agarwal and Teas (2001) found:

- Performance and financial risk mediated the relationships between quality, sacrifice and value.
• Quality was a partial mediator of the relationships between extrinsic cues and value.

Based on this discussion, it can be hypothesised that:

\[ H_4: \text{The greater the perceived risk, the less perceived value will be} \]

5.1.5 Perceived Value

The notion that value drives loyalty has substantial support among marketing practitioners (Neal, 1999) and scholars alike (Sweeney, et al., 1999; Silcox, 2002; Carver and Scheier, 1990). In making a decision to return to a service provider, customers are likely to consider whether or not they received “value for money” (Bolton and Drew, 1991). For example, Bolton and Drew (1991) reported that value is a significant determinant of a consumer’s intention to remain loyal, a result supported in a number of different contextual settings (e.g. Chang and Wildt, 1994; Grisaffe and Kumar, 1998; Sirdeshmukh, Singh, and Sabol 2002). Indeed, while some claim customer satisfaction is not enough to drive customer loyalty, others argue the solution is to add value to a transaction (e.g. Stum and Thiry, 1991). Customer loyalty is earned by consistently delivering superior value (Reichheld, 1993).

Sweeney and Soutar’s (2001) PERVAL scale suggested a multidimensional value construct with four dimensions (emotional, social, quality-performance and price-value). In a subsequent study in a continuous service setting (Silcox, 2002) found that only functional value and price-value (or “value for money”) dimensions were significant. Consequently, the present study focussed on the “functional” and “value-for-money” dimensions of the value construct. Functional value in the present context can be defined as the practical or technical benefits users obtain by using mobile phones (Sweeney and Soutar, 2001). People may use mobile phones because they need its function. For example, when a person wants to find a direction to a target place, he or she may obtain functional value by using a location-based mobile phone service. Value-for-money can be defined as the return obtained from a mobile phone services compared to the cost, time and effort spent (Bolton and Drew, 1991; Cravens et al., 1988; Monroe, 1990;
Schechter, 1984; Sweeney and Soutar, 2001). Perceived value for money has been found to be a significant mediator of price, as well as of quality and risk (Sweeney, et al. 1999). Monetary value cannot be neglected, as users have to pay relatively high fees to use mobile phone services.

The major studies into value have usually been undertaken in a consumer and/or a retailing context (Baker, 1990; Dodds and Monroe, 1985; Dodds et al., 1991; Sweeney, et al., 1999, 1999) and have used willingness to buy (prepurchase intentions) as a key consequence of value perceptions (see Bolton and Drew, 1991, who use re-purchase intentions, as an exception). There seems to be no research that has examined the relationship between perceived value and the cognitive, affective and conative components of loyalty in a single setting. Most of the research (e.g. Dodds et al., 1991) has focused on willingness to buy as the behavioural intention construct and did not consider other loyalty aspects (e.g. affective and cognitive aspects). In the present study, these relationships are examined by hypothesising that:

H5a: The greater the perceived functional value / value-for-money, the greater is the cognitive loyalty.

H5b: The greater the perceived functional value / value-for-money, the greater is the affective loyalty.

H5c: The greater the perceived functional value / value-for-money, the greater is the conative loyalty.

It is further hypothesised that trust and quality evaluations affect loyalty through their influence in creating value. This parallels the mediation role of value hypothesised and tested in service quality–loyalty relationships in prior research (Sweeney et al., 1999; Sirdeshmukh et al., 2002; Chang and Wildt, 1994; Grisaffe and Kumar, 1998; Zeithaml, 1988). For example, Sweeney, et al., (1999) reported that perceived value for money was a significant mediator of perceived quality, price risk and willingness to buy relationships. However, Sirdeshmukh et al., (2002) found that, while value completely
mediated the effect of trust on loyalty in a retailing context, its influence was only partial in an airlines context. These results suggest:

**H₆a:** Perceived value for money is a mediator of its various antecedents (quality, price, risk and trust factors) and cognitive loyalty.

**H₆b:** Perceived value for money is a mediator of the various antecedents (quality, price, risk and trust factors) and affective loyalty.

**H₆c:** Perceived value for money is a mediator of the various antecedents (quality, price, risk and trust factors) and conative loyalty.

There also seems to be agreement that perceived value influences satisfaction (Churchill and Suprenant, 1982; Woodruff, 1997; Ruyter et al., 1997; Danaher and Mattson, 1994). It seems there are relationships between quality and value, quality and satisfaction and value and satisfaction, suggesting quality influences perceived value, which, in turn, influences satisfaction.

The service management literature further suggests customer satisfaction is the result of a customer’s perception of the value received in a transaction or relationship, where value equals perceived service quality relative to price and customer acquisition costs (Blanchard and Galloway, 1994; Heskett et al., 1990; Howard and Sheth, 1969) relative to the value expected from transactions or relationships with competing vendors (Zeithaml et al., 1990). That has led Rust and Oliver (1994, p. 10) to suggest that, “value, like quality, is an encounter-specific input to satisfaction,” a relationship that has been confirmed by Danaher and Mattson (1994) and de Ruyter et al. (1997). Bearing in mind that episodes may be very brief, consumers form judgements during this phase of the service process on the basis of perceived value. The outcome of each evaluation determines the level of satisfaction with the transaction as a whole (transaction satisfaction), suggesting:

**H₇a:** The greater the perceived value, the greater the customer satisfaction.
Finally, prior research has empirically established the relationship between customer trust and perceived value. For example, Deepak et al. (2002) asserted that perceived value is an important mediator of the trust-loyalty relationship. Benevolence, honesty and competence are the essential components on which trust is developed (Anderson and Weitz, 1989; Ganesan, 1994). These components are accentuated in a relationship when a customer believes that he or she is receiving value from a sales exchange. In turn, this fosters a belief that there is minimal sacrifice in a relationship, leading to “confidence in an exchange partner’s reliability and integrity” (Morgan and Hunt, 1994, p. 23). This suggests that:

\[ H_{7b}: \text{The greater the perceived value, the greater the customer trust.} \]

5.1.6 Customer Satisfaction

Satisfaction has been suggested as the driver of loyalty by many (Newman and Werbel, 1973; Oliver and Linda, 1981; Bearden and Teel, 1983; Bitner, 1990; Fornell, 1992; Anderson et al., 1994; Dick and Basu, 1994; Oliver, 1997; Anderson and Fornell, 1994; Pritchard, 1991; Bloemer and Kasper, 1995; Blodgett et al., 1993; Patterson, 1995; Anderson and Sullivan, 1993; Cronin, Brady and Hult, 2000; Shemwell et al., 1998; Taylor and Baker, 1994) but as non-significant by others (Brady and Cronin, 2001; Garbarino and Johnson, 1999; Jones and Sasser, 1995; Cronin and Taylor, 1992; Fornell, 1992; Oliva et al., 1992). For example, Fornell (1992, p. 7) argued that, “loyal customers are not necessarily satisfied customers, but satisfied customers tend to be loyal customers …customer satisfaction makes it costly for a competitor to take away another firm’s customer”. The logic lies in “exit-voice” theory (Hirschman, 1970), which assumes the dissatisfied clients have the option of never using the services of the supplier again (“exit” behaviour), seeking the services of another company. On the other hand, some studies supported Reichheld’s (1993) argument that customer satisfaction is not a surrogate for customer retention or customer loyalty and, thus, increasing customer satisfaction does not necessarily lead to increased customer loyalty.

The most common finding, however, has been that satisfaction mediates the relationship between service quality and loyalty (Cronin et. al., 2000; Cronin and Taylor, 1992;
Gotheib et. al., 1994; Spreng and Singh, 1993). Studies have also found satisfaction to be a consequence of service quality evaluations, without investigating the extent to which it mediates the relationship between service quality and behavioural intentions, at an individual consumer level (Spreng and MacKay, 1996) or at an economy-wide level (Fornell et al., 1996).

However, a recent study showed that, when a customer is completely satisfied, as opposed to being merely satisfied, they are significantly less likely to defect or switch, leading to the suggestion that the intensity of satisfaction is an element in customer loyalty (Strauss and Neuhaus, 1997). Similarly, Soderlund (1998) found a positive association between customer satisfaction and customer loyalty, but also noted that increasing satisfaction does not produce an equal increase in loyalty for all customers. The relationship between satisfaction and loyalty is neither simple nor linear and satisfied customers may defect (Jones and Sasser, 1995). It would appear customers make an assessment about the level of service, deciding whether it is adequate or desired and, therefore, they may be satisfied with a relationship overall, but dissatisfied with a particular service episode (Storbacka et al., 1994).

Perhaps the varying relationships found between satisfaction and service loyalty are due to an incomplete portrayal of loyalty (Gremler et al., 2001), which by itself, is a complex phenomenon that warrants a multifaceted conceptualisation (Dick and Basu, 1994). Given the unequivocal debate on the satisfaction-loyalty (and its sub-components) link (e.g. Mittal and Kamakura, 2001; Gremler et al., 2001; Rundle-Thiele and Bennett, 2001), it is hypothesised that:

\[ H_{8a} : \text{The greater the customer satisfaction, the greater the cognitive loyalty.} \]

\[ H_{8b} : \text{The greater the customer satisfaction, the greater the affective loyalty.} \]

\[ H_{8c} : \text{The greater the customer satisfaction, the greater the conative loyalty.} \]

In addition, several researchers have suggested a flow from relationship satisfaction to trust (Bendapudi and Berry, 1997; Bennett, 1996; Crosby et al., 1990; Gruen, 1995; Tax et al., 1998). Ganesan (1994) and Selnes (1998) found strong support for a relationship
between satisfaction and trust. Moreover, Geyskens’ (1998) meta-analysis revealed that relationship satisfaction significantly influences trust. However, others have suggested a different ordering from trust to relationship satisfaction (Andaleeb, 1996; Doney and Cannon, 1997; Ramsey and Sohi, 1997; Smith and Barclay, 1997).

The research model examined in the present study suggests that, rather than driving the relationship, trust is reflective of customer satisfaction (Garbarino and Johnson, 1999). Although trust is usually understood as a future-oriented attitude (i.e. as a state of mind that goes beyond past experience), it cannot be denied that a positive experience with a person or organization will help develop trust towards this person or organization (Ganesan, 1994, Geyskens et al., 1999; Dwyer, Schurr and Oh, 1987). Similarly, Selnes (1998) noted that trust is an aggregate evaluation that can be regarded as a result of relationship satisfaction, suggesting:

\[ H_{8d}: \text{The greater the customer satisfaction, the greater the trust.} \]

5.1.7 Trust

Like customer satisfaction, trust is one of the most widely examined constructs in relationship marketing (Crosby et al., 1990, Garbarino and Johnson, 1999, Helfert and Gemünden, 1998, Mohr and Spekman, 1994, Morgan and Hunt, 1994). Despite attempts to understand the construct better, it remains elusive. For example, even though studies have found trust positively affects commitment and loyalty (Bove and Johnson, 2002; Chaudhuri and Holbrook, 2001; Garbarino and Johnson, 1999; Geyskens et al, 1996; Morgan and Hunt, 1994; Wetzels, 1998; Beatty et al., 1996; Bendapudi and Berry, 1997; Dwyer, Schurr and Oh, 1987; Fontenot and Wilson, 1997; Gruen, 1995; Gundlach and Murphy, 1993; Hennig-Thorau and Klee, 1997; Moorman et al., 1993; Ramsey and Sohi, 1997; Schurr and Ozanne, 1985), some studies refute these effects (Doney and Cannon, 1997; Ganesan, 1994; Grayson and Ambler, 1999).

However, in this study, it is argued that the intangibility and heterogeneousness of mobile phone services “positions trust as perhaps the single most powerful relationship marketing tool available to the company” (Berry 1995, p. 242). This is mainly attributed
to its ability to diminish perceived risk and vulnerability in a relationship (Ganesan, 1994; Andaleeb, 1996), which, in turn, reduces transaction costs, as there is less necessity to establish expensive control mechanisms. This can be seen in a number of studies that found customers formed relationships with service providers they trusted to deliver a reliable core service (Gwinner et al., 1998; Berry and Parasuraman, 1991).

In her meta-analysis, Geyskens (1998) concluded that the trust-commitment relationship has been over-researched and that the findings related to it are almost unanimous. She stated, “if these relationships are empirically pursued in the future, it should be only to demonstrate that there may be some conditions under which these relationships do not hold” (Geyskens 1998, p. 99). Relational commitment has also been called ‘customer loyalty’ (Berry, et al. 1983; Czepiel, 1990; Morgan and Hunt, 1994; Sheth and Parvatiyar, 1995), the latter term being more accepted in the business community (Silcox, 2002). The main research objective in the present study was to measure the influence of perceived value on relationship outcomes. Since trust and loyalty are core relationship constructs, their interrelationship is an essential component in such a study. Moreover, the present study is one of few that has investigated the relationship between trust and relationship commitment in a continuous service context. Consequently, it is hypothesized that:

\[ H_{9a} \]: The greater the trust, the greater the cognitive loyalty.

\[ H_{9b} \]: The greater the trust, the greater the affective loyalty.

\[ H_{9c} \]: The greater the trust, the greater the conative loyalty.

5.1.8 Customer Loyalty

As discussed in Section 4.1, Oliver (1997) argued that consumers could become “loyal” at each attitudinal phase. Specifically, consumers may become loyal in a cognitive sense first, then later in an affective sense, still later in a conative manner and, finally, in a behavioural manner, which has been described as “action inertia.”
The cognitive form of service loyalty (Bloemer et al., 1999; Caruana and Zammit, 2000; de Ruyter et al., 1998) has been described to be of “shallow nature” (Oliver, 1999) where customers “have not ceased attending to alternatives, but maintain their awareness of alternatives without “constant and frenetic testing” (Dwyer et al., 1987, p. 19). For that reason, it is important to study the effects of stronger forms of loyalty as well. Affective loyalty is a function of the customers’ affect-based attitudes to a product and more deeply encoded in the customers’ mind than cognition, which is more subject to counterarguments (Oliver, 1997).

In addition, given that the future behaviour of customers is generally of more interest to marketers than current attitudes and/or behaviour, it is not a surprise that the most frequently researched component of loyalty in the past decade has been future intentions or conative loyalty (e.g. Fornell, 1992; Zeithaml et al., 1996; Dubé and Maute, 1998; Ganesh et al., 2000; Sharma and Patterson, 1999). Although this is an intentional measure of loyalty, it is assumed to be a better predictor of behavioral loyalty than cognitive or affective loyalty.

The focus of the present study is on cognitive loyalty, affective loyalty and conative loyalty. Behavioural loyalty was excluded as, at least as operationalised by Gremler et al., (2001) it is was not well correlated with the other three constructs and the suggested replacement measure of “share of wallet” (Pompa et al., 2000) may not be applicable in our study where consumers are less likely to subscribe to cellular services from a variety of telcos at any one time. This suggests:

\[ H_{10a}: \text{The greater the cognitive loyalty, the greater is the affective loyalty.} \]

\[ H_{10b}: \text{The greater the affective loyalty, the greater is the conative loyalty.} \]
5.2 Moderating Effects and Related Hypotheses

5.2.1 Involvement

Involvement has received considerable attention from consumer researchers in recent years (e.g. Laurent and Kapferer, 1985; Mittal and Lee, 1989; Zaichkowsky, 1985). A high involvement of the buyer is expected to provide a stronger basis for enhancing the buyer-seller relationship (Christy et al., 1996; Leuthesser, 1997; Park and Choi, 1998). Solomon et al. (1985) claimed that, in low involvement situations, treating buyers as individuals will probably not pay, whereas in high involvement situations, buyers want more personal treatment. Consequently, approaches, however well intentioned, could be regarded as undesirable (Christy et al., 1996).

In addition, researchers have suggested that people who are highly involved with a product category are more loyal (Dick and Basu, 1994; King and Ring, 1980; Bloch, 1982). It has been suggested that a relationship can add value only for customers who are already interested. Gordon et al. (1998) found that involved buyers are more likely to participate in marketing relationships and to derive value from these relationships. However, there are no known studies that capture the relationship between involvement and trust/customer satisfaction/perceived value in a single study. To this end, the following hypotheses are suggested:

\[ H_{11a} \]: Involvement moderates the relationship between perceived value and customer satisfaction.

\[ H_{11b} \]: Involvement moderates the relationship between trust and perceived value.

\[ H_{11c} \]: Involvement moderates the relationship between customer satisfaction and trust.
5.3 Summary

A summary of the eleven major hypotheses relevant to the model shown in Figure 5-1, which were developed in the present study, are presented below in Table 5-1 for ease of reading. While chapters two, three and four discussed the prior research that provided the foundation for the present study, the current chapter outlined the hypotheses within the research model in detail. The next chapter discusses the research approach taken to examine the various hypotheses and provides a preliminary analysis of the data collected in the quantitative survey phase of the study.
### TABLE 5-1: EXAMPLES OF PRIOR STUDIES FOR RESEARCH HYPOTHESES

