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# High-speed internet service providers in Thailand: customer selection, satisfaction and loyalty

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**HIGH-SPEED INTERNET SERVICE PROVIDERS IN  
THAILAND: CUSTOMER SELECTION, SATISFACTION  
AND LOYALTY**

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A thesis submitted to

The Graduate College of Management, Southern Cross University Australia

In partial fulfilment of the requirement for the degree of

**Doctor of Business Administration**

**2009**

## Declaration

I certify that the substance of this thesis has not been previously submitted for any degree and is not currently being submitted for any other degree.

I also certify that to the best of my knowledge any help received in preparing this thesis and all sources used have been acknowledged in this thesis.

Singed: .....

(Wisanan Ouparamai)

Date: .....

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## Abstract

High-speed internet or broadband internet, typically contrasted with dial-up access over a modem, is now an important access option for internet users for both work and everyday usage. As a result, the availability of high speed internet access is considered by international organisations to be a key to enhance levels of competitiveness and to sustain economic growth for many countries (Paltridge 2001, 2002). For high-speed internet providers to understand their consumers' decision-making processes, it is essential that they understand the critical factors that influence the selection of a service provider as well as the drivers of customer satisfaction and customer loyalty. These issues are critical to the long-term business success for any service provider (Anderson, Fornell & Lehmann 1994; Bettman & Park 1980; Churchill & Surprenant 1982; Cronin & Taylor 1994; Dick & Basu 1994; Dorsch, Grove & Darden 2000; Grace & O'Cass 2003; Murray 1991; Parasuraman, Zeithaml & Berry 1988). Existing research in the telecommunications industry has already shown that service providers who satisfy customers and encourage their customers to become loyal can expect higher market shares and greater profitability (Finkelman, Cetlin & Wenner 1992; Khatibi, Ismail & Thyagarajan 2002; Wang, Lo & Yang 2004). The high-speed internet market in Thailand has been in the growth stage in the past 2–3 years and it is likely to continuously expand (Lih 2008; Thai National Statistical Office 2008). All high-speed internet providers now need to create marketing strategies to enhance their competitive level and expand their customer base. This research, therefore, explores the links between three main areas of the household high-speed internet market in Thailand. In order to do so, it explores the following research questions:

1. What are the factors that influence customers' selection of high-speed internet service providers in Thailand?
2. What are the factors that influence customer satisfaction with high-speed internet service in Thailand?
3. What are the factors that influence customer loyalty to high-speed internet service providers in Thailand?

Based on the literature reviewed in the thesis, a theoretical framework was established which proposes that in the Thai high-speed internet market, consumers' selection of a service provider will be influenced by the perceived risks associated with using that provider, the types of information searches conducted when searching for a service provider, and the corporate image of the service provider. Once a service provider has been selected, customer satisfaction will be influenced by the users' perception of service quality in terms of tangibility, reliability, responsiveness, assurance, empathy, and network quality. Finally, customer loyalty is likely to be influenced by trust in the service provider, switching costs associated with changing providers, perceived value gained from the service, corporate image, and level of satisfaction with the service.

A quantitative method via questionnaire survey was used to obtain the views of approximately 300 Thai internet users regarding their opinions and perceptions about choosing and staying with their high-speed internet providers. The target population for this study was defined as individuals who had high-speed internet access at home. A 7-point scale was used to assess a range of relevant questions. The data analysis in this study was undertaken via Statistical Package for the Social Sciences (SPSS) version 12. Multiple regression analysis was used to investigate the relationships between dependent variables and independent variables.

The findings of this research determined that in order to gain new customers and retain existing ones, high speed internet providers need to take into consideration three main areas: (1) customers' selection or customer decision making; (2) customer satisfaction; and (3) customer loyalty. Firstly, in order to secure new customers, the company's corporate image is critical to the consumer decision-making process. Other critical and significant factors found to influence the selection process are the type of information provided by the service provider and the degree of risk perceived by the consumer in terms of the potential for their time and money to be wasted if a poor service provider is chosen.

With regards to ensuring customer satisfaction, there are four underlying factors that service providers must focus on. Firstly, the quality of the internet network is the most critical factor. This is followed by the less tangible components of service such as staff empathy for the customer, the reliability of the service, and the level of assurance given to the customer by service provider staff.

In terms of long-term customer loyalty, the research shows there are four key issues that service providers must consider to maintain good business relationships with their existing customers. These four important issues are customer satisfaction, corporate image, perceived value, and trust.

The results of this research are important, not only to high-speed service providers, but also to customers and the broader community. For high-speed internet service providers, this research will explore the underlying factors as well as provide information on any improvements necessary to ensure and enhance customer's selection, satisfaction, and loyalty. For customers and the broader community, the findings will improve the competitiveness levels of high-speed internet providers. These findings can also increase the levels of competition for the high-speed internet industry in Thailand. As a result, customers will have more choices in selecting the service that best suits their needs. In addition, the expansion of high-speed internet services to cover wider areas will be beneficial for the nation and broader community since high-speed internet is a telecommunication service that can promote both economic and social development of a nation (Oh, Ahn & Kim 2003).



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# **CHAPTER 1**

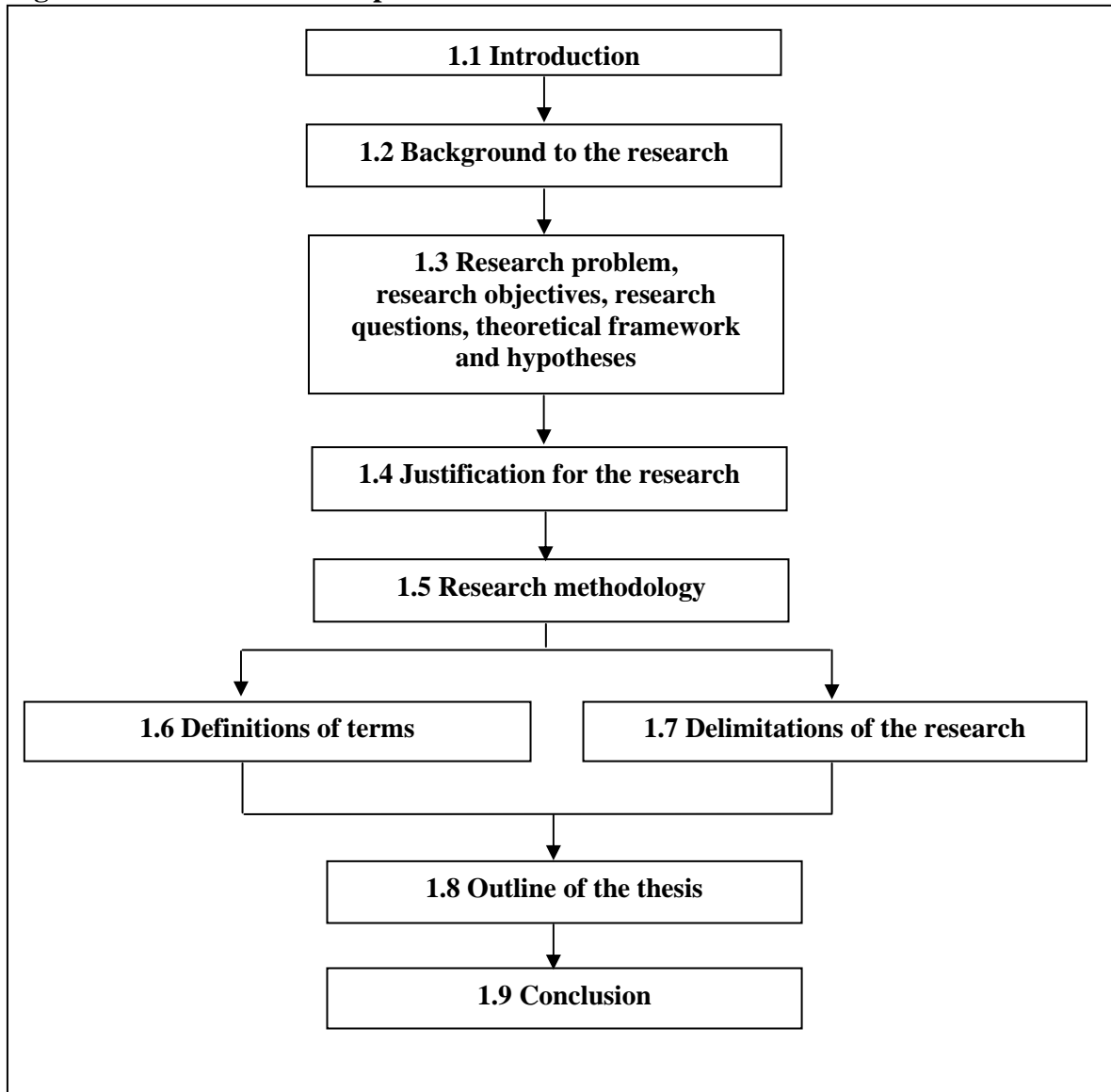
## **INTRODUCTION**

### **1.1 Introduction**

This research explores the factors that influence a customer's intention to select and stay with a particular high-speed internet provider in Thailand. The objectives of this chapter are to outline the contents and structure of the thesis. It provides background information about the research, and identifies the research problem, research questions, theoretical framework, and research hypotheses. The chapter also briefly presents an overview of the literature review in three main areas: customer decision making, customer satisfaction, and customer loyalty. From the literature review, a preliminary model is developed to identify factors influencing customers' selection of a service provider, customer satisfaction, and customer loyalty in the Thai household high-speed internet market. In order to retain existing customers and acquire new ones, it is necessary for internet service providers to investigate and understand how a range of factors impact on customers' perceptions of their current service providers. In addition, the chapter presents the justification for the research, reviews research methodology, comments on delimitations, and outlines each chapter in the thesis.

This chapter consists of nine sections as shown in Figure 1.1. This introductory section is followed by a brief overview of the research background in Section 1.2. The research problem, research objectives, research questions, theoretical framework and hypotheses are summarised and presented in Section 1.3. Section 1.4 presents the justification for the research, followed by the research methodology which is presented in Section 1.5. Definitions of terms used in this thesis and delimitations of the research are summarised in Sections 1.6 and 1.7, while Section 1.8 outlines each of the following chapters. Finally, the chapter ends with a conclusion in Section 1.9.



**Figure 1.1: Structure of Chapter 1**

Source: Developed for this research

## **1.2 Research background**

Information technology is one of the key components in gaining national competitiveness (Oh, Ahn & Kim 2003; Paltridge 2001). The rapid expansion of information technologies and the increased use of data communication by business and residential users encourages the growth of internet-based services and generates a greater need for an availability of high-speed internet service access (Owen 2005; Paltridge 2007). The introduction of internet and electronic mail has led to a paradigm shift in people's communication

behaviour. Moreover, the continued expansion and consumption of content and applications is now a significant factor driving high-speed development in many countries. Many countries have made the construction of high-speed internet or broadband infrastructure a priority (Paltridge 2001).

Before the high-speed internet age, internet users mostly spent more time downloading contents or large files than they did enjoying them. The fastest rate at which dial-up internet access can deliver downloaded files is 56 kilobits per second and requires the full use of a telephone line (Broadbandinfo 2008). On the other hand, high-speed internet can transmit five or more times faster than the speed of a conventional dial-up modem, generally without disrupting telephone use (Broadbandinfo 2008). In addition, the Organisation for Economic Cooperation and Development (OECD) has defined high-speed internet access as 256 kilobits per second in at least one direction (upload or download) (Alice 2008).

For conventional email use, having continuously available high-speed internet access is not important, but it is essential for the sending or receiving of large data files, videos, graphics, or photographs. For example, dial-up internet does not allow internet users to quickly and efficiently access video and music files whereas high-speed internet access allows users to quickly and easily download photos and large email files or attachments. Using high-speed internet, residential and business users can have much faster access to websites. This consequently enables better communication, better potential for video conferencing, and better quality of other usage of the features that internet can offer.

The history of internet in Thailand began in 1987 when a group of university professors wanted to keep contact with their friends and researchers in other countries. At that time, the Asian Institute of Technology's (AIT) in Thailand made some test Unix to Unix CoPy (UUCP) connections to the University of Melbourne, the University of Tokyo, and UUNET (Palasri, Huter & Wenzel 1999). A year later, the Australian International Development Plan (AIDP) assisted Prince of Songkhla University (PSU) in setting up dial-up email connectivity to the University of Melbourne (Palasri, Huter & Wenzel 1999). In 1991, a UUCP network was established to five universities in Thailand (Palasri, Huter & Wenzel 1999). By 1995, internet usage had grown extensively and expanded outside the academic area to general internet users (Palasri, Huter & Wenzel 1999). Since then,

internet access in Thailand has become available in every big city and most tourist destinations (Palasri, Huter & Wenzel 1999; Thai National Statistical Office 2008).

The subscriber migration to high-speed access, together with the Thai government's policy since the beginning of 2004 of encouraging and supporting Thai people to be able to have high-speed internet access without difficulty, have resulted in rapid growth of the high-speed internet market in Thailand during the past 3–4 years (Kasikorn Research Center 2005; Thuvasethakul 2008; Winbroadband 2008). The number of high-speed internet users in Thailand continues to grow and there are a large number of subscribers (Thai National Statistical Office 2008; Thuvasethakul 2008). The key growth drivers for high-speed internet usage in Thailand include the introduction of wireless internet access services by internet providers, the aggressive promotional packages with bundles services, and the growing interest in broadband content such as the popular video content, social networking services, and others (TOT 2008; TRUE 2008; TT&T 2008).

There are three main high-speed internet service providers in Thailand (Siamturakij 2008): (1) True Corporation (True); (2) TOT Public Company Limited (TOT); and (3) TT&T Public Company Limited (TT&T). These three service providers have market shares of about 50%, 30%, and 10% respectively (Lih 2008; Siamturakij 2008). In addition, there are other service providers such as CS Loxinfo Public Company Limited, Samart, ADC, ISSP etc. (Pantip 2008; Winbroadband 2008). As a result, every high-speed internet service provider must try their best to develop their marketing strategy and improve their business performance to increase their levels of competitiveness. The first step to increasing their competitive potential is to acquire customers as much as possible based on a thorough understanding of customers' decision making of how and why consumers choose particular service providers. A strong understanding of customer decision making or customers' selection behaviour is then very important for the service providers in order to be successful and achieve their business goals (Milman & Pizam 1995).

The customer decision-making process is the process of a customer choosing among different service providers (Berning & Jacoby 1974). Normally, customers tend to compare the elements of the services offered by different providers in order to eliminate alternatives in the process of choosing the service provider that best suits their needs (Bettman & Park 1980). The reason for customers going through this decision-making

process is that consumers cannot always be certain that the planned purchase will satisfy their needs (Cox & Rich 1964). The role of risk in the selection of services is perceived to be higher than with the selection of goods, and services are more difficult to evaluate than goods (Murray 1991). Since high-speed internet is an intangible service, customers are forced to search for several sources of information to help them manage their perceived risks and reduce the uncertainty involved in their choice (Parasuraman, Zeithaml & Berry 1988; Zeithaml, Berry & Parasuraman 1993). By providing enough information about the benefits of their services, internet service providers can help customers to reduce the risks associated with choosing a service provider. In addition, service providers with a good corporate image have a competitive advantage and are likely to acquire more customers (Gotsi & Wilson 2001; Grardberg & Fombrun 2002; Groenland 2002).

Once customers have made their decision to select service providers, it is essential for the service providers to understand the factors that contribute to customer satisfaction. The degree of customer satisfaction in the context of the Thai high-speed internet market is influenced by the users' perception of service quality in terms of tangibility, reliability, responsiveness, assurance, empathy, and network quality. When customers are satisfied, they become loyal customers, and loyal customers buy more, accept higher prices, are willing to purchase other services offered by the same service providers, and spread positive messages by word of mouth in relation to the service providers (Anderson, Fornell & Lehmann 1994; Aydin & Ozer 2005).

In fact, having loyal customers and being able to expand the loyal customer base are seen as key factors in maintaining and developing sustainable competitive advantages (Reichheld 1993; Reichheld & Teal 1996). This research explores the underlying factors that can create customer loyalty in the context of the Thai high-speed internet market. In the theoretical model used in this study (Figure 1.2), apart from customer satisfaction, there are another four variables that are seen as possible determinants of customer loyalty in the context of this study. These four variables are: trust, switching costs, perceived value, and corporate image.

In sum, telecommunications markets in many countries have been liberalised and overseas operators are now allowed to freely compete with the local providers (Paltridge 2007). Telecommunication service providers that satisfy customers and encourage their customers

to become loyal can expect higher market shares and greater profitability (Finkelman, Cetlin & Wenner 1992; Khatibi, Ismail & Thyagarajan 2002; Wang, Lo & Yang 2004). The overall purpose of this study, therefore, is to investigate what the influential factors are that can help high-speed internet providers to gain new customers and retain existing ones.

Having provided the above background information about this research, the following section presents and discusses the research problem, research objectives, research questions, and research hypotheses.

### **1.3 Research problem, research objectives, research questions, theoretical framework and hypotheses**

Based on the background information provided above, this research addresses the research problem, research objectives, research questions, theoretical framework, and hypotheses as follows:

#### **1.3.1 The research problem**

High-speed internet services are becoming more popular and the rapid development of information technologies is affecting almost every aspect of peoples' lives around the world. This is as true in Thailand as it is elsewhere. The expansion of high-speed internet service availability to cover a wider range of areas will have benefits for the nation and broader community since broadband or high-speed internet is a telecommunication service that can promote the economic and social development of a nation (Oh, Ahn & Kim 2003). As a result, the study of customers' intentions to select and stay with particular service providers is very important. This study will provide direction for high-speed internet providers to determine the attributes to focus on in order to enhance overall customer satisfaction and customer retention. Expanding a loyal customer base can assist in generating a business's profitability because the cost of retaining existing customers is less than the cost of acquiring new customers (Reichheld 1993; Reichheld & Teal 1996). Hence, the key research problem of this study is:

*What are the factors that influence customers' intentions to select and stay with particular high-speed internet providers in Thailand?*

This research therefore will focus on factors that contribute to customer decision making, satisfaction, and loyalty in the Thai household high-speed internet market. The aim of this research is to provide valuable insights into the customer's perspective to enable high-speed internet providers to understand how to retain existing customers as well as acquire new ones. The results of this study will enhance and improve the competitiveness of high-speed internet providers because service providers will have more understanding of what points should be taken into account to become successful and have more loyal customers, which will ultimately result in more profitability.

### **1.3.2 Research objectives**

Arising from the research problem, this research aims to explore three main areas including customers' selection of providers, customer satisfaction, and customer loyalty in the context of the household high-speed internet market in Thailand. More specifically, the objectives of this research are summarised as follows:

1. To investigate factors influencing customers' selection of high-speed internet service providers in Thailand.
2. To investigate and analyse the variables that impact on customers' satisfaction with high-speed internet services in Thailand.
3. To investigate and analyse the variables that impact on customer loyalty to high-speed internet service providers in Thailand.

### 1.3.3 Research questions

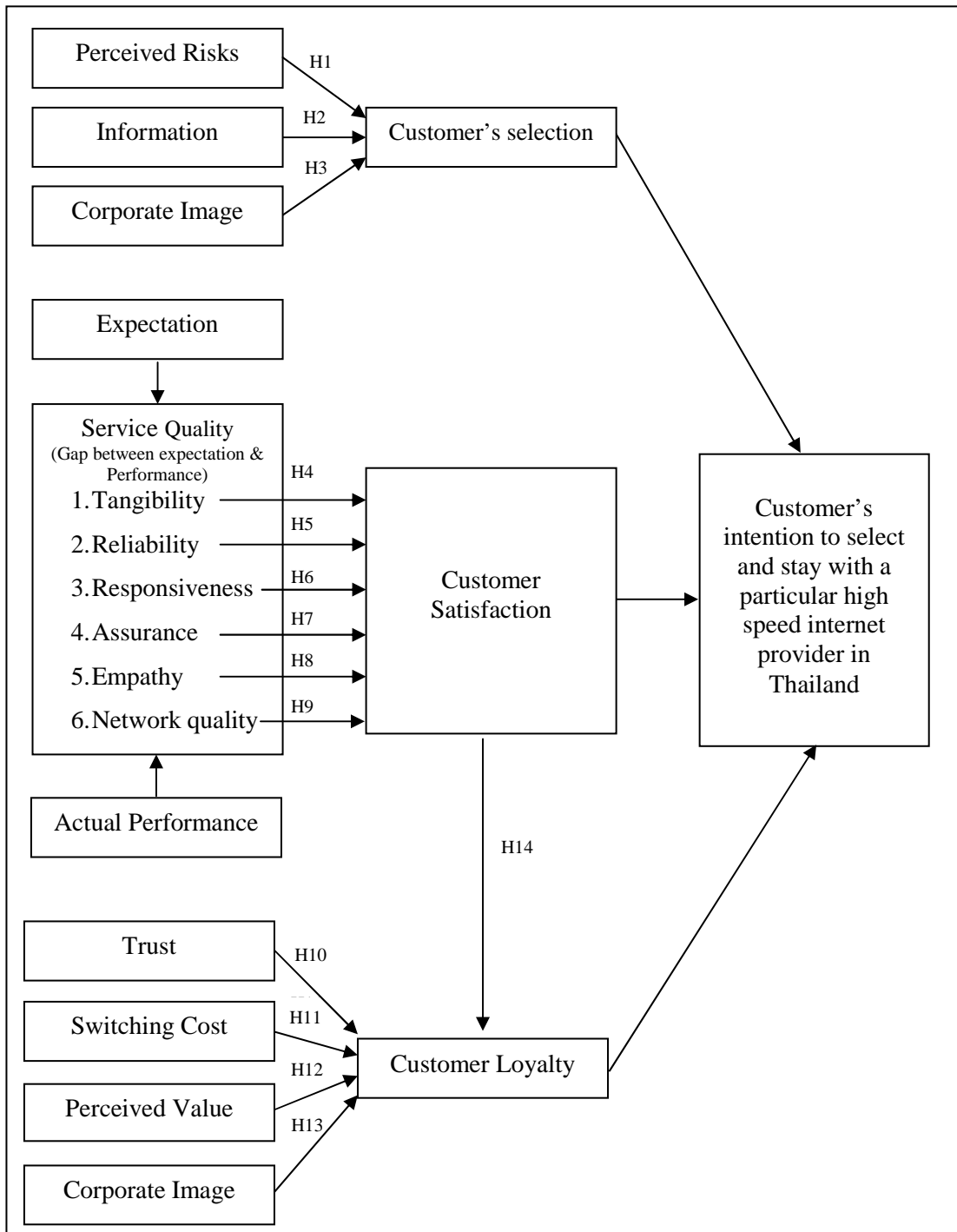
Based on the research problem and research objectives, three main research questions were derived to test what factors influence customers' intentions to select and stay with particular high-speed internet providers. These key research questions are:

1. What are the factors that influence customers' selection of high-speed internet service providers in Thailand?
2. What are the factors that influence customer satisfaction with high-speed internet services in Thailand?
3. What are the factors that influence customer loyalty to high-speed internet service providers in Thailand?

### 1.3.4 Theoretical framework

Based on the literature review presented in Chapter 2, a theoretical framework was established in order to explore the research problems and develop the hypotheses discussed in Chapters 2 and 3. Figure 1.2 shows the proposed theoretical framework of this study regarding customers' intentions to select and stay with a particular high-speed internet provider in Thailand. The framework contains three separate components, each of which proposes that in the Thai high-speed internet market: (1) a customer's selection of a service provider is influenced by perceived risks, information search, and corporate image; (2) customer satisfaction is influenced by perceived service quality in terms of tangibility, reliability, responsiveness, assurance, empathy, and network quality; and (3) customer loyalty is influenced by trust, switching costs, perceived value, corporate image, and the level of customer satisfaction. This theoretical framework led to the 14 hypotheses developed for this study and will be presented in the next section.

**Figure 1.2: Proposed model**



Source: Developed for this research



### 1.3.5 Research hypotheses

Stemming from the research questions and the theoretical framework, 14 hypotheses were developed in order to draw conclusions to this research. More details for each hypothesis will be further discussed in Chapter 2.

**Hypothesis 1:** The extent of perceived risk associated with other service providers positively influences customers' intention to select their chosen service provider.

**Hypothesis 2:** The more information consumers collect about alternative service providers the less likely they are to choose the current service provider.

**Hypothesis 3:** The corporate image of the service provider positively influences customers' selection of that provider as their high speed internet service.

**Hypothesis 4:** Tangibility positively influences customer satisfaction.

**Hypothesis 5:** Reliability positively influences customer satisfaction.

**Hypothesis 6:** Responsiveness positively influences customer satisfaction.

**Hypothesis 7:** Assurance positively influences customer satisfaction.

**Hypothesis 8:** Empathy positively influences customer satisfaction.

**Hypothesis 9:** Network quality positively influences customer satisfaction.

**Hypothesis 10:** Trust positively influences customer loyalty.

**Hypothesis 11:** Switching costs positively influence customer loyalty.

**Hypothesis 12:** Customer perceived value positively influences customer loyalty.

**Hypothesis 13:** Corporate image positively influences customer loyalty.

**Hypothesis 14:** Customer satisfaction positively influences customer loyalty.

#### **1.4 Justification for the research**

The focus of this research is justified on the basis of three key issues. As stated in the introduction to this chapter, the use of high-speed internet has been steadily increasing over recent years. It is an important access solution for internet users for both work and everyday usage. The availability of high-speed internet access is considered by international organisations to be a key to enhancing the levels of competitiveness and to sustaining economic growth for many countries (Paltridge 2001, 2002). The proportion of the telecommunication industry devoted to the high-speed internet market is expanding. It generates huge amount of revenue to internet service providers (Kasikorn Research Center 2005; Paltridge 2001). Most high-speed internet providers are trying hard to acquire new customers, at the same time, attempting to focus on keeping existing customers. In terms of being cost effective in the telecommunication industry, the more users a service provider has, the lower its average unit cost will be, and the better its operating performance will be (Hu & Hwang 2006). Keeping existing customers can result in several benefits such as increasing profitability, reducing marketing and operating costs, and preventing customer defection to other companies (Anderson & Sullivan 1993; Boulding, Kalra, Staelin & Zeithaml 1993; Bowen & Chen 2001; Murphy 2001; Reichheld & Teal 1996). This research is therefore justified as it will provide high-speed internet providers in Thailand with valuable insights regarding how to acquire new customers and to retain loyal customers in order to improve their business performance.

Secondly, while existing research has explored the factors that influence customer decision making, customer satisfaction, and customer loyalty in both the telecommunication market and other businesses, this research will be the first which attempts to investigate these three main areas specifically in the context of the Thai high-speed internet market using a face to face survey methodology.

Finally, this research provides useful and valuable information for high-speed internet providers in terms of understanding the factors which influence internet users' behaviour. For the successful future expansion of internet service providers, it is essential that they obtain a good understanding of the critical factors that influence customers' selection of service providers as well as the drivers of customer satisfaction and customer loyalty so that areas of potential improvement can be noted and addressed in future developments. This research aims to identify the most important variables influencing customers' perceptions of high-speed internet providers in terms of the customers' overall inclinations to select, to be satisfied, and to become loyal customers. This research will also help internet service providers to determine how to acquire new customers and to retain their existing customers in order to ensure that a profitable business is developed. These issues are critical to the long-term business success of every service provider (Anderson, Fornell & Lehmann 1994; Cronin & Taylor 1994; Dick & Basu 1994; Parasuraman, Zeithaml & Berry 1988).

Section 1.5 presents a broad overview of the methods used to conduct this research.

## **1.5 Research methodology**

This section provides an overview of the research methods used to collect and analyse the data as presented in Chapter 3. This research begins with a review of the literature related to customer decision making behaviour, customer satisfaction, and customer loyalty in Chapter 2, leading to the development of the fourteen hypotheses presented above. A positivist paradigm which uses quantitative research was chosen to be suitable to test the research assumptions and hypotheses in order to solve the research problem. This research involves quantifying the relationship between variables and will use statistics to explain these relationships. Data will be of responses to questions in the questionnaire survey, with the methodologies aimed at verification or contradiction of theoretical hypotheses. It is evident that a quantitative approach is most appropriate because the present research seeks to answer set research hypotheses rather than attempting to develop new theory (Deshpande 1983; Lincoln & Guba 1985).

In this research, interviewer-completed surveys via face-to-face interviews were used for data collection to complete the survey as this technique allows the interviewer to clarify certain questions and provide clear instructions on how to complete the survey (Sekaran 2003). This method was considered more appropriate to the Thai culture because respondents tend to respond better to survey questions when some face-to-face guidance is provided. The process of random sampling was used in order to reduce bias in the sample of Thai respondents (Veal 2005). In other words, all members of the population had an equal chance of being included in the sample. The subjects targeted for data collection of this study were Thai high-speed internet users who had high-speed internet access at home. The survey questionnaire consisted of five sections: (1) Experience with high-speed internet service providers; (2) Opinions on high-speed internet service quality; (3) Future intention towards service providers; (4) Approaches to choosing a high-speed internet service provider; and (5) General information (Demographic questions). Three hundred respondents were asked to rate their responses to the survey questions on a scale of 1 to 7 (where 1 is 'Strongly disagree' and 7 is 'Strongly agree'). The survey was translated from English to Thai using a well accepted method which is outlined in Chapter 3.

The data was collected in key public business areas in central Bangkok where it was likely that a large number of high-speed internet users could be found (e.g. near offices etc.) (Thuvasethakul 2008). Most of the respondents worked in office buildings located in downtown areas in Bangkok such as Silom, Sathorn, Siamsquare, Chidlom and Sukhumvit. Each selected downtown area has a nearby public area (e.g. walkways, courtyard etc.) where it was feasible to approach target participants. Ethical considerations were taken into account in this research. Prior to the respondents voluntarily taking part in the study, a covering letter was presented to inform every respondent about all aspects of the research such as the research purpose, objectives, and procedures, as well as their right to terminate the interview at any time. In addition, confidentiality and anonymity were ensured so that all respondents were protected from harmful and undesirable consequences that might have occurred after the data collection process. The questionnaire survey was approved by the Ethics Committee of Southern Cross University before distribution to respondents.

In order to obtain valid interpretations of data, reliability and validity were ensured to reduce errors and evaluate measures (Zikmund 2003). This research used Cronbach's coefficient alpha to measure reliability as it is a commonly used method to examine the reliability of multipoint-scaled items. It can be considered a perfectly adequate index to test the consistency reliability (Sekaran 2000). Content validity was undertaken to ensure that the questionnaire measured an adequate and representative set of items that answered the research questions (Sekaran 2000).

The data collected from the survey was edited, coded, entered into the computer, analysed and interpreted by using the Statistical Package for the Social Sciences Program (SPSS) version 12.0. This research used Pearson's correlation coefficient (Pearson  $r$ ) which is suitable for interval scaled variables to examine the relationships among the variables (Sekaran 2003). Multiple regression analysis was used to indicate how much of the variance in the dependent variable could be explained by a set of independent variables (Sekaran 2003). More details of the research methodology are provided in Chapter 3 while the analysis of results of the research is presented in Chapter 4.

Before concluding this chapter, the next section presents a list of terms and definitions used in this study in order to clarify the meaning of key terminology used throughout the thesis.

## 1.6 Definitions of terms

**Assurance** refers to the knowledge and courtesy of employees including their ability to convey trustworthiness and confidence to customers (Parasuraman, Zeithaml & Berry 1988).

**Corporate image** can be viewed as the outsider's perception of a particular organisation (Chun 2005; Fombrun, Gardberg & Sever 2000; Post & Griffin 1997). Customers' perceptions regarding corporate image usually depend on the reality of their overall past experiences and interactions between customers and the company or service provider (Bolton & Drew 1991; Feldwick 1996; Oliver & Linda 1981).

**Customer loyalty** is the customers' intention to stay with their current service provider and their behaviour when they make frequent repeat purchases of their preferred brands (Dick & Basu 1994). Customer loyalty is the customers' intention to repurchase from the same supplier over time (Edvardsson, Johnson, Gustafsson & Strandvik 2000).

**Customer satisfaction** is the accumulated customer's purchase and consumption experiences influenced by two factors: expectations and experienced service performance (Gotlieb, Grewal & Brown 1994). Customer satisfaction can be best explained by the concept of confirmation/disconfirmation resulting from the differences between expectation and perceptions (Churchill & Surprenant 1982; Oliver 1980).

**Customers' selection** or **customer decision making** is the process of customers' choosing among alternatives that lead to acquisition and buying of products or services (Berning & Jacoby 1974; Mowen 1995).

**Empathy** can be viewed as the caring and individualised attention that the firm provides to its customers (Parasuraman, Zeithaml & Berry 1988).

**High-speed internet**, otherwise known as broadband internet refers to a high data rate internet access. It refers to any kind of internet connection that is not a standard dial-up connection (Broadbandinfo 2008).

**Information search** is the process of information collection by customers. Customers search for information because they want to reduce the level of perceived risks (McColl-Kennedy & Fetter 1999).

**Network quality** refers to the quality of the specific chosen network or the quality and strength of the network signal of the specific chosen network (Wang, Lo & Yang 2004).

**Perceived risks** refers to the nature and amount of risk perceived by consumers regarding a particular purchasing situation (Cox & Rich 1964). The concept of risk implies that consumers make their purchase decisions in uncertain situations regarding the desired service or product (Murray 1991).

**Perceived value** can be defined as the consumers' overall assessment of the utility products or services based on perceptions of what is received and what is sacrificed (Monroe 1991; Parasuraman, Zeithaml & Berry 1988).

**Reliability** can be defined as the ability to accurately perform and deliver services as promised (Parasuraman, Zeithaml & Berry 1988).

**Responsiveness** can be viewed as a willingness to help and provide prompt service to customers (Parasuraman, Zeithaml & Berry 1988). It also concerns the readiness and timeliness of employees in providing services (Parasuraman, Zeithaml & Berry 1985).

**Switching cost** is defined as the one-time costs that customers associate with the process of switching from one service provider to another (Burnham, Frels & Mahajan 2003).

**Tangibility** refers to the appearance of physical facilities, equipment, personnel, and communications materials of a business (Parasuraman, Zeithaml & Berry 1988).

**Trust** can be defined as an individual's belief that their exchange partner can be relied on and that the exchange partner will fulfil their needs (Koller 1988; Moorman, Zaltman & Deshpande 1992).

After explaining the definition of key terms used in this thesis, the delimitations of the research are presented in the next section.

## **1.7 Delimitations of the research**

The scope of this research has some delimitations which applies to its outcomes. Although these delimitations do not have a significant impact on the research results, they must be acknowledged before conclusions are drawn from the study. The first delimitation is that this study collects and analyses data from Thailand only. In addition, this research does not apply to every type of product in the telecommunication industry, but only examines opinions of high-speed internet users who have high-speed internet access at home to test hypotheses.

As the target population for this study is defined as individuals who have high-speed internet access at home, many of these individuals work in office buildings located in downtown and working office areas in Bangkok. Therefore, the questionnaire survey used in this research was only distributed via public areas adjacent to selected areas in Bangkok where a large number of high-speed internet users can be found (Thuvasethakul 2008).

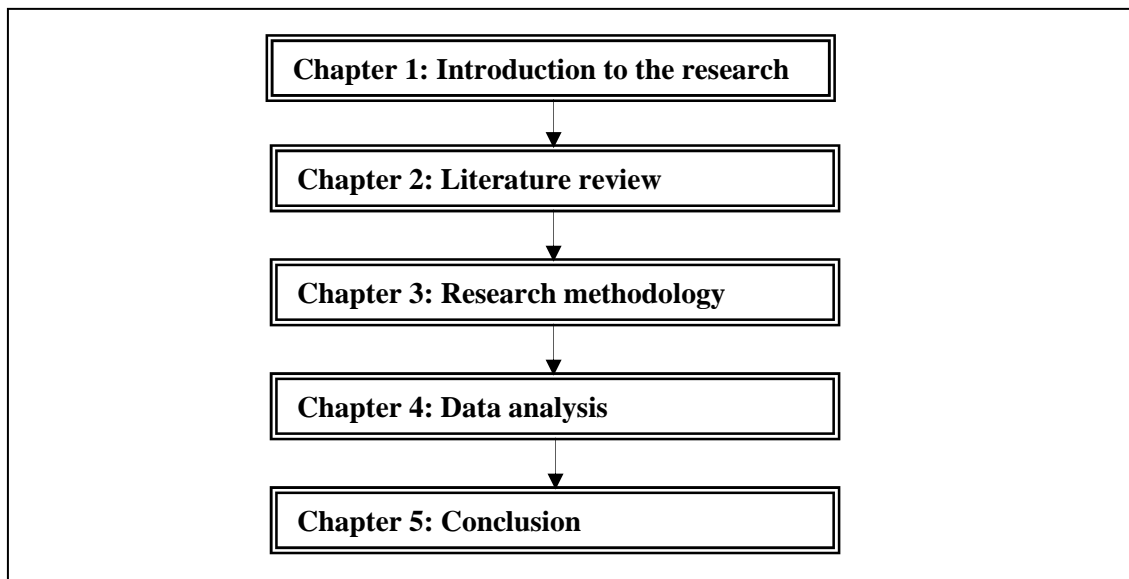
Furthermore, data was collected in 2008 when particular economic and governmental policies and conditions applied in Thailand. Therefore, the findings might not be applicable in exactly the same way in future. Data collected at alternative times may produce varying results.

An overview of the structure of this thesis is now presented in Section 1.8.

## **1.8 Outline of the thesis**

There are five chapters in this thesis as shown in Figure 1.3. Chapter 1 provides an introduction and brief background to the research including a statement on the research problem, research questions, theoretical framework, and hypotheses. The chapter also provides justifications of the research, explains definitions of terms, summarises of methodology used, and comments the delimitations of the research.



**Figure 1.3: Outline of the thesis**

Source: Developed for this research

Chapter 2 presents a literature review and examines literature from previous research in three parent disciplines including customer decision making, customer satisfaction, and customer loyalty. Based on this literature review, a theoretical framework with appropriate hypotheses is developed and presented in Chapter 2.

Chapter 3 justifies the research paradigms and research approach for the study and outlines the methodologies used to test the hypotheses. It explains the details of data collection, along with the data processing procedures and analytical techniques developed.

Chapter 4 reports the results of data analysis from a questionnaire survey in terms of descriptive statistics and analysis using the Social Sciences (SPSS) version 12.0. Multiple regression analysis is applied to investigate the relationships between dependent variables and independent variables.

Finally, Chapter 5 discusses the conclusions and implications of the research results. The implications of the study are divided into two aspects: implications for academic theory and implications for practical application. In addition, it discusses the limitations of the research and provides suggestions for future research.

## **1.9 Conclusion**

This chapter presented the background to the research in order to introduce the key research problem, research questions, theoretical framework, and hypotheses. The justification for this research was examined, and then the research methodology was discussed. Definitions of the terms used in the research along with the delimitations of the research were described. Finally, the outline of the five chapters in the research was explained. The next chapter, Chapter 2, will discuss the literature review which focuses on three main areas: (1) consumer behaviour, in particular customer purchasing decision making; (2) consumer satisfaction which concentrates on factors influencing customer satisfaction for service providers; and (3) customer loyalty.

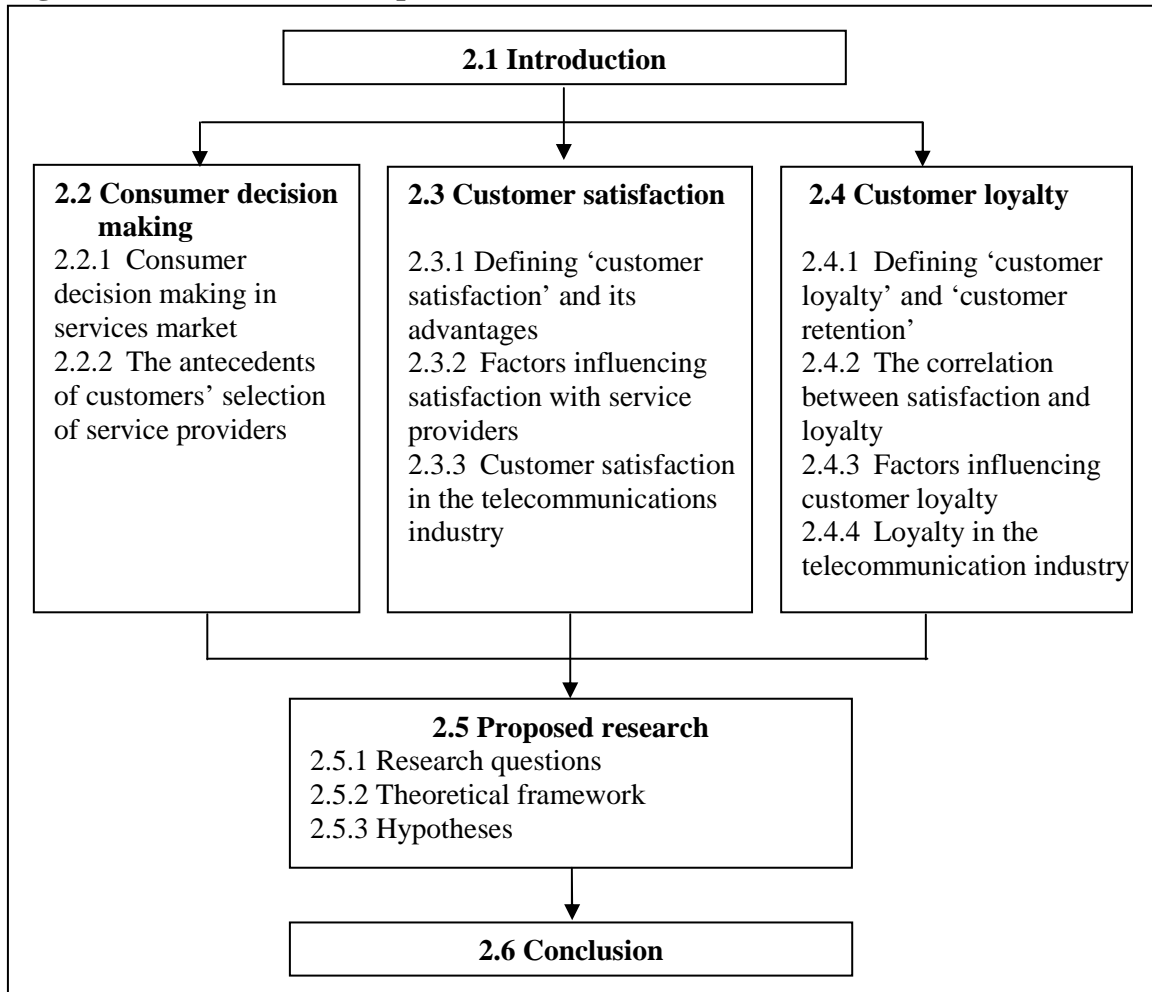
## **CHAPTER 2**

# **LITERATURE REVIEW**

### **2.1 Introduction**

This chapter presents a review of the literature in three main areas: customer decision making or customers' selection behaviour; consumer satisfaction, which concentrates on factors influencing customer satisfaction for service providers; and customer loyalty. These three areas play a significant role in enabling service providers to achieve their goals which lead to business success.