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Examples of Prior Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>H\textsubscript{1a}: Corporate image $\rightarrow$ Perceived Value ($\beta_{1a}$)</td>
<td>Martensen et. al., 2000; Kristensen et. al., 1999</td>
</tr>
<tr>
<td>H\textsubscript{1b}: Corporate image $\rightarrow$ ES functional Service quality ($\beta_{1b}$)</td>
<td>Johnson et al., 2001; Bloemer, 1999; Andreassen and Lindestad, 1998; Darden and Schwinghammer, 1985; Render and O’Connor, 1976; Stafford and Enis, 1969;</td>
</tr>
<tr>
<td>H\textsubscript{2a}: ES Functional Service Quality $\rightarrow$ Perceived Value ($\beta_{2a}$)</td>
<td>Silcox, 2002; Sweeney, et al., 1999; Anderson and Narus, 1998; Gwinner et al., 1998; Johnson, 1997; Baker, 1990; Clemmer, 1990; Bishop, 1984</td>
</tr>
<tr>
<td>H\textsubscript{2b}: ES functional Service Quality $\rightarrow$ ES Technical Service Quality ($\beta_{2b}$)</td>
<td>Sweeney et al., 1999; Johnson 1997; Anderson and Narus, 1998; Gwinner et al., 1998; Baker, 1990; Clemmer, 1990; Bishop, 1984.</td>
</tr>
<tr>
<td>H\textsubscript{2c}: ES Technical Service Quality $\rightarrow$ Perceived Value ($\beta_{2c}$)</td>
<td>Silcox, 2002; Sweeney et al., 1999; Monroe and Krishnan 1985.</td>
</tr>
<tr>
<td>H\textsubscript{3a}: Perceived Relative Price $\rightarrow$ Perceived Value ($\beta_{3a}$)</td>
<td>Sweeney et al., 1999; Monroe and Krishnan 1985; Olshavsky, 1985; Ahtola, 1984; Geistfeld, 1982; Monroe and Petrosjius, 1981; Shapiro, 1968; Gabor and Granger, 1966; Leavitt, 1954; Oxenfeldt, 1951; Morris and Bronson, 1969; Sproles, 1977; Riesz 1978, 1979; Scitovsky, 1945.</td>
</tr>
<tr>
<td>H\textsubscript{3b}: Perceived price $\rightarrow$ ES Technical Service Quality ($\beta_{3b}$)</td>
<td>Sweeney et al., 1999; Gronroos, 1984; Leavitt, 1954; Tull et al., 1964; Gabor and Granger, 1966 and McConnell, 1968.</td>
</tr>
<tr>
<td>H\textsubscript{4}: Perceived risk $\rightarrow$ Perceived value ($\beta_{4}$)</td>
<td>Sweeney et al., 1999; Steenkamp and Jan-Benedict, 1990; Settle and Alreck, 1989; Monroe and Krishnan, 1985; Bauer, 1960</td>
</tr>
<tr>
<td>Hypotheses</td>
<td>Examples of Prior Studies</td>
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<tr>
<td>------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>H5a: Perceived value $\rightarrow$ Cognitive loyalty. ($\beta_{5a}$)</td>
<td>Sirdeshmukh et al., 2002; Grisaffe and Kumar, 1998; Chang and Wildt, 1994; Bolton and Drew, 1991; Dodds, Monroe and Grewal 1991.</td>
</tr>
<tr>
<td>H5b: Perceived value $\rightarrow$ Affective loyalty. ($\beta_{5b}$)</td>
<td></td>
</tr>
<tr>
<td>H5c: Perceived value $\rightarrow$ Conative loyalty. ($\beta_{5c}$)</td>
<td></td>
</tr>
<tr>
<td>H6a: Perceived value for money is a mediator of the various antecedents (quality, price, risk and trust factors) and cognitive loyalty.</td>
<td>Sirdeshmukh et al., 2002; Sweeney et al., 1999; Grisaffe and Kumar, 1998; Chang and Wildt, 1994; Zeithaml, 1988.</td>
</tr>
<tr>
<td>H6b: Perceived value for money is a mediator of the various antecedents (quality, price, risk and trust factors) and affective loyalty.</td>
<td></td>
</tr>
<tr>
<td>H6c: Perceived value for money is a mediator of the various antecedents (quality, price, risk and trust factors) and conative loyalty.</td>
<td></td>
</tr>
<tr>
<td>H7a: Perceived value $\rightarrow$ Customer satisfaction. ($\beta_{7a}$)</td>
<td>de Ruyter et al., 1997; Rust and Oliver, 1994; Danaher and Mattson, 1994.</td>
</tr>
<tr>
<td>H7b: Perceived value $\rightarrow$ Customer Trust ($\beta_{7b}$)</td>
<td>Deepak et al., 2002; Morgan and Hunt, 1994; Ganesan, 1994; Anderson and Weitz, 1989.</td>
</tr>
<tr>
<td>H8a: Customer satisfaction $\rightarrow$ Cognitive loyalty. ($\beta_{8a}$)</td>
<td>Silcox, 2002; Cronin et al., 2000; Tax et al., 1998; Shemwell et al., 1998; Selnes, 1998; Strauss and Neuhaus, 1997; Oliver, 1997; Bloemer and Kasper, 1995; Patterson, 1995; Dick and Basu, 1994; Anderson et al., 1994; Ganesan, 1994; Taylor and Baker, 1994; Anderson and Fornell 1994; Anderson and Sullivan, 1993; Spreng and Singh, 1993; Blodgett et al., 1993; Cronin and Taylor, 1992; Fornell, 1992; Bitner, 1990; Bearden and Teel, 1983; Newman and Werbel, 1973.</td>
</tr>
<tr>
<td>H8b: Customer satisfaction $\rightarrow$ Affective loyalty. ($\beta_{8b}$)</td>
<td></td>
</tr>
<tr>
<td>H8c: Customer satisfaction $\rightarrow$ Conative loyalty. ($\beta_{8c}$)</td>
<td></td>
</tr>
<tr>
<td>H8d: Customer satisfaction $\rightarrow$ Customer trust. ($\beta_{8d}$)</td>
<td>Bendapudi and Berry, 1997; Bennett, 1996; Crosby et al., 1990; Gruen, 1995; Siguaw et al., 1997.</td>
</tr>
</tbody>
</table>
### Hypotheses

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Examples of Prior Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>H9a: Trust $\rightarrow$ Cognitive loyalty ($\beta_{9a}$)</td>
<td>Bove and Johnson 2002; Chaudhuri and Holbrook, 2001; Garbarino and Johnson, 1999; Odekerken-Schröder, 1999; Chow and Holden, 1997; Hennig-Thorau and Klee, 1997; Fontenot and Wilson, 1997; Ramsey and Sohi, 1997; Geyskens et al., 1996; Morgan and Hunt, 1994; Wetzels, 1998; Beatty et al., 1996; Bendapudi and Berry, 1997; Dwyer et al., 1987; Gruen, 1995; Gundlach and Murphy, 1993; Schurr and Ozanne, 1985.</td>
</tr>
<tr>
<td>H9b: Trust $\rightarrow$ Affective loyalty ($\beta_{9b}$)</td>
<td></td>
</tr>
<tr>
<td>H9c: Trust $\rightarrow$ Conative loyalty ($\beta_{9c}$)</td>
<td></td>
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</tbody>
</table>

| H10a: Cognitive loyalty $\rightarrow$ Affective loyalty. ($\beta_{10a}$) | Brown et al., 2001; Oliver, 1997. |
| H10b: Affective loyalty $\rightarrow$ Conative loyalty. ($\beta_{10b}$) |

| H11a: Involvement moderates the relationship between perceived value and customer satisfaction. |
| H11b: Involvement moderates the relationship between trust and perceived value. |
6.0 Introduction

The present chapter provides a link between the research model and its related hypotheses that were described in the previous chapter and the empirical results that will be outlined in subsequent chapters. Its purpose is to clarify the approach used for evaluating the various hypotheses and to describe the process and results of item generation and testing. The chapter discusses the “what”, “why” and “how” of the study and their consequences in terms of its reliability and validity. It does not discuss the measurement or structural models that are at the heart of the study, which are outlined in the results chapters of the thesis. The next section describes the process used to establish
and initially test the items intended to measure each construct. Subsequently, the development of the questionnaire is discussed. Finally, justifications for collecting data through the in-home self-administered survey method are provided.

6.1 Item Generation and Testing

An electronic database was set up that included detailed bibliographic information on books, journal articles and conference proceedings. As the study required a cross-disciplinary approach, information was obtained from various research fields, including industrial marketing, consumer marketing, organization theory, relationship, retail marketing, services marketing and social psychology. First, information sources were searched for the presence of constructs that might be of interest. Second, sources containing these constructs were examined to determine construct conceptualisation and delineation. This examination resulted in valuable insights about definitions of and interrelationships between the constructs that were discussed in earlier chapters.

The database also provided a comprehensive picture of existing scales for the various constructs. Handbooks of marketing scales (e.g. Bearden et al., 1993; Bruner and Hensel, 1992) were also consulted. Scales for most constructs were available, but had to be altered slightly to suit the present service setting. It is generally acknowledged that multi-item measures are better than single-item as they allow an assessment of reliability and validity (Dillon et al., 1993). Thus, all of the constructs, except price, were constructed using multiple items.

While focus groups are typically a first step in generating information that is helpful in structuring questionnaires (e.g. Churchill, 1995; Dillon et al., 1990), such an approach was not used in the present study as there were existing and well-established scales for all of the relevant constructs. These constructs have been used in a variety of research contexts and were easily revised to fit the present research context in which respondents were asked about their experiences with their mobile telephone service providers. The scales used in the present study and their sources are provided in Table 6-1.
### TABLE 6-1: THE SCALES USED IN THE PRESENT STUDY

<table>
<thead>
<tr>
<th>Scale</th>
<th>No of items</th>
<th>Source of Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase Involvement</td>
<td>4</td>
<td>Ganesh et al., 2000</td>
</tr>
<tr>
<td>Ego Involvement</td>
<td>2</td>
<td>Ganesh et al., 2000</td>
</tr>
<tr>
<td>Affective Loyalty</td>
<td>3</td>
<td>Gremler et al., 2001</td>
</tr>
<tr>
<td>Cognitive Loyalty</td>
<td>3</td>
<td>Gremler et al., 2001; Bellenger et al., 1976; Newman and Werbel, 1973; Zeithaml et al., 1996.</td>
</tr>
<tr>
<td>Conative Loyalty (Higher order construct made up of repurchase intentions (RI) and word-of-mouth (WOM))</td>
<td>4</td>
<td>Eggert and Ulaga, 2002, Maxham and Netemeyer, 2002; Gremler et al., 2001; Zeithaml et al., 1996.</td>
</tr>
<tr>
<td>ES Functional Service Quality</td>
<td>4</td>
<td>Sweeney et al., 1999; Dodds et al., 1991</td>
</tr>
<tr>
<td>ES Technical Service Quality</td>
<td>2</td>
<td>Sweeney et al., 1999; Dodds et al., 1991</td>
</tr>
<tr>
<td>Trust</td>
<td>3</td>
<td>Chaudhuri and Holbrook, 2001; Garbarino and Johnson, 1999</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>8</td>
<td>Oliver, 1980; Gremler et al., 2001</td>
</tr>
<tr>
<td>Functional Value</td>
<td>3</td>
<td>Sweeney and Soutar (2001)</td>
</tr>
<tr>
<td>Perceived Value for Money</td>
<td>4</td>
<td>Sweeney and Soutar (2001)</td>
</tr>
<tr>
<td>Emotional Value</td>
<td>3</td>
<td>Sweeney and Soutar (2001)</td>
</tr>
<tr>
<td>Social Value</td>
<td>3</td>
<td>Sweeney and Soutar (2001)</td>
</tr>
<tr>
<td>Relative Price</td>
<td>1</td>
<td>Sweeney et al., 1999; Conover, 1976</td>
</tr>
<tr>
<td>Corporate Image</td>
<td>3</td>
<td>Johnson et al., 2001; Andreassen and Lindestead, 1997</td>
</tr>
</tbody>
</table>
The next step was to decide on the format of the individual items. While self-reporting techniques are widely used in marketing research, researchers use different types of response scales (Churchill, 1995). In this study, Likert-type scales were used that asked respondents to indicate their degree of agreement or disagreement with a (series of) statement(s). This scale is regarded as an itemised rating scale because each category is numbered and/or briefly described (Churchill, 1995; Malhotra, 1996). The Likert scale is widely used (Malhotra, 1996) as it allows respondents to express the intensity of their feelings (Churchill, 1995; DeVellis, 1991). Moreover, its ease of construction and the simplicity of respondent directions are regarded as advantages (Malhotra, 1996). While the output from a technical standpoint is no stronger than an ordinal scale, the Likert scale responses are routinely treated at interval level data (Kerlinger, 1986; Malhotra, 1996; Weiers, 1988). The Likert scale used in the present study had:

1. An odd number of response options
2. A total number of seven response options
3. Balanced response options
4. A forced choice of response options
5. Blank boxes that were used to indicate agreement
6. Only positive items

According to Malhotra (1996), the Likert scale, by definition, has an odd number of responses as, if some respondents have neutral responses, they should be given the opportunity to express their neutrality (DeVellis, 1991; Dillon et al., 1993; Malhotra, 1996; Weiers, 1988). Since people might be neutral about the issues included, an odd number of responses were provided.

Determining the optimum response categories is important in constructing Likert-type scales. Too few categories result in too coarse a scale and lose much of a rater’s discriminative powers. Conversely, too fine a scale may go beyond a rater’s limited powers of discrimination (Gartner et al., 1951; Guilford, 1954). Further, there is a
positive relationship between the number of scale points and scale reliability (Churchill and Peter, 1984; DeVellis, 1991; Nunnally, 1967; Nunnally and Bernstein, 1994). Green and Rao (1970), working with simulated data and using the reproducibility of the original data configuration as their criterion, found 6 or 7 point scales were best, especially if several different instruments were used concurrently. Thus, in line with traditional guidelines suggesting the use of seven plus or minus two categories of response options (Dillon et al., 1990; Weiers, 1988), seven-point scales were used.

The sophistication of the intended data analysis techniques also influenced the number of response categories. It is generally acknowledged that, if sophisticated statistical techniques are used, seven or more categories are needed (Malhotra, 1996). As advanced statistical analyses were to be used, a five-point scale was deemed to be less suitable. Finally, as it has been suggested that some respondents have difficulties answering nine-point scales due to cognitive limitations (Churchill and Peter, 1984; Malhotra, 1996; Weiers, 1988), a seven-point scale was seen to be appropriate.

The choice of balanced or unbalanced response options is related to the balance between the number of favourable and unfavourable response options (Green et al., 1988; Weiers, 1988). It is generally agreed that a Likert scale should be balanced to reduce response bias (Malhotra, 1996; Parasuraman, 1991) and this was accepted in the present study.

A forced scale is one “that forces respondents to express an opinion because a ‘no opinion’ or ‘no knowledge’ option is not provided” (Malhotra, 1996, p. 299). In situations where respondents can be expected to have an opinion about the topic, a forced scale provides most information (Dillon et al., 1993; Malhotra, 1996; Weiers, 1988). A “filter question” (Malhotra, 1996) was included, however, to ensure respondents had necessary information. Thus, as only respondents who currently owned at least one mobile phone were interviewed, a forced scale was used in the present study. The choice indicator is the way by which respondents indicate their choices on the scale. Circling numbers were, with higher numbers representing more favourable answers (Malhotra, 1996).
It is generally recognized that alternating between positively and negatively worded items can be good practice as it reduces potential halo-effects. However, there may be a price to pay for including positively and negatively worded items (Babakus and Boller, 1992; Carman, 1990; DeVellis, 1991). In their refinement and reassessment of the SERVQUAL scale, Parasuraman et al. (1991) discovered that negatively worded items were troublesome for several reasons. First, the standard deviation of negatively worded items was consistently higher than of positively worded items, implying respondents may have been confused by negatively worded items. Second, negatively worded items were seen to be more awkward and less meaningful than positively worded items. Finally, the Cronbach alpha coefficients of constructs in which negatively worded items were included were consistently lower. Consequently, it was decided to use only positively worded items in the present study.

6.2 Qualitative Item Testing

It is generally recognised that data collection should not begin without an adequate pre-test of the content and physical appearance of a survey (Churchill, 1995; Dillon et al., 1993; Malhotra, 1996). Item pre-testing uses a small sample to improve survey items by identifying and eliminating potential problems (Malhotra, 1996). This section outlines the approach used in the present study.

A pre-test with consumers can be undertaken after the initial questionnaire has been completed, but before the main survey (Churchill, 1995). The value of a pre-test is its ability to uncover problems before a questionnaire is used in the field. As professional judgement and intellectual exercise are not substitutes for pre-testing (Backstrom and Hursch, 1963), "no survey should be taken without a pre-test" (McDaniel and Gates, 1995, p. 301). Consequently, a questionnaire was constructed and pilot tested on a small sample of customers. There is no consensus as to the appropriate size of a pre-test sample. Some simply recommend that the sample be “small” (Zaltman and Burger, 1975), while others suggest specific sizes. For example, Boyd et al. (1977) recommended 20 while Backstrom and Hursch (1963) recommended a sample of 30.
Following the largest of these suggestions, 30 current mobile phone owners were approached. As Tull and Hawkins (1976, p. 240) suggested the need “to use respondents who are as similar as possible to the target respondents”, care was taken to ensure these people were similar to those who were to be included in the final data collection, at least in terms of age, gender and familiarity with the topic.

Respondents were asked to complete the questionnaire, after which they were asked to describe the meaning of each question, to explain their answer and to discuss any problems they encountered while answering questions. This technique is referred to as “debriefing” (Dillon, Madden, and Firtle 1993; Malhotra 1996). As "language is basically ambiguous and ... words can have different meanings" to different people (Bradburn and Sudman, 1991, p. 32), it is important to ensure the words used in survey questions have the meaning to respondents the researcher intended them to have (Kinnear and Taylor, 1991). It is also important to check for such problems as double or leading questions or all or nothing items. Eight days after the first questionnaires were completed, the same respondents were asked to fill up the same questionnaires again.

Based on respondents’ feedback, only minor modifications were made. For example, as the wording of the two “corporate image” items were too long, these questions were shortened. Test-retest correlations were computed and, in general, they were well above the 0.50 level, suggesting most items were reliable and could be retained. These results were not surprising because, as noted previously, the questionnaire included mainly previously used and well-tested constructs.

### 6.3 Questionnaire Design

Several decisions were made about the design of the questionnaire that determined question sequence, questionnaire layout, questionnaire instructions, and questionnaire translation. It is generally recommended that simple, interesting, and non-threatening questions should be at the start of a questionnaire (Churchill, 1995; Malhotra, 1996; Parasuraman, 1991). The present questionnaire started with a simple question that asked about the length of the relationship a respondent had with his/her mobile phone service
provider. Second, classification information should be asked at the end of the questionnaire, as key information should be asked first in case respondents stop answering questions (Churchill 1995; Parasuraman 1991). Further, difficult or sensitive questions should be asked later in a questionnaire (Churchill 1995; Malhotra 1996). These suggestions were accepted in the design of the present survey.

It is useful to divide a questionnaire into several logical parts. Skipping from topic to topic in a random fashion may confuse respondents, break their train of thought or cause errors in the data (Malhotra 1996; Parasuraman 1991). To this end, the questionnaire was divided into four distinct parts:

- Part one asked about the respondents’ current mobile phone use. The five questions collected information on respondents’ relationship length with their current service provider, their average monthly spend and their propensity to switch.

- Part two focused on the selection criteria used in choosing a mobile phone service provider. This section measured ego and purchase involvement (Ganesh et al., 2000), emotional value, functional value, social value and value-for-money (Sweeney and Soutar, 2001) (iii) corporate image construct (Johnson et al., 2001; Andreassen and Lindestead, 1997) and performance risk and financial risk (Jacoby and Kaplan, 1972; Spence et al., 1970; Stone and Winter, 1987).

- Part three asked about respondents’ experience with their most recent or current service provider. In this section, information on trust (3 items), customer satisfaction (8 items), product quality (5 items), functional/technical service quality (6 items) and affective, cognitive and conative loyalty (11 items) was collected.

- Part four collected information about respondents; backgrounds, including age, gender, marital status, highest education level, occupation and household income.

The physical characteristics of a questionnaire can affect the information obtained. If a questionnaire looks sloppy, respondents might think the study is unimportant and may refuse to participate (Churchill, 1995; Malhotra, 1996; Parasuraman, 1991). A crowded questionnaire can also lead to errors if respondents become confused. Questions that are
adequately separated and that properly locate answer spaces significantly lower error chances (Churchill, 1995; Malhotra, 1996; Mayer and Piper, 1982). In the present survey, questions were separated from each other alternately using shaded and white lines, enhancing the readability of the statements.

It is important to provide clear instructions. The cover letter must convince a respondent to cooperate and clarify the purpose of the study (Churchill, 1995; Parasuraman, 1991). Further, instructions for individual questions should be placed as close to the questions as possible. It is a common practice to distinguish instructions from questions by using distinctive appearance (Malhotra, 1996). In the present questionnaire, instructions were located in bold immediately above the corresponding questions.

After making these decisions and the changes resulting from the pre-test, a revised questionnaire was constructed for use in the present study. This questionnaire is provided in Annex 1.

6.4 Data Collection and Sampling

6.4.1 Sample Size

The determination of the sample size was based on suggestions from structural equation modelling experts. Tabachnick and Fidell (1996) cautioned that correlation coefficients are less reliable when estimated from small samples. As a rule of thumb, Comrey and Lee (1992) suggest sample sizes of 50 as very poor, 100 as poor, 200 as fair, 300 as good, 500 as very good, and 1,000 as excellent. However, Tabachnick and Fidell (1996) and Kline (1998) suggested that it may be more helpful if the sample size is thought of in terms of number of subjects per free parameter and argued that 10 subjects per estimated free parameter would be adequate if the measured variables were normally distributed. Recently MacCallum et al. (1999) found necessary sample size varies not only based on the complexity of the model but also on the value of communalities in factor analysis. Their analysis showed that higher communalities decreased the role of sample size in estimating population parameters. Previous studies of the items and the factors tested in the current study showed that their communalities were quite high.
(around 0.70), suggesting a moderate sample of the size suggested by MacCallum et al. (1999) would be appropriate. Therefore, following their suggestions, a sample of 300 was seen as sufficient for the analysis of the suggested model and the approach undertaken to obtain the sample is discussed in the following section.

6.4.2 Data Collection Approach

The choice of a data collection method should be based on the research problem being investigated (Kerlinger, 1986). As a result, each of the choices made were evaluated in light of the specific problem being investigated in this study. Figure 6-1 indicates the choices that were made. At each stage, the option selected, is shaded.

Research can be cross-sectional or longitudinal. Here, a cross-sectional design was used. Cross-sectional research involves “the collection of information from any given sample of population elements only once” (Malhotra, 1996, p. 92). Longitudinal research, on the other hand, provides an in-depth view of the situation and the changes that take place over time (Dillon et al., 1990; Green et al., 1988; Malhotra, 1996). Scholars recognise that representative sampling and response biases are serious problems in longitudinal research (Churchill, 1995; Malhotra, 1996; Parasuraman, 1991). In longitudinal research, the cooperation of panels is required. Respondents’ refusal to cooperate, panel mortality and the payment of panel members increase the lack of representative sampling. Further, response bias is increased as panel members more consciously perform the investigated behaviours and that new panel members tend to increase the investigated behavior (Churchill, 1995; Malhotra, 1996; Parasuraman, 1991). Finally, longitudinal research implicitly requires long data collection periods. Based on these arguments and the objective of our study, a cross-sectional research was considered appropriate.

In this study, a non-experimental approach was used. Kerlinger (1986, p. 348) defined non-experimental research as “systematic, empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable”. While experimental research generally provides high internal validity, its lower external validity and
artificiality are problems (Churchill, 1995; Cook and Campbell, 1979; Dillon et al., 1990; Kerlinger, 1986; Malhotra, 1996). As the present study was hoped to provide insight for a variety of retail situations, external validity was an important criterion. Consequently, non-experimental research was seen to be suitable for our purpose. Non-experimental research designs can use observation or surveys (Churchill, 1995; Dillon et al., 1990; Kerlinger, 1986; Malhotra, 1996). In this study, a survey was used as the data needed could not be directly observed.

A personal delivery and (collection) of self-administered questionnaires approach was used to gather the required data. Such an approach is likely to have good response rates at reasonable costs. Stover and Stone (1974) suggest personal delivery and pickup is likely to be the most cost-effective method in relatively compact geographic areas. This makes the method suitable for use in Singapore, given its small geographic size. Lovelock et al., (1976, p. 358) further suggested that, “for lengthy questionnaires, personal delivery by trained survey takers appears to yield higher response rates than mail surveys at competitive costs”.

Figure 6-1: The Selection of the Data Collection Approach
Historically, the highest response rates have been obtained through personal interviews (Mayer, 1974). In fact, refusals tend to average only about 10% in personal interviews (Boyd et al., 1977). This compares favourably against response rates for telephone interviews. For example, Wiseman and McDonald (1979) reported a median completion rate of 30% based on their audit of 182 market research studies. Mail surveys traditionally have low response rates, (Sheehan and McMillan, 1999; Bourque and Fiedler, 1995). While the personal interview “far overshadows the others as perhaps the most powerful and useful tool of social scientific survey research” (Kerlinger, 1986, p.379), it suffers from interviewer control and bias, cost and social desirability bias. Given the present study’s tight budget, the costs of personal interviews made this approach impossible.

The present survey included 60 items, suggesting a drop-off and pick-up approach particularly appropriate (Loveland et al., 1976). Further, the approach provided greater control over sample design, permitting tight, complete and up-to-date identification of respondents’ geographic locations, as well as the selective elimination of people outside the predefined sample frame on background or ownership criteria. This was important in the present that required respondents to own at least one mobile phone. Efforts were also made to improve sample representativeness by imposing strict quotas with respect to age, gender, interviewing time-of-the-day and interviewing day-of-the-week (Dillon et al., 1993).

Finally, it was hoped the approach would provide more “truthful” answers. Many previous studies have shown respondents will answer some questions differently in a personal interview when compared to what they write on a self-administered questionnaire (Sudman et al., 1965; Hyman, 1954).

6.4.3 Collecting the Data

Sampling methods can be classified into probability and non-probability approaches (Churchill, 1995; Green et al., 1988; Malhotra, 1996; Parasuraman, 1991). In the present study, a mixed method of probability sampling (stratified simple random sampling for household selection) and non-probability sampling (quota sampling to help sample
representativeness to the population) was used. A sampling frame was purchased from Singapore’s Department of Statistics (DOS) that contained Geographical Location information (by Census District) and Household Type stratification information. The criteria for generation of such a sampling frame provided by DOS are that it must be representative and cover all Census Districts in Singapore. All dwelling units in the sampling frame were arranged by geographical location according to Census Districts. Within each Census District, the sample was stratified by Household Type. Stratified simple random sampling of each Household Type was used to select the households that were approached. A number of stages occurred in data collection

6.4.3.1 Stage 1 (Week 1 to 3)

Only one person in each household was chosen. It is not advisable to sample all eligible people within a household, because of the effect of intra-cluster homogeneity on sampling errors and the possibility of data contamination due to discussion between people in the household. The “last birthday” method was used to select the individual in each household (i.e. the person within the household whose birthday is the latest in the year will be chosen. This person, of course, must own a mobile phone to be considered). The survey taker briefly described the survey, obtained cooperation and arranged to return in 3 hours to collect the completed questionnaire. If the questionnaire was not completed by this time, the survey taker paid a third visit four days later. Stamped addressed envelopes were left at households if respondents had still not completed the questionnaire.

Ten survey takers were recruited. Five were given supervisory responsibilities, which included random call-backs to verify completed questionnaires. Interviewers were instructed to make calls from 4.00 pm to 9.30 pm on weekdays and from 9.00 am to 9.30 pm on Saturdays. Each survey taker was assigned a route, with instructions to call at every other housing unit on that route, until all questionnaires had been distributed. In the event that no one was at home, their instructions were to set aside two questionnaires and call back on the second visit. At this point, units with a continuing non-response could be replaced by the unit next door.
The log sheet provided a record of each household visited. Survey takers marked housing units which had to be substituted after the second visit because no one was at home and noted households that refused or were considered ineligible (including the reasons why). When a household agreed to participate, the survey taker marked down the number of questionnaires distributed and, later, the number returned. By using personal delivery and collection in conjunction with detailed log sheets it was possible to identify three different categories of non-response:

(1) Households where no one could be found at home on either the initial visit or on subsequent call-back(s). These units were replaced by an adjacent household.

(2) Households that were successfully contacted but declined to participate.

(3) Individuals within contacted households who received questionnaires but failed to return any of them in usable form.

At the end of stage 1, the sample was compared with the population and shortfalls were made up by quota sampling in stage 2.

6.4.3.2 Stage 2 (Week 3 to 5)

Quota sampling is “a non-probability sampling procedure in which (1) the population is divided into cells on the basis of relevant control characteristics, (2) a quota of sample units is established for each cell and (3) interviewers are asked to fill the quotas assigned to the various cells” (Parasuraman, 1991, p. 548). Given its ability to control the composition of the sample, quota sampling is a refined form of non-probability sampling (Parasuraman, 1991). Several authors have argued that, under certain conditions, quota sampling obtains results that are close to probabilistic approaches (Malhotra, 1996; Parasuraman, 1991).

In this stage, respondents were selected to meet quotas with respect to gender, age and occupation. This ensured the sample was representativeness of the population, at least in terms of these characteristics. Each interviewer completed the same number of interviews in each method using the same quota procedure in each method.
6.5 Summary and Conclusions

In the present chapter, the methods used for generating and testing scale items, together with their results, were discussed. The procedures used for generating and testing questionnaire items were then discussed. Comments were also made about the design of the questionnaire that was used for the final data collection. Finally, the decision process used to decide on the use of a geographic based drop-off and pick-up data collection approach was outlined. The data collected as a result of this process provided the information used to examine the suggested model and its various hypotheses. The results obtained from the analysis of these data are discussed in subsequent chapters.
7.0 Introduction

The data collected within the survey were analysed in a number of stages. In stage one, the level and nature of missing data were assessed. Sample characteristics were also examined and descriptive statistics for the various constructs were computed. One of the main purposes of this stage was to determine if important assumptions, such as the normality of the data set, associated with multivariate analysis held. The reliability of the various constructs was also tested.
In stage two, confirmatory factor analysis was used to assess whether the constructs had acceptable levels of discriminant and convergent validity. The correlations or covariance matrix between constructs or factors served as an input to estimate the structural coefficients between the constructs or latent variables. The measurement part of the structural model was examined before the structural paths were estimated, as suggested by Andersen and Gerbing (1988).

The present chapter examines the results from the first stage of the data analysis, while results from stages two and three are outlined in the next chapter. This phase of the data analysis was undertaken using the SPSS 10.0 package (Norusis, 2000).

**7.1 Examining the Data (Stage 1)**

7.1.1 Response Rates and Missing Data

<table>
<thead>
<tr>
<th>TABLE 7-1: PARTICIPATION AND RESPONSE RATES</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Households</strong></td>
</tr>
<tr>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Total households visited</td>
</tr>
<tr>
<td>Less those ineligible to participate</td>
</tr>
<tr>
<td>(e.g. owners with last birthdays who do not own a mobile phone)</td>
</tr>
<tr>
<td>Net sample (households contacted)</td>
</tr>
<tr>
<td>(100.0%)</td>
</tr>
<tr>
<td>Less not-at-homes after 3 visits</td>
</tr>
<tr>
<td>Less refusals to participate</td>
</tr>
<tr>
<td>Households accepting questionnaires</td>
</tr>
<tr>
<td>(64%)</td>
</tr>
<tr>
<td>Less households returning not completed questionnaires</td>
</tr>
<tr>
<td>Usable questionnaires</td>
</tr>
<tr>
<td>(55%)</td>
</tr>
</tbody>
</table>

Note: Only one respondent was chosen in each household.
Table 7-1 provides information on response rates. As can be seen from the table, after taking account of the people in visited households who were not eligible, a response rate of 64% was obtained, which is an excellent response rate for a survey of this kind. The data were checked to see whether there were coding errors. Out-of-range values were determined by looking at frequencies. For cases with coding errors, the original questionnaires were consulted to correct the errors.

Forty eight cases were deleted due to missing data. A listwise deletion approach was used as the proportion of missing values (13%) was not large (Hair et al., 1998). Further, there were no significant age or gender differences in the sample before and after the deletion. Consequently, a listwise deletion was seen as appropriate, especially as the sample was still large (301). A drawback of listwise deletion is that it may seriously reduce sample size, which is a key concern in multivariate analysis, such as structural equation modeling (SEM), which was the key analysis procedure in the present study. There is little theoretical guidance about the appropriate sample size for such analysis (Baumgartner and Homburg, 1996). However, it is generally accepted that the minimal sample needed is 100 to 150 (Anderson and Gerbing, 1988). However, when sample sizes maximum likelihood estimation procedures are extremely sensitive when samples are very large and even very small differences can suggest a poor fit. As a result, a sample of 200 is often suggested as the critical size. However, larger sample sizes may be required in case of model misspecification, model complexity, non-normality of data or the use of some estimation procedures (Hair et al., 1998). In the present study, the final sample size of 301 was felt to be adequate given the risk of moderate normality violations (which is discussed in the next section) and the complexity of the suggested model.

The possibility of outliers was also examined. However, the various univariate and multivariate tests used to examine this issue suggested there were no problems with such cases. Consequently, no further cases were removed, resulting in the final sample of 301 that was noted in Table 7-1.
7.1.2 An Examination of Normality

Structural equation modeling is sensitive to the distributional characteristics of the data, particularly departures from multivariate normality. A lack of multivariate normality is troublesome because it inflates the chi-square goodness of fit statistic, creates an upward bias in critical values for determining coefficient significance and affects standard errors (Baumgartner and Homburg, 1996; Bentler, 1990; Hair et al., 1998; Jaccard and Wan, 1996; Jöreskog and Sörbom, 1989; Steenkamp and van Trijp, 1991). The normality of each of the constructs included in the present study was examined through the use of histograms, box plots and normal probability plots. Eleven constructs (purchase involvement, value-for-money, emotional value, functional value, price, trust, customer satisfaction, product quality, functional service quality, technical service quality and word-of-mouth) were found to be negatively skewed. The remaining six constructs (ego involvement, corporate image, social value, risk, affective loyalty and repurchase intentions) were positively skewed.

Attempts to transform the constructs to achieve normality (using transformations such as the inverse, square roots and logarithms) did not show any improvement. Thus, a decision was made to use the original variables for subsequent analysis as transformations may alter the meaning of responses and introduce additional problems (Anderson et al., 1987; Gassenheimer et al., 1998). Further, the sample was large enough to compensate for kurtosis, reducing any biases in parameter estimates (Hair et al., 1998).

7.1.3 Sample Characteristics

As was shown in Table 7-1, 800 households were visited. After three visits and 48 unusable surveys due to incomplete responses, 301 usable surveys were obtained. A time-trend extrapolation test was used to assess non-response bias (Armstrong and Overton, 1977). In this test, non-respondents are assumed to be similar to people who responded late in the survey period, rather than to those who responded early. Few differences between the early (first 10%) respondents and the late (last 10%) respondents suggested that non-response bias was unlikely to be a problem (Avlonitis
and Gounaris, 1997). No significant differences were found between the two groups, reducing concerns about non-response biases within the present sample.

Table 7-2 provides information about respondents’ relationships with their service providers. As can be seen from the table, respondents have been with their existing mobile phone service provider for some time (42% for at least 2 to 3 years), tended to spend between $50 and $99 a month with their provider (44%) and have generally been loyal to their mobile phone service provider (81% have had only one service provider)

**TABLE 7-2: RESPONDENTS’ RELATIONSHIP WITH THE SERVICE PROVIDER**

<table>
<thead>
<tr>
<th>Relationship Length</th>
<th>Frequency</th>
<th>%</th>
<th>Average Monthly Spend</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 0.5 year</td>
<td>40</td>
<td>13.3</td>
<td>$50 or less</td>
<td>111</td>
<td>36.9</td>
</tr>
<tr>
<td>0.5 to 1 year</td>
<td>68</td>
<td>22.6</td>
<td>$50 - $99</td>
<td>133</td>
<td>44.2</td>
</tr>
<tr>
<td>2 to 3 years</td>
<td>127</td>
<td>42.2</td>
<td>$100 - $149</td>
<td>49</td>
<td>16.3</td>
</tr>
<tr>
<td>4 to 5 years</td>
<td>38</td>
<td>12.6</td>
<td>$150 - $199</td>
<td>4</td>
<td>1.3</td>
</tr>
<tr>
<td>More than 5 years</td>
<td>28</td>
<td>9.3</td>
<td>More than $199</td>
<td>4</td>
<td>1.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service Providers to-date</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>245</td>
<td>81.4</td>
</tr>
<tr>
<td>More than One</td>
<td>56</td>
<td>18.6</td>
</tr>
</tbody>
</table>

Table 7-3 summarises some of the respondents’ background characteristics. Male (51%) and female respondents (49%) were almost equally represented. The majority of the respondents (57%) were middle-aged (30 to 55 years) and married (58%). The sample was well-educated, with 55% having a post high school education (diploma and above). Thus, it was not surprising that the largest percentage (48%) had monthly incomes of between $3,000 and $3,999 per month. In general, the sample reflected national figures well (Singapore Census 2000).
### TABLE 7-3: SOME BACKGROUND CHARACTERISTICS OF RESPONDENTS

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 20</td>
<td>38</td>
<td>12.6</td>
</tr>
<tr>
<td>20-24</td>
<td>17</td>
<td>5.6</td>
</tr>
<tr>
<td>25-29</td>
<td>66</td>
<td>21.9</td>
</tr>
<tr>
<td>30-34</td>
<td>56</td>
<td>18.6</td>
</tr>
<tr>
<td>35-39</td>
<td>46</td>
<td>15.3</td>
</tr>
<tr>
<td>40-44</td>
<td>34</td>
<td>11.3</td>
</tr>
<tr>
<td>45-59</td>
<td>34</td>
<td>11.3</td>
</tr>
<tr>
<td>60-64</td>
<td>7</td>
<td>2.3</td>
</tr>
<tr>
<td>Above 65</td>
<td>3</td>
<td>1.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>153</td>
<td>50.8</td>
</tr>
<tr>
<td>Female</td>
<td>148</td>
<td>49.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>122</td>
<td>40.5</td>
</tr>
<tr>
<td>Married</td>
<td>175</td>
<td>58.1</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>1.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSLE and below</td>
<td>24</td>
<td>8.0</td>
</tr>
<tr>
<td>GCE N/O Levels</td>
<td>75</td>
<td>24.9</td>
</tr>
<tr>
<td>GCE A Levels</td>
<td>36</td>
<td>12.0</td>
</tr>
<tr>
<td>Polytechnic Diploma</td>
<td>84</td>
<td>27.9</td>
</tr>
<tr>
<td>Degree and Postgraduate</td>
<td>82</td>
<td>27.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working</td>
<td>217</td>
<td>72.1</td>
</tr>
<tr>
<td>Self-employed</td>
<td>6</td>
<td>2.0</td>
</tr>
<tr>
<td>Housewife</td>
<td>28</td>
<td>9.3</td>
</tr>
<tr>
<td>Student</td>
<td>39</td>
<td>13.0</td>
</tr>
<tr>
<td>Retired</td>
<td>6</td>
<td>2.0</td>
</tr>
<tr>
<td>Unemployed</td>
<td>5</td>
<td>1.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monthly income</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below $2,000</td>
<td>16</td>
<td>5.3</td>
</tr>
<tr>
<td>$2,000 - $2,999</td>
<td>105</td>
<td>34.9</td>
</tr>
<tr>
<td>$3,000 - $3,999</td>
<td>143</td>
<td>47.5</td>
</tr>
<tr>
<td>$4,000 - $4,999</td>
<td>28</td>
<td>9.3</td>
</tr>
<tr>
<td>$5,000 - $5,999</td>
<td>7</td>
<td>2.3</td>
</tr>
<tr>
<td>$6,000 and above</td>
<td>1</td>
<td>0.6</td>
</tr>
</tbody>
</table>
7.1.4 An Initial Exploration of the Research Constructs

In this section, the mean, median, standard deviation and reliability analysis regarding each of the items for the various constructs are reported. Reliability is “the degree to which measures are free from error and therefore yield consistent results” (Peter, 1979, p. 6). There are three basic methods for assessing reliability: (1) test-retest, (2) internal consistency, and (3) alternative forms (Peter, 1979). Several scholars have suggested that internal consistency measures are the most useful when assessing the reliability of measures in marketing research (Churchill, 1979; DeVellis, 1991; Dillon et al., 1990; Green et al., 1988; Peter, 1979; Peterson, 1994). Internal consistency can be defined as “the reliability within single testing occasions” (Green et al., 1988, p. 254). Two generally accepted methods are used to determine internal consistency reliability (item-to-total correlations and Cronbach’s alpha (Cronbach, 1951; Dillon et al., 1990)). Churchill and Peter (1984, p. 363) have noted that, “other things being equal, measures can be made more reliable by increasing the number of items in the scale.” In the present study study, however, this was not an issue as most of the constructs had a small number of items. Consequently, the internal consistency of the constructs was examined through Cronbach’s alpha and by computing the item to total correlations for each item used to measure the various constructs.

7.1.4.1 The Value Construct

The value construct used in the present study was based on the PERVAL scale developed by Sweeney and Soutar (2001), which has four sub-scales (value-for-money, emotional, social and functional). The items were measured on seven-point disagree-agree scales, as were most of the constructs. Items for each of the sub-scales were initially summed so that high scores implied higher value. The descriptive statistics, shown in Table 7-4, suggested respondents felt their service provider provided reasonable value. In all cases, the standard deviation exceeded one, suggesting that, while there was some agreement about the value assessments, there was variation in these perceptions. The four sub-scales had high coefficient alphas (between 0.88 and 0.93), suggesting the sub-scales were very reliable and can be used with (Grey and Diehl, 1992). While there exists no commonly accepted standard as to which Cronbach’s
alpha value can be regarded as low or high, most scholars agree alpha values above 0.80 are desirable (Davis, 1964; Kaplan and Saccuzzo, 1982; Murphy and Davidshofer, 1988; Nunnally, 1967; Peterson, 1994).