This chapter is divided into six sections as outlined in Figure 2.1. Section 1 is an introduction. Section 2 presents and describes factors that influence consumer purchase decision-making behaviour, followed by Section 3 which discusses literature dealing with all factors that influence customer satisfaction when they use a service and includes particular reference to the telecommunications industry. Section 4 presents an overview of the literature on customer loyalty and customer retention, including the correlation between satisfaction and loyalty. Section 5 demonstrates the link between the three main areas being investigated for this research in the context of the Thai household high-speed internet market. In this section, 14 hypotheses together with three research questions are developed, followed by Section 6 which is the conclusion.

**Figure 2.1: Structure of Chapter 2**

Source: Developed for this research

## 2.2 Consumer decision making

The key to a successful marketing strategy is based on a thorough understanding of how and why consumers purchase particular products and services (Milman & Pizam 1995). The decision-making perspective is one of the three perspectives on consumer behaviour that lead to acquisition and purchase of products or services by consumers (Mowen 1995). A decision-making process is a process of choosing among alternatives (Berning & Jacoby 1974). Engel, Blackwell and Miniard (1995) suggest there are seven stages which usually occur in the consumer buying process: problem recognition, information search, evaluation of alternatives, purchase decision, consumption, post-purchase evaluation, and divestment. Similarly, Poon and Joseph (2001) note that consumers move through each stage of their decision-making process, beginning with problem recognition, search for and evaluation of

available alternatives, purchase, and post-purchase evaluation. Peter and Tarpey (1975) postulate that there are three strategies consumers use to make their decisions: (1) select the brand that minimises expected loss (perceived risk); (2) select the brand that maximises expected gain (perceived benefit); and (3) select the brand that maximises net expected gain (net perceived benefits). In fact, regardless of which sector the firm is operating in, be it the manufacturing sector or the services marketplace, knowledge about customer behaviour is essential for the business to be successful and achieve their business goals. More details about customer decision making in service markets will be discussed in the next section.

### **2.2.1 Consumer decision making in services markets**

A number of researchers have proposed that goods can be evaluated prior to purchase but services can only be evaluated only during or after the service delivery (Gronroos 2000; Kugyte & Sliburyte 2005; Zeithaml & Bitner 2003; Zeithaml, Parasuraman & Berry 1985). Services are described as intangible processes, performances or activities whereas goods are physical objects (McGuire 1999). The role of risk in the consumption of services is perceived to be higher than with goods, and services are more difficult to evaluate than goods (Murray 1991). To purchase services, consumers can be forced to search for several sources of information to help them to minimise perceived risks and reduce uncertainty (Parasuraman, Zeithaml & Berry 1988; Zeithaml, Berry & Parasuraman 1993). Many times, consumers tend to compare the same service offered by different providers with standards in mind which serve as elements to eliminate alternatives in the middle phases of the choice process (Bettman & Park 1980). In other words, consumers find and use more resources to gain information when assessing the risk or uncertainty involved in purchasing services than when assessing the risk involved in purchasing goods.

In addition, services are generally characterised by intangibility, inseparability of production and consumption, difficulty of standardisation and perishability (Hill & Neeley 1988; Zeithaml, Parasuraman & Berry 1985). In terms of intangibility, services cannot be seen, tasted, felt, or touched in the same manner that goods can (Zeithaml, Parasuraman & Berry 1985). Inseparability of production and consumption can be defined as simultaneous

production and consumption since services are sold, produced and consumed almost at the same time (Regan 1963). Whereas goods are first produced, then sold and then consumed (Regan 1963). Heterogeneity or difficulty of standardisation means the quality and essence can vary from producer to producer, from customer to customer, and from day to day. For example, service performance from the same provider may differ at different times since people's performance can fluctuate even on the same day (Zeithaml, Parasuraman & Berry 1985). Perishability means that services cannot be stored. For example, the capacity of internet network or telephone line capacity not used cannot be reclaimed. The differences between services and physical goods as summarised by Gronroos (2000) are shown in Table 2.1.

**Table 2.1: Differences between services and physical goods**

<b>Services</b>	<b>Physical goods</b>
Intangible	Tangible
Heterogeneous	Homogeneous
Production, distribution and consumption simultaneous processes	Production and distribution separated from consumption
An activity or process	A thing
Core value produced in buyer-seller interactions	Core value produced in factory
Customers are involved in production of the service	Customers are not (normally) involved in the production process
Cannot be kept in stock	Can be kept in stock
No transfer of ownership	Transfer of ownership

Source: Adopted from Gronroos (2000)

Service providers must realise that customers' decision-making processes will vary depending on the type of product being purchased. Customers will put less effort into the process when purchasing simple services and more effort when purchasing complex and expensive ones (Dorsch, Grove & Darden 2000). An example of this is that customers with no prior experience will probably spend more time evaluating the value that they can gain from acquiring products/services (Bettman & Park 1980). By providing enough sources of information about the benefits of services, service providers can help customers to reduce

the risks associated with choosing services that they are not familiar with. If customers clearly understand how the products/services work, they can more easily make their decision to choose the provider that best fulfils their needs. In some cases, customers buy the same brand or use the service from the same provider over a long period. This is called habitual decision making and it is considered a great value to firms or service providers (East 2008).

Devlin (2002) analysed the choice criteria in the home loans market. His research reveals that for the residential market, which involves the same group of prospective customers as the residential telecommunication market in the present research, effective cross-selling programs are the best way to create more opportunities for service providers. In the home loan market, residential customers tend to rely on the previous financial organisation that they have used. Discount or cash-back promotions are not considered to be primary motivators. Service providers could use financial promotion programs as a minor part of their approach when developing their marketing communication strategy. However, in the residential service market, providing more convenience for customers with respect to store or branch location and product advisor programs is more important and plays a vital role in acquiring new customers and retaining existing ones.

As has been discussed, services can be characterised as heterogeneous, intangible, inspirable, and perishable commodities which cannot be stored (Zeithaml, Parasuraman & Berry 1985). Services are varied, and a service is any act or performance that one party can offer to an other (Kotler 2000). Services are products that can be offered for exchange, usually, but not always, for money between customers and service providers (McGuire 1999). Consumers' decision making in service markets are likely to rely more on providing further information and convenience for customers regarding the store/branch location and service advisor program. Understanding what customers are looking for and how they will evaluate the service offerings is therefore important for all service providers in developing a good relationship with their customers (Gronroos 2000).

Having discussed how consumers make their decisions in service markets, Section 2.2.2 will now discuss the key issues that have an impact on customers' selection of service providers.

### **2.2.2 The antecedent of customers' selection of service providers**

#### **Information search and perceived risks**

Information search is an essential part of consumer decision making and search activity is considered central to consumer behaviour decision making theory (Moore & Lehmann 1980; Newman & Lockeman 1975). Information search represent the second stage after problem recognition in the seven stages of the decision making process model proposed by Engel, Blackwell and Miniard (1995). The two principal conceptual ideas that influence a customer's product choice selection are product information availability and prior experience with the products (Bettman & Park 1980). Customers with prior knowledge tend to use their past experience in the decision-making process whereas customers with no prior knowledge will spend more time searching for product information from available sources to avoid or minimise the level of uncertainty associated with the product/service.

Murray (1991) investigated the impact of perceived risk on services and found that more information was needed to reduce risk in purchasing services than in purchasing goods. He also suggests that the greater the degree of perceived risk, the more effort consumers expend to seek information. Consumers use different methods to search for information to deal with different types of risk that they encounter (Taylor 1974). Wilkie and Dickson (1985) point out that different consumers will perform information search activities differently based on their individual limitations and perceptions. The degree of uncertainty or perceived risk associated with products/services can be reduced by using several sources to search for more information (Dorsch, Grove & Darden 2000). Consumers' perceptions of uncertainty or perceived risk in a purchasing situation have an impact on consumers' information search behaviour (Hugstad, Taylor & Bruce 1987). That is because searching is believed to be an effective process for reducing uncertainty and perceived risk (Urbany, Dickson & Wilkie 1989).



**Information search**

According to Punj and Staelin's (1983) model of consumer information search behaviour for automobiles, the amount of information searching that consumers undertake depends on whether the perceived benefit of the purchasing decision can be improved through increased searches or whether more satisfying purchases can be made. Consumers will continue to search for more information as long as the perceived benefits exceed the perceived costs (Punj & Staelin 1983). Perceived costs can be defined as the total of all direct and indirect costs associated with conducting the search (Punj & Staelin 1983). Meanwhile, perceived benefits are positively related to the amount of external information searching undertaken by consumers. Consumers will tend to search for more information if they perceive that the additional information can assist them to make a better or more satisfying purchase decision (Srinivasan & Ratchford 1991). Wilkie and Dickson (1985) argue that there are some variables that influence the extent of the required information search including whether the available information is adequate, the amount of prior experience or knowledge that consumers already have, store visits and salesperson interactions.

In general, information searches can be classified into two broad types: internal and external (Bettman 1979; McColl-Kennedy & Fetter 1999; Murray 1991). Bettman (1979) notes that consumers search to acquire information in order to achieve their goals, and their search may be internal (memory) or external (e.g. advertisement, newspaper). Likewise, Murray (1991) postulates that consumers gather both internal and external information to handle the risks that they perceive. Consumers begin to check their internal information against their previous purchase experience and knowledge (Kiel & Layton 1981). If an internal search of memory does not provide a satisfactory solution, consumers will begin to collect information from external sources such as market advertisements, the internet, family, and friends (Kiel & Layton 1981). Srinivasan and Ratchford (1991) define the level of external information searching as the amount of attention and effort taken to obtain information or data relating to the specific purchase under consideration. External information searching can include economic and psychological processing which involves active, motivated, and conscious effort (Gibler & Nelson 2003; Srinivasan & Ratchford 1991). Therefore, external searches can be defined as the acquisition of information from other sources rather than an individual's memory and will occur when consumers are

motivated to search for information concerning their purchase (Heaney & Goldsmith 1999; McColl-Kennedy & Fetter 2001). However, a number of researchers suggest that brand names play a vital role in consumer search behaviour. That is, when brand names are presented, consumers undertake less external searching and tend to rely more on their internal information (memory) and their previous experience with that brand (Jacoby, Chestnut & Silberman 1977; van Raaij 1977).

According to McColl-Kennedy and Fetter's (2001) study about the dimensions of consumer search behaviour in services, consumers' search activities can be classified according to two broad aspects: (1) sources of external information and (2) the degree of effort the search involves. Firstly, sources of external information can be classified according to whether they are dominated by marketing or whether they are dominated by personal and impersonal communication (Engel, Blackwell & Miniard 1995). Beatty and Smith (1987) suggest that there are four sources of external information: media, retailers, personal communication, and neutral sources. Similarly, Olshavsky and Wymer (1995) argue that external information sources can be classified as: (1) market controlled; (2) reseller information; (3) third-party independent; (4) interpersonal sources; and (5) by direct inspection of the good by the consumer. Secondly, in terms of consumers' external search effort, there are some common measures of search effort such as the number of stores visited, the number of brands examined, and time spent in the overall shopping experience (Newman & Lockeman 1975).

In summary, there are two types of information searches: internal and external. Generally, consumers search for information in order to reduce the level of uncertainty and perceived risk. Further details of perceived risks will be discussed below.

### **Perceived risks**

Perceived risk refers to the nature and amount of risk perceived by consumers regarding a particular purchasing situation (Cox & Rich 1964). The concept of risk implies that consumers make their purchase decisions with uncertainty regarding the desired service or product (Murray 1991). Consumers cannot always be certain that the planned purchase will satisfy their needs (Cox & Rich 1964). Mitra, Reiss and Capella (1999) suggest that

perceived risk is a common variable that consumers use to explain the risk perception and risk deduction methods.

Srinivasan and Ratchford (1991) define perceived risk as the probability of any loss (financial, performance, physical, and convenience) that can occur due to the absence of external search, multiplied by the importance of that loss. Hugstad, Taylor and Bruce (1987) and Capon and Burke (1980) found that more sources of information will be required in high-risk purchasing situations. A number of researchers state that in the event of greater perceived risk, consumers are more likely to rely on information from personal sources such as product-related conversation or word-of-mouth (WOM) discussion in order to reduce risk and/or uncertainty in their purchase (Locander & Hermann 1979; Lutz & Reilly 1984; Midgley 1983; Perry & Hamm 1969). Likewise, Hugstad, Taylor and Bruce's (1987) study of perceived risks and consumer information searches indicate that the role of personal sources of information (e.g. families, relatives, friends, salesperson) appears to be much more important in high-risk situations than in low-risk situations. In addition, Mitra, Reiss and Capella (1999) confirm that consumers prefer personal information sources than impersonal information sources for all service categories.

Jacoby and Kaplan (1972) conceptualise perceived risk as the personal uncertainty consumers feel about the possibility of negative outcomes from the usage of a particular product or service. They classify perceived risks into six types: financial risk, performance risk, physical risk, psychological risk, social risk, and overall perceived risk. Roselius (1971) includes an additional type of perceived risk which is time risk. Time risk means the possible loss of convenience or time associated with the unsatisfactory delivery of a service (Roselius 1971). Forsythe and Shi (2003) studied and investigated the types of risk perceived by internet shoppers when they intend to purchase. They suggest that there are three types of risk related to frequency of online search. These three types of risks are product performance risk, financial risk, and time/convenience risk. Product performance risk refers to any loss which occurs when a product/service does not perform as expected (Horton 1976). Financial risk is defined as the potential net loss of money involved (Derbaix 1983). Time/convenience risk refers to the inconvenience or difficulty which occurs during the process of purchase transactions (Forsythe, Liu, Shannon & Gardner 2006). These types of perceived risks are summarised in Table 2.2.

**Table 2.2: Types of perceived risks**

<b>Type of perceived risk</b>	<b>Definitions</b>
Financial risk	The chances that consumer may lose money if they try an unfamiliar brand.
Performance risk	The likelihood that there will be something wrong with an unfamiliar brand or that brand will not work properly.
Physical risk	The chances that an unfamiliar brand may not be safe (i.e. become harmful or injurious to consumers' health).
Psychological risk	The chances that an unfamiliar brand will not fit well with consumer's self-image or self-concept.
Social risk	The chances that an unfamiliar brand will affect the way others think of consumers.
Time/Convenience risk	The possible loss of convenience or time that may occur if consumer buying an unfamiliar brand (i.e. delayed of delivery time from a service provider).
Overall perceived risk	All sorts of factors combined about how risky consumer concerns when buying an unfamiliar brand.

Source: Adapted from Jacoby and Kaplan (1972) and Roselius (1971)

Apart from information searches and perceived risk, customers' selection behaviour can also be influenced by corporate image. The definition and advantages of corporate image are described in the next section.

### **Corporate image**

Corporate image can be viewed as the outsider's perception of a particular organisation (Chun 2005; Fombrun, Gardberg & Sever 2000; Post & Griffin 1997). Image is described as the overall impression made on the minds of customers (Dichter 1985). Corporate image can be simply defined as an accumulation of the impressions or perceptions held by external stakeholders (Bromley 1993; Davies & Miles 1998). Customers' perceptions of corporate image usually depend on their overall past experiences and interactions with a particular organisation (Bolton & Drew 1991; Feldwick 1996; Oliver & Linda 1981). Past

experiences and word of mouth are important antecedents of corporate image (Wangenheim & Bayon 2004) and they are the basis of how customers create expectations about service quality (Lau & Lee 1999). Corporate image should be considered as an intangible asset that can contribute to a competitive advantage in the marketplace of goods and services (Dowling 2004; Hall 1992; Milgrom & Roberts 1982) and it should be appropriately and professionally managed by business firms (van Riel 1997).

Chun (2005) suggests that corporate image is the outsider's perception whereas corporate reputation stems from both internal and external stakeholders' perceptions. The distinction between image and reputation is useful because one can form an image of a corporation without any real experience of it. Compared to reputation, corporate image is therefore, quicker to change under the influence of advertisements (Gray & Balmer 1998). Some researchers suggest that companies with a good reputation and image have a competitive advantage and are likely to acquire more customers (Gotsi & Wilson 2001; Grardberg & Fombrun 2002; Groenland 2002). Customers usually expect to receive a certain level of quality based on their past experiences and businesses need to carry on building up the strength of their brand's image as it is seen to be considered by existing and potential consumers (Anisimova 2007).

Corporate image is established and developed in the customers' mind based on communication and experience, and it is believed to have an impact on customers' satisfaction judgments (Andreassen & Lindestad 1998). Building up corporate image is a lengthy process that can be improved by the successes and achievements of the company. In contrast, corporate image can be easily damaged if the company is unable to perform its services well or ignores customers' needs and expectations (Dichter 1985; Herbig, Milewicz & Golder 1994). This is because when customers are satisfied (or dissatisfied) with the service, their attitude toward a service provider/company will be improved (or damaged) (Andreassen & Lindestad 1998). As a result, corporate image is believed to have an influence on customers' buying decisions since it can simplify customer decision making and can help customers to choose the most favourable option from different companies or service providers (Markus 1977). Similarly, Andreassen and Lindestad (1998) propose that corporate image is assumed to have an impact on customers' choice of company when service characteristics are difficult to evaluate. People tend to buy products if their image of the provider is consistent with their image of themselves (Markus 1977).

In service marketing, corporate image is considered to be an important factor for customers to evaluate the quality of services offered by different service providers (Gronroos 1984; Zinkhan, Ganesh, Jaju & Hayes 2001). As service is intangible and the quality of a service may be more difficult to evaluate by customers than goods, service firms may be more likely to feel the effects of corporate image than other types of firms (Kim & Choi 2003). Such an image can impact on customers' perceptions of service quality, which is why many service organisations attempt to provide positive information about their services (such as PR, advertisements and direct marketing campaigns) in order to attract new customers. Some researchers note that corporate image has two principal components: functional components and emotional components (Kennedy 1977; LeBlanc & Nguyen 1996; Martineau 1958). Functional components are tangible characteristics that can be easily measured. On the other hand, emotional components are the psychological dimensions of the feelings and attitudes towards a company. These feelings stem from individual experiences with a particular company.

In the telecommunication market, the **extrinsic characteristics** such as personal contact, the physical environment, technical support, and the responsiveness of the staff of service providers can have significant influences on customers' intentions to select a service provider (Nguyen & Leblanc 2001). The rationale is that these physical elements can constitute the benefits promised in the service transaction in customers' eyes (Nguyen & Leblanc 2001). The probability of customers selecting a particular telecom service provider tends to be higher when perceptions of a service provider's corporate image are strongly positive. In short, it is suggested that corporate image plays a vital role when customers are in the process of making the decision to select a service provider (Nguyen & Leblanc 2001). In addition, the interaction between service provider and customer, along with the encounter processes can also have a strong effect on customers' decision making behaviour (Athanasopoulos & Iliakopoulos 2003; Smith, Bolton & Wagner 1999). Client's presence and participation are always parts of service delivery processes and that is why tangible elements such as personal contact through the process of service encounters can be used to improve customers' perceptions of corporate image.