**TABLE 7-4: DESCRIPTIVE STATISTICS FOR THE VALUE CONSTRUCTS**

<table>
<thead>
<tr>
<th>Scale</th>
<th>No. of items</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Value for Money</td>
<td>4</td>
<td>5.31</td>
<td>5.40</td>
<td>1.33</td>
<td>0.93</td>
</tr>
<tr>
<td>Emotional Value</td>
<td>3</td>
<td>4.33</td>
<td>4.38</td>
<td>1.27</td>
<td>0.91</td>
</tr>
<tr>
<td>Social Value</td>
<td>3</td>
<td>4.36</td>
<td>4.42</td>
<td>1.27</td>
<td>0.88</td>
</tr>
<tr>
<td>Functional Value</td>
<td>3</td>
<td>5.00</td>
<td>5.12</td>
<td>1.16</td>
<td>0.88</td>
</tr>
</tbody>
</table>

**7.1.4.2 The Involvement Constructs**

The involvement constructs were based on the scales suggested by Ganesh et al. (2000). The relevant items were again summed so that high scores implied there was higher involvement and the descriptive statistics obtained, shown in Table 7-5, suggested respondents had some purchase involvement, but relatively less emotional involvement, with their respective service providers. Both involvement constructs had high coefficient alphas (0.89), suggesting they can be used with confidence.

**TABLE 7-5: DESCRIPTIVE STATISTICS FOR INVOLVEMENT CONSTRUCTS**

<table>
<thead>
<tr>
<th>Scale</th>
<th>No. of items</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purchase Involvement</td>
<td>4</td>
<td>5.11</td>
<td>5.25</td>
<td>1.19</td>
<td>0.89</td>
</tr>
<tr>
<td>Ego Involvement</td>
<td>2</td>
<td>3.99</td>
<td>4.00</td>
<td>1.54</td>
<td>0.89</td>
</tr>
</tbody>
</table>
7.1.4.3 The Corporate Image, Relative Price and Financial and Performance Risk Constructs

The corporate image construct was based on suggestions made within the European Customer Satisfaction Index model (Gustafsson et al. 2001; Andreasson and Lindestad 1997). The relative price and perceived risk constructs were based on scales suggested by Sweeney et al. (1999). Again the relevant items were summed so high scores implied respondents had a better image of their provider and felt they obtained better prices. Items on the risk constructs were summed so high scores implied respondents were more willing to take gambles (i.e. were less risk averse). The results, shown in Table 7.6, suggested respondents felt they were obtaining good prices from their service providers. They also held their provider in reasonable regard. Finally, they were not very likely to accept financial and/or performance risks. The corporate image and risk constructs had high coefficient alphas of 0.87 and 0.88 respectively, suggesting that they can be used with confidence in our study.

<table>
<thead>
<tr>
<th>Scale</th>
<th>No. of items</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Image</td>
<td>4</td>
<td>4.35</td>
<td>4.25</td>
<td>1.21</td>
<td>0.87</td>
</tr>
<tr>
<td>Relative Price</td>
<td>1</td>
<td>4.89</td>
<td>5.00</td>
<td>1.52</td>
<td>na</td>
</tr>
<tr>
<td>Perceived Risk</td>
<td>5</td>
<td>3.64</td>
<td>3.80</td>
<td>1.17</td>
<td>0.88</td>
</tr>
</tbody>
</table>

7.1.4.4 The Service Quality Constructs

The service quality constructs were also based on items suggested by Sweeney et al. (1999). Items were summed so high scores implied respondents believed they were received quality service from their mobile phone service providers. The high scores, shown in Table 7-7, suggested respondents felt the way service was being delivered and
the outcomes of their service encounters were good. The quality constructs had high coefficient alphas (ranging from 0.77 to 0.83), so they can be used with confidence.

### TABLE 7-7: DESCRIPTIVE STATISTICS FOR THE QUALITY CONSTRUCTS

<table>
<thead>
<tr>
<th>Scale</th>
<th>No. of items</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES Functional Service Quality</td>
<td>4</td>
<td>5.35</td>
<td>5.33</td>
<td>1.04</td>
<td>0.83</td>
</tr>
<tr>
<td>ES Technical Service Quality</td>
<td>2</td>
<td>5.22</td>
<td>5.00</td>
<td>1.06</td>
<td>0.77</td>
</tr>
</tbody>
</table>

#### 7.1.4.5 The Trust and Customer Satisfaction Constructs

The three items in the trust construct were taken from Garbarino and Johnson’s (1999) study, while the eight customer satisfaction items were taken from Oliver (1980). Items were summed so that high scores suggested higher trust and satisfaction respectively. The results, shown in Table 7-8, suggested mobile phone service providers were seen to be reasonably trustworthy. In addition, respondents were reasonably satisfied with their overall experience with their respective providers. Both the trust and customer satisfaction constructs had high coefficient alphas (0.90 and 0.82) so they can be used with confidence.

### TABLE 7-8: DESCRIPTIVE STATISTICS FOR THE TRUST AND CUSTOMER SATISFACTION CONSTRUCTS

<table>
<thead>
<tr>
<th>Scale</th>
<th>No. of items</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>3</td>
<td>4.84</td>
<td>5.00</td>
<td>1.05</td>
<td>0.90</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>8</td>
<td>4.82</td>
<td>4.75</td>
<td>1.13</td>
<td>0.82</td>
</tr>
</tbody>
</table>
7.1.4.6 The Loyalty Constructs

Affective and cognitive loyalty, repurchase intentions and word-of-mouth were measured using scales suggested by Gremler et al. (2002). The items were summed so high scores implied more positive responses. The descriptive statistics, shown in Table 7-9, suggested respondents were “cognitively” and “emotionally” loyal to their service providers. They were also likely to repurchase from their service providers and to provide positive word-of-mouth about their service providers. All of the loyalty sub-scales had coefficient alphas greater than 0.85, suggesting they can be used with confidence.

**TABLE 7-9: DESCRIPTIVE STATISTICS FOR THE LOYALTY CONSTRUCTS**

<table>
<thead>
<tr>
<th>Scale</th>
<th>No. of items</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affective Loyalty</td>
<td>3</td>
<td>4.69</td>
<td>4.67</td>
<td>1.05</td>
<td>0.85</td>
</tr>
<tr>
<td>Cognitive Loyalty</td>
<td>3</td>
<td>4.94</td>
<td>4.67</td>
<td>0.95</td>
<td>0.86</td>
</tr>
<tr>
<td>Conative Loyalty</td>
<td>5</td>
<td>4.73</td>
<td>4.50</td>
<td>1.09</td>
<td>0.92</td>
</tr>
</tbody>
</table>

Finally, for all of the constructs, all of the item-to-total correlations exceeded 0.60, except for one repurchase intention item (0.52). General threshold values for item-to-total correlations range from 0.30 to 0.60 (Green et al., 1988; Steenkamp and van Trijp, 1991), suggesting all of the items should be retained at this stage.

To validate the assumption of unidimensionality, an initial exploratory factor analysis was undertaken⁴. While there are a number of exploratory factor analysis techniques, empirical evidence has shown that the choice of one particular technique is not crucial to the final results (Stewart, 1981). Since principal components analysis leads to unique reproducible results and since it is most commonly applied, this technique was chosen (Churchill 1995; Green, Tull, and Albaum 1988; Kerlinger 1986; Weiers 1988). All of the items loaded onto single components and the variances accounted for by these

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⁴ As suggested by one of the examiners.
components ranged from 71% to 93%. Further, the communalities for the various items ranged from 0.51 to 0.95 (See Appendix B). These results supported the conceptual consistency of the items used to measure each construct and the unidimensionality of the various constructs.

### TABLE 7-10: EXPLORATORY FACTOR ANALYSES OF THE CONSTRUCTS

<table>
<thead>
<tr>
<th>Construct</th>
<th>Items</th>
<th>Eigenvalue</th>
<th>% of Variance Explained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value for Money</td>
<td>4</td>
<td>3.29</td>
<td>82.32</td>
</tr>
<tr>
<td>Functional Value</td>
<td>3</td>
<td>2.44</td>
<td>81.35</td>
</tr>
<tr>
<td>Emotional Value</td>
<td>3</td>
<td>2.54</td>
<td>84.85</td>
</tr>
<tr>
<td>Social Value</td>
<td>3</td>
<td>2.43</td>
<td>81.08</td>
</tr>
<tr>
<td>Purchase Involvement</td>
<td>4</td>
<td>3.04</td>
<td>76.02</td>
</tr>
<tr>
<td>Ego Involvement</td>
<td>2</td>
<td>1.80</td>
<td>90.05</td>
</tr>
<tr>
<td>Corporate Image</td>
<td>3</td>
<td>2.85</td>
<td>71.44</td>
</tr>
<tr>
<td>Relative Price</td>
<td>1</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Perceived Risk</td>
<td>5</td>
<td>3.84</td>
<td>76.93</td>
</tr>
<tr>
<td>Functional Service Quality</td>
<td>3</td>
<td>2.41</td>
<td>80.34</td>
</tr>
<tr>
<td>Technical Service Quality</td>
<td>2</td>
<td>1.87</td>
<td>93.81</td>
</tr>
<tr>
<td>Trust</td>
<td>3</td>
<td>2.48</td>
<td>82.91</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>8</td>
<td>5.71</td>
<td>71.42</td>
</tr>
<tr>
<td>Cognitive Loyalty</td>
<td>2</td>
<td>1.80</td>
<td>90.03</td>
</tr>
<tr>
<td>Affective Loyalty</td>
<td>3</td>
<td>2.66</td>
<td>88.70</td>
</tr>
<tr>
<td>Conative Loyalty</td>
<td>3</td>
<td>2.59</td>
<td>86.37</td>
</tr>
</tbody>
</table>
Chapter Seven: Preliminary Data Analysis

7.2 Conclusions

The present chapter presented information about respondents’ backgrounds and provided descriptive and reliability statistics for the various constructs. The results suggested the sample was representative of Singapore’s population. The high coefficient alphas and item-to-total correlations suggested that the constructs could be used with confidence in the present continuing service environment. This outcome was anticipated as the scales included in the study were established constructs that have been used in several prior studies. The next chapter examines the constructs’ validity in more detail.
8.1 Introduction

The research model outlined in chapter five was empirically estimated in one service setting (the mobile phone sector) in one country (Singapore). The present chapter presents the results obtained in the process of estimating the suggested model. Section 8.2 describes the choices and underlying motivations related to the use of structural equation modeling, while sections 8.3 and 8.4 outline the results obtained in estimating the model. Section 8.5 discusses the results of the analyses undertaken to examine the moderating effects that were discussed in chapter two.
8.2 Analytical Choices

In this section structural equation modelling (SEM) is discussed and the reasons why SEM was seem as the most suitable data analysis technique for testing the research hypotheses suggested in chapter five are outlined. Several procedural decisions related to the implementation of SEM are also discussed.

8.2.1 What is Structural Equation Modelling?5

A review of the SEM literature suggests that modern SEM evolved out of the efforts of many scholars pursuing several analytical lines of research (Golob, 2001). Bollen (1989) argued that SEM is founded on three primary analytical developments, namely:

(1) Path analysis

(2) Latent variable modeling

(3) General covariance estimation methods.

Path analysis was developed almost exclusively by geneticist Sewall Wright (1921; 1934), who introduced three crucial concepts:

(1) The first covariance structure equations

(2) The path diagram or the causal graph

(3) The decomposition of total effects between any two variables into direct and indirect effects.

Shipley (2000) describes how and why path analysis was largely ignored in biology, psychology and sociology until the 1960s. Prior to that time, econometricians had also pursued the testing of causal relationships through the use of over-identifying constraints on partial correlations (e.g. Haavelmo, 1943) but, for many years, economics was uninformed about the solutions inherent in path analysis (Epstein, 1987; Shipley, 2000).

5 While Structural Equation Modeling is a well-known technique, as pointed out by one of the examiners, this section is retained to provide a proper introduction into the subject matter.
During the 1960s and early 1970s, sociologists in particular (led by Blalock, 1961; Boudon, 1965 and Duncan, 1966) discovered the potential of path analysis and its related partial correlation methods. Path analysis was, however, superseded by SEM, in which general covariance structure equations specify how alternative chains of effects between variables generate correlation or covariance patterns. Modern SEM still relies on path diagrams to express what the modeller postulates about the relationships that generate the correlations among variables.

As already noted, the development of models in which inferences about latent variables could be derived from covariances among observed variables (indicators) was pursued in sociology during the 1960s. These latent variable models contributed significantly to the development of SEM by demonstrating how measurement errors (errors-in-variables) can be separated from specification errors (errors-in-equations) (Blalock, 1963). These models led to the first general SEM, developed by Jöreskog (1970; 1973) and Wiley (1973).

In SEM, a hypothetical model that depicts the linkages between latent constructs and their empirical observed indicators is called a measurement model, while the relationships between the constructs is called a structural model (Bollen, 1989; Byrne, 1998; Jöreskog, 1993). An example of a simple SEM is shown in Figure 8-1.

![Figure 8-1: A Structural Equation Model](image-url)
Observed variables are indicated by rectangles or squares (e.g. VAL1, VAL2 and LOY3 in Figure 8-1) and latent variables are indicated by ellipses or circles (i.e. PERCEIVED VALUE and CUSTOMER LOYALTY in Figure 8-1). Error terms (“disturbances” or measurement errors for latent variables) are included in a SEM diagram, represented by “err1 to err6” for measured variables and “resid1” for latent variables (also known as residual error). Measurement error occurs from random measurement error and error uniqueness, a term used to describe the error variance arising from some characteristic that is considered to be specific (or unique) to a particular indicator variable. Residual terms represent error in the prediction of endogenous factors from exogenous factors (Byrne, 2001). Regression coefficients ($\beta$s) are represented by single-headed arrows that indicate a hypothesised pathway between two variables. More detailed discussions on SEM can be found in books by Bollen (1989), Byrne (2001), Hayduk (1987), Hoyle (1995), Kaplan (2000), Kline (1998), Loehlin (1998), Maruyama (1998), Mueller (1996), Schoenberg (1989), and Shipley (2000). Overviews of the approach can be found in Cudeck et al. (2001), Jöreskog (1989), Mueller (1997) and Yuan and Bentler (1997).

8.2.2 Why Structural Equation Modelling?

In the present study, each construct was a latent variable made up of several indicators. Moreover, testing the research hypotheses discussed in Chapter Five implied investigating relationships between latent constructs that could be dependent or independent variables. As a result, SEM was the most appropriate analytical technique. SEM is a widely used tool in academic research (Baumgartner and Homburg, 1996; Hair et al., 1998; Steenkamp and van Trijp, 1991) and has often been used in investigations of the perceived value construct (e.g. Sweeney et al., 1999; Silcox, 2002; Sirdeshmukh et al., 2002; Eggert and Ulaga, 2002).

There are two basic advantages to using SEM rather than more traditional analysis techniques. First, it represents interrelated, latent concepts and accounts for measurement error in its estimation process. The parameter estimates from bivariate and multiple regression and those from systems of simultaneous equations can be seriously biased when observed variables are assumed to be measured without error (Bollen, 1989).
According to Bagozzi (1980, p. 88), “the estimation of parameters in models where measurement error is present but not explicitly represented will not provide useful estimates.” Partitioning error variance and structural prediction errors from explained variance is critical to assessing structural equation models. “SEM takes this measurement error into account when estimating the path coefficients in a structural model, therefore providing more accurate estimates of the causal relationships of interest” (McGill et al. 2000, p. 13).

Second, SEM allows for the “examination of a set of relationships between one or more independent variables, either continuous or discrete, and one or more dependent variables, either continuous or discrete” (Ullman 1996, p. 710). In contrast to, for instance, multiple regression analysis, SEM can estimate several equations at once. Moreover, these equations can be interrelated, implying that the dependent variable in one equation can simultaneously be an independent variable in one or more other equations. This allows the modelling of complex relationships, which is not possible with other multivariate techniques (Fornell and Larcker, 1981; Hair et al., 1998; Steenkamp and van Trijp, 1991).

8.2.3 Procedural Decisions related to Using Structural Equation Modelling

When using SEM, several procedural decisions need to be taken before estimation is undertaken. Successively, we discuss the choice of a partial disaggregation model, a covariance matrix, maximum likelihood estimation, a two-step analysis, and the AMOS software program.

(1) The Partial disaggregation model

Because the number of observed variables in empirical research is often large, it can be impractical to include all items as individual measures (Baumgartner and Homburg, 1996). Following Sweeney et al. (1999), confirmatory factor analysis was undertaken based on a partial disaggregation approach. Partial disaggregation models reduce the number of observed variables and parameters included in confirmatory factor analysis models. Each observed indicator is actually a composite of individual items pertaining to
its respective dimension. Items in the present study were mostly categorized into 2-item parcels.

As suggested by Bagozzi & Edwards (1998), this results in a satisfactory ratio of sample size to parameters to be estimated as the approach permits modelling with smaller sample sizes. Further, this approach reduces measurement error in the observed indicators (Bentler, 1989; Bagozzi & Edwards, 1998) and, thus, results in better fitting solutions (Bandalos, 2002).

This approach negotiates between the total aggregation model, in which a single value for each construct is used as input for SEM by combining all indicators and a total disaggregation model, in which true single items are used as multiple measures of a latent construct. The former approach suffers from a loss of information, as the distinction between items is lost, while the latter is often unwieldy due to greater random errors in items and the many parameters that are estimated (Bagozzi and Heatherton, 1994; Bagozzi and Foxall, 1996). Further, since all indicators of a construct should correspond in the same way to that variable, different random combinations should lead to the same fit.

(2) Type of input matrix

Two types of input matrices can be used to estimate a SEM (a correlation or a covariance matrix). The covariance matrix has the advantage of providing valid comparisons of unstandardised coefficients between different populations or samples. This is not possible when models are estimated on the basis of a correlation matrix. Baumgartner and Homburg (1996, p. 148) recommended that, “in future research all analyses be conducted on covariance matrices.” Consequently, the covariance matrix approach was used in the present study.

(3) The estimation technique

Estimation techniques transform the covariance matrix of observed variables into structural parameters. Several estimation techniques can be used, including maximum likelihood, unweighted least squares in forms such as asymptotically distribution free
weighted least squares (ADF or ADF-WLS), generalized least squares, ordinary least squares and two-stage least squares (Bollen, 1989). These methods involve a scalar fitting function that is minimised using numerical methods. Parameter standard errors and correlations are computed from the matrices of first and second derivatives of the fitting function. The product of the optimised fitting function and the sample size is asymptotically chi-square distributed with degrees of freedom equal to the difference between the number of free elements in the observed variance covariance and the number of free parameters in the model. Maximum likelihood (ML) estimation is the most widely used approach (Anderson and Gerbing, 1988; Baumgartner and Homburg, 1996; Bollen, 1989). It is recognized that ML estimates are robust against moderate violations of the normality assumption provided sample sizes are larger than 100 (Anderson and Gerbing, 1988; Chou and Bentler, 1995).

Sample size is another point of consideration (see Anderson and Gerbing, 1988; Bentler, 1990; Bentler and Yuan, 1999; Bollen, 1990; Hoogland and Boomsma, 1998). While asymptotically distribution-free (ADF) estimation procedures for non-normally distributed data exist, these generally require very large sample sizes, limiting their practical usefulness (Sugawara and McCallum, 1993; Fan, et al., 1999 and Boomsma and Hoogland, 2001; Baumgartner and Homburg, 1996; Jöreskog and Sörbom, 1989; Steenkamp and van Trijp, 1991). ADF-WLS procedures require larger sample sizes due to their heavy reliance on asymptotic assumptions and required computation and the inversion of a matrix of fourth-order moments. The consensus is that the minimum sample size for ADF-WLS estimation is at least 1,000 (Hoogland and Boomsma, 1998), although some say this figure might be as high as 2,000 (Hoyle, 1995; Ullman, 1996; Boomsma and Hoogland, 2001). As our sample was not large (301), ML procedures were used to estimate the structural parameters in the present study.6 Interestingly, simulations by Sharma, Durvasula, and Dillon (1989) have shown that ADF techniques do not

---

6 ML estimation also requires a reasonable sample, particularly when non-normal data are involved. Based on Monte Carlo studies of the performance of various estimation methods, it has been suggested that: (1) A minimum sample of 200 is needed to reduce biases to an acceptable level (Kline, 1998; Loehlin, 1998; Boomsma and Hoogland, 2001). (2) The sample should be at least fifteen times the number of observed variables (Stevens, 1996). (3) The sample should be at least five times the number of free parameters in the model, including error terms (Bentler and Chou, 1987; Bentler, 1995). (4) With strongly kurtotic data, the minimum sample should be ten times the number of free parameters (Hoogland and Boomsma, 1998).
necessarily outperform maximum likelihood estimation methods, even though they might be expected to be more appropriate theoretically.

(4) Two-step analysis

The present study followed the two-step approach suggested by Anderson and Gerbing (1988). A rationale for this approach is that the simultaneous estimation of the measurement and structural models may create difficulties in assigning meaning to theoretical constructs. To minimise the potential for interpretational confounding, the two-step approach requires the estimation of a measurement model containing all of the latent constructs and their indicators prior to the estimation of the structural model (Anderson and Gerbing, 1988). The estimation of fixed parameters may produce a model with an acceptable goodness-of-fit, although the model may contain latent constructs to which meaning cannot be assigned.

(5) Statistical program used

The Amos software program allows a researcher to “[a] determine if the causal processes under study are represented by a series of structural (regression) equations, and [b] model these structural relations pictorially to enable a clearer conceptualisation of the theory under study” (Byrne, 2001 p. 3). In the present study, confirmatory factor analysis and model testing were undertaken using the AMOS 4 software package (Arbuckle and Wothke, 1999).

8.2.4 Evaluating a Structural Equation Model

Assessing the overall goodness-of-fit for a structural equation model is not as clear-cut as with other multivariate dependence techniques. Although many guidelines have been suggested, no absolute test is available (Hair et al., 1998). As noted by Bollen (1989, p. 275), “selecting a rigid cut-off for the incremental fit indices is like selecting a minimum $R^2$ for a regression equation. Any value will be controversial.” The evaluation of goodness-of-fit measures in SEM has gained widespread interest in recent years, resulting in the continual development of new measures.
When measurement and structural models are evaluated, three types of overall model fit measures are usually used, namely:

- Absolute Fit Measures (AFM).
- Incremental Fit Measures (IFM).
- Parsimonious Fit Measures (PFM) (Byrne, 2001; Hair et al., 1998; Hu and Bentler, 1995; Maruyama, 1998).

An absolute fit index is used to evaluate how well an a priori theoretical model fits the sample data, while an incremental fit index assesses proportionate fit by comparing a target model with a more restricted, nested baseline model. A parsimonious fit measure is used to see whether model fit has been achieved by over-fitting the data with too many coefficients.

\(1\) Absolute fit measures

Among the absolute fit measures used to evaluate the model are the Chi-square statistic \(\chi^2\), the Goodness-of-fit index (GFI), the root mean square residual (RMSR) and the root mean square error of approximation (RMSEA). A large Chi-square statistic relative to the degrees of freedom suggests there is a difference between the observed and the estimated covariance matrix. Consequently, a low Chi-square statistic is desired as this suggests little difference between actual and predicted covariance matrices. However, the Chi-square statistic is very sensitive to sample size (Jöreskog and Sörbom, 1993; Bagozzi and Foxall, 1996). Indeed, it is common to find a large \(\chi^2\) relative to degrees of freedom, indicating a need to modify the model to fit the data (Jöreskog and Sörbom, 1993). Researchers have addressed the \(\chi^2\) limitation by developing goodness-of-fit indexes that take a more pragmatic approach to the evaluation process (Bentler, 1990; Jöreskog and Sörbom, 1996; Byrne, 2001).

The Goodness-of-fit index (GFI) represents the overall degree of fit, and can range in value from zero (a poor fit) to 1.0 (a perfect fit). As a rule of thumb, the GFI should be greater than or equal to 0.90 (Schumacker and Lomax, 1996; Hair, et al., 1998). The
standardised root mean square residual (SRMR) is the average difference between the predicted and observed variances and covariances in the model (Hu and Bentler, 1999). The smaller the standardised RMR, the better the model fit and it is generally suggested that the SRMR should be below 0.10.

The root mean square error of approximation (RMSEA) is a close approximation of the fit relative to the degrees of freedom that could be expected if the model was estimated in the population, not just from the sample drawn for the estimation (Steiger, 1990). If the RMSEA point estimate is less than 0.05, the lower and upper boundaries of confidence interval are less than the recommended values of 0.05 and 0.08 respectively (Browne and Cudeck, 1993); and the probability value associated with this test of close fit is greater than 0.50 (Jöreskog and Sörbom, 1996), it can be said that the degree of approximation is very small and the model fits the data well.

(2) Incremental fit measures

The incremental fit measures compare the proposed model to a baseline model. Common examples of this group of indexes are the adjusted goodness-of-fit index (AGFI), the Tucker-Lewis index (TLI), the normed fit index (NFI), the relative fit index (RFI) and the comparative fit index (CFI). The AGFI, as an extension of the GFI, is adjusted by the ratio of the degrees of freedom for the proposed model to the degrees of freedom for the null model. A recommended acceptance level is a value greater than or equal to 0.90 (Hair, et al. 1998).

Bentler and Bonett’s (1980) normed fit index (NFI) has often been the practical criterion of choice, as evidenced in large part by the current “classic” status of its original paper (see Bentler, 1992; Bentler and Bonett, 1987). However, addressing evidence that the NFI has shown a tendency to underestimate fit in small samples, Bentler (1990) revised the BFI to take sample size into account and proposed the comparative fit index (CFI). The relative fit index (RFI; Bollen, 1996) is a derivative of the NFI. Although a value greater than 0.90 was originally considered appropriate (Bentler 1992), a revised cut off value for all three indexes of 0.95 has recently been suggested (Hu and Bentler, 1999).
Finally, the Tucker-Lewis Index (TLI) (Tucker and Lewis, 1973), which is used when evaluating factor analysis, can also be used to make comparisons between alternative models by substituting the alternative model for the null model. It is recommended that a value greater than or equal to 0.95 is acceptable (Hu and Bentler, 1999).

(3) Parsimonious fit measures

As a third class of measure, parsimonious fit measures include the parsimonious normed fit index (PNFI) and the parsimonious goodness-of-fit index (PGFI). These measures are used to evaluate whether model fit has been obtained by “over fitting” data with too many coefficients. The PNFI takes account of the number of degrees of freedom used to achieve fit. Higher values of the PNFI are better. The PGFI takes into account the complexity of the hypothesised model in the assessment of the overall fit and, typically, a PGFI value larger than 0.50 is acceptable (Byrne, 2001).

8.3 Measurement Model Evaluation

On the basis of Anderson and Gerbing's (1988) recommendation, a measurement model was estimated before estimating the structural paths to test the hypothesized relationships between constructs. The validity and reliability of the constructs are discussed next before the measurement model results are reported.

(1) Reliability and Validity

Construct reliability was assessed using Cronbach’s alpha coefficient, as shown in Tables 7-4 to 7-9. Cronbach alpha values should exceeded 0.70 as this is the commonly accepted minimum level (Hair et al., 1998, p. 642). Reliabilities were found to range from 0.77 (ES Technical Service Quality) to 0.93 (Perceived Value-for-Money), suggesting all of the constructs included in the present could be regarded as reliable, which was not surprising as they were adapted from prior research.

Fornell and Larcker (1981) have argued that the percentage of variance extracted for each construct, which is an alternative reliability measures, should be higher than 0.50, which implies that the variance accounted for by each construct is greater than the variance
accounted for by measurement error (Hair et al., 1998) and this measure was also computed for each construct.

A confirmatory factor analysis was undertaken on each of the constructs to further assess their measurement properties and the results are shown in Table 8-1.

**TABLE 8-1: COMPOSITE DESCRIPTIVE STATISTICS**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Number of Items</th>
<th>Smallest Standardised Loading</th>
<th>Chi Square Prob.</th>
<th>Composite Reliability</th>
<th>Variance Extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value for Money</td>
<td>4</td>
<td>0.77</td>
<td>0.89</td>
<td>0.93</td>
<td>0.78</td>
</tr>
<tr>
<td>Functional Value</td>
<td>3</td>
<td>0.80</td>
<td>na</td>
<td>0.89</td>
<td>0.72</td>
</tr>
<tr>
<td>Emotional Value</td>
<td>3</td>
<td>0.83</td>
<td>na</td>
<td>0.91</td>
<td>0.78</td>
</tr>
<tr>
<td>Social Value</td>
<td>3</td>
<td>0.83</td>
<td>na</td>
<td>0.88</td>
<td>0.72</td>
</tr>
<tr>
<td>Ego Involvement</td>
<td>2</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Purchase Involvement</td>
<td>4</td>
<td>0.80</td>
<td>0.13</td>
<td>0.91</td>
<td>0.71</td>
</tr>
<tr>
<td>Corporate Image</td>
<td>3</td>
<td>0.72</td>
<td>na</td>
<td>0.88</td>
<td>0.71</td>
</tr>
<tr>
<td>Relative Price</td>
<td>1</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Perceived Risk</td>
<td>5</td>
<td>0.65</td>
<td>0.04</td>
<td>0.87</td>
<td>0.62</td>
</tr>
<tr>
<td>Functional Service Quality</td>
<td>3</td>
<td>0.78</td>
<td>na</td>
<td>0.88</td>
<td>0.72</td>
</tr>
<tr>
<td>Technical Service Quality</td>
<td>2</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Trust</td>
<td>3</td>
<td>0.72</td>
<td>na</td>
<td>0.90</td>
<td>0.76</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>5</td>
<td>0.36</td>
<td>0.36</td>
<td>0.93</td>
<td>0.67</td>
</tr>
<tr>
<td>Affective Loyalty</td>
<td>3</td>
<td>0.80</td>
<td>na</td>
<td>0.94</td>
<td>0.84</td>
</tr>
<tr>
<td>Cognitive Loyalty</td>
<td>2</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Conative Loyalty</td>
<td>3</td>
<td>0.84</td>
<td>na</td>
<td>0.92</td>
<td>0.80</td>
</tr>
</tbody>
</table>

As can be seen from the Table, all of the composite reliability measures were above 0.85, which exceeded both Bagozzi and Yi’s (1988) minimum values of 0.60 and the recommended threshold level of 0.70 (Hair et al., 1998, p. 642). The high loadings imply
strong correlations on the underlying construct and that the scales are measuring what they are intended to measure, as do the high variance extracted values (Hather, 1994; Kline, 1998). As a result, it can be concluded that all of the constructs are reliable and have convergent validity.

Fornell and Larcker (1981) have also shown that, for two constructs to have discriminant validity (i.e. to be measuring different things), the average variance extracted scores for the two constructs should be greater than the squared correlation between the two constructs. The squared correlations are shown in Table 8-2, as are the variance extracted scores for the various constructs. As an example, the average variance extracted scores for the value for money and social value of 0.75 (the average of 0.78 and 0.72) was greater than the squared correlation between the two constructs (0.26) ans so on. As can be seen from the Table, all of the pairs of constructs in the present study met this requirement. Consequently, it can be argued that there was discriminant validity between all of the pairs of constructs and that, therefore, all of the constructs can be included in any subsequent modelling.
## TABLE 8-2: VARIANCE EXTRACTED AND SQUARED CORRELATIONS\(^7\)

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Value for Money</td>
<td>0.78</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Value</td>
<td>0.72</td>
<td>0.26</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Emotional Value</td>
<td>0.78</td>
<td>0.59</td>
<td>0.47</td>
<td></td>
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<tr>
<td>Functional Value</td>
<td>0.72</td>
<td>0.45</td>
<td>0.32</td>
<td>0.52</td>
<td></td>
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</tr>
<tr>
<td>ES Func. Service Quality</td>
<td>0.72</td>
<td>0.48</td>
<td>0.15</td>
<td>0.43</td>
<td>0.33</td>
<td></td>
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</tr>
<tr>
<td>ES Tech. Service Quality</td>
<td>0.78</td>
<td>0.1</td>
<td>0.13</td>
<td>0.12</td>
<td>0.09</td>
<td>0.35</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Purchase Involvement</td>
<td>0.71</td>
<td>0.21</td>
<td>0.35</td>
<td>0.15</td>
<td>0.29</td>
<td>0.15</td>
<td>0.09</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk</td>
<td>0.62</td>
<td>0.34</td>
<td>0.22</td>
<td>0.13</td>
<td>0.14</td>
<td>0.34</td>
<td>0.25</td>
<td>0.36</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate Image</td>
<td>0.71</td>
<td>0.1</td>
<td>0.41</td>
<td>0.19</td>
<td>0.42</td>
<td>0.09</td>
<td>0.05</td>
<td>0.34</td>
<td>0.18</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>0.67</td>
<td>0.45</td>
<td>0.28</td>
<td>0.45</td>
<td>0.35</td>
<td>0.32</td>
<td>0.06</td>
<td>0.3</td>
<td>0.22</td>
<td>0.32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>0.76</td>
<td>0.25</td>
<td>0.25</td>
<td>0.44</td>
<td>0.5</td>
<td>0.37</td>
<td>0.18</td>
<td>0.12</td>
<td>0.02</td>
<td>0.26</td>
<td>0.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affective Loyalty</td>
<td>0.84</td>
<td>0.06</td>
<td>0.22</td>
<td>0.11</td>
<td>0.19</td>
<td>0.13</td>
<td>0.03</td>
<td>0.11</td>
<td>0.23</td>
<td>0.22</td>
<td>0.13</td>
<td>0.21</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cognitive Loyalty</td>
<td>0.56</td>
<td>0.24</td>
<td>0.37</td>
<td>0.37</td>
<td>0.33</td>
<td>0.3</td>
<td>0.17</td>
<td>0.15</td>
<td>0.34</td>
<td>0.18</td>
<td>0.32</td>
<td>0.31</td>
<td>0.33</td>
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</tr>
<tr>
<td>Conative Loyalty</td>
<td>0.86</td>
<td>0.15</td>
<td>0.37</td>
<td>0.21</td>
<td>0.23</td>
<td>0.22</td>
<td>0.13</td>
<td>0.13</td>
<td>0.15</td>
<td>0.19</td>
<td>0.22</td>
<td>0.27</td>
<td>0.43</td>
<td>0.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td>1.00</td>
<td>0.56</td>
<td>0.19</td>
<td>0.53</td>
<td>0.43</td>
<td>0.51</td>
<td>0.1</td>
<td>0.16</td>
<td>0.02</td>
<td>0.03</td>
<td>0.38</td>
<td>0.28</td>
<td>0.05</td>
<td>0.18</td>
<td>0.16</td>
<td></td>
</tr>
</tbody>
</table>

\(^7\) The Squared Path Correlation Coefficients are shown in the relevant cells.
(2) The Measurement Models

A decision was made to separate the full CFA model into three smaller models to eliminate the effects of model complexity and sample size (Anderson and Narus, 1990; Bentler and Chou, 1987). Reisinger and Turner (1999) have argued that large measurement models can create interpretation and significance related problems. As smaller measurement models have been tested in other behavioural research studies with some success (e.g. Garbarino and Johnson, 1999; Sujan et al., 1994), it was decided to take this approach in the present study.

The first measurement model included the four components from the PERVAL perceived value scale (functional value, social value, emotional value and value-for-money) and the 2 service quality dimensions (technical and functional), while the second model included the other exogenous constructs; namely corporate image and perceived risk and 1 moderator - involvement. The third model included the endogenous constructs (trust, customer satisfaction, cognitive loyalty, affective loyalty and conative loyalty). Standardised residuals and modification indices were reviewed to determine any potential model misspecifications.

The goodness of fit indexes for the three measurement models are shown in Table 8-3. For the three measurement models, the Root Mean Square Residuals (RMRs) were below the suggested 0.05 limit suggested by (Byrne 2001) while the Adjusted Goodness of Fit Indexes (AGFI) met the minimum suggested figure of 0.90 (Arbuckle, 1999), while the Normed Fit Indexes (NFI) and Comparative Fit Indexes (CFI) were well above the 0.90 levels recommended by Bentler and Bonett (1980). Further, the ratios of the chi-square statistic to its associated degree of freedom were below 3, which has been suggested as an indication of an acceptable fit (Carmines, 1981). The measurement model was deemed to be adequate and the structural model was estimated.
TABLE 8-3: GOODNESS-OF-FIT SUMMARY FOR THE MEASUREMENT MODELS

<table>
<thead>
<tr>
<th>Measurement Model</th>
<th>Constructs</th>
<th>AGFI</th>
<th>NFI</th>
<th>CFI</th>
<th>RMSEA</th>
<th>RMR</th>
<th>Chi-Square / df</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Value, ES Service Quality ES Technical Service Quality</td>
<td>0.90</td>
<td>0.97</td>
<td>0.98</td>
<td>0.07</td>
<td>0.04</td>
<td>2.73</td>
</tr>
<tr>
<td>2</td>
<td>Involvement Perceived Risk Corporate Image</td>
<td>0.96</td>
<td>0.99</td>
<td>0.99</td>
<td>0.05</td>
<td>0.04</td>
<td>1.66</td>
</tr>
<tr>
<td>3</td>
<td>Affective Loyalty Customer Satisfaction Trust Cognitive Loyalty Affective Loyalty</td>
<td>0.90</td>
<td>0.98</td>
<td>0.98</td>
<td>0.08</td>
<td>0.04</td>
<td>2.99</td>
</tr>
</tbody>
</table>

8.4 Structural Model Evaluation

In this section, the results of estimating the structural paths of the hypothesised model outlined in Chapter Five are discussed and some revisions to the model are suggested. The performance of a rival model is also assessed to see whether the finally suggested model is robust against alternative formulations.

An important step before determining the goodness-of-fit criteria for a model is to ensure that it is identified. Identification means there is at least one unique solution for each parameter estimate in the model. Models in which there is only one solution for each parameter estimate are said to be just-identified. Models for which there are an infinite number of possible parameter estimate values are said to be under-identified. Finally, models that have more than one possible solution (but one best or optimal solution) for each parameter estimate are considered to be over-identified. Typically over-identified models are sought, as these models allow the researcher to test statistical hypotheses, including model fit (Loehlin, 1992).
Model identification, in the present case, is achieved according to the recursive rule, as the beta matrix can be arranged so that all of the estimates are in the lower half of the matrix and the psi matrix is diagonal (Bollen, 1989). However, this is a necessary but not sufficient condition. According to Hair et al (1998), the model must meet the rank condition, which is both a necessary and sufficient condition. This requires the researcher to algebraically determine if each parameter is uniquely identified (estimated). In assessing the identification of the structural model, it was assumed that the residuals were uncorrelated as the model would not be identified if any indicator of a latent variable has a disturbance that is correlated with disturbances to other indicators of that latent variable. Next, the model was developed so that there were “as many path relationships going into any endogenous variable as there were exogenous variables in the overall model,” which is a simple way to test the rank condition.

8.4.1 An Evaluation of the Hypothesised Model

The results of the estimation of the initially suggested model are shown in Table 8-4. As can be seen from the various goodness of fit indices, the model did not fit the data very well. The GFI was 0.80, the AGFI was 0.73 and the NFI was 0.66, whereas these indices should be greater than 0.90 (Arbuckle and Wothke, 1999). Further, the CFI coefficient was 0.79, which is well below its recommended minimum value of 0.90 (Bentler, 1990).