In the same way, Erevelles, Srinivasan and Rangel's study (2003) examined the processes involving consumer satisfaction and customer behaviour patterns of switching internet service providers. They suggest that **emotional factors** assert a strong impact on

customers' perceptions regarding service providers' image. These emotional factors are the cumulative experiences between customers and service providers in terms of all contact points including service encounters (formal and informal) with personal, physical facilities, other marketing communication devices deployed by the company, and unintentional messages about the company circulated in the market place. All of these emotional factors are assumed to enhance corporate image of service providers in the eyes of customers. Consequently, customer services such as technical support and responsiveness of the service personnel play a vital role when making the decision to choose a service provider.

In sum, corporate image plays a pivotal role for service companies in attracting new customers and retaining existing ones (Andreassen & Lindestad 1998). When information regarding the desired service is insufficient, customers are likely to use corporate image to make an assessment of the quality of the services offered by a firm (Herbig & Milewicz 1993; Weigelt & Camerer 1988). Customers consider corporate image as it can help them to evaluate the ability of the service company and judge whether it can fulfil their needs (Barich & Kotler 1991). In addition, as noted above, personal contact, physical environment, technical support, and responsiveness of staff are critical factors influencing the customer's selections when they want to choose their telecommunications service provider. Hence, in pursuing marketing communication strategies, service providers should incorporate customer service and physical evidence together with the intrinsic attributes of their respective services in the message to ease the decision making process of customers (Erevelles, Srinivasan & Rangel 2003; Nguyen & Leblanc 2001). More than intangible elements, telecommunication service providers should make the most of the presence of contact elements in their advertising to make the intangibles become tangible in customer perceptions. Nevertheless, to be more competitive, it is essential for businesses to understand customer satisfaction and its advantages as well as what factors that contribute to customer satisfaction. More details about customer satisfaction, both in general and in the telecommunication industry, will be discussed in the next section.

## **2.3 Customer satisfaction with service providers**

### **2.3.1 Defining ‘customer satisfaction’ and its advantages**

Customer satisfaction is a fundamental concept in marketing and has become a critical issue for all service providers. Most businesses realise that the more competitive the market, the more attention is required to achieve customer satisfaction. Customer satisfaction has the most significant impact on customer loyalty, followed by brand reputation and switching costs (Methlie & Nysveen 1999). However, since modern customers live a more complex life and have more access to a greater amount of information, they have become harder to please and are more determined to get what they want.

The term satisfaction refers to one’s holistic feeling toward a product or service, and a customer’s holistic feeling results from the summation of his/her evaluation of each aspect of an offering (Parasuraman, Zeithaml & Berry 1988; Zeithaml, Berry & Parasuraman 1996). This concept is closely related to the perception of the relationship that one has with a service provider (Anderson, Fornell & Lehmann 1994). Satisfaction is primarily defined as an affective response to a specific consumption experience and it is an emotional response (Cadotte, Woodruff & Jenkins 1987). Customer satisfaction is the accumulated experience of a customer’s purchase and consumption experiences influenced by two factors: expectations and experienced service performance (Gotlieb, Grewal & Brown 1994). Customer satisfaction can be best explained by the concept of confirmation/disconfirmation of expectation and perceptions (Churchill & Surprenant 1982; Oliver 1980). To evaluate customer satisfaction or dissatisfaction requires experience with the service, and it is influenced by customers’ perceptions toward the service (Oliver 1980).

Some researchers suggest that there are at least two concepts of customer satisfaction. One is transaction-specific, and the other is cumulative (Boulding, Kalra, Staelin & Zeithaml 1993). Cumulative customer satisfaction is an overall feeling and experience that customers have of a particular service provider. In its cumulative aspect, satisfaction refers to the overall evaluation of customers of their purchase and consumption experiences (Edvardsson et al. 2000; Johnson & Fornell 1991). On the other hand, transaction-specific



satisfaction stems from the level of confirmation or disconfirmation that occurs when a customer evaluates their expectations compared to the perceived value which they receive during and after each service encounter transaction (Anderson, Fornell & Lehmann 1994; Olsen & Johnson 2003; Olson & Dover 1979).

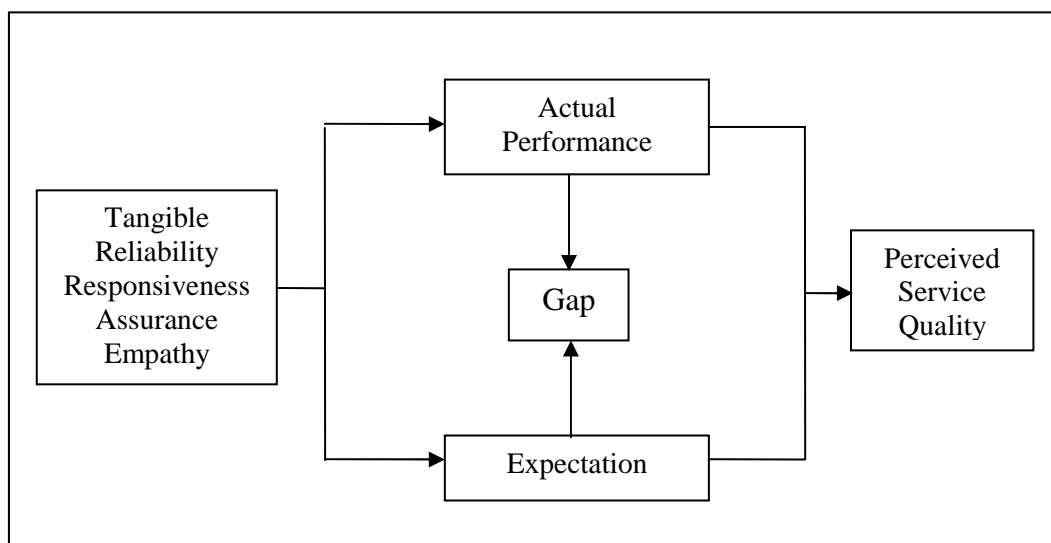
In service marketing, customer satisfaction is conventionally accepted as the central feature of service business success (Anderson, Fornell & Lehmann 1994). Quality has a positive impact on customer satisfaction which, in turn, generates organisations' profit (Anderson, Fornell & Lehmann 1994). Customers who are satisfied with products/services are likely to have positive attitudes which lead to frequent purchases, purchases in greater volume, and purchases of other goods and services offered by the firm (Anderson, Fornell & Lehmann 1994). When customers are satisfied, they become loyal customers, and loyal customers tend to buy more, accept higher prices, and spread positive word of mouth messages about the firm (Aydin & Ozer 2005). On the other hand, dissatisfied customers are more likely to search for more information about alternatives and are more likely to switch to competitors (Anderson & Srinivasan 2003). Moreover, dissatisfied customers are not willing to develop a closer relationship with their current service providers and may try to reduce dependence on that provider (Anderson & Srinivasan 2003). In sum, it can be concluded that satisfaction is the customers' evaluation of a product/service in terms of whether it has met their needs and expectations (Zeithaml & Bitner 2003). Business success depends on knowing, understanding, and meeting customers' needs and demands in order to create customer satisfaction. Customer satisfaction can be used as a potent competitive weapon by businesses in most industries. Many researchers have investigated the link between customer satisfaction and customer loyalty. They suggest that a highly satisfied customer is likely to become a loyal customer which in turn results in more profits and business success (Anderson, Fornell & Lehmann 1994; Finkelman, Cetlin & Wenner 1992; Smith, Bolton & Wagner 1999).

### 2.3.2 Factors influencing satisfaction with service providers

#### Relationships between expectation, actual performance, and perceived service quality

Cronin and Taylor (1992) provide evidence that **service quality** leads to customer satisfaction. There is a significant relationship between customer satisfaction and perceived service quality. Parasuraman, Zeithaml and Berry (1988) suggest that perceived service quality results from a comparison between expectations and actual performance. This perceived service quality plays a crucial role as an antecedent of customer satisfaction with service providers. Perceived service quality and satisfaction levels can be defined based on the gap between the levels of customer expectation and the levels of actual performance (Langevin 1988). The relationships among expectation, actual performance, and perceived service quality as shown in Figure 2.2 were proposed by Parasuraman, Zeithaml and Berry (1988).

**Figure 2.2: Relationships among expectation, actual performance, and perceived service quality**



Source: Adapted for this research from Parasuraman, Zeithaml and Berry (1988)

**Expectation** is a determinant of customer satisfaction which can be derived from word of mouth, expert opinion, publicity, and communication controlled by the service providers (Oliver 1980). The expectations customers have of a business can vary greatly according to their assessments of service quality resulting from comparisons between service expectations and the actual performance or perceived value (Parasuraman, Zeithaml & Berry 1988). Views about the level of service quality that should be delivered to meet customer's expectations can be seen as being determined by expectations about two factors – desired service and adequate service (Zeithaml, Berry & Parasuraman 1993, 1996). The desired service is the level of service that customers expect to receive whilst the adequate service is the minimum level of the service that customers find acceptable. It should be noted that companies at least need to offer/deliver an adequate service in order to retain customers.

**Perceived service quality** is influenced by consumer perceptions of service quality, marketing mix, brand name, and image of the company (Andreassen 1994). Some researchers have tried to understand the links between quality, customer satisfaction, and firms' performance. They propose that perceived service quality has a direct impact on how satisfied customers are with suppliers (Anderson, Fornell & Lehmann 1994). Fornell, Johnson, Anderson, Cha and Bryant (1996) suggest that perceived service quality is one of the determinants of customer satisfaction. Hence, satisfaction normally depends on customers' perceived value or perceived service quality (Ravald & Gronroos 1996).

### **The definition and measurement of service quality**

Services by definition are intangible and are not easily duplicated. On the other hand, quality is differentiable and stems from the customer's expectations (Khatibi, Ismail & Thyagarajan 2002). Gronroos (1990) proposes that service quality consists of two dimensions: technical quality (service production) and functional quality (delivery process). Technical quality is the quality of the service itself while functional quality can be seen as the quality of the service delivery process and includes such things as staff's service-mind or the manner in which personnel deliver the service. In fact, even when the technical quality or the quality of the service itself is excellent, the overall service quality may be negatively perceived and customers may still not be highly satisfied if the functional quality or service delivery processes are poor (Gronroos 1988).

The interactions between customers and service providers at all contact points, called **the service encounter**, can lead to the perceived service quality from the customer's point of view (Gronroos 1988). A service encounter can be defined as a 'dyadic interaction between a customer and service provider' (Surprenant & Soloman 1987, p. 87). Researchers in service quality theory suggest that it is important for service providers to achieve customer satisfaction in the service encounter (Parasuraman, Zeithaml & Berry 1985) since it has a critical impact on customer-perceived quality. Bitner, Booms and Tetreault (1990) suggest that in most service organisations, impressions of service quality are formed during the interactions between the customers and the firm's contact personnel. Consequently, service quality is highly dependent on the interactions between firms and customers.

### **The measurement of service quality**

Researchers and practitioners in the context of service quality theory suggest some methods to measure service quality. However, it is difficult to state which one is the best method for service quality measurement (Brady & Cronin 2001). This section reviews several works on service quality with the aim being to identify and select an appropriate framework that the current research can be based on.

For example, to measure perceived service quality, Gronroos (1988) proposes the following six criteria that can be used as a guideline for customers' evaluations with their perceived service quality. The Six Criteria of Good Perceived Service Quality proposed by Gronroos (1990) are shown below in Table 2.3.

**Table 2.3: The six criteria of good perceived service quality**

<b>Criteria</b>	<b>Definitions</b>
Professionalism and Skills	Outcome-related criteria: The service provider, its employees, operational systems, and physical resources have the knowledge and skills required to professionally solve problems.
Attitudes and Behaviour	Process-related criteria: The contact persons are concerned about the customers and genuinely interested in solving any problem in a friendly and spontaneous way.
Accessibility and Flexibility	Process-related criteria: The service provider, its location, operating hours, employees and operational systems are well designed and operated to be easy to gain access.
Reliability and Trustworthiness	Process-related criteria: The customers can rely on the service provider, its employees and systems to keep promises and perform with the best interest of the customers.
Recovery	Process-related criteria: whenever something goes wrong, the service provider will immediately and actively take corrective action.
Reputation and Credibility	Image-related criteria: The operations of the service provider can be trusted.

Source: Adapted for this research from Gronroos (1988)

Langevin (1988) argues that to measure service quality from the customer's point of view, consideration must be given to three main areas: quality, timeliness, and responsiveness. In addition, Garvin (1988) introduces eight characteristics that can be used to best describe quality. These eight characteristics include performance, features, conformance, reliability, durability, serviceability, aesthetics and customer-perceived quality.

Another well-known measurement method is proposed by Parasuraman, Zeithaml and Berry (1985). This group of researchers originally proposed that there are ten common factors that customers tend to rely on when they evaluate service quality: (1) reliability; (2) responsiveness; (3) competence; (4) access; (5) courtesy; (6) communication; (7) credibility; (8) security; (9) understanding and (10) tangibles. In 1988, these 10 factors were simplified and grouped into five underlying dimensions: tangibility, reliability, responsiveness, assurance, and empathy (Parasuraman, Zeithaml & Berry 1988). Consequently, this five-dimensional model has become well known and widely recognised as the 'SERVQUAL' approach used for the measurement of service quality as shown in Table 2.4 below.

**Table 2.4: Five dimensions of SERVQUAL**

<b>Dimensions</b>	<b>Definitions</b>
Tangibles	Tangibility can be viewed as physical facilities, equipment, and personnel appearance. For example, service provider's physical facilities are visually appealing, service provider has up-to-date equipment.
Reliability	Reliability can be viewed as an ability to accurately perform and deliver service as promised. For example, service provider is dependable and always delivers its service at the times it promises to do so.
Responsiveness	Responsiveness can be viewed as a willingness to help and provide prompt service to customer. For example, employees tell customers exactly when service will be performed and never too busy to respond to customer requests.
Assurance	Assurance can be viewed as knowledge and courtesy of employees including their ability to convey trustworthiness and confidence to customers. For example, employees instil confidence in customers and are consistently well-mannered with customers.
Empathy	Empathy can be viewed as the caring, individualised attention the firm provides its customers. For example, service provider has the customers' best interest at heart and understands customers' specific needs.

Source: Adapted for this research from Parasuraman, Zeithaml and Berry (1988)

### **Service quality assessment in the telecommunications industry**

Bolton and Drew's (1991) study of telephone services for the residential market argues that quality of service is the most important determinant of perceived service value which can enhance satisfaction level in customer's opinion. The result of their study is consistent with prior research concerning service quality. A key determinant of overall perceived service quality is the gap between actual performance and expectation.

As mentioned earlier, SERVQUAL is a tool that can be used to measure the level of perceived service quality. It focuses on the gap between expectation and actual performance. However, there have been some criticisms and several researchers argue against the original SERVQUAL. These researchers suggest that the disconfirmation model, or the gap score, of the original SERVQUAL can sometimes show a poor result in some industries (Babakus & Boller 1992; Brown, Churchill & Peter 1993; Carman 1990; Cronin & Taylor 1992). For example, Carman (1990) proposes that SERVQUAL cannot

be a standard measure that is appropriate in any service and that the measurement of SERVQUAL needs to be customised to the specific service. Likewise, Babakus and Boller (1992) argue that the service quality's dimensions can vary depending on the type of service being studied. In addition, Bitner, Booms and Tetreault (1990), propose an alternative method and define service quality as the customer's overall impression of the service.

As an outcome of these criticisms, some researchers have explored the alternative use of a 'performance-only' approach known as the SERVPERF method. This method was initially developed by Cronin and Taylor (1992). Cronin and Taylor (1992) undertook a comparison study of the SERVQUAL and SERVPERF approaches which used both methods to evaluate the levels of service quality in four service industries including, banking, pest control, cleaning, and fast food. The result indicates that SERVQUAL did not work well for all four service industries while SERVPERF had an extremely good fit in all four industries. The implication of this finding is that the performance-only approach can be applied much more readily to new service contexts. To support this idea, Lee, Lee and Yoo (2000) developed research focusing on the determinants of perceived service quality. The finding of their study supports the idea that the performance-based measures of service quality (SERVPERF) work better and detect more of the variations in service quality.

In addition, Wang, Lo and Yang (2004) used the measurement model to measure customers' perceived service quality in China's mobile phone market based on the SERVQUAL model. Some modification to the original SERVQUAL statements was made based on previous prevalent literature reviews, group discussions, and expert opinions in order to reflect the specific attributes of the mobile phone industry and the specific culture in China. They agree with a number of researchers (Babakus & Boller 1992; Brown, Churchill & Peter 1993; Cronin & Taylor 1992; Dabholkar, Thorpe & Rentz 2000; Oliver 1993) who argue that combining expectations and perceptions into a single measure can result in an approach which outperforms the SERVQUAL scale in terms of both reliability and validity.

Notably, since Wang, Lo and Yang's (2004) study focused on the mobile telecommunication market, durability and aesthetics were not considered relevant. Instead,

network quality was used in terms of 'performance' because it was one of the most important factors determining overall quality in the mobile phone market. Thus, instead of having only the original five SERVQUAL dimensions of tangibility, reliability, responsiveness, assurance, and empathy (Parasuraman, Berry & Zeithaml 1991; Parasuraman, Zeithaml & Berry 1988), Wang, Lo and Yang (2004) also included another antecedent factor, service quality, which is 'network quality' as it is believed to be the most important driver for customers' overall perceived quality evaluation in the mobile phone market. The results of Wang, Lo, Yang's (2004) study suggest that, in order for service providers to be successfully competitive, they must try to improve customer-perceived service quality by focusing on all six underlying factors including tangibility, reliability, responsiveness, assurance, empathy, and network quality. That is because these six factors are the antecedents to customers' overall evaluation of service quality. Service providers must try their best to improve service quality, deliver superior value, achieve higher customer satisfaction, and turn behaviour intentions of customer into the actual patronage if they want to create and maintain their competitive advantage.

Simply stated, because the SERVQUAL scale does not work well for some service industries, the combination of measures of expectation and perception into a single measure is used to reduce this problem and will result in a measure which outperforms the SERVQUAL score in terms of reliability and validity (Babakus & Boller 1992; Brown, Churchill & Peter 1993; Dabholkar, Thorpe & Rentz 2000). As a result, the service quality measurement of this present research will be based on the SERVPERF model as proposed by Cronin and Taylor (1992) along with reasonable modifications (Khatibi, Ismail & Thyagarajan 2002; Wang, Lo & Yang 2004).

To summarise, it has been noted that to measure the level of overall perceived service quality in different situations, different cultures, and different environments, some reasonable modifications of the service quality measurement methodology should be applied with the aim of outperforming the standard measurement tools and achieving better evaluated results in terms of validity and reliability. Good measurements allow service providers to know what needs to be improved regarding their service offerings. In addition, customers' perceptions of service quality play a very significant role in determining customer satisfaction, especially in service marketing. Improvements made to service quality will increase customers' satisfaction levels since service quality is a



measurable attribute with which customers can evaluate their satisfaction, especially in the service industry (Ismail & Khatibi 2004).

For the purposes of this research, a modification of service quality measurement method will be applied based on the methods proposed by the researchers discussed above. This approach will be outlined in detail in Chapter 3. The next section will provide an overview of customer satisfaction in the telecommunication industry.

### **2.3.3 Customer satisfaction in the telecommunication industry**

As mentioned earlier, to evaluate their level of satisfaction, customers begin by looking at quality. In the telecommunication industry, as the industry moves from a regulated market to a competitive environment, many organisations have invested heavily in increasing consumer satisfaction. This is driven by industry deregulation, and partly by the increased competition coming from international companies who offer more advanced technology and better service (Burnham, Frels & Mahajan 2003; Finkelman, Cetlin & Wenner 1992). Bruhn and Grund (2000) investigate the relationship between satisfaction and loyalty in several industries including telecommunication. They find that in the telecommunication market, satisfaction is an indicator of customer loyalty. Telecommunication service providers are better off in the long run if they improve satisfaction in order to minimise customers' defection (Stewart 1998).

Khatibi, Ismail and Thyagarajan (2002) studied the relationship between perceptions of perceived quality related to price and customer satisfaction in the Malaysian telecommunication industry. The study discovers that there is a significant correlation between customer satisfaction and service quality. The findings also indicate that there are four independent service quality factors which are the antecedents of customer satisfaction including understanding business needs, operating hours, fault reporting centre and response time. In order to improve customer-perceived quality which leads to increased customer satisfaction, service providers should concentrate more on the service quality aspects of their business rather than merely on customer satisfaction. In fact, improvements made to the service quality will also increase customer satisfaction levels. Wang, Lo and Yang (2004) further investigated the dynamic relationships between service

quality, customer value and customer satisfaction and their influence on customer behaviour in China's mobile phone market. The results indicate that network quality is one of the most important drivers of overall customers' perceived value which is derived from service quality, customer value, and customer satisfaction. In order to maintain a competitive advantage and enhance the degree of customer satisfaction, the finding suggests that service providers must attempt to improve their service quality, especially in their customers' eyes.