<table>
<thead>
<tr>
<th>Goodness of Fit Measures</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi – square</td>
<td>1022.28</td>
</tr>
<tr>
<td>Degrees of Freedom (df)</td>
<td>267</td>
</tr>
<tr>
<td>Probability (p)</td>
<td>0.00</td>
</tr>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>0.80</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>0.72</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>0.79</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>0.66</td>
</tr>
<tr>
<td>Standard Root Mean Square Residual (RMR)</td>
<td>0.13</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>0.20</td>
</tr>
</tbody>
</table>
It was also apparent that many of the suggested paths did not have significant coefficients, perhaps because the model was too complex. Further, some of the relationships that had been supported in previous research (e.g. Sweeney et al., 1999) did not have their expected signs. In addition, the model was not identified, according to the “rank rule” (Bollen, 1989).

A decision was made to simplify the model, moving the analysis from a confirmatory to an exploratory mode (Byrne, 2001). Relationships in the original model were modified, either by removing insignificant relationships or by adding new relationships to the model that were suggested by modification indexes. Following the approach recommended by Long (1983), only one parameter was added or deleted at a time, because each modification may reduce or eliminate the need to add or delete a second parameter. Modification of the relationships stopped as soon as a good fitting model was achieved and that model was accepted as the final model. Byrne (2001) has suggested that theory and statistical analysis should be considered simultaneously in finding such a model.

To this end, paths with non-significant regression coefficients were removed from the model one at a time to achieve the desired more parsimonious model. This resulted in the “Relative Price,” “Perceived Risk” and “Customer Satisfaction” constructs being excluded, as they had no significant relationships with the model’s other constructs. The fit of the model improved further when the various loyalty components (affective, cognitive and conative loyalty) were combined into a single higher-order construct. Similarly, to improve the overall fit of the model, the various value sub-components (value-for-money, functional, emotional and social) and service quality sub-components (functional service quality, technical service quality) were also represented as higher-order constructs. The simpler model was re-estimated and an acceptable fit was achieved, as can be seen in Table 8-5.
### TABLE 8-5: GOODNESS OF FIT MEASURES FOR REVISED MODEL

<table>
<thead>
<tr>
<th>Goodness of Fit Measures</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi – square</td>
<td>58.075</td>
</tr>
<tr>
<td>Degrees of Freedom (df)</td>
<td>27</td>
</tr>
<tr>
<td>Probability (p)</td>
<td>0.000</td>
</tr>
<tr>
<td>Goodness of Fit Index (GFI)</td>
<td>0.963</td>
</tr>
<tr>
<td>Adjusted Goodness of Fit Index (AGFI)</td>
<td>0.925</td>
</tr>
<tr>
<td>Comparative Fit Index (CFI)</td>
<td>0.989</td>
</tr>
<tr>
<td>Normed Fit Index (NFI)</td>
<td>0.980</td>
</tr>
<tr>
<td>Standard Root Mean Square Residual (RMR)</td>
<td>0.032</td>
</tr>
<tr>
<td>Root Mean Square Error of Approximation (RMSEA)</td>
<td>0.062</td>
</tr>
</tbody>
</table>

The goodness of fit indexes made it clear that the simpler model was a much better fit, with the chi-square statistic falling to 58.08. The other goodness of fit indices were also acceptable, with the $GFI$, $AGFI$, $CFI$ and $NFI$ meeting the recommended minimum value of 0.90. In addition, the $RMR$ value (0.03) suggested that the sample variances and covariances differed by only a small amount from their estimates (Arbuckle and Wothke, 1999). Finally, the $RMSEA$ value (0.06) was within the acceptable level, suggesting a reasonable fit. Modification indices did not suggest any major improvements. Overall, the revised model, which is shown in Figure 8-2, fitted the data well, suggesting it represented the present mobile phone service context well.
In addition, the strengths of the path coefficients between the exogenous and the endogenous constructs were examined. Although no limit has been set that determines when a path coefficient can be considered as high, values exceeding 0.90 are considered to be indicative of multicollinearity problems (Hair et al., 1998). All of the path coefficients between the exogenous and the endogenous constructs were below 0.80 in the present case, suggesting multicollinearity was not a problem in the present context.

8.4.2 Hypotheses Tests

The structural path coefficients are shown in Figure 8-4. The relationships between the constructs were examined based on the t-values associated with the path coefficients between the constructs. If an estimated t-value is greater than a certain critical value (p < 0.05, t-value = 1.96), the null hypothesis that the associated estimated parameter is equal to zero was rejected and the hypothesised relationship was supported (Mueller 1996). A summary of the various hypotheses tested in the revised model is presented in Table 8-6.
### TABLE 8-6: HYPOTHESES TESTS FOR PROPOSED MODEL

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a: Corporate image → perceived value</td>
<td>Supported</td>
</tr>
<tr>
<td>H1b: Corporate image → perceived service quality</td>
<td>Not supported</td>
</tr>
<tr>
<td>Corporate image → Trust*</td>
<td>Supported</td>
</tr>
<tr>
<td>H2a: ES functional service quality → perceived value</td>
<td>Supported</td>
</tr>
<tr>
<td>H2b: ES functional service quality → ES technical service quality</td>
<td>Not supported</td>
</tr>
<tr>
<td>H2c: ES technical service quality → perceived value</td>
<td>Supported</td>
</tr>
<tr>
<td>H3a: Perceived price → perceived value</td>
<td>Not Supported**</td>
</tr>
<tr>
<td>H3b: Perceived price → ES technical service quality</td>
<td>Not Supported**</td>
</tr>
<tr>
<td>H4a: Perceived risk → perceived value</td>
<td>Not Supported**</td>
</tr>
<tr>
<td>H5a: Perceived value → cognitive loyalty</td>
<td>Supported</td>
</tr>
<tr>
<td>H5b: Perceived value → affective loyalty</td>
<td>Supported</td>
</tr>
<tr>
<td>H5c: Perceived value → conative loyalty</td>
<td>Supported</td>
</tr>
<tr>
<td>H6a: Perceived value → satisfaction</td>
<td>Not supported</td>
</tr>
<tr>
<td>H7a: Perceived Value → Trust</td>
<td>Not supported</td>
</tr>
<tr>
<td>H8a: Satisfaction → Cognitive loyalty</td>
<td>Not Supported**</td>
</tr>
<tr>
<td>H8b: Satisfaction → affective loyalty</td>
<td>Not Supported**</td>
</tr>
<tr>
<td>H8c: Satisfaction → conative loyalty</td>
<td>Not Supported**</td>
</tr>
<tr>
<td>H8d: Satisfaction → Trust</td>
<td>Not Supported**</td>
</tr>
<tr>
<td>H9a: Trust → Cognitive loyalty</td>
<td>Supported</td>
</tr>
<tr>
<td>H9b: Trust → Affective loyalty</td>
<td>Supported</td>
</tr>
<tr>
<td>H9c: Trust → Conative loyalty</td>
<td>Supported</td>
</tr>
<tr>
<td>H10a: Cognitive loyalty → Affective loyalty</td>
<td>Not supported</td>
</tr>
<tr>
<td>H10b: Affective loyalty → Conative loyalty</td>
<td>Not supported</td>
</tr>
</tbody>
</table>

Notes: **Constructs were dropped due to insignificant relationships in the model re-specification process.  
*New relationships found to be significant.

Among the commonly accepted antecedents, corporate image (0.73) had a more significant effect on perceived value than did service quality (0.30). Corporate image also impacted significantly on trust (0.57). Service quality was important in increasing customer trust (0.39) and had a smaller, but significant, positive impact on perceived
value (0.30). Finally, perceived value had a more significant positive effect on customer loyalty (0.41) than did customer trust (0.29).

As suggested by Sweeney et al. (1999), the relevance of perceived value’s role as a mediator was examined using the approach suggested by Baron and Kenny (1986). Three regression equations were estimated, namely:

(1) The mediator on the independent variable

(2) The dependent on the independent variable

(3) The dependent on both the independent and mediating variable together.

For mediation to be established equations 1 and 2 must be significant and the mediator must significantly affect the dependent variable in the third equation. In addition, the effect of the independent variable in the third equation should be less than its effect in the second equation. These mediation tests were conducted on each of the three antecedents (independent variables) of perceived value in the final model (the two service quality dimensions and corporate image) and the results are shown in Table 8-7.

Each of the antecedents was found to affect the latent perceived value construct significantly (Equation 1). Each of the antecedents of perceived value also separately significantly affected conative loyalty (Equation 2). Third, perceived value was found to affect customer loyalty significantly when both perceived value and each antecedent were included as predictors of conative loyalty (Equation 3). The effect of the antecedents on customer loyalty was less in Equation 3 (conative loyalty regressed on each antecedent). The perceived value construct satisfied all of Baron and Kenny’s (1986) mediating conditions, implying that perceived value accounts for a considerable amount (but not all) of the variance in the Corporate Image-Service Quality  customer loyalty relationships. Hence, hypotheses 6a to 6c were supported.
TABLE 8-7: REGRESSION EQUATION TESTS FOR PERCEIVED VALUE MEDIATION (IN THE CORPORATE IMAGE AND SERVICE QUALITY \( \rightarrow \) CONATIVE LOYALTY RELATIONSHIPS)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporate Image</td>
<td>Coefficients for the Independent Variables</td>
<td>Coefficients for the Independent Variables</td>
<td>Coefficients for the Mediator Variable</td>
</tr>
<tr>
<td>Service Quality</td>
<td>0.519 (10.497)</td>
<td>0.389 (7.291)</td>
<td>.130 (2.350)</td>
</tr>
<tr>
<td></td>
<td>0.553 (11.463)</td>
<td>0.423 (8.082)</td>
<td>0.160 (2.825)</td>
</tr>
</tbody>
</table>

Notes:
* Figures in brackets are t-values. All the results had p < 0.01.
* The mediator (equations 1 and 3) is perceived value
** The independent variable for each row is as specified in the left hand column.
*** The dependent variable (equations 2 and 3) is customer loyalty.

In order to better understand the relative importance of each construct, total effects need to be assessed. Total effects include the indirect, as well as the direct effects already described. These are shown in Table 8-8. An example of the derivation of the indirect effects is given at the foot of the table.

A comparison of the coefficients suggests that customer loyalty was most influenced by corporate image (0.46) and perceived value (0.41). Corporate image had a significant direct influence on perceived value (0.73). Similarly, service quality had a positive direct effect on functional value (0.30), albeit of a smaller magnitude. Service quality had direct effects on functional value (0.30) and trust (0.39) while indirectly impacting on customer loyalty (0.23). The evidence strongly suggests that good service quality and corporate image are important antecedents to future decisions and satisfaction.
### Table 8-8: Effects on Endogenous Constructs A) Direct B) Indirect C) Total

<table>
<thead>
<tr>
<th>Effect of → on ↓</th>
<th>Corporate Image</th>
<th>Service Quality</th>
<th>Customer Trust</th>
<th>Perceived Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Trust</td>
<td>0.572</td>
<td>0.385</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>0.000</td>
<td>0.000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>0.572</td>
<td>0.385</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>0.727</td>
<td>0.302</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>0.000</td>
<td>0.000</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>0.727</td>
<td>0.302</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Customer Loyalty</td>
<td>0.000</td>
<td>0.000</td>
<td>0.286</td>
<td>0.413</td>
</tr>
<tr>
<td></td>
<td>0.464</td>
<td>0.235</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>0.464</td>
<td>0.235</td>
<td>0.286</td>
<td>0.413</td>
</tr>
</tbody>
</table>

Notes: Cell entries are a) due to direct path; b) effects due to indirect paths and c) the total of the two.

8.4.2.1 Squared Multiple Correlations

The squared multiple correlations, which measure the strength of the linear relationship between the dependent variable and the independent variables, are shown in Table 8-9. Overall, the squared multiple correlations suggested that 42 percent of the variance in customer loyalty was explained by the constructs included in the final model. This suggests what is important to mobile phone customers and has important managerial implications, which are discussed in the next chapter.

Perceived value had a squared multiple correlation of 0.79, suggesting that both perceived value constructs were well explained by its antecedents of corporate image, and service quality. This is not surprising as the construct had been tested by Sweeney, Soutar and Johnson (1999) and Silcox (2002) in previous research. Similarly, the various antecedents explained 64 percent of the variance in trust.
TABLE 8-9: SQUARED MULTIPLE CORRELATIONS FOR THE ENDOGENOUS CONSTRUCTS

<table>
<thead>
<tr>
<th>Construct</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Value</td>
<td>0.79</td>
</tr>
<tr>
<td>Customer Trust</td>
<td>0.64</td>
</tr>
<tr>
<td>Customer Loyalty</td>
<td>0.42</td>
</tr>
</tbody>
</table>

8.4.3 An Evaluation of Nested Models

In SEM, it is generally agreed that researchers should compare rival models and not just test the performance of a proposed model (Bollen and Long, 1992; Hair et al., 1998; Morgan and Hunt, 1994). Thus, as a further test, a number of alternative models were tested. The first introduced a direct relationship between service quality and customer loyalty as it could be argued that the better the service quality, the greater the customer loyalty. The relationship identified was not significant and did not improve the explained variance. The second alternative model introduced a relationship between corporate image and customer loyalty as, if a buyer’s perceptions of the company’s image increased, a buyer’s future intentions might be affected positively. The analysis did not support the relationship. The third alternative model added a relationship between perceived value and customer trust. Again, the path was found to be insignificant and did not improve the variance explained.

Three further nested models were used to see whether the model was parsimonious. The relationship between corporate image and customer trust was removed. The model was unidentified and hence the model was deemed unacceptable. The relationship between service quality and customer trust was then removed. This reduced the overall variance explained in the final model to 41% and all of the goodness of fit indices were worse, with the AGFI being unacceptable (chi-square 81.024; df 28; P 0.000; GFI 0.952; AGFI 0.906; CFI 0.98; RMR 0.055 and RMSEA 0.079). Finally, the relationship between customer trust and customer loyalty was removed. This reduced the overall variance
explained in the final model to 37% and all of the goodness of fit indices were worse and unacceptable (chi-square 73.179; df 28; P 0.000; GFI 0.955; AGFI 0.913; CFI 0.984; RMR 0.054 and RMSEA 0.073). Thus, it seems the final model is both parsimonious and acceptable.

8.5 Moderating Effects

In this section, the moderating effects of involvement on the two paths involving perceived value, loyalty and trust are examined. Figure 8-3 shows these paths. Moderated multiple regression analysis (Cohen and Cohen, 1983; Hair et al., 1995) was used to assess the moderating effect of involvement on the relationships between perceived value and customer loyalty and between customer trust and customer loyalty. This technique has been recommended as preferable to subgroup analysis for testing moderator effects as it makes more use of the data and its interaction effect (with the independent variables) on the dependent variable (Peters and Champoux, 1979).

Note: The red dotted lines are the moderating effects of involvement. Paths being tested are in black. All other paths (not tested herein) have been lightened for better contrast.

FIGURE 8-3: MODERATING EFFECTS OF INVOLVEMENT
First, to represent the interaction between each of the independent variables (i.e. perceived value and customer satisfaction) and involvement, the variables were centred and then multiplied together. For example, the product term that represents the interaction between perceived value and customer loyalty is equal to \((Perceived\ Value - mean\ of\ Perceived\ Value)\times(Involve\ ment - Mean\ of\ Involvement)\). Next, a regression analysis is undertaken with customer loyalty as the dependent variable and the product terms, as well as the variables that were used to create the interactions, as the independent variables. The results obtained are shown in Table 8-10.

### TABLE 8-10: INTERPRETING THE SIGNIFICANCE OF THE INTERACTION TERMS

<table>
<thead>
<tr>
<th></th>
<th>Unstandardised Beta (B)</th>
<th>SE</th>
<th>Standardised Beta (b)</th>
<th>t</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>1.86</td>
<td>0.23</td>
<td></td>
<td>8.23</td>
<td>0.00</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>0.31</td>
<td>0.06</td>
<td>0.36</td>
<td>5.33</td>
<td>0.00</td>
</tr>
<tr>
<td>(PV)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Trust</td>
<td>0.22</td>
<td>0.05</td>
<td>0.26</td>
<td>4.26</td>
<td>0.00</td>
</tr>
<tr>
<td>(CT)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involvement (IN)</td>
<td>0.07</td>
<td>0.05</td>
<td>0.09</td>
<td>1.61</td>
<td>0.11</td>
</tr>
<tr>
<td>Product term PV*IN</td>
<td>0.13</td>
<td>0.04</td>
<td>0.19</td>
<td>3.24</td>
<td>0.00</td>
</tr>
<tr>
<td>Product term CT*IN</td>
<td>-0.11</td>
<td>0.04</td>
<td>-0.15</td>
<td>-2.64</td>
<td>0.01</td>
</tr>
</tbody>
</table>

Here, the p values related to PV*IN and CT*IN are less than 0.05. Thus, involvement moderates the perceived value → customer loyalty relationship and the customer trust → customer loyalty relationship. The nature of these relationships can be determined by looking at the standardised beta values for the dependent variable (customer loyalty as a function of all the other variables. Here (in standardised terms):

\[
\text{Customer Loyalty} = (0.36*PV) + (0.26*CT) + (0.09*IN) + (0.19*PV*IN) - (0.15*CT*IN)
\]  

(1)
The variables that are not relevant to the interaction of interest are set to zero. For example, the relationship between Perceived Value and Customer Loyalty at various levels of involvement can be seen by setting CT=0 because the relationship should be explored at the average level of the other variables. The standardised betas value, however, represent the betas that would have been generated had the mean been deducted from each variable and the outcomes had then been divided by the standard deviation (i.e. z scores). Thus, Equation (1) becomes:

Standardised values of Customer Loyalty = (0.36*PV) + (0.09*IN) + (0.19*PV*IN)  
(for the Relationship PV \( \rightarrow \) Loyalty)

Standardised values of Customer Loyalty = (0.26*CT) + (0.09*IN) - (0.15*CT*IN)  
(for the Relationship CT \( \rightarrow \) Loyalty)

The relationship between the independent and dependent variable when the moderator is:

(i) greater than average (i.e. Involvement (IN) = 1)

Standardised values of Customer Loyalty = (0.36*PV) + (0.09*IN) + (0.19*PV*IN)  
= 0.55PV + 0.09  
(for the Relationship between PV \( \rightarrow \) Loyalty)

Standardised values of Customer Loyalty = (0.26*CT) + (0.09*IN) - (0.15*CT*IN)  
= 0.11CT + 0.09  
(for the Relationship between CT \( \rightarrow \) Loyalty)

In other words, when involvement is high, customer loyalty is a positive function of perceived value and customer trust.

(ii) less than average (i.e. Involvement (IN) = -1) and

Standardised values of Customer Loyalty = (0.36*PV) + (0.09*IN) + (0.19*PV*IN)  
= 0.17PV - 0.09
(for the Relationship between PV $\rightarrow$ Loyalty)

\[
\text{Standardised values of Customer Loyalty} = (0.26*CT) + (0.09*IN) - (0.15*CT*IN) \\
= 0.41CT - 0.09
\]

(for the Relationship between CT $\rightarrow$ Loyalty)

In other words, when involvement is low, customer loyalty is a positive function of both perceived value and customer trust.

(iii) average (i.e. Involvement(IN) = 0)

\[
\text{Standardised values of Customer Loyalty} = (0.36*PV) + (0.09*IN) + (0.19*PV*IN) \\
= 0.36PV
\]

(for the Relationship between PV $\rightarrow$ Loyalty)

\[
\text{Standardised values of Customer Loyalty} = (0.26*CT) + (0.09*IN) - (0.15*CT*IN) \\
= 0.26CT
\]

(for the Relationship between CT $\rightarrow$ Loyalty)

When involvement is average, customer loyalty is a positive function of both perceived value and customer trust. Each of these interactions is captured in Figures 8-4 and 8-5. This is in line with Peters and Champoux’s (1979. p. 91) suggestion that the slope coefficients be used for analysis because they "suggest the differential impacts which are likely to occur from interventions targeted at alternative groups and alternative variables."
Thus, at all different involvement levels, customer loyalty is positive related to perceived value and customer trust, providing support for our hypotheses H11a to H11c.
8.6 Summary and Conclusions

In the present the choice of SEM as a data analysis technique was discussed. The procedure used was based on a partial disaggregation model (two indicators per construct), the variance-covariance matrix, maximum likelihood estimation and a two-step analysis. AMOS was used to conduct the various analyses. The data had been discussed previously in Chapter 7 and the sample was considered large enough to undertake these analyses.