Some researchers in telecommunication literature propose that customer satisfaction is a valid predictor of customer loyalty (Gerpott, Rams & Schindler 2001; Kim & Yoon 2004). Eshghi, Haughton and Topi (2007) investigate the determinants of customer loyalty in the wireless telecommunication industry in the United States (USA) and propose that service providers are better off if they improve customer satisfaction in order to create true loyalty and minimise customer defection rather than only creating switching costs such as restrictive contracts. If they rely solely on switching barriers without concerning themselves with customer satisfaction, this will work for a period of time, but customers will immediately defect to a different carrier once they can access better alternatives (Eshghi, Haughton & Topi 2007).

To manage customer satisfaction in the telecommunication industry is difficult because of the diversity of services as well as the variety of customer segments that exist. The most basic segmentation criterion to classify the type of customers is to distinguish whether they are residential or corporate customers (Hahm, Chu & Yonn 1997). In this research, the residential market will be the target market that is investigated. According to Athanassopoulos and Iliakopoulos (2003), whose research focused on customer satisfaction of the residential customers of a major European telecommunication company, the antecedents of customer satisfaction in the telecommunication industry can be assessed through the performance of service providers with respect to their product, directory enquiry service, fault repair service, service provision, branch network, and billing system. In support of this idea, Finkelman, Cetlin and Wenner (1992) note that in order to increase customer satisfaction levels in the telecommunication industry, the company needs to focus on sales, provisioning/installation, product usage, repair/restoration, and billing system. They suggest that customers will become more demanding as the complexities of their lifestyle increase. Customers will seek more services that can save them time and

give them the ability to have control over their lives. Service providers including ones within the telecommunications industry, must realise that increasing competitive choices can enhance the level of customer satisfaction since it is one of the critical factors of business success.

Telecommunication industries in many countries have now been liberalised and have allowed foreigners to freely compete with the local providers. Several variables such as product usage, directory enquiry, fault repair, service provision, branch location network, billing system, installation, and sales channel are considered to have a strong impact on customer satisfaction in the telecommunications industry. Switching barriers may be applied to reinforce behavioural intention on customer loyalty but service providers are better off if they focus on improving customer satisfaction. Certainly, telecommunication service providers that satisfy customers can expect higher market shares and greater profitability. Satisfied customers can increase company revenues in a number of ways, including cross selling programs with current customers and acquiring new customers derived from the influence of positive word of mouth. That is, both service quality and customer-perceived value have a positive impact on customer satisfaction in the telecommunications industry.

Having discussed customer satisfaction and its advantages, as well as factors influencing satisfaction and customer satisfaction in the telecommunication industry in this section, the next section, Section 2.4, will discuss customer loyalty and retention which is one of the key factors for business success.

## **2.4 Customer loyalty and customer retention**

### **2.4.1 Defining ‘customer loyalty’ and ‘customer retention’**

**Customer loyalty** is an outcome of a customer’s purchase and use resulting from the comparison of the rewards and the costs of the purchase in relation to the anticipated consequences (Churchill & Surprenant 1982). Customer loyalty can be seen as a function of customer satisfaction (Oliver 1980). Business organisations not only need to attract new customers, but also must retain them to ensure their profit and success. Jacoby (1975)

advises that loyalty is a biased behavioural purchase process that is caused by the customer's emotional processes. The meaning of customer loyalty can be explained as the customer's intention to stay with the current service provider and, at the same time, their behaviour when they make frequent repeat purchases of their preferred brands (Dick & Basu 1994). Edvardson et al. (2000) define customer loyalty as a customer's intention to repurchase from the same supplier over time. For instance, a commitment that customers make to particular brands of goods or services is an indicator of their loyalty to these brands. Many times, service loyalty occurs when customers reject the competitors' offerings aimed at changing their purchasing behaviour. For this reason, customer loyalty can be seen as one of the most reliable predictors of a service firm's success (Nguyen & Leblanc 2001). In addition, customer loyalty can be described as the potency of the relationship between customers' attitude and their repetitive purchase behaviour (Dick & Basu 1994). In other words, there are two main concepts related to loyalty: behavioural loyalty and attitudinal loyalty.

In the earlier days, most researchers focused on the behavioural loyalty concept. For example, Newman and Werbal (1973) define loyal customers as customers who repeat purchase from preferred brands and do not search for other brand alternatives. Loyalty can be measured by several factors including proportion of purchase, purchase sequence, and probability of purchase (Dick & Basu 1994). Likewise, Tellis (1988) defines loyalty as repeat purchase frequency and suggests that customers always respond better to brands that they are more loyal towards. Nevertheless, these definitions do not pay much attention to understanding the underlying factors which contribute to repeat purchasing and their behavioural definitions. These definitions are also insufficient to explain how and why brand loyalty is important and have been developed because some factors, such as the lack of consumer choice, can force customers to appear to be loyal even though they are not (Day 1969; Jacoby & Kyner 1973).

On the other hand, more recently, loyalty has also been defined from the attitudinal perspective which includes cognitive, affective, and conative aspects (Dick & Basu 1994). Oliver (1999) proposes that loyalty develops from attitude to behaviour and states that there are four phases which a customer goes through to become loyal: the cognitive, affective, conative, and action phases. First, loyalty in the cognitive phase is based on performance level or prior knowledge and experience of consumers towards particular

brands with regard to such characteristics as price or feature. Second, in the affective phase, loyalty can be viewed as a liking or the customers' attitude toward a brand based on their cumulative satisfaction. However, at this affective stage, it is still possible for a customer to switch brands. The third phase, conative loyalty, is defined as a customer's behavioural intention to continue patronage of their preferred brands. At this stage, consumers are brought up to a stronger level of commitment and it is harder for any competitor to poach them than it is if they are at the phase of affective loyalty. Finally, the action phase is the stage in which motivated or intention factors contribute to loyalty, and are transformed into readiness to act. Action loyalty is, therefore, related to the concept idea of behavioural loyalty (Dick & Basu 1994; Oliver 1999).

In sum, it can be concluded that the sense of customers' loyalty encompasses intended behaviour and whether or not the intended behaviour finally occurs (Gustafsson & Johnson 2002). As has been discussed, it is important to note that customers may hold a favourable attitude toward a brand but not purchase it on multiple occasions because of some possible reasons such as their positive attitude toward other brands.

**Customer retention**, from the company viewpoint, can be defined as an action of businesses trying to keep existing customers by building and maintaining a good relationships with them and, at the same time, avoiding losing them to competitors (Burnham, Frels & Mahajan 2003). While revenues increase from the same customers, the average cost of serving them declines, which is why customer retention programs are considered one of the most important strategies for long-term business success (Rust & Zahorik 1993). The main purpose of all marketing activities of a firm is usually the attempt to develop, maintain and enhance its customers' loyalty toward its products or services because loyal consumers will buy larger quantities of the brands that they prefer and buy them more often (Dick & Basu 1994; Tellis 1988). This is because when customers are pleased and business can retain them for longer time periods, they are more likely to buy additional services and the firms may be able to charge a higher price by offering premium services (Zeithaml, Berry & Parasuraman 1996). In addition, when any unexpected problem occurs, most loyal customers will try to do something or at least ask for help rather than quietly defecting from the brand (Duffy 1998). For example, in order to increase customer's confidence, service providers should make it clear that they welcome

complaints and have clear procedures to handle them (East 2000). In sum, it is worthwhile for firms to put considerable effort into retaining loyal customers.

### **Business benefits of customer loyalty**

To attract new customers, companies must invest in advertising in order to sell their products or services but the money will be wasted unless the products or services are sold. Customers can have different reactions to marketing efforts depending on the factors underlying consistent purchase behaviour (Javis & Wilcox 1977), and new customers may not contribute to profit until they are kept for a period of time depending upon the business type/sector involved (Newman & Werbel 1973; Tellis 1988). Fornell and Wernerfelt (1987) point out that the relative costs of customer retention are substantially less than those of customer acquisition. Similarly, a number of researchers propose that increasing customer loyalty can lead to increasing profitability for businesses (Aydin & Ozer 2005; Bowen & Chen 2001; Devlin 2002; Finkelman, Cetlin & Wenner 1992; Hallowell 1996; Reichheld 1993; Reichheld & Teal 1996). This is because the total cost of acquiring new customers is higher than the cost of retaining current customers because finding new customers will take extra time, effort and money.

As a result, most businesses prefer to retain their valued customers and persuade them to become more loyal because this can result in greater income and profit. Without customer loyalty, service providers may not be able to retain their competitive advantage. This can be explained as loyal customers are easier to serve and make fewer demands on employees since they already know and understand the company's working processes (Chow & Holden 1997). Loyal customers appear to provide more repeat patronage and are less likely to shop around with competitors for better deals (Bowen & Chen 2001). In other words, generally, companies create profit from their long-term relationships (Reichheld & Teal 1996). The longer loyal and profitable customers stay with a business, the more profit that the business can gain from them. For example, Reichheld and Teal (1996), using the evidence from Bain & Company, note that the profits of businesses can increase by between 25% to 95% if the firm increases its number of loyal customers by 5%.

Basically, a range of advantages arise when businesses have loyal customers, including increased profitability, increases in price premiums, increases in long-term relationship

and commitment, increases in purchase intention and positive word of mouth, reductions in marketing and operating costs, and increases in switching barriers to prevent customers defect from their current service provider (Anderson & Sullivan 1993; Boulding et al. 1993; Bowen & Chen 2001; Murphy 2001; Reichheld & Teal 1996). This is why customer loyalty cannot be neglected and most companies must try their best to satisfy their customers in order to develop long-term relationships with them, and to ensure their customers become loyal.

From the customers' point of view, loyalty serves as a purchasing strategy that reduces risk when choosing to make a purchase from different vendors. Being loyal and trusting in their preferred brands can help customers avoid the risks associated with choosing to buy similar products/services offered by different vendors (Chow & Holden 1997; Puto, Patton & King 1985). Loyal customers can also be defined as customers who hold a favourable attitude toward their preferred brands which can result in repeat buying behaviour. Indeed, in increasingly competitive markets, having loyal customers and being able to expand the loyal customer base are seen as key factors in maintaining and developing a sustainable competitive advantage. These advantages include reducing marketing and operation costs, acquiring more customers by positive word of mouth, increasing market share, and increasing profits.

This section has examined definitions of customer loyalty and customer retention as well as emphasising their importance. Before discussing the important variables which have an impact on customer loyalty, the next section will discuss the correlation between customer satisfaction and customer loyalty.

#### **2.4.2 The correlation between satisfaction and loyalty**

It is widely recognised that customer satisfaction has a positive effect on customer loyalty (Bolton & Drew 1991; Gronholdt, Martensen & Kristensen 2000; Mittal & Lassar 1998). Hallowell (1996) proposes that customer satisfaction, customer loyalty, and a business's profitability are all related to one another (Murphy 2001; Reichheld 1993; Reichheld & Teal 1996). Researchers and practitioners in the context of satisfaction and loyalty indicate that satisfaction is linked to some aspects of loyalty (Anderson, Fornell & Lehmann 1994).

Customer satisfaction can be viewed as a strong predictor of customer loyalty and has been identified as an antecedent to customer loyalty (Anderson & Srinivasan 2003; Gronholdt, Martensen & Kristensen 2000). Customers who are completely satisfied are likely to repurchase up to six times more than those who are fairly satisfied (Jones & Sasser 1995). In highly competitive markets, high levels of satisfaction will lead to greatly increased customer loyalty and enhance the degree of customer loyalty. Expanding a loyal customer base is very important for generating long-term business financial performance since it can assist in improving business profitability (Murphy 2001; Reichheld & Teal 1996).

The idea of emphasising customer loyalty strategies along with satisfying customers appears to be worthwhile for most firms since business understands the profit impact of having a loyal customer base (Reichheld 1993). To remain successful over a long period, businesses need to understand the effects of the relationship between customer satisfaction and customer loyalty in their type of their business, and the businesses which they are competing with (Jones, Mothersbaugh & Beatty 2002; Jones & Sasser 1995). Companies are unavoidably required to identify and understand the effects of satisfaction and loyalty in order to keep their potentially profitable existing customers. The impact of this link depends varies with each customer according to their prior experiences (Rust, Lemon & Zeithaml 2004).

Chandrashekar, Rotte, Tax and Grewal (2007) notice that strong satisfaction is enough to translate into loyalty but weakly held satisfaction is not sufficient (Anderson & Srinivasan 2003; Chandrashekar et al. 2007). This can be explained as every customer may have different characteristics, and their satisfaction thresholds therefore can be different. Sometimes, customers may indicate that they are satisfied with their current service providers but still defect. At the same level of related satisfaction, the degree of customer loyalty towards the firm together with their repurchase intention rate can also vary among different customer groups (Mittal & Kamakura 2001). Customers with lower expectation thresholds are more likely to repurchase their preferred brands and become more loyal than those who have higher expectation thresholds (Mittal & Lassar 1998; Mittal & Kamakura 2001).



Even though customer satisfaction plays a vital role and has been assumed to be an antecedent of customer loyalty and loyal customers are probably satisfied, some researchers argue that higher satisfaction levels do not necessarily result in higher customer loyalty (Jones & Sasser 1995; Oliver 1999; Stewart 1997). There is some evidence that customers who are satisfied with their current service providers sometimes defect to other service providers. For example, Jones and Sasser (1995) indicate that dissatisfied customers tend to defect from their current service providers while satisfied customers may or may not stay with their current service providers. In addition, Reichheld (1996) notes that approximately sixty five percent of customers who defected from their current service providers reported before defection that they were satisfied or sometimes even very satisfied.

Oliver's (1999) study indicates that although satisfaction is a necessary step in creating loyalty, it has become less significant since there are some additional factors involved such as convergence of product, convenience, personal considerations, and social force. He suggests that true loyalty can be achieved better when these additional factors are also present. Similarly, other researchers suggest that there are some factors that can make customers appear to be deeply loyal even though they are not. These factors include government regulations that limit competition, high switching costs, lack of choice, and aggressive customer retention programs (Day 1969; Jones & Sasser 1995; Lemon, Tiffany & Russell 2002; Rust, Lemon & Zeithaml 2004).

As mentioned earlier in Section 2.3.1, in a highly competitive business environment, products and services are rarely seen to be perfect, for customers become harder to completely satisfy. The total investment required to improve the level of satisfaction to the extent that all customers are completely satisfied may not be worthwhile and cannot provide attractive financial benefits for companies. In most cases, to gain a good and strong relationship between companies and customers, a level of satisfaction below the point of total satisfaction, but above the minimum satisfaction threshold can be enough to translate to loyalty (Jones & Sasser 1995; Zeithaml, Berry & Parasuraman 1993, 1996). Yi and La's (2004) study about what influences the relationship between customer satisfaction and repurchase intention, argues that loyal customers tend to consider the gap between expectation and actual performance (disconfirmation) less than non-loyal customers. This is because customer loyalty has a positive impact on customer satisfaction

and loyal customers have more favourable attitudes and higher intentions to repurchase. This is why loyal customers seem to be more positive in their judgments related to satisfaction.

In this section, the relationships between customer satisfaction and loyalty have been examined. Particular attention was paid to the differences, similarities, and associations between customer satisfaction and customer loyalty. Customer satisfaction is an essential attribute of customer loyalty. However, customer satisfaction alone may not guarantee the creation of customer loyalty. Thus, Section 2.4.3 will explore what, apart from customer satisfaction, are the factors that can strengthen a service provider's ability to create customer loyalty.

### 2.4.3 Factors influencing customer loyalty

Based on the existing literature, there are several key factors, in addition to customer satisfaction, that contribute to customers' loyalty. They include **corporate image** (Anisimova 2007; Aydin & Ozer 2005; Methlie & Nysveen 1999; Nguyen & Leblanc 2001), **customer switching costs** (Aydin & Ozer 2005; Burnham, Frels & Mahajan 2003; Jones, Mothersbaugh & Beatty 2002; Methlie & Nysveen 1999), **perceived value** (Bolton & Drew 1991; Cronin & Taylor 1992; Monroe 1991; Parasuraman, Zeithaml & Berry 1988; Ravald & Gronroos 1996), and **trust** (Aydin & Ozer 2005; Lau & Lee 1999). An overview of each factor and its impact on customer loyalty is now provided.

#### 2.4.3.1 Corporate image

As mentioned earlier in Section 2.2.2, corporate image plays a vital role for every business, not only for attracting new customers but also for retaining existing ones (Andreassen & Lindestad 1998). Several researchers suggest that there is a strong relationship between corporate image and customer loyalty. A company or service provider who has a good corporate image is likely to keep its loyal customers (Andreassen & Lindestad 1998; Fombrun & van Riel 1997; Greyser 1999; Hall 1992; Nguyen & Leblanc 2001; Yoon, Guffey & Kijewshi 1993). Customer perceptions of company's

image can influence the likelihood of their repurchase intentions and loyalty (Reynolds, Darden & Marktin 1974 - 1975).

Martensen, Gronholdt and Kristensen (2000) suggest that, in the telecommunications industry, corporate image is an important driver of customer satisfaction and loyalty while perceived quality has a relatively minor impact. When services are difficult to evaluate, corporate image is believed to be an important factor that influences perceptions of quality, value, customer satisfaction, and customer loyalty (Andreassen & Lindestad 1998). Customer loyalty and the likelihood of customer recommendations can be enhanced by making corporate image more favourable (Bontis, Booker & Serenko 2007). Such a favourable corporate image plays a vital role on generating a business's superior profitability (Robert & Dowling 1997; Vergin & Qoronfleh 1998). A favourable image encourages shareholders to invest in a company, attracts good staff, retains customers and can result in superior overall returns and profits (Robert & Dowling 1997; Vergin & Qoronfleh 1998). Corporate image should be considered and managed as a valuable long-term corporate asset (Chun 2005; Wood 2000). To illustrate, the study of Melewar, Husser and Srivoravilai (2005) about the corporate visual identity of France Telecom's re-branding is a good example. The research result confirms that a strong corporate image can be used as a powerful weapon for gaining an advantage over competitors and successful corporate brand management can, in turn, result in customer loyalty (Melewar, Husser & Srivoravilai 2005).

Corporate image can be used to predict service providers' performance and can be considered the most reliable predictor of whether a service provider has the ability to meet customer' desires (Nguyen & Leblanc 2001). Corporate image can be established and developed in the consumers' mind through communication and experience (Andreassen & Lindestad 1998). Andreassen (1994) suggests that corporate image is positively correlated with customer satisfaction and loyalty. When customers are satisfied with the services, their attitude toward the company will be improved and they are likely to become loyal customers (Andreassen & Lindestad 1998). Reichheld and Teal (1996) recommend that motivated and happy employees can build greater customer satisfaction which leads to improving the long-term relationship between a company and its customers. Further, it is widely believed that satisfied and happy customers will extend their referrals, endorsements, spreading their approval via word of mouth which can have a crucial effect

on generating a superior corporate image and can result in encouraging existing and potential customers become loyal (Jones & Sasser 1995; Zeithaml, Berry & Parasuraman 1996). Word of mouth is viewed as one of the most important factors not only for improving corporate image but also for enhancing the level of loyalty between customers and service providers. A positive image among customers can be improved by focusing on customer satisfaction and can thereby create customer loyalty (Bontis, Booker & Serenko 2007).

The extrinsic characteristics of service providers can have a significant influence on its corporate image which positively affects the firms' customer retention (Nguyen & Leblanc 2001). That is, tangible elements such as personal contact and physical environment can be used to create an optimistic impact on the corporate image (Nguyen & Leblanc 2001). Rather than only focus on the technical aspects of the product, focusing on the extrinsic characteristics of the product such as making the product pleasant to look at and nice to feel and touch, is always considered a great strategic marketing technique to develop corporate image (Lau & Lee 1999). LeBlanc and Nguyen (1996) identify five factors of corporate image which are: 1) corporate identity which is associated with the personality and distinguishing features of a company such as company name, logo, prices charged for services, level and quality of advertising that can be easily recognised by customers; 2) reputation which is described as the consistency of an organisation's action over time; 3) service offering which can be described as consisting of core and additional services; 4) physical environment such as decoration, atmospherics, layout, and lighting in the office, the appearance of buildings and grounds, parking facilities and 5) personal contact, including a friendly and courteous manner on the part of staff, responsiveness of staff, well-groomed and neat appearance, and technical support provided. In sum, a positive corporate image is likely to attract and keep loyal customers (Fombrun & van Riel 1997; Greyser 1999; Hall 1992; Yoon, Guffey & Kijewshi 1993). Customer perceptions of a company's image can have an impact on their repurchase intentions and loyalty (Reynolds, Darden & Marktin 1974 - 1975). Since a good corporate image has the potential to increase an organisation's competitiveness, business firms that have a good understanding of the image evaluations of customers will gain a strategic advantage when developing advertising strategies aimed at creating customer loyalty (LeBlanc & Nguyen 1996).

This section discussed the relationship between corporate image and customer loyalty. The next section will present more details about customer switching costs which is another factor that influences customer loyalty.

#### **2.4.3.2 Customer switching costs**

Switching costs are defined as the one-time costs that customers associate with the process of switching from one service provider to another (Burnham, Frels & Mahajan 2003). Consumers will make their decision about whether to stay with their current provider or switch to another according to their perception of what they get and what they must sacrifice (Ravald & Gronroos 1996). Consumers will not switch if they believe that the benefit they will gain from their future provider is less than the switching cost they have to pay. Often, customers may not have any loyalty to their current service providers, but still remain in the business relationship because of 'spurious loyalty' based on factors such as habit or switching costs (Kim & Yoon 2004, p. 757). In addition, according to Beatty and Smith (1987), around 40% to 60% of customers come to the same store to purchase because of habit. Thus, habit can be viewed as one of the switching barriers that prevents customers from switching to competitors.

There are several types of switching costs such as financial or economic costs, evaluation costs, learning costs, set-up costs, and costs of convenience (Burnham, Frels & Mahajan 2003; Hu & Hwang 2006). For example, high-speed internet service providers may offer two-year contracts with a special price package to the customers. If customers want to switch to other internet service providers, they will have to pay a penalty charge. Another example is that customers will have to wait for five business days in order to get their high-speed internet completely set up and ready to use. If they attempt to change or switch to an other service provider, they will have to waste their time and money again to get the service installation to be ready to use the service from another internet provider. Burnham, Frels and Mahajan (2003) developed a switching cost typology and identified three types of switching costs: (1) procedural switching costs, primarily involving the loss of time and effort. Customers' perceptions of procedural switching costs may be increased when they are more aware of product complexity or provider heterogeneity, or when customers have their investments with the provider in terms of breadth of use, and extent of modification;

(2) financial switching costs, mainly involving the loss of financially quantifiable resources including benefit loss costs and monetary loss costs. Customers' perceptions of financial switching costs may be increased by increasing their perceptions of product complexity, and by encouraging broader product use; and (3) relational switching costs, involving psychological or emotional discomfort due to the loss of identity and the breakdown of relationships such as personal relationship loss and brand relationship loss costs. This kind of switching cost may be increased by increasing customers' awareness of their perceptions of provider heterogeneity, by encouraging broader product use, and by reducing the attractiveness of alternative providers.

### **Advantages of switching costs**

Customer defection refers to a customer's decision to terminate a business relationship with a particular service firm (Stewart 1998). Some business analysts suggest that consumers consider switching costs as barriers which arise when attempting to defect or switch from their current service providers. As a result, these barriers can reduce consumers' actual switching behaviour (Weiss & Anderson 1992). Furthermore, researchers suggest that switching costs can have both direct and indirect effects on customer retention (Lee, Lee & Feick 2001). To support this idea, Ranaweera and Prabhu (2003) propose that, from the consumers' point of view, switching costs act as barriers for them when they want to change service providers. There are several times that customers may not feel loyal to their current service providers but still remain in the business relationship (Kim & Yoon 2004). By creating switching costs, service providers are likely to be able to retain more customers even if they are not highly satisfied. However, some researchers suggest that customers can become offended if these switching costs lead to a perception of being forced into too much commitment (Withey & Cooper 1989). Furthermore, service providers in the telecommunication market are better off in the long run if they improve customer satisfaction in an attempt to minimise customers' defection (Stewart 1998). Thus, an ideal solution for service providers should be an appropriate combination of switching barriers and adding value to their services (Ranaweera & Prabhu 2003).

In sum, as it has been noted, switching costs play a crucial role in customer retention and customers' intentions to stay with their existing provider (Burnham, Frels & Mahajan 2003; Hu & Hwang 2006; Kim & Yoon 2004; Lee, Lee & Feick 2001; Ranaweera & Prabhu 2003). There are several types of switching costs, based on customer perceptions, that can occur when customers want to switch from their current service provider to another such as financial switching costs, learning costs, set-up costs and costs of convenience. These types of switching costs significantly influence consumers' intentions to stay with their current service providers. These switching barriers can work effectively without creating customer resentment and service firms can benefit if the firm adopts a combined strategy focusing on the right balance between increasing customer satisfaction and switching barriers. The next section provides details regarding the definition and advantages of perceived value which is considered a further factor that can enhance the level of customer loyalty.

#### **2.4.3.3 Customer perceived value**

Customer perceived value can be defined as the consumers' overall assessment of the utility of products or services based on perceptions of what is received and what is sacrificed (Monroe 1991; Parasuraman, Zeithaml & Berry 1988). Simply stated, customer-perceived value is the ratio between perceived benefit and perceived sacrifice in the customer's eyes. The perceived sacrifice includes all the costs the customer faces when they are in the process of purchasing such as purchase price, acquisition costs, installation, repairs and maintenance, risk of failure or poor performance (Monroe 1991; Parasuraman, Zeithaml & Berry 1988). The perceived benefits include physical and service attributes, technical support, and other indicators of perceived service quality (Monroe 1991; Parasuraman, Zeithaml & Berry 1988). Parasuraman, Zeithaml and Berry (1988) point out that perceived value is subjective and individual, and therefore varies among consumers. That is, different customers might evaluate the same product or service differently on different occasions. Cronin and Taylor (1992) suggest that customer perception of service quality can lead to customer satisfaction, and there is a significant relationship between the overall customer satisfaction level and overall customers' perceived value which can be transferred to increased customer loyalty.

If a company or service provider wants to increase levels of customer-perceived value, it can do so either by providing more perceived benefits and/or reducing customer-perceived sacrifice (Ravald & Gronroos 1996). Increasing the benefits to the customer means adding something that the customer perceives is important, beneficial, and valuable to the core product/service. For example, when an internet provider provides a good and stable internet signal plus superior supporting services (such as money-back guarantees, good after sale service, excellent repairs and maintenance), it will increase the benefits perceived by the customer. On the other hand, reducing customer-perceived sacrifice can be done when the service provider has a thorough understanding of customers' needs and their preferences. For instance, an internet provider may offer the same service package/plan as their competitor with a lower price, or may improve the convenience of installation procedures without extra charge. These will reduce the perceived sacrifice in the customers' perception. In fact, increasing customer-perceived value can be done either by increasing customer-perceived benefits or by minimising customer-perceived sacrifice. By adding more perceived value to the service, customer loyalty can be achieved. Since perceived value is essential to creating customer loyalty, the antecedents, benefits, and measurements of perceived value both in general and in the telecommunication industry will now be discussed in more detail.

### **The antecedents, benefits, and measurements of perceived value**

Research evidence suggests that customers who perceive that they receive 'value for money' are more satisfied and tend to become loyal customers more often than customers who do not perceive they received 'value for money' (Zeithaml, Berry & Parasuraman 1996). Bolton and Drew (1991) note that service quality is the most important determinant of perceived value. They also point out that perceived value is positively related to behavioural intentions (repeat purchase intentions), and the performance level from the customer's viewpoint has a direct effect on their quality and value assessment of the services. Customers who remain with a firm for a longer period of time because they are pleased with the perceived quality and value of the services tend to buy more additional services and spread favourable word of mouth messages and have a willingness to recommend the firm to others (Boulding et al. 1993; Parasuraman, Zeithaml & Berry 1988; Zeithaml, Berry & Parasuraman 1996). In such cases, a higher price compared with other



companies may be acceptable since customers are committed to retaining a long-term relationship with the firm (Zeithaml, Berry & Parasuraman 1996).

In a study on services of dentists, auto services, restaurants, and hairstylists, McDougall and Levesque (2000) conclude that customer-perceived value represents an important contribution to customer loyalty. Some researchers suggest that perceived value is a critical determinant of customer repurchase decisions (Sweeney, Soutar & Johnson 1997). Choi, Cho, Lee, Lee and Kim (2004) argue that perceived value can directly and indirectly influence customer behavioural intentions. Patterson and Spreng (1997) conducted research on repurchase intentions of consultancy service customers and found that the effects of perceived value on repeat purchase intention were mediated through satisfaction.

Perceived value, from the service providers' standpoint, should be viewed as a major competitive weapon and can be used to create and improve their sustainable competitive advantage (Devlin, Gwynne & Ennew 2002; Eggert & Ulaga 2002; Khatibi, Ismail & Thyagarajan 2002). Lovelock (1991) states that it is the customers' perceived value that will guide their repurchase decisions. Similarly, a number of researchers suggest that perceived value can be seen as a critical factor for a business's success as it is considered to be an essential factor for every business in a competitive environment (Aydin & Ozer 2005; Parasuraman, Zeithaml & Berry 1985; Zeithaml, Berry & Parasuraman 1996). The customers' perceived value can be viewed as a determinant that signals whether a customer will remain with or will defect from a company (Zeithaml, Berry & Parasuraman 1996). The correlation between customers' perceived value and customers' behavioural intention is highly positive. Such a positive correlation is likely to strengthen the relationships between firms and customers. As a result, these relationships lead to customers' intentions to increase the volume of their purchases and their willingness to pay a premium price to their preferred service providers.

Wang, Lo and Yang (2004) have developed a set of questions to measure customer-perceived value based on Cronin, Brady and Hult (2000). These measures were developed to ask customers to evaluate whether 'overall, the chosen service is value for money', 'the chosen service is worth what is given up such as time, energy and effort' and 'compared with the offerings of major competitors, the transaction with this service provider is a good choice'.

According to Khatibi, Ismail and Thyagarajan's (2002) study about the antecedents of customer loyalty in the telecommunications market if companies want to enhance customer loyalty, they must continuously improve their overall perceived value in their customers' eyes. To improve customers' perceived value, there are five important identified variables that service providers must take into consideration including channel of ordering, operating hours, fault reporting centre, response time and restoration time that have a strong correlation with customer loyalty (Khatibi, Ismail & Thyagarajan 2002).

In sum, customer-perceived value can easily be thought of as the discrepancy between total perceived get (benefits) and total perceived give (sacrifices). However, perceived cost might extend beyond monetary costs. It might also include temporal costs, social costs and psychological costs. In the meantime, total get (perceived benefit) extends its scope beyond the functional benefits derived from product features and can also include social or psychological benefits. Moreover, customer-perceived value can be viewed as a competitive weapon and can be used to enhance the levels of customer satisfaction which consequently leads to increased levels of customer loyalty.

Apart from the factors that have been discussed, previous literature suggests that trust is another factor assumed to have an impact on customer loyalty. Trust will be discussed in more detail in the next section.

#### **2.4.3.4 Trust**

Trust is defined as the expectation of parties in a transaction and the risk associated with such transactions (Deutsch 1958). Some researchers suggest that it can be defined as a willingness on the part of individuals to rely on an exchange partner to fulfil their needs (Koller 1988; Moorman, Zaltman & Deshpande 1992). This willingness arises from an expectation of the other party based on past experiences that the other party will provide and create a positive outcome (Deutsch 1958). Morgan and Hunt (1994, p. 23) conceptualise trust as 'the confidence in an exchange partner's reliability and integrity'. Ba and Pavlou (2002) define trust as the subjective assessment by one party that another party will perform a particular transaction according to his or her confident expectations in an environment characterised by uncertainty. Doney and Cannon (1997) argue that an

understanding of trust is essential for understanding interpersonal behaviour in economic exchanges.

Based on the study of Lewis and Weigert (1985), trust can be divided into two types: cognitive trust and emotional trust. Emotional trust is based on ones' feelings that can be motivated by strong positive affect for the object being considered while cognitive trust is based on good logical reasons (Lewis & Weigert 1985). In general, ones' trusting behaviour can usually be derived from a combination of both. Some researchers argue that there are two distinct types of trust – benevolence trust and credibility trust (Doney & Cannon 1997; Ganesan 1994). Benevolence trust refers to the belief that one partner is sincerely interested in the other partner's welfare and has intentions and motives beneficial to the other party even if the environment and circumstances may be changed. Sellers who are concerned with the outcomes of buyers along with their own will be trusted to a greater extent than sellers who are interested only in their own welfare (Ganesan 1994). Credibility trust refers to the belief that the other party is honest, reliable, and competent. In brief, individuals are trusted based on their reputation, which is based on what they have done in the past (Chow & Holden 1997).

### **Benefits and advantages of trust**

As the competitive environment becomes more and more intense and brand loyalty is harder and harder to achieve, businesses across industries face a new mutual threat; deal loyalty (loyalty to a particular deal or promotion) instead of brand loyalty (loyalty to the whole brand). Trust can be viewed as an antecedent of customer loyalty (Dick & Basu 1994; Lau & Lee 1999). To create customer loyalty toward a brand, building long-term relationships with customers in order to win their trust is considered advantageous (Morgan & Hunt 1994). That is because trust is likely to enhance the degree of customer loyalty (Jones & Sasser 1995). Researchers suggest that building trust is important to create long-term relationships between business firms (sellers) and customers (buyers) (Anderson & Narus 1990; Lau & Lee 1999). When consumers have trust in the products or services of their preferred brands, they are willing to purchase more of the brands without the need to be heavily persuaded, and this can result in lower advertising and other related costs (Murphy 2001). In addition, there are occasions that satisfaction alone may not be sufficient to ensure a good long-term relationship between a business and its customers. As

such, trust can be viewed as being complementary to satisfaction, in ensuring long-term relationships and strengthening customer loyalty (Hart & Johnson 1999; Morgan & Hunt 1994). Adler (2001) suggests that building trust in doing business can greatly improve the business's effectiveness. Building trust in a brand is always considered one of the best ways to create customer loyalty (Lau & Lee 1999). On the other hand, lack of trust in a business, especially in one characterised by dishonesty and cheating, could lead to a business's failure (Granovetter 1985).

When buyers have trust in a seller, it will affect their relationship in three ways: (1) it reduces the perception of risk that may occur during and after the exchange; (2) it increases the confidence of the buyer that all unfairness will be resolved over a long period; and (3) it reduces the transaction costs in an exchange relationship (Ganesan 1994). Ba and Pavlou's (2002) study suggests that the seller's capacity to build up trust is very important because it can have an effect on the business transaction by generating price premiums, while buyers will have a willingness to pay these premium prices. Similarly, Aydin and Ozer (2005) studied the antecedents of customer loyalty in the telecommunications market. They suggest that trust is the most important factor among the three factors, which create customer loyalty namely trust, switching cost, and service quality.

It is important to note that trust is about perceptions. A seller and buyer must have their perceptions to trust each other in order for them to make an effective exchange (Hawes, Mast & Swan 1989). In addition, since trust is a willingness to rely on other parties in whom one has confidence, when the buyers trust the sellers, it affects their purchasing behaviour (Chow & Holden 1997). In sum, trust has strong positive effects on customer loyalty and customer retention (Dick & Basu 1994; Lin & Wang 2005). Trust in a brand is essential and is a key factor for a business to attain customer loyalty (Lau & Lee 1999).

This section has examined some factors that can encourage customer loyalty. Further details regarding each customer loyalty research in the telecommunication industry is discussed in the next section.

#### 2.4.4 Loyalty in the telecommunications industry

Edvardsson et al. (2000) indicate that customer loyalty has a positive impact on companies' profitability especially for the service sector such as the telecommunications industry. The degree of customer loyalty in the telecommunications industry is mostly derived from customer satisfaction (Bruhn & Grund 2000). Lin and Wang (2005) investigate the determinants of customer loyalty in the mobile commerce context in Taiwan. The result supports other studies and indicates that there are some important factors that have an impact on customer loyalty including perceived value, trust, habit, and satisfaction. The researchers also note that customer satisfaction plays a crucial intervening role in transforming perceived value and trust into loyalty. Nevertheless, the researchers conclude that the concepts of perceived value, trust and customer satisfaction cannot substitute, but need to complement, each other (Lin & Wang 2005).

Nguyen and Leblanc's (2001) study about the corporate image of telecommunications companies indicates that corporate image can also be viewed as one of the underlying factors influencing customer loyalty. The results of their study reveal that the level of customer loyalty tends to be higher when perceptions of corporate image are strongly positive. In other words, corporate image and corporate reputation play a vital role in improving customer loyalty. In addition, because clients' presence and participation are always parts of the service delivery process, tangible elements such as personal contact and the physical environment experienced in the process of the service encounter can be used to improve customers' perceptions of the corporate image. which, in turn, results in higher levels of loyalty (Bitner, Booms & Tetreault 1990; Nguyen & Leblanc 2001).

The more loyal customers a service provider has, the lower its average unit cost will be, and the better its operating performance will be. The study of Hu and Hwang (2006), of the Taiwanese mobile market, indicates that in a saturated market, retaining existing customers and encouraging them to increase usage of services is more important than gaining new subscribers in terms of being cost effective. It is necessary for every service provider in this industry to retain their current customers by investigating the variables that affect customers' switching behaviour because it is widely accepted that the cost involved

in gaining new subscribers is higher than the cost of retaining old subscribers (Aydin & Ozer 2005; Devlin 2002; Finkelman, Cetlin & Wenner 1992).

The study of Aydin and Ozer (2005) about antecedents of customer loyalty in the telecommunications market further indicates that consumers' perceived service quality is a necessary, but not sufficient, condition for customer loyalty. In the telecommunications market, companies lose some of their customers every month, and the negative impact of word of mouth can cause huge damage to companies. The research findings indicate that of the three factors which create customer loyalty (trust, switching cost, and customer satisfaction), trust is the most important. The relative significance of these three factors is that trust comes first, followed by switching costs, and finally service quality (Aydin & Ozer 2005). Consumers consider switching barriers when they attempt to switch from one service provider to another, and these barriers tend to diminish consumers' actual switching behaviour (Weiss & Anderson 1992). Thus, switching barriers should be considered as switching costs (Hu & Hwang 2006). As discussed, switching costs can be classified as: procedural switching costs; financial switching costs; and relational switching costs (Burnham, Frels & Mahajan 2003). These three types of switching costs have a negative correlation with consumers' intention to switch service providers. However, financial switching costs can lock customers into remaining with the company over only a short period of time as it nurture only behavioural but not attitudinal loyalty. It is nurturing attitudinal loyalty which is the fundamental aim of the customer relationship management. In fact, in telecommunications markets, there are very slim price differences among the main competitors, and financial costs seem not to be at a high enough level to discourage customers from switching to a different provider (Hu & Hwang 2006). Therefore, telecommunications service providers should focus more on procedural and relational switching costs because these two types of switching cost play a more significant role in consumers' switching behaviour.

This section has outlined what variables are the underlying factors that impact on customer loyalty in the context of the telecommunications market. Section 2.5 will now discuss the research and the specific research aims and objectives. In addition, all hypotheses related to the research objectives will be developed.

## **2.5 Proposed research, research questions, theoretical framework, and hypotheses**

The previous sections have reviewed literature about the background theories in consumer decision making, customer satisfaction, customer loyalty and retention both in general and in particular for the telecommunications industry. This section builds on the literature to propose a theoretical framework linking the correlations between those three main areas. The research framework will focus on the high-speed internet service industry in Thailand.

For high-speed internet providers to understand their customers' decision making processes, it is essential that they understand the critical factors that influence customers' selection of a service provider as well as the drivers of customer satisfaction and customer loyalty. Nevertheless, there appear to be no existing research that specifically investigate these three main areas in the high-speed internet market in Thailand. This research, therefore, will be the first research which investigates these three main areas from the consumer's perspective in Thailand. The variables studied in this study cover consumer decision making, customer satisfaction and customer loyalty.

This research topic is important because high-speed internet services are becoming more popular and the rapid development of information technologies is affecting almost every aspect of people's lives. The findings of this research will be very useful for service providers in the high-speed internet market sector, because they will identify the most important variables, from the customer perspective, that influence customers' selection, customer satisfaction, and customer loyalty in order to retain existing customers as well as acquire new ones.