The goodness-of-fit of the structural models and the various measurement models were satisfactory. Moreover, the structural models did not reveal any offending estimates and all significant relationships were in the hypothesised direction.

The initial model did not fit the data well. However, following the process suggested by Byrne (2001), the model was simplified by examining the path coefficients and removing those that were not significant. This resulted in some of hypotheses not being supported. The final model, which was more parsimonious, explained 79% and 42% of the variance respectively in perceived value and customer loyalty in the present mobile phone context. In addition, rival models were estimated to further affirm the usefulness of the finally accepted model, which proved to be robust.

The managerial and theoretical implications of the findings from this chapter will be discussed next. The limitations of the study are also examined and, finally, suggestions for future research are outlined.
Chapter Nine
Conclusions, Limitations and Implications

9.1 Introduction

In section 9.2, results of the study are discussed while, in section 9.3, the study’s major limitations are outlined. In section 9.4, some important directions for future research are outlined and, finally, in section 9.5 the theoretical and managerial implications of our study’s results are described.
9.2 Conclusions

In this section, the results related to the main, mediating and moderating effects in the hypothesised model are discussed. This provides an answer to each of the research questions that were formulated in chapter one.

9.2.1 What are the key antecedents of perceived value?

In this study, a perceived value model that attempted to provide for a better understanding of long-term relationship success between customers and service firms was suggested. The model includes traditional antecedents (product quality, relative price and service quality) but also integrated other important variables (corporate image and perceived risk) to assess their contribution to perceived value and its outcomes.

The present study found that many of the hypothesised relationships suggested by previous research in the goods and services area were supported, although not all were confirmed. Corporate image and service quality had significant positive effects and explained 79% and 64% of the variance in perceived value and customer trust respectively. Corporate image had the greatest effect on perceived value, followed by service quality. A similar observation was noted for the effect of both constructs on consumer trust.

As mentioned, corporate image was found to be the dominant antecedent of perceived value. This finding is consistent with much prior research (e.g. Kristensen et al., 1999; Martensen et al., 2000), discussed in chapter two, which emphasised the importance of corporate image. The present study, in line with prior research by Anderson and Narus (1998), Baker (1990), Bishop (1984), Clemmer (1990) and Gwinner et al. (1998), also found support for arguments made by Sweeney et al. (1999) and Monroe and Krishnan (1985), that “quality contributes to value, without being value itself.”

In addition, as the service quality construct included functional service quality and technical service quality sub-constructs (Grönroos 1982; 1983; 1988; 1990), improving sale staff’s product knowledge is likely to improve consumers’ perceptions of service
quality by perceived risk was not significant in influencing perceived value. A potential explanation for this might be that customers have become immune to the various “price wars” and “product offers” in which mobile phone service providers often engage. Given the well-regulated environment, the competitive prices of subscription packages and the fact that there is little differentiation in handset models carried by mobile phone service providers in Singapore, relative price and perceived risk seem to have become “hygiene factors”. If this is true, it holds important implications for service providers as it underlines that promotional efforts directed at buyers should highlight only relevant aspects, such as corporate image and service quality, to assist consumers in their decision making.

9.2.2 What the key antecedents of customer loyalty?

The connection between perceived value, trust, customer satisfaction and customer loyalty has been debated in the services marketing literature. Some authors have doubted whether relationship satisfaction, trust and relationship commitment are distinct constructs (Bejou et al., 1996; Crosby et al., 1990; Dwyer and Oh, 1987; Hennig-Thorau and Klee, 1997; Kumar et al., 1995a; Lagace et al., 1991; Leuthesser, 1997; Scheer and Stern, 1992; Wray et al., 1994). Further, while it has been suggested that future intentions are determined in part by perceived value (Bolton and Drew, 1991), little attention has been paid to customer value in the services area (Lemmink et al., 1998).

The finally accepted model showed that customer loyalty is positively influenced by trust and the perceived value of their overall service experience. In addition, corporate image had the biggest influence on consumer loyalty, followed by perceived value, customer trust and service quality. Consequently, service firms must create a good corporate image if they wish to build customer loyalty. These variables explained 42% of the variance in customer loyalty. This supports Garbarino and Johnson's (1999, p. 71) suggestion that “consumer decision making…is believed to be guided by high order mental constructs such as customer satisfaction, perceived service quality, perceived value, trust and commitment.”
The results also lent credence to the views of Beatty et al. (1996), Macintosh and Lockshin (1997), Berry (1995), Ganesan and Hess (1997) and Morgan and Hunt (1994), who found that trust is an important relationship variable. Support was also found for the four value subscales developed by Sweeney and Soutar (2001 (i.e. value for money, emotional, functional and social value) influencing the three components of customer loyalty (cognitive, affective and conative), at least in a mobile phone service context.

Finally, the role of perceived value was tested. Perceived value was found to be to a mediator between service quality and corporate image (the antecedents of perceived value) and people’s willingness to buy (the outcome of perceived value). Since the effects of corporate image and service quality on customer loyalty were reduced to close to zero when perceived value was introduced, perceived value can be described as a “potent” and dominant mediator of the relationships between corporate image and service quality and customer loyalty.

The absence of customer satisfaction in the final model fuels the ongoing debate as to whether perceived value is a substitute for customer satisfaction in some settings (e.g. Eggert and Ulaga 2002). In making the decision to return to the service provider, customers are likely to consider whether or not they received “value for money”. It is possible that customer satisfaction may be captured as part of the service quality experience and that perceived value is more critical to customer loyalty. However, the results of the present study question the adequacy of traditional customer satisfaction surveys as the main or only tool to obtain customer feedback and gauge customer loyalty. However, more research is required before a particular view about the nomological relationship between customer perceived value, customer satisfaction and behavioural outcomes is accepted.

9.2.3 To what extent does involvement moderate the effects of perceived value and trust on loyalty?

The results obtained in the present study showed that involvement is a moderator, providing support for hypotheses H11a to H11c. Figures 8-5 and 8-6 visualised the effects of involvement on the relationship between customer trust and perceived value and
customer loyalty. It was found that customer loyalty was positively influenced by perceived value at different involvement levels, which is in line with Gordon et al. (1998) research that found involved buyers were more likely to participate in marketing relationships and to derive value from these relationships.

Similarly, the customer trust - customer loyalty relationship was positive at different involvement levels. This is in line with Christy et al.’s (1996) notion that sellers’ efforts, however well intended, could be regarded by a buyer as undesirable when involvement was low. It seems that, in the present context, giving personal attention and treating buyers as individuals will probably pay.

In comparison with prior studies that focused on the relationships between satisfaction and loyalty, the present research highlighted the strong effect perceived value and customer trust had on customer loyalty, especially in high involvement situations. This suggests the importance of perceived value and trust compared to satisfaction in generating customer loyalty. This finding should be seen as a step towards the development of those factors that generate brand loyalty because, traditionally, research has focused on satisfaction as the key variable.

The discussion of the moderator effects emphasised that sellers should not lose sight of the impacts buyer-related factors have on customer loyalty. No matter how much trouble the seller goes through to increase his or her relationship orientation, such efforts can be seriously affected by customers’ involvement.

9.3 Limitations

The present study was limited by design and specification issues (Kenny, et al., 1998). The relationships suggested in the research model were tested through a one time study, while a true test of the causality would measure constructs in different time periods. Therefore, all of the relationships suggested were tested based on statistical analysis, leaving appropriate time order and alternative explanation requirements of the causal analysis unanalysed. In addition, structural modeling techniques do not allow a researcher to determine the direction of causality, nor do they allow a researcher to conclude that a
causal relationship exists (Dillon and Goldstein, 1984). It is generally recognised that longitudinal studies and experiments provide stronger inferences for causality. Moreover, longitudinal research can improve our understanding of the process dynamics and cumulative effects of buyer-seller relationships that are not apparent in “snapshots” of current relationships. Time and budget constraints, however, prevented such a study in the present case.

Kenny et al. (1998) argued that mediational analysis could suffer from techniques where the initial variable and the mediator variable and also the mediator variable and the outcome variable are measured too close in time. For mediation to occur both paths (i.e. the paths between the initial variable and the mediator and the mediator and the outcome variable) should be relatively large. Further, the close measurement of the various variables may increase or decrease the size of paths tested. Proximal measurement of variables can also lead to multicollinearity effects, which are misleading factors in mediational analysis.

In terms of specification issues, mediation suffers if reverse causal effects occur between the various variables (Kenny et al., 1998). Reverse causal effects were not tested in this study as most time reverse causal effects are difficult to measure and further tests of the causal assumptions are needed.

Second, the study was constrained by sample size, which also resulted from time and monetary constraints. Although the sample was acceptable for the study’s purposes, structural equation models often require very large samples for the powerful analysis that is often more useful.

Third, some biases may have occurred in collecting the data and interpreting the results. A first bias might have been introduced by the omission of important variables. While the variance in customer loyalty explained was 42% some additional variables that might have increased this figure (e.g. a desire for novelty) were not measured. Future studies are needed to examine such variables. Because substantive interpretation and statistical significance tests guided the data analysis, results should be interpreted with caution. The
replication of these findings in future studies is necessary to reach a stronger
interpretation of the various relationships.

A second threat to validity is *common method bias*. As a single questionnaire was used to
measure the various constructs included in the model, the strength of the relationships
between these constructs may be inflated. A third potential bias is related to the
measurement of customer loyalty. The true meaning of loyalty may only be partially
captured as the loyalty measure was *self-declared* by respondents. No database
information could be used to measure actual purchasing behaviour. Future studies could
be improved if they had access to data on customers’ purchase histories. It would be
possible to look at strings of purchases and to incorporate contextual information. A
fourth potential bias is related to *non-normality* of the data. As the data were not normally
distributed, this may create an upward bias in critical values for determining coefficient
significance. However, sample sizes were large enough to partially compensate for this
problem (Hair et al., 1998). Finally, a potential bias might have arisen from the existence
of *halo effects*. For example, respondents who were loyal to a particular provider might
have given positively biased answers to questions related to this provider.

Fourth, as the data was only obtained in Singapore, caution should be taken when
projecting results outside this environment. For instance, does a buyer’s “value
perceptions” mean the same things for Scandinavian customers as it does for Italians?
Are the factors that drive customer loyalty in Singapore the same as those that drive
customer loyalty in Australia, Brazil or Spain? In a similar vein, the fact that the study
used an industry specific sample (mobile phone services) may put constraints on its
generalisability to other business-to-consumer services. Future research in other service
industry needs to be undertaken in other business-to-consumer service settings to
examine this issue.

Finally, it should be noted that some of the scales used in the study (e.g. trust and
corporate image), although developed in reference from existing scales, might be
culturally biased. Because their dimensional and item contents are not directly equivalent
to the scales used in past studies, caution is needed in making conclusions about the
extent of the similarity in the relationships among the key constructs found in this study and in previous studies. A rigorous test of the equivalence of the measures and/or the structural relationships is only possible in a study with multinational samples of mobile phone service customers.

### 9.4 Implications

#### 9.4.1 Theoretical Implications

The main thrust of the present study was to suggest a continuing service value model based on established relationships among four key constructs (service quality, value, trust and customer loyalty) and to test it in Singapore’s telecommunications market. While considerable research has examined the relationships between value, trust, customer satisfaction and customer loyalty (e.g. Sweeney et al., 1999; Garbarino and Johnson, 1999; Morgan and Hunt, 1994), critical knowledge gaps still exist. As such, the study was intended to make contributions in several areas.

First, most past studies of perceived value have focused on the links between service quality, satisfaction and behavioural intention in retail settings. Few studies have examined loyalty in service contexts (Gremler et al., 2001) and, in particular, in telecommunications service markets (Gerpott et al., 2001). Second, the vast majority of past value studies have been concentrated in the United States, Europe and Australia. Although the importance of examining the applicability of theories and models across cultures has been addressed by many researchers (Peterson and Jolibert, 1995), very few studies have been conducted for this purpose. In this regard, the present study, which examined an established conceptual value framework in the context of a unique telecommunications environment, contributes to the cross-border or cross-system extension of marketing knowledge.

Third, there has been relatively little research into the value construct itself (Sweeney and Soutar 2001), which market practitioners (e.g. Neal, 1999) and scholars alike (e.g. Sirdeshmukh, Singh, and Sabol 2002; Bolton and Drew, 1991) have suggested drives loyalty. The use of the PERVAL scale (Sweeney and Soutar, 2001) with a four-subscale
conceptual model provided a more integrated framework for the relevant constructs and their presumed relationships. The suggested model was strongly supported by the data collected in Singapore, where the liberalised telecommunications environment offers many choices for prospective consumers and a competitive environment for mobile phone service providers. The results obtained suggest that the causal sequence suggested by the multi-attribute attitude model framework (i.e., cognition (service quality, corporate image and value), affect (trust) and conation (customer loyalty)) is robust across national boundaries. Corporate image emerged as the most important determinant of loyalty. However, this finding should not be viewed as reducing the significance of perceived value in telecommunications marketing. Further examination of the findings shows the significant mediating role value plays in the relationship between corporate image and service quality and customer loyalty. Hence, mobile phone service providers need to seek ways in which they can reduce perceived monetary and nonmonetary service costs and increase perceived benefits.

Fourth, most of the research that has examined relationship marketing has been conceptual and focused on company benefits. Research from a customer perspective has been scarce (Liljander and Roos, 2002; Singh and Sirdeshmukh, 2000). In addition, until now, the relationship marketing literature has mainly been characterised by the use of general and ambiguous definitions of the concepts “relationship” and “relationship marketing”. This has resulted in a lack of consistency in the interpretation and measurement of different relationship constructs (Grönroos, 1994; Gummesson, 1999; Wilson, 1995). The meaning of a relationship and relationship marketing was made explicit in the present study by introducing a clear starting point to a relationship, by formulating a relationship from the buyer’s perspective and by distinguishing between different types of efforts directed at enhancing buyer-seller relationships. Moreover, the present study was based on a thorough investigation of the applicability of underlying theories to relationship marketing in a consumer context. The study was an attempt to translate the usefulness of a broad range of theories from various disciplines to the study of consumer relationships, which ensured the soundness and coherence of the suggested conceptual model.
Fifth, the results add to our knowledge about relationship satisfaction, trust and relationship commitment, which are key relationship outcomes. No study has investigated the relationships between value-for-money, trust, customer satisfaction and the cognitive, affective and the conative components of loyalty within a single study, although Dodds et al. (1991), Sweeney, et al. (1999) and Silcox (2002) included some of these elements in their various studies. The present findings extended their research by the inclusion of other important constructs, such as corporate image, and also assessed the moderating role of involvement in such relationships.

The relationships between the four sub-scales of the perceived value constructs (functional value, social, emotional and value-for-money) and the three sub-scales of the customer loyalty construct (cognitive, affective and conative) were also examined. Nevertheless, better fits were obtained from the final model in which perceived value and customer loyalty were modelled as higher-order constructs. This raises some questions about the applicability of Oliver’s (1997) four consecutive phases of loyalty in markets like the one investigated in the present study. Oliver (1997) suggested that loyalty evolves from cognitive loyalty to affective loyalty, conative loyalty, and action loyalty. Since Oliver (1997) hypothesised that consumers move from positive attitudinal loyalty to positive behavioural loyalty, he assumed that behaviour only occurs if positive attitudes, such as relationship commitment, are apparent. The present data do not support this, but rather provide support for the idea that underlies the concept of “true customer loyalty,” which is generally assumed to exist if behavioural loyalty and relationship commitment are strong (Dick and Basu, 1994; Jacoby and Chestnut, 1978; Oliver, 1997; Schiffman and Kanuk, 1987; Uncles and Laurent, 1997).

Finally, while Dodds, et al. (1991) and Baker, et al. (1992) used an experimental setting and student samples, the present research, like that of Sweeney et al. (1999) and Silcox (2002), was undertaken in a real-life setting, providing external validity to the study’s findings.
9.4.2 Managerial Implications

Today, managers as well as academicians, recognise the importance of consumers’ value perceptions and their influence on products evaluation and future purchase decisions (Barlow and Maul, 2000; Gale, 1994; Weinstein and Johnson, 1999; Woodruff and Gardial, 1996). Consumers are becoming more value conscious, trying to buy products that give more benefits for less sacrifice. To meet the demands of value conscious customers, managers must understand what defines the value of their products in their customers’ minds. The present study expanded the value models in service contexts and its results should help marketing managers in mobile phone service providers understand what drives customers’ value perceptions.

First, the results stress the need for mobile phone service providers to make real relationship efforts (in particular, improving their corporate image and service quality) towards their customers above and beyond their core product and service efforts. In this study, these relationship efforts explained 42% percent of the variance in customer loyalty. As today’s service providers increasingly offer comparable services, copy competitors’ price promotions, share common distribution systems and treat customers well in terms of services offered, they should direct more of their attention towards developing and implementing such relationship efforts. Value-based loyalty strategies can be built around these relationship efforts.

Consequently, managers and employees need to be trained, motivated and rewarded for making relationship efforts to regular customers. Service providers capable of training and motivating employees to show real warm and personal feelings towards customers can reap resulting benefits in terms of improved value perceptions. This confirms the important role employees play as “part-time” marketers in enhancing customer relationships (Bitner, 1995; Grönroos, 1994; Gummesson, 1987). This is not always an easy task as service professionals are “much more comfortable providing the service than marketing his or her own abilities” (Hoffman and Bateson, 1997, p. 196). Because services are intangible, clients have difficulties in assessing the performance of the service they receive and, more importantly, in comparing it with the offerings made by
different providers (Reeves and Bednar, 1995). Service providers need to focus on creating a distinctive corporate image that builds on the promise of good service quality.

Second, it might be concluded that competitive prices, risk reduction for consumers will not increase the consumers’ perceptions of service value. A potential explanation for this finding might be that customers have begun treating such efforts as “hygiene factors” that they expect regardless of the service provider. This holds important implications for service providers as it underlines that efforts directed at buyers should only be undertaken in relevant areas.

Third, the results suggest that the effectiveness of relationship marketing is not only determined by a service provider’s approach to the market, but also by the nature of the service provider’s customers. The moderating effect of involvement shows that the impact of a service provider’s efforts is dependent on the level of buyers’ involvement. As involvement may differ across market segments, the results obtained imply that the effectiveness of relationship marketing strategies also differs across market segments. Consequently, service providers must not only focus on optimising their efforts towards customers but should also pay attention to finding the right customers (Reichheld, 1996). In addition to the more traditional criteria of product-market segmentation, such as market size, market growth and expected market share, service providers need to be more sensitive to the average levels of customer involvement in their particular service-markets.

Finally, a customer’s trust, which is built from every contact with their mobile phone service provider, impacts on their future intentions. For years, scholars and business managers have written extensively on building trust in customers. This study identified some of the attributes that impact on trust in a telecommunications services context. For

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8 As suggested by one of the examiners, follow-ups were made to uncover why relative price was not important. Respondents generally felt that high mobile penetration rates (4 out of 5 Singaporeans are mobile phone users) and a saturated market had pushed prices to a level where there was negligible price differences between the various service plans offered by competing operators. Value – a function of “quality and prices” – retains its importance because the quality of mobile services could be felt. For example, mobile phone users were aware that they cannot receive phone messages or may get poor reception when they use particular mobile networks in certain parts of Singapore. Future research should focus on understanding the role of relative price in other service settings.
instance, if customers felt they could believe in the service provider, they would see their
decision as wise and develop a desire to remain with that service provider. The challenge
for service providers is to develop mechanisms that allow them to understand these
higher-level attributes and to deliver them consistently (Silcox, 2002).