### 2.5.1 Research questions

The three main research questions are:

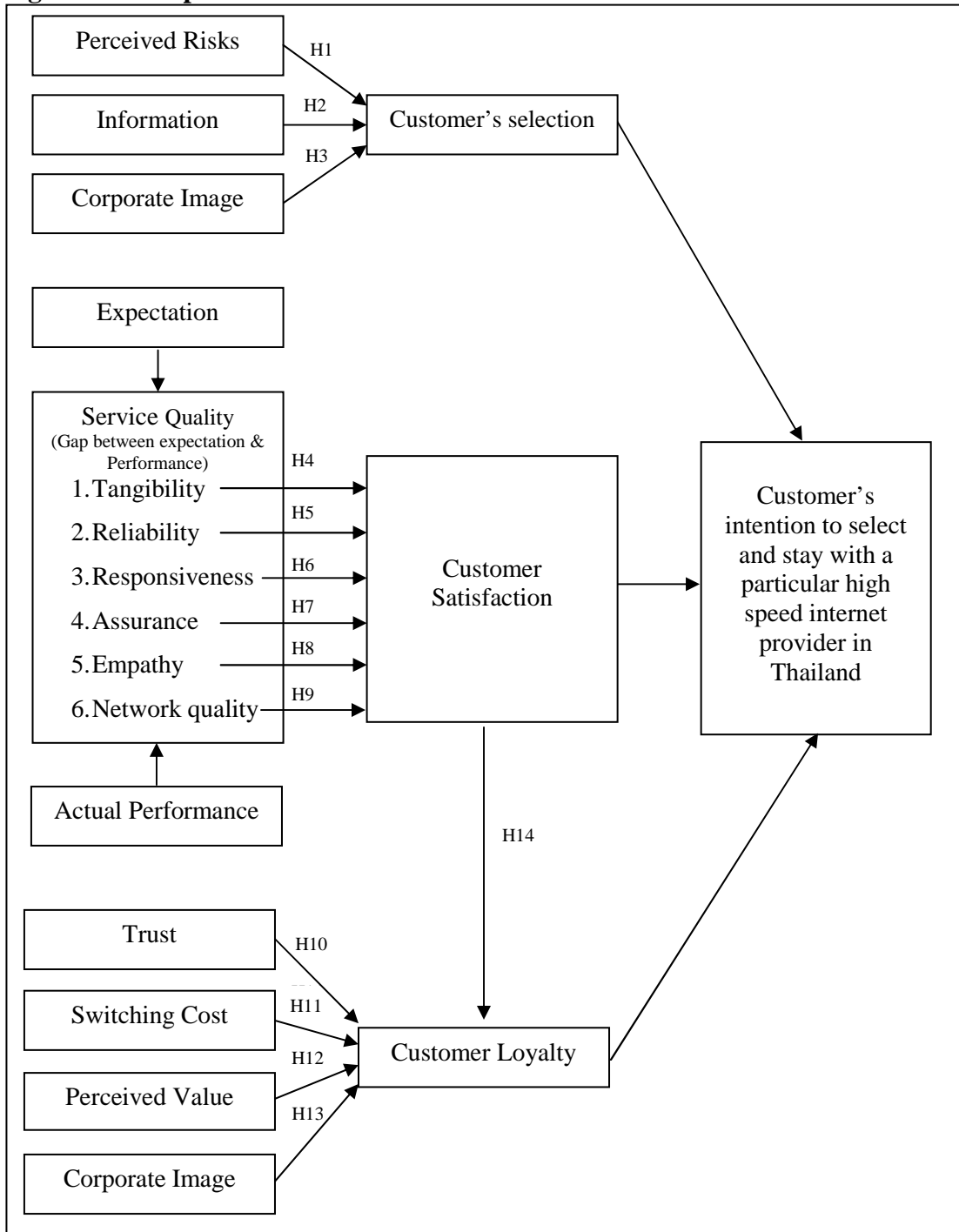
1. What are the factors that influence customers' selection of high-speed internet service providers in Thailand?
2. What are the factors that influence customer satisfaction with high-speed internet services in Thailand?
3. What are the factors that influence customer loyalty to high-speed internet service providers in Thailand?

### 2.5.2 Theoretical framework

To appropriately answer these research questions, the proposed model will generally focus on investigating underlying variables that have an impact on customers' intention to select and stay with a particular high-speed internet service provider. Based on the literature reviewed, the proposed model (theoretical framework) explores three separate issues (customers' selection of service provider, customer satisfaction, and customer loyalty). It is proposed, based on the previous literature reviewed, that the first issue, customer selection of service provider is influenced by three variables (perceived risks, information, and corporate image). The second issue, customer satisfaction, is proposed to be determined by service tangibility, reliability, responsiveness, assurance, and empathy. In this second analysis, based on the study of Wang, Lo and Yang (2004) which investigates factors that influence customers' perceptions of service quality in the telecommunications industry, another independent variable (network quality) is included in order to measure customers' perceived service quality in the Thai high-speed internet industry. This second analysis aims to establish the relationships between these six independent variables and the level of customer satisfaction in the Thai high-speed internet market. The third issue focuses on factors that can enhance the level of customer loyalty. According to the literature reviewed, there are five independent variables assumed to be involved in this final analysis including trust, switching costs, perceived value, corporate image, and customer satisfaction. The proposed model (Figure 2.3) and all the hypotheses which will be tested in the context of Thai high-speed internet market are outlined below.



**Figure 2.3: Proposed model**



Source: Developed for this research

### 2.5.3 Hypotheses

To answer the research questions, a series of hypotheses was developed to explore the factors which determine each of three main areas being investigated in the context of Thai household high-speed internet market. These three main areas influence the customers' overall intentions to select and stay with particular service providers. The hypotheses are presented in three sub-sets below.

#### A) Customers' selection of providers

In the first analysis, there are three independent variables that are believed to influence customers' selection of high speed internet service provider. These three variables are perceived risks, information, and corporate image. Further details of these three variables and related hypotheses are discussed below.

##### **Perceived risks**

Perceived risks can be defined as the probability of any loss that can occur as the result of using a product or service and the importance level of that loss (Forsythe et al. 2006; Peter & Tarpey 1975). Murray (1991) suggests that the concept of risk implies that consumers make their purchase decision in an uncertain situation regarding the desired service/product. Based on the literature reviewed, there are several types of perceived risks including financial risk, performance/product risk, and time and effort risk. Consumers cannot always be certain that the planned purchase will allow them to achieve a satisfactory procurement (Cox & Rich 1964). For example, if there is a high level of perceived risks associated with choosing an alternative service provider, customers are likely to stay with their current service provider. This leads to the following hypothesis:

H1: The extent of perceived risk associated with other service providers positively influences customers' intention to select their chosen service provider.

**Information search**

Information searching is an essential part of consumer decision making (Moore & Lehmann 1980; Newman & Lockeman 1975). It is the process of information collection by customers. Customers search for information because they want to reduce the level of perceived risk (McCull-Kennedy & Fetter 1999). For example, internet users usually spend a lot of time and effort choosing the internet packages that best suit their needs or try to compare how services are performed by different providers. This leads to the following hypothesis:

H2: The more information consumers collect about alternative service providers the less likely they are to choose the current service provider.

**Corporate image**

Corporate image is described as the overall impression made in the minds of customers based on overall past experiences and interactions between customers and service providers (Bolton & Drew 1991; Bromley 1993; Davies & Miles 1998). Corporate image has the potential to impact on customers' selection behaviour and customer decision making (Andreassen & Lindestad 1998). When services are difficult to evaluate, corporate image is believed to be an important factor influencing customers' buying decisions and can simplify customer decision making when choosing the most favourable choice from different service providers (Andreassen & Lindestad 1998; Markus 1977). This leads to the following hypothesis:

H3: The corporate image of the service provider positively influences customers' selection of that provider as their high speed internet service.

**B) Customer satisfaction**

Based on the literature review, there are six independent variables in the second analysis which are believed to have an impact on the degree of customer satisfaction. A more detailed overview of the five SEVPERF dimensions and an additional factor (network quality) are outlined below;

**Tangibility**

Tangibility can be viewed as the appearance of physical facilities, equipment, personal, and communication materials of a business (Parasuraman, Zeithaml & Berry 1988). It is assumed that providers will try to make the appearance of the firm's tangible assets attractive. For example, an internet service provider may have up-to-date equipment or its physical facilities may be visually appealing. The physical environment and other visible aspects of the service encounter can be used by the customers to evaluate service quality which affects their level of satisfaction. This leads to the following hypothesis:

H4: Tangibility positively influences customer satisfaction.

**Reliability**

Reliability can be viewed as the ability to accurately perform and deliver a service as promised (Parasuraman, Zeithaml & Berry 1988). Reliability involves consistency and dependability of service performance. For instance, if a service provider consistently honours its promises made to customers, it can be said to be reliable. Another example is, when customers have a problem, the service provider shows a sincere interest in solving it. This leads to the following hypothesis:

H5: Reliability positively influences customer satisfaction.

**Responsiveness**

Responsiveness can be viewed as the willingness of employees to help and provide prompt service to customers (Parasuraman, Zeithaml & Berry 1988). It also concerns the readiness and timeliness with which employees provide a service (Parasuraman, Zeithaml & Berry 1985). An example of responsiveness is employees of a service provider telling customers exactly when a service will be performed and never being too busy to respond to customer requests. This leads to the hypothesis below:

H6: Responsiveness positively influences customer satisfaction.

**Assurance**

Assurance can be described as the knowledge and courtesy of employees together with their ability to convey trustworthiness and confidence to customers (Parasuraman, Zeithaml & Berry 1988). It also involves the knowledge and skill of the contact personal encouraging confidence in customers. An example would be that employees properly answer customers' questions. This will result in customers feeling safe in transactions made with the service provider and customers feeling that they can trust employees of the service provider (Cronin & Taylor 1992; Wang, Lo & Yang 2004). This leads to the hypothesis below:

H7: Assurance positively influences customer satisfaction.

**Empathy**

Empathy involves understanding and knowing customers, or making the effort to understand customers' expectations and needs. It can be defined as the caring, individualised attention that the firm provides to its customers which can generate and enhance customer satisfaction regarding the service offered (Parasuraman, Zeithaml & Berry 1988). Empathy will result in a service provider having the customers' best interests at heart and understanding customers' specific needs. This leads to the following hypothesis:

H8: Empathy positively influences customer satisfaction.

**Network quality**

In order to maintain a competitive advantage and enhance the degree of customer satisfaction, service providers must attempt to improve their service quality especially in customers' eyes (Parasuraman, Zeithaml & Berry 1988; Wang, Lo & Yang 2004). Network quality is one of the most important drivers of overall service quality in the context of the telecommunications industry (Chun & Hahn 2007; Wang, Lo & Yang 2004). Hence, telecommunication service providers need to invest in improving their network quality (Odell & Waters 2006). This leads to the following hypothesis:

H9: Network quality positively influences customer satisfaction.

### **C) Customer loyalty**

In the final analysis, five independent variables are believed to have an impact on the dependent variable of customer loyalty. These five factors are trust, switching costs, perceived value, corporate image, and customer satisfaction.

#### **Trust**

Trust is a belief that individuals have that their exchange partner can be relied on and that the exchange partner will help them when needed (Koller 1988; Moorman, Zaltman & Deshpande 1992; Morgan & Hunt 1994). Judgments about whether service providers can be trusted will be based on their reputation regarding what they have done in the past (Chow & Holden 1997). Trust is likely to enhance the degree of customer loyalty (Anderson & Narus 1990; Jones & Sasser 1995). When customers have trust in their preferred service providers, they will purchase more and become loyal customers (Murphy 2001). This leads to the following hypothesis:

H10: Trust positively influences customer loyalty.

#### **Switching costs**

The term switching costs can be defined as the one-time costs that customers associate with the process of switching from one service provider to another (Burnham, Frels & Mahajan 2003). Customers will make their decision about whether to stay with their current provider or switch to another according to their perception of what they get and what they will have to sacrifice (Ravald & Gronroos 1996). Based on existing research in the telecommunications context, switching costs are believed to be an important factor that has an impact on customer loyalty (Burnham, Frels & Mahajan 2003; Hu & Hwang 2006). This leads to the following hypothesis:

H11: Switching costs positively influence customer loyalty.

#### **Perceived value**

Customer perceived value can be defined as the customers' overall assessment of the utility product or service, and is based on perceptions of what is received and what is sacrificed when purchasing that product or service. (Monroe 1991; Parasuraman, Zeithaml

& Berry 1988; Ravald & Gronroos 1996). Lovelock (1991) suggests that, it is the customers' perception of value that will guide their final purchase and repurchase decisions. Therefore, from the service provider's standpoint, perceived value should be considered as a major competitive weapon and can be used to create and improve their sustainable competitive advantage (Devlin, Gwynne & Ennew 2002; Eggert & Ulaga 2002; Khatibi, Ismail & Thyagarajan 2002). By adding more perceived value to the service, customer loyalty can be increased. This leads to the following hypothesis:

H12: Customer perceived value positively influences customer loyalty.

### **Corporate image**

Corporate image not only has an influence on customers' selection of a service provider as mentioned earlier; it also has an impact on increasing the probability of customer repurchase (Andreassen & Lindestad 1998; Nguyen & Leblanc 2001). Andreassen and Lindestad (1998) suggest that corporate image plays a pivotal role for service providers not only to attract new customers but also to retain existing ones. Customer loyalty and the likelihood of customer recommendation can be enhanced by improving corporate image to be more favourable (Bontis, Booker & Serenko 2007). Hence, this leads to the following hypothesis:

H13: Corporate image positively influences customer loyalty.

### **Customer satisfaction**

Customer satisfaction is the accumulated experience of customers' purchase and consumption experience influenced by two factors: expectation and perceived service performance (Gotlieb, Grewal & Brown 1994). Customers who are satisfied with a provider's products/services tend to have positive attitudes which lead to frequent purchases, purchases in greater volume, and purchases of other goods and services offered by the firm (Anderson, Fornell & Lehmann 1994). In other words, when customers are satisfied, they then become loyal customers. Moreover, researchers in the context of telecommunications industry suggest that customer satisfaction appears to be a valid predictor of customer loyalty (Gerpott, Rams & Schindler 2001; Kim & Yoon 2004). Telecom service providers should improve customer satisfaction to create true loyalty and

minimise customer defection (Eshghi, Haughton & Topi 2007). This leads to the following hypothesis:

H14: Customer satisfaction positively influences customer loyalty.

As shown in Figure 2.3 (page 66), these 14 hypotheses will be tested in the proposed research model to investigate the underlying factors that have an impact on customers' intentions to select and stay with a particular high-speed internet provider in Thailand. Further discussion of the development and testing of this model will be presented in Chapter 3.

## **2.6 Conclusion**

This chapter provides a context for understanding the factors that influence customers' selections of service providers, customer satisfaction, and customer loyalty. Based on the literature reviewed in the thesis, 14 hypotheses were developed together with a theoretical model (Figure 2.3, page 66). The model proposes that in the Thai high-speed internet market, a customer's intention to choose a high-speed internet service provider is influenced by the level of perceived risks, information searches, and the service provider's corporate image. Once a service provider has been selected, the degree of customer satisfaction can be influenced by customers' perceptions of service quality. Finally, the level of customer loyalty is likely to be influenced by underlying factors including trust, switching costs, perceived value, corporate image, and customer satisfaction.

Having reviewed the key conclusions drawn from the literature review, the next chapter (Chapter 3), will describe and present the details of the research methodology to be used to collect and analyse data from Thai high-speed internet users. The 14 hypotheses will be tested with data collected in Thailand in accordance with the methodology set out in Chapter 3. Chapter 3 also outlines the survey procedures and analysis techniques used in this research.



## **CHAPTER 3**

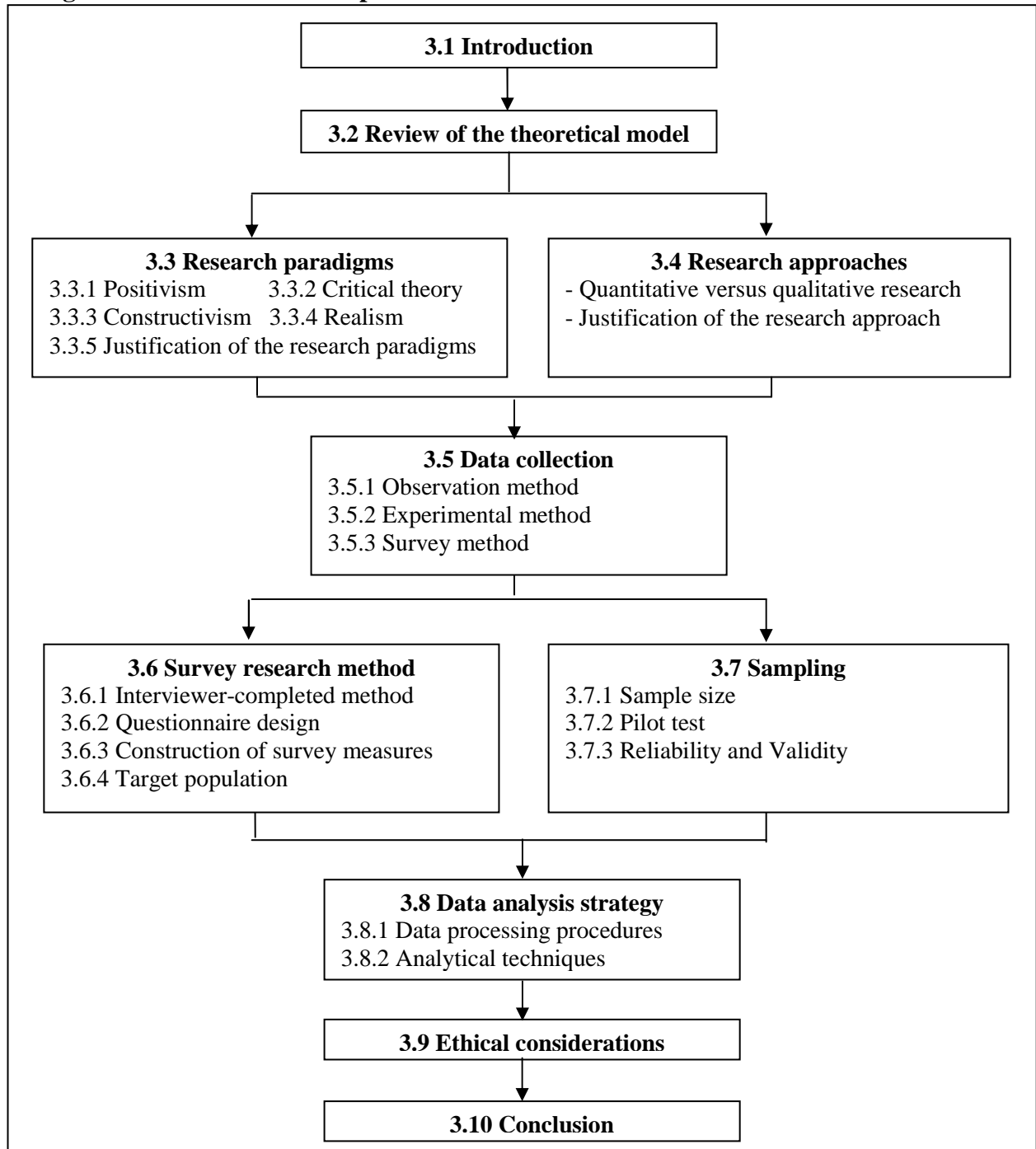
# **METHODOLOGY**

### **3.1 Introduction**

The previous chapter reviewed literature about consumer behaviour in relation to three main areas: consumer decision making, customer satisfaction, and customer loyalty. These three underlying concepts have been discussed in detail, followed by the development of a theoretical framework. The related 14 hypotheses have then been developed. This chapter provides and demonstrates how the data collection and analysis of the data to test the 14 hypotheses was conducted. In addition, this chapter provides clarification of the ethical considerations that relate to the conduct of the research.

The purpose of this chapter is to examine the research methods and approaches used to investigate customers' perceptions of high-speed internet services in Thailand. This chapter consists of ten sections, shown in Figure 3.1. An overview of the theoretical framework is presented in Section 3.2. A broad justification of the research paradigm is presented in Section 3.3, followed by a discussion of quantitative and qualitative research methodologies in Section 3.4. Section 3.5 describes the procedures of data collection, and Section 3.6 describes survey instruments, questionnaire design, construction of survey measures, and the target population. This is followed by an explanation of sampling size, the pilot study, and reliability and validity which are presented in Section 3.7. Section 3.8 describes the data analysis strategy in this research. The ethical considerations are considered in Section 3.9. Finally, the chapter ends with a conclusion in Section 3.10.

**Figure 3.1: Structure of Chapter 3**



Source: Developed for this research

### 3.2 Review of the theoretical model

The theoretical framework is the foundation that the entire research is based on, and a good theoretical framework should help in identifying and labelling the underlying variables in the circumstances that are related to the research problem (Sekaran 2000). The theoretical framework for the present research was developed from a review of the literature and is linked to the three underlying disciplines of consumer decision making, customer satisfaction, and customer loyalty as shown in Figure 2.3, page 66. These underlying disciplines provide the general background of the important factors which contribute to customer's intention to select and stay with a particular high-speed internet provider in Thailand.

Table 3.1 provides a summary of the research hypotheses and questions to be investigated in the current research.

**Table 3.1: Summary of research questions and hypotheses**

<b>Research questions</b>	<b>Hypotheses</b>
1. What are the factors that influence customers' selection of high-speed internet service providers in Thailand?	H1: The extent of perceived risk associated with other service providers positively influences customers' intention to select their chosen service provider.
	H2: The more information consumers collect about alternative service providers the less likely they are to choose the current service provider
	H3: The corporate image of the service provider positively influences customers' selection of that provider as their high speed internet service.
2. What are the factors that influence customer satisfaction with high-speed internet services in Thailand?	H4: Tangibility positively influences customer satisfaction.
	H5: Reliability positively influences customer satisfaction.
	H6: Responsiveness positively influences customer satisfaction.
	H7: Assurance positively influences customer satisfaction.
	H8: Empathy positively influences customer satisfaction.
	H9: Network quality positively influences customer satisfaction.