To enjoy the substantial competitive and economic advantages provided by a loyal
customer base, such as price tolerance, companies must not only manage customer
satisfaction. Abstract attributes of the service offering that are related to customers’
perception of how his or her interests and welfare are affected must also be considered.
After all, the present research suggests trust and perceived value may have displaced
customer satisfaction as the key driver of customer loyalty, especially in high
involvement situations.

Because trust is built on past experiences and is dynamic (Sheaves and Barnes, 1996),
managers may want to develop customer relationship programmes that proactively
manage the trust building process. In this respect, Lewicki and Bunker (1996) have
suggested three stages of trust that are likely to be found in professional relationships
(calculus-based, knowledge-based and identification-based trust) and managers need to
examine each of these.

Customers with calculus-based trust believe a firm will behave in the provider’s best
interest so as not to suffer the loss of reputation or profits that a violation of trust would
create. In this respect, firms that make concerted efforts to ensure service standards are
consistently delivered will be rewarded by their customers’ belief in its benevolence.

Knowledge-based trust is based on knowing a firm well and being able to anticipate its
actions. It could be related to knowledge bonds (Liljander and Strandvik, 1995) and
confidence benefits (Gwinner et al., 1998) and represents a generalised expectancy that
has progressed over a longer period of time. Effective two-way communication is
important at this stage for knowledge-based trust to develop. Convenient feedback
channels and regular customer dialogues are possible vehicles that amply demonstrate a
company’s interest to learn about a customer’s needs and problems.
Finally, customers with identification-based trust have confidence in the company and believe that it will act in their best interests. The company must leverage its in-depth knowledge of customers’ needs and desires to innovate and adapt service offerings. In addition, firms can participate in community programmes and display strong corporate social responsibility as it reaches out to its intended target market. This helps foster shared values (Berry, 2000; Morgan and Hunt, 1994) with target customers who, in turn, are more likely to defend the company against criticism from outsiders.

In sum, honest communication and information about the services offered, shared values, a strong and positive brand reputation and non-opportunistic behaviour on the part of the service provider will go a long way to securing customers’ trust.

9.5 Directions for Future Research

In the present study, the suggested model was tested in Singapore. As culture may influence consumer behaviour (Usunier, 1993), future research should focus on detecting cross-country differences and integrating cultural variables into the model. For example, future research could assess the extent to which value perceptions differ between individualistic cultures (e.g. the United States) and collective cultures (e.g. China).

Second, as it could be expected that the strength of the paths in the model is dependent on the type of service provider being investigated. It would be useful to conduct research that focused on the differences between service providers with the largest and smallest customer bases. It might be hypothesised that smaller service providers would demonstrate more relationship-friendly characteristics than would larger providers, as the degree of social exchange and the possibilities for customisation are generally better in smaller organisations.

Third, as the variance in customer value and loyalty that was explained could still be increased, future research should explore additional antecedents of customer value and loyalty that are related to product and service efforts. This would not only increase the percentage of the explained variance in customer loyalty but would also allow the relative impact of product, service, and relationship efforts to be better measured. In this way,
service providers could get further insights into the factors that are in need of priority attention. For example, further research could focus on examining the role of affect (Bateson and Hui, 1992; Donovan and Rossiter, 1982; Hui and Bateson, 1991; Mattila and Wirtz, 2000; Wirtz and Bateson, 1999). Prior research has found that contact with physical environments in different service settings results in different affective responses and that these affective responses influence customers’ evaluations and future behaviours (Bitner, 1992; Mattila and Wirtz, 2000; Wirtz et al., 2001). Future research could explore affective reactions to physical environments and suggest which affective dimensions (i.e., pleasure, arousal, dominance) influence customer satisfaction, loyalty and future behavioural intentions.

Fourth, as it is hypothesised that loyal buyers are willing to accept incidental lower levels of product or service efforts without breaking the relationship, it would be useful to investigate the influence critical incidents have on relationship outcomes. Critical incidents are top-of-mind, even in the long run. From this perspective, it would be useful to incorporate these incidents into relationship marketing research (Odekerken-Schröder et al., 2000). This would require the use of longitudinal research that measures relationship outcomes at multiple points in time and that collects information on critical incidents that occur over time. Critical incidents can be studied by applying the Critical Incident Technique (CIT), a method developed by Flanagan (1954) to collect and classify stories through content analysis. According to Flanagan (1954, p. 327), an incident is “any observable human activity that is sufficiently complete in itself to permit inferences and predictions to be made about the person performing the act”. A critical incident “makes a “significant” contribution, either positively or negatively, to the general aim of the activity” (Flanagan 1954, p. 338). The CIT has proven to be useful in a variety of research contexts (Bitner et al., 1990; Duffy, 1983; Sweeney and Soutar, 1995). In the context of services, Bitner et al. (1990, p. 73) defined critical incidents as “specific interactions between customers and service firm employees that are especially satisfying or especially dissatisfying”.
Finally, as was stressed in chapter two, the effectiveness of relationship marketing strategies is likely to be dependent on various contingency variables. In the present study, the role of buyer relationship proneness and product category involvement were examined. This indicates the crucial importance of assessing the role of other such variables that potentially affect the success of relationship marketing strategies. Future research should devote attention to the effects of product/service characteristics, environmental characteristics and/or exchange situation characteristics.
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Appendix A

The Questionnaire
Dear Participant,

Your cooperation is sought in this study that seeks to understand what you value in your selection of mobile/cellular service providers. These insights are important to service providers so they can improve your overall future experience with them.

The whole survey will take approximately 20 minutes. Survey participants will be eligible to win a SGD100 NTUC shopping voucher. To be eligible for this prize, please provide your e-mail address on a separate page. You need not supply your email address if you do not wish to be in the final draw for the prize. E-mail addresses will not be used for any other purpose.

All of the information gathered in this research project will be held in the strictest confidence. The data will only be analysed in aggregate and no personal details will be released.

Please note that your participation in this study is voluntary. Please return your completed questionnaire to us in the postage-paid envelope. By completing and returning the questionnaire, you have indicated your consent to participate in the study.

Thank you in advance for your valuable time and effort in completing this questionnaire. If you have any questions about this study, please do not hesitate to email me at: alvin_yeoyc@yahoo.com

Yours sincerely,

Alvin Yeo
Doctoral Candidate, Graduate School of Management, UWA.

Supervisor: Professor Geoff Soutar, Director, Graduate School of Management, UWA.

The Human Research Ethics Committee at the University of Western Australia requires that all participants are informed that, if they have any complaint regarding the manner, in which a research project is conducted, it may be given to the researcher or, alternatively to the Secretary, Human Research Ethics Committee, Registrar’s Office, University of Western Australia, 35 Stirling Highway, Crawley, WA 6009 (telephone number 9380-3703). All study participants will be provided with a copy of the Information Sheet for their personal records.
PLEASE NOTE: It is very important that the person who fills in this survey should own a mobile phone.

(A) Current Mobile Phone Use (Please circle the appropriate responses)

1. How long have you been with your current mobile phone service provider?
   - Less than ½ year ........................................ 1
   - ½ - 1 year .............................................. 2
   - 2 – 3 years.............................................. 3
   - 4 – 5 years .............................................. 4
   - More than 5 years .................................... 5

2. What is your own average total monthly mobile phone spending?
   - $ 50 or less .............................................. 1
   - $ 50 - 99 .................................................. 2
   - $100 - 149 ................................................ 3
   - $150 - 199 ................................................ 4
   - More than $200 ....................................... 5

3. With how many mobile service providers, in total, have you had subscription plans?
   - 1 .......................................................... 1 (Go to Question 5)
   - More than 1.......................................... 2 (Go to Question 4)

4. When deciding to switch service providers, how important was the following?
   (a) Price ...................................................... 1 2 3 4 5 6 7
   (b) Transmission quality and coverage .... 1 2 3 4 5 6 7
   (c) Precision of billing service............... 1 2 3 4 5 6 7
   (d) Access to service provider ............... 1 2 3 4 5 6 7
   (e) Employee response to service failures ... 1 2 3 4 5 6 7
   (f) Attracted by competitors................. 1 2 3 4 5 6 7
   (g) Ethical Problems.................................. 1 2 3 4 5 6 7

5. To what extent do you agree with the following statements?
   (a) For me, the costs in time, money and effort to switch service providers is high.
   (b) It is just not worth the hassle to switch service providers.
   (c) It requires a lot of time and effort to sign up with for a similar plan with another service provider.

   Strongly Agree  Strongly Disagree
   (a) 1 2 3 4 5 6 7
   (b) 1 2 3 4 5 6 7
   (c) 1 2 3 4 5 6 7
## (B) About Your Selection of Mobile Phone Service Provider (Please circle the one number that best reflects your view about each statement)

### 6. In choosing a mobile phone service provider, 

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>I constantly compare the prices and rates offered by various providers.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(b)</td>
<td>I visit a number of providers before subscribing to a particular plan.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(c)</td>
<td>I compared the prices and rates offered by several providers before selecting my present provider.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(d)</td>
<td>I weigh the pros and cons of my choice before deciding on my present provider.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(e)</td>
<td>It is important for me to choose a provider who says a lot about who I am.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(f)</td>
<td>It is important for me to choose a service provider that “feels” right to me.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
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</table>

### 7. I would choose a service provider if: 

<table>
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<tr>
<th></th>
<th>Strongly Agree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>I had a favourable opinion about the provider’s corporate image.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(b)</td>
<td>I had a favourable opinion about the provider’s contribution to society.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(c)</td>
<td>The provider’s corporate image was better than others in the industry.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(d)</td>
<td>My friends have a favourable opinion of the provider’s corporate image.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(e)</td>
<td>The overall subscription package was reasonably priced.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(f)</td>
<td>Their subscription package offered me good value for money.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(g)</td>
<td>The subscription package price was economical.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(h)</td>
<td>I was sure the subscription package was worth the money.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(i)</td>
<td>The price of the subscription plan offered by was good compared to other plans with similar features.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(j)</td>
<td>Their subscription plan would be enjoyable.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(k)</td>
<td>I felt good with their subscription plan.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(l)</td>
<td>I felt relaxed subscribing to their plan.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(m)</td>
<td>Their subscription plan would appeal and attract most people.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(n)</td>
<td>It would be good being associated with this service provider.</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>(o)</td>
<td>Their subscription package made a good</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>
impression on other people.

| (p) | The service provider delivers consistently high quality | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| (q) | Their subscription plans are well packaged. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| (r) | The service provider has an acceptable standard of quality | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

8. How willing are you to take a gamble in terms of the following?

| (a) | Not at all | Willing | Extremely Willing |
| (b) | | | |
| (c) | | | |
| (d) | | | |
| (e) | | | |

(C) About Your Experience with Your Most Recent / Current Service Provider (Please circle one number for each statement)

9. How do you feel about this provider?

| (a) | Strongly Agree | Strongly Disagree |
| (b) | | |
| (c) | | |

10. How would your rate your overall experience with this service provider?

| (a) | The services offered are not what I need | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| (b) | They have not worked out as well as I expected | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| (c) | I am dissatisfied with my decision to choose this service provider | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| (d) | If I could do it all over again, I’d use a different provider | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| (e) | I have not enjoyed my experience with this provider | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| (f) | I feel bad about my decision to use this service provider | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| (g) | I am not happy that I used this service provider | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| (h) | Using this service provider was an unwise decision | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
11. How do you rate your current mobile phone device (handset)?

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<th>6</th>
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<td>Unreliable</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>Reliable</td>
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<tr>
<td>(b)</td>
<td>Not dependable</td>
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<td></td>
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<td></td>
<td>Dependable</td>
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<tr>
<td>(c)</td>
<td>Poor visual appeal</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>Good visual appeal</td>
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<tr>
<td>(d)</td>
<td>Not Durable</td>
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<td></td>
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<td>Overall poor quality</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Overall good quality</td>
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12. Based on your most recent experience, this service provider’s employees:

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<tbody>
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<td>(a)</td>
<td>Did not give me prompt service</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>Gave me prompt service</td>
</tr>
<tr>
<td>(b)</td>
<td>Were unwilling to help</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Were willing to help</td>
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<tr>
<td>(c)</td>
<td>Were not courteous</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Were courteous</td>
</tr>
<tr>
<td>(d)</td>
<td>Could not answer my questions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Could answer my questions</td>
</tr>
<tr>
<td>(e)</td>
<td>Didn’t know what they were talking about</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Knew what they were talking about</td>
</tr>
<tr>
<td>(f)</td>
<td>Didn’t give me individual attention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Gave me individual attention</td>
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13. Thinking about your overall experience with this service provider, to what extent do you agree with each of the following statements?

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<th>5</th>
<th>6</th>
<th>7</th>
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<tbody>
<tr>
<td>(a)</td>
<td>I really like doing business with this mobile service provider.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>(b)</td>
<td>To me, this mobile service provider is the best one with which to do business.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>(c)</td>
<td>I believe they are a good mobile service provider.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>(d)</td>
<td>I try to use this mobile service provider every time I need cellular services.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>(e)</td>
<td>This mobile service provider is my first choice when I need cellular services.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>(f)</td>
<td>This service provider is the primary place I consider when I need to use cellular services.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>(g)</td>
<td>I intend to continue doing business with this service provider over the next few years.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>(h)</td>
<td>As long as their present service continues, I doubt I would switch service providers.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>(i)</td>
<td>I am likely to recommend this service provider</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>
to my friends.

(j) I would be glad to serve as a reference customer to my current service provider.

(k) If my friends were looking for a service provider, I would tell them to try mine.

| (D) About Yourself (Please circle the appropriate responses) |
|---|---|
| **14.** What is your age? | **18.** Are you ... ? |
| Less than 20 .................. 1 | Working .................. 1 |
| 20 – 24 ...................... 2 | Self-employed ............ 2 |
| 25 – 29 ...................... 3 | National Service .......... 3 |
| 30 – 34 ...................... 4 | Housewife .................. 4 |
| 35 – 39 ...................... 5 | Student ...................... 5 |
| 40 – 44 ...................... 6 | Retired ...................... 6 |
| 45 – 59 ...................... 7 | Unemployed ................ 7 |
| 60 – 64 ...................... 8 | Disabled .................... 8 |
| Above 65 .................... 9 | |

| **15.** What is your gender? | **19.** Which of the following income ranges reflects your average household monthly income? |
| Male ...................... 1 | Below $2,000 .............. 1 |
| Female .................... 2 | $2,000 - $2,999 .......... 2 |
| | $3,000 - $3,999 .......... 3 |
| | $4,000 - $4,999 .......... 4 |
| | $5,000 - $5,999 .......... 5 |
| | $6,000 - $6,999 .......... 6 |
| | $7,000 - $7,999 .......... 7 |
| | $8,000 - $8,999 .......... 8 |
| | $9,000 - $9,999 .......... 9 |
| | $10,000 and above ...... 10 |
| | Not Applicable .......... 11 |

| **16.** What is your marital status? | |
| Single ..................... 1 | |
| Married ................... 2 | |
| Others .................... 3 | |

| **17.** What is your highest educational level attained? | |
| PSLE and below .......... 1 | |
| GCE N/O Cert .......... 2 | |
| GCE A Cert ............ 3 | |
| Polytechnic Diploma ...... 4 | |
| Degrees/Post-graduate ... 5 | |

Thank you for taking time and effort to complete this questionnaire.

Your e-mail address (for a chance at winning the prize offered) : ______________________
Appendix B

EXPLORATORY FACTOR ANALYSES OF THE CONSTRUCTS

1. Purchase Involvement

KMO and Bartlett's Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .806 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 719.082 |
| df | 6 |
| Sig. | .000 |

Communalities

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<td>pinv_2</td>
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<td>pinv_4</td>
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Extraction Method: Principal Component Analysis.

Total Variance Explained

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<th>Extraction Sums of Squared Loadings</th>
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<tr>
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<td>4</td>
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Extraction Method: Principal Component Analysis.

2. Ego Involvement

KMO and Bartlett's Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .500 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 306.460 |
| df | 1 |
| Sig. | .000 |
### Total Variance Explained

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Extraction Method: Principal Component Analysis.

### 3. Corporate Image

#### KMO and Bartlett’s Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .735 |
| Bartlett’s Test of Sphericity | Approx. Chi-Square | 676.598 |
| df | 6 |
| Sig. | .000 |

### Total Variance Explained

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Extraction Method: Principal Component Analysis.
4. Perceived Value-for-Money

**KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .844 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1036.839 |
| df | 6 |
| Sig. | .000 |

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Extraction Method: Principal Component Analysis.

**Total Variance Explained**

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Extraction Method: Principal Component Analysis.

5. Perceived Emotional Value

**KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .733 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 630.513 |
| df | 3 |
| Sig. | .000 |

**Communalities**

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Extraction Method: Principal Component Analysis.
6. Perceived Social Value

**KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .746 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 486.772 |
| df | 3 |
| Sig. | .000 |

**Communalities**

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Extraction Method: Principal Component Analysis.

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Extraction Method: Principal Component Analysis.

7. Perceived Functional Value

**KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .740 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 500.783 |
| df | 3 |
| Sig. | .000 |

**Total Variance Explained**

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Extraction Method: Principal Component Analysis.
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Extraction Method: Principal Component Analysis.

Total Variance Explained

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Extraction Method: Principal Component Analysis.

8. Perceived Risk

KMO and Bartlett's Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .805 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 806.552 |
| df | 10 |
| Sig. | .000 |

Communalities

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Extraction Method: Principal Component Analysis.

Total Variance Explained

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<th>Component</th>
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<th>% of Variance</th>
<th>Cumulative %</th>
<th>Total</th>
<th>% of Variance</th>
<th>Cumulative %</th>
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Extraction Method: Principal Component Analysis.
9. Customer Trust

KMO and Bartlett's Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | .698 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 631.195 |
| df | 3 |
| Sig. | .000 |

Communalities

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Extraction Method: Principal Component Analysis.

Total Variance Explained

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<td>Total</td>
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Extraction Method: Principal Component Analysis.

10. Customer Satisfaction

KMO and Bartlett's Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | .844 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 3576.672 |
| df | 28 |
| Sig. | .000 |
Communalities

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Extraction Method: Principal Component Analysis.

Total Variance Explained

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Extraction Method: Principal Component Analysis.

11. Functional Service Quality

KMO and Bartlett's Test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .702   |
| Bartlett's Test of Sphericity | Approx. Chi-Square | df | Sig. |
|                                      | 498.872 | 3  | .000 |

Communalities

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Extraction Method: Principal Component Analysis.
12. Technical Service Quality

**KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .500 |
| Bartlett's Test of Sphericity | Approx. Chi-Square: 435.761, df: 1, Sig.: .000 |

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</table>

13. Affective Loyalty

**KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .706 |
| Bartlett's Test of Sphericity | Approx. Chi-Square: 920.487, df: 3, Sig.: .000 |
Communalities

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Extraction Method: Principal Component Analysis.

Total Variance Explained

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<th>Extraction Sums of Squared Loadings</th>
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Extraction Method: Principal Component Analysis.

14. Cognitive Loyalty

KMO and Bartlett's Test

<p>| | | | |</p>
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<tr>
<td>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</td>
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<td>Bartlett's Test of Sphericity</td>
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Communalities

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Extraction Method: Principal Component Analysis.

Total Variance Explained

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<th>Extraction Sums of Squared Loadings</th>
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Extraction Method: Principal Component Analysis.
15. Conative Loyalty

**KMO and Bartlett's Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | .743 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 688.626 |
| df | 3 |
| Sig. | .000 |

**Communalities**

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Extraction Method: Principal Component Analysis.

**Total Variance Explained**

<table>
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<th>Initial Eigenvalues</th>
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</thead>
<tbody>
<tr>
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Extraction Method: Principal Component Analysis.