Research questions	Hypotheses
3. What are the factors that influence customer loyalty to high-speed internet service providers in Thailand?	H10: Trust positively influences customer loyalty.
	H11: Switching costs positively influence customer loyalty.
	H12: Customer perceived value positively influences customer loyalty.
	H13: Corporate image positively influences customer loyalty.
	H14: Customer satisfaction positively influences customer loyalty.

Source: Developed for this research

### 3.3 Research paradigms

A paradigm is an overall conceptual framework or a set of basic beliefs (Guba & Lincoln 1994) that guide the researcher on how to appropriately conduct research. Paradigm issues are important and researchers should be clear about what paradigm guides his or her approach. A paradigm can be described as serving to define what should be studied, what questions should be asked and what rules should be followed in interpreting the answers obtained (Guba & Lincoln 1994). Generally, there are four types of research paradigm: positivism, critical theory, constructivist paradigms, and realism (Guba & Lincoln 1994). An overview of each paradigm as well as the justification for choosing a positivist paradigm for the present research will be given below.

#### 3.3.1 Positivism

The positivist perspective embraces the idea that there is a world that can be objectively described and measured (Hunt 1993; Lincoln & Guba 1985). The positivist paradigm is concerned with the external world and is based on the view that rather than being inferred subjectively through sensation, characteristics of the external world can be measured through objective methods (Easterby-Smith, Thorpe & Lowe 2002). Data collection for this paradigm is usually conducted in a structured manner without the researcher's involvement.

This paradigm is often used to measure and analyse connecting relationships between variables that are consistent across time and across the context of the research phenomenon (Perry, Riege & Brown 1999). It is concerned with the confirmation of a theory (Deshpande 1983), and does not focus much on the discovery and development of new theories (Lincoln & Guba 1985). In other words, the positivist paradigm is more concerned with theory testing rather than building theory or theory development.

For this research approach, researchers are seen as being independent from what is being measured in the study. The epistemology of the positivist paradigm allows the researchers to determine 'how things really are' and 'how things really work' (Guba & Lincoln 1994, p. 111). A positivist paradigm also involves scientific, experimental, empiricist, quantitative or deductive approaches (Ticehurst & Veal 2000). As a result, when the researcher follows correct procedures, research outcomes will not be influenced by researcher value and bias (Guba & Lincoln 1994).

### **3.3.2 Critical theory**

A critical theory paradigm asserts that reality is apprehended and is based on historically situated structures that can be changed over time (Guba & Lincoln 1994). It often requires long-term ethnographic and historical studies of organisational processes and structures (Perry, Riege & Brown 1999). The critical approach focuses on the analysis and transformation of social, political, cultural, economic, ethnic, and gender values (Perry, Riege & Brown 1999).

In this paradigm, the researcher becomes immersed in the research and will share knowledge and social action with respondents (Guba & Lincoln 1994). It also emphasises reality based on the perceptions held by a group of individuals. In summary, the epistemology of critical theory involves an interactive link between the researcher and the object being researched.

### 3.3.3 Constructivism

A constructivist paradigm holds that truth is subjective and is based on individual perceptions of actuality while the world has multiple realities (Easterby-Smith, Thorpe & Lowe 2002; Perry, Riege & Brown 1999). In this paradigm, perception is the most important reality, while knowledge is constructed according to an individual's perceptions and beliefs about the world, that is, the researcher and the respondents should be interactively linked to literally create the findings (Guba & Lincoln 1994). To investigate the individual's perceptions and beliefs, a researcher has to be a 'passionate participant' (Guba & Lincoln 1994; Perry, Riege & Brown 1999). Consequently, constructivists depend on an interaction between interviewer and respondents.

### 3.3.4 Realism

From a realist point of view, there is a real world to discover (Healt & Perry 2000; Perry, Riege & Brown 1999) even though it is imperfectly and probabilistically apprehended (Guba & Lincoln 1994). A realist paradigm implies that perception is not a reality, but a window to reality through which a picture of reality can be reflected when combined with other perceptions. This paradigm emphasises the difference between reality and perceptions about reality; that is, perceptions are not considered as reality (Perry, Riege & Brown 1999). To be objective, the data should be collected from as many sources as possible (triangulation) (Perry, Riege & Brown 1999). The epistemology of this paradigm asserts that the findings are probably true (Perry, Riege & Brown 1999). In order to uncover these findings, objectivity needs to be maintained but dualism is abandoned (Guba & Lincoln 1994). In sum, in the realist paradigm, the researcher objectively attempts to understand and explain why people have different experiences rather than search for external causes and fundamental laws to explain their behaviours.

### **3.3.5 Justification of the selected research paradigm**

The primary stage in the research design focuses on deciding what research paradigm is most suitable for the current research. Having reviewed and discussed the four major research paradigms (positivism, constructivism, critical theory, and realism) the positivist paradigm seems most appropriate for the current research due to the fact that the purpose of the objective approach is to discover cause-effect relationships as well as value-free theory testing (Perry, Riege & Brown 1999). The deductive method of testing theories or hypotheses is associated with the positivist paradigm and it is common for methods such as survey research to be used to collect data for analysis (Neuman 2006; Perry, Riege & Brown 1999). In addition, the present research does not aim to build theory, and so critical theory, realism, and the constructivist approach are not suitable.

A comparison between quantitative and qualitative approaches will be further discussed in the next section.

## **3.4 Research approaches – quantitative versus qualitative research**

Quantitative research is concerned with numerical measures when collecting data (Ticehurst & Veal 2000). This approach primarily involves statistical analysis (Zikmund 2003) and relies on numerical data to ensure objective and accurate results are obtained in order to draw conclusions or to test hypotheses. In addition, the process of collecting data for the quantitative approach can be achieved either via a questionnaire survey or from secondary data sources (Ticehurst & Veal 2000). The collected data are then transformed into numbers and are subjected to different levels of statistical manipulation and finally reported (Blaikie 2003). Quantitative research has a logical structure that can determine research problems in the form of hypotheses (Neuman 2006). To be sure of the reliability of the results, researchers often use computers to analyse the data (Ticehurst & Veal 2000) and use numbers to test hypotheses. They interpret these hypotheses into a general causal explanation and present the meaning of the statistics and explain how the numbers relate to the hypotheses (Neuman 2006).

On the other hand, qualitative research involves observing and gathering a great deal of information and data, without collection and analysis of numbers or statistical procedures (Bryman & Burgess 1999; Dooley 1995; Zikmund 2000). Qualitative approaches are common in social research and are used for the study of groups, where interaction between group members is of interest (Neuman 2006). Unlike the quantitative approach, qualitative methods are often used for exploratory theory building rather than theory testing (Neuman 2006; Veal 2005). In particular, a qualitative approach is often used when the focus of research is on people's beliefs and the meanings they attribute to other people and events (Ticehurst & Veal 2000). Qualitative data can be collected via a range of methods including informal and in-depth interviews, group interviews or focus groups, and participant observation (Ticehurst & Veal 2000). Thus, data can be rich and deep (Bryman & Cramer 2001) in the form of words and images from document observation and transcripts (Neuman 2006).

The differences between quantitative and qualitative methods are presented in Table 3.2.

**Table 3.2: Quantitative approach versus qualitative approach**

<b>Quantitative approach</b>	<b>Qualitative approach</b>
Test hypothesis that the researcher begins with.	Capture and discover meaning once the researcher becomes immersed in the data.
Concepts are in the form of distinct variables.	Concepts are in the form of themes, motifs, generalisations, and taxonomies.
Measures are systematically created before data collection and are standardised.	Measures are created in an ad hoc manner and are often specific to the individual setting or researcher.
Collected data are measured in the form of numbers from precise measurement.	Collected data are measured in the form of words and images from documents, observations, and transcripts.
Theory is basically causal and is deductive.	Theory can be causal or non-causal and is often inductive.
Procedures are standard, and replication is assumed.	Research procedures are particular, and replication is very uncommon.
Analysis proceeds by using statistics, tables, or charts and discussing how what they show relates to hypotheses.	Analysis proceeds by extracting themes or generalisations from evidence and organising data to present a coherent, consistent picture.

Source: Adopted from Neuman (2006)



### **3.4.1 Justification of the research approach**

Generally, to conduct quantitative research, quantitative researchers will develop a model based on information from a review of previous literature and test the model by collecting data from many sources or respondents (Zikmund 2003). The most common conceptual framework for quantitative research is to look for the causal relationships among variables, rather than just describe the variable, where one is the cause and the other is the effect (Sekaran 2003). The independent variable is the cause that influences the dependent variable, or the effect, in either a positive or negative way (Sekaran 2003).

According to Veal (2005), a quantitative method seeks to quantify the data collected, applies some forms of statistical analysis and analyses data in the form of statistical output based on relatively small sample sizes and provides insight and understanding of the problem setting.

The present research constitutes a quantitative study which has established a model framework based on previous studies. The objective of this research is to test 14 hypotheses related to the factors that influence customers' intentions to select and stay with particular high-speed internet service providers in Thailand. In addition, this research involves quantifying the relationships between variables and will use statistics to explain these relationships. The researcher will collect data in terms of numbers of responses using a questionnaire survey, and the methodologies aim at verification or contradiction of theoretical hypotheses. Hence, it is evident that a quantitative approach is most appropriate because the present research seeks to answer set research hypotheses rather than attempting to build theory.

Before giving the justification for why a survey research method was chosen for data collection in this research, the next section provides an overview of three types of data collection commonly used in business research.

### **3.5 Data collection**

Data can be collected in a variety of ways and from different sources (Sekaran 2003). Data collection methods can be placed in three main categories, namely, observation, experimental, and survey methods.

#### **3.5.1 Observation methods**

Observation is unobtrusive and involves gathering information about people's behaviour without their knowledge, thus it provides rich data and insights into the nature of the phenomena observed (Ticehurst & Veal 2000). The major advantage of the observation method is that it records behaviour without relying on reports from the respondents. Therefore, it is more reliable and free from respondents' bias (Sekaran 2003). However, there are some limitations of using this method, that is, it cannot be used to observe cognitive phenomena such as attitude, intention, and expectations (Zikmund 2000).

#### **3.5.2 Experimental methods**

Experimental research allows the researcher to control the research situation so that causal relationships among variables may be evaluated (Zikmund 2000). The main feature of experimental research is that the researchers ideally control all the relevant variables in the conducted experiment (Ticehurst & Veal 2000). It is a method in which the researchers might conduct the research in laboratory, a natural setting, or create a simulated setting (Sekaran 2003). In addition, selected variables are manipulated while other variables are supposed to be constant and the effects on subjects are then measured to establish cause-and-effect relationships (Ticehurst & Veal 2000). As a result, the experimental method is different from other research methods in terms of the degree of control that researchers can have over the research situation (Zikmund 2000).

### 3.5.3 Survey methods

Survey methods are one of the most common tools used to collect primary data from a representative sample of individuals (Sekaran 2003; Zikmund 2000). The term survey refers to the whole process of conducting the data collection and involves the gathering of information from individuals using a questionnaire or interview schedule (Veal 2005). Questionnaire surveys are useful when data are required from samples representative of a defined larger population and it is useful when the research questions indicate the need for relatively structured data (Ticehurst & Veal 2000).

In accordance with the nature of the positivist paradigm, the present research aims to test research hypotheses through a quantitative approach. The survey questionnaire method was chosen and a set of questions was given to a group of appropriately selected respondents. Further details about the specific survey research methods used to collect data in this research will be discussed in the following section.

### 3.6 Survey research method

The purpose of this section is to discuss survey research methods and to introduce the data collection method used in the present research. According to Ticehurst and Veal (2000), questionnaire surveys can generally be conducted in one of two ways: interviewer-completed questionnaires (assisted by an interviewer) and/or respondent-completed questionnaires (self-completed). In the case of interviewer-completed surveys, an interviewer reads the questions out to the respondents and records the respondent's answers on the questionnaire form. For respondent-completed surveys, respondents independently read and fill out the questions for themselves. There are several types of questionnaire survey that are commonly used to collect data including telephone interviews, face-to-face interviews, mail surveys and surveys conducted via other communication media (Ticehurst & Veal 2000). For the present research, the interviewer-completed method by face-to-face interview was chosen because this method is considered to offer more accurate information and provides more complete responses (Ticehurst & Veal 2000).

### **3.6.1 Interviewer-completed method via face-to-face interviews**

Face-to-face surveys increase the level of trust and cooperation between interviewer and interviewee (Dooley 1995). By using this method, respondents will be able to obtain more assistance from the interviewer because the interviewer can guide the respondents through the survey while asking questions verbally, rather than simply handing the survey to the respondents for the respondent to complete. Moreover, the face-to-face interview allows the interviewer to provide clear instructions to the respondents about what is required and provides an opportunity for the respondents to seek any clarification or ask questions if they do not clearly understand the questions in the questionnaire (Sekaran 2003). During the interview process, the interviewer can also verify and check on given answers by asking the respondents to clarify or expand on a specific response. Significantly, this method is considered more appropriate to the Thai culture because respondents are likely to respond to surveys better if some guidance is provided.

For the present research, the researcher was aware that an interviewer-completed method has some limitations or disadvantages such as less anonymity, and respondents may distort their answers to please the interviewer (Veal 2005). In order to overcome these limitations or disadvantages, a cover letter was provided to explain the research and assure the interviewees that all data received from the respondents would be kept anonymous and confidential, and that the results would be used only for the research. In addition, all respondents were asked to answer each question as directly as they could since there was no right or wrong answer.

A comparison of the advantages and disadvantages of interviewer-completed surveys and respondent-completed surveys is shown in Table 3.3.

**Table 3.3: Interviewer-completed method vs. respondent-completed method**

	<b>Interviewer-completed</b>	<b>Respondent-completed</b>
<b>Advantages</b>	More accuracy Higher response rates Fuller and more complete answers Design can be less ‘user-friendly’	Cheaper Quicker Relatively anonymous
<b>Disadvantages</b>	Higher cost Less anonymity Exaggerated desire to please interviewer More care needed in layout and presentation	Unreliable response Incomplete response Risk of undesired response

Source: Adapted from Veal (2005)

### 3.6.2 Questionnaire design

The development of a survey is strongly influenced by the nature of the research questions and the research objectives (Zikmund 2000). The first stage of the data collection commonly begins with the process of questionnaire design since it is very important for researchers to design the instrument itself in order to collect the data. In designing the questionnaire, every question has to relate back to the research questions and hypotheses (Ticehurst & Veal 2000). In the present research, every question in the questionnaire was based on the literature review in Chapter 2 and the review of existing research regarding consumer decision making, customer satisfaction, and customer loyalty. After that, a series of measures were adopted, developed, and included into the design of the survey.

According to Sekaran (2003), to appropriately design a questionnaire, researchers should focus on three main areas: (1) wording of the questions should be simple; (2) the questions should be carefully phrased in order to make it easier for coding, tabulating, and interpreting; (3) question sequence and the layout should be designed to interest respondents. The following discussion provides further details regarding these three issues and also covers other important procedures involved in the questionnaire design for this study.

For the first step, language and wording used in the questionnaire, all questions in the survey were simply worded in a way that could be understood by the respondents (Sekaran 2003). Questions were not too long because respondents can get tired or lose interest in

answering long questions (Sekaran 2003). The language used in the questionnaire was English originally. This was translated into Thai because the respondents were Thai people. The purpose of translation was to ensure that the respondents could clearly understand all of the questions provided in the questionnaire. The researcher used a recognised back-translation procedure (Hambleton, Merenda & Spielberger 2005), which involved asking two professional lecturers at Sukhothai Thammathirat Open University and Mahidol University, who were fluent in using both English and Thai in their academic careers, to back-translate the original questionnaire. The first translator transformed the questionnaire survey from English to Thai. The second translator converted the Thai version of the survey back into English. To ensure that the translation of the questionnaire survey in this research was accurate and interpretable, all differences in the translation were addressed and corrected by the researcher and the two translators.

Secondly, the types of questions and measurement scales used in the questionnaire should be carefully phrased since it is crucial to determine how the researcher wants each question to be answered. Questionnaire design may use a combination of open-ended questions and pre-coded or closed questions (Veal 2005). An open-ended question allows respondents to recommend other relevant opinions and recommendations and also requires a written response. The answers to open-ended questions can be difficult for computers to analyse and response rates can be very low because people are often too lazy to write down full-length answers (Veal 2005). On the other hand, a pre-coded or closed question can be answered quickly by respondents by choosing from alternative answers that have been provided by researchers. To ensure that the alternatives are mutually exclusive and to code the information for subsequent analysis, this research mainly uses pre-coded or closed questions.

Finally, the question sequence and the layout of the questionnaire should be designed to interest respondents. For the present research, in order to assist the respondents to answer the questions without difficulty, all questions were logically and neatly organised in appropriate sections. Instructions on how to complete the items in each section were also provided (Sekaran 2003).

Before respondents were required to answer the questions contained within the survey, they were presented with a covering letter. This covering letter was designed to introduce the researcher and research institution and provide an explanation of the general introductions and the main survey objectives. After participating in the survey questionnaire, the respondents may have questions about the survey, and so the covering letter provided the contact details of the researcher as well as the research supervisor. The covering letter also indicated that participation in this survey was voluntary with an assurance about anonymity and confidentiality of the information given by respondents. In addition, the letter made it clear that all questions asked in the questionnaire would be used only for the research purpose. Finally, the covering letter ended with a courteous note thanking the respondents for taking the time to respond to the survey.

### **3.6.3 Construction of survey measures**

In this research, the survey questionnaire was divided into five sections. Each respondent needed approximately 10–15 minutes to complete the questionnaire in the face-to-face interview. The question sequence started with easy-to-answer questions to gain respondents' cooperation (Sekaran 2003). In Section 1, respondents were asked some fundamental questions about their experiences with high-speed internet service providers. They were asked to choose the appropriate answer for each question and some questions invited respondents to add comments in blank spaces. The purpose of this section was to gain some general information about customers who used high-speed internet, and which company was their current service provider. In addition, these questions were used to screen the target respondents who were eligible for inclusion in this present research. That is, for those who did not have high-speed internet access at home, the interview was immediately terminated. The questions in this section are presented in Figure 3.2.

**Figure 3.2: Section 1 of the questionnaire**

<p><b>Section 1: Experience with high-speed internet service provider</b></p> <p>Please select the appropriate answer for each question in this section:</p>	
<p>1. Do you have high-speed internet access at home?</p>	
1 Yes	2 No (if no, then terminate interview)
<p>2. Who is your current service provider?</p>	
1 TOT Public Company Limited	2 TRUE Corporation Public Company Limited
3 TT&T Public Company Limited	4 Other, please specify .....
<p>3. How long have you been with this service provider?</p>	
1 Less than 1 year	2 1 – 2 years
3 2 – 3 years	4 More than 3 years, please specify.....
<p>4. What is your main reason for using high-speed internet?</p>	
1 Work	2 Education / Study
3 Shopping	4 Entertainment
5 Personal business (such as contacting friends families, or conducting banking online)	6 Other purpose, please specify .....

Source: Developed for this research

In Sections 2, 3, and 4 of the questionnaire, a seven-point Likert-type scale was chosen to ask the respondents relevant questions. In this scale, 1 represented ‘strongly disagree’ (the most unfavourable response to the statement) and 7 represented ‘strongly agree’ (the most favourable response to the statement) (Zikmund 2000). Section 2 of the questionnaire asked the respondents about their opinions regarding their experiences with their existing high-speed internet service provider, followed by Section 3 which asked respondents about their future intentions towards that service provider. Section 4 asked respondents about their attitudes towards selecting an alternative high-speed internet service provider.

There are advantages to using a Likert scale. It allows the researcher to measure the distance between two points on the scale (Strongly agree and strongly disagree), while being balanced by a neutral (mid) point (Zikmund 2000). Moreover, it helps the researcher to be able to compute the means and the standard deviations of the responses on the



variables. In other words, a Likert scale can measure the magnitude of the differences in the preferences among all respondents (Sekaran 2000).

As outlined previously in Section 3.6.2, this research used a combination of items from the literature review in Chapter 2 – the review of existing research regarding consumer decision making, customer satisfaction, and customer loyalty as well as the existing research in the context of telecommunication service. All questions in the present research aim to measure respondents' perceptions regarding the underlying factors that influence their loyalty to their current high-speed internet provider. The question sequence in the questionnaire was randomised and started with easy-to-answer questions, and moved to progressively more difficult questions (Sekaran 2000). A discussion of how each set of measures was developed in the survey is now provided. A copy of the English version of the survey is provided in Appendix 1 and a copy of the Thai version is provided in Appendix 2.

## **Perceived risk**

Perceived risk can be defined as the probability of any loss that can occur as the result of using a product or service (Forsythe et al. 2006) taking into account the importance of that loss (Peter & Tarpey 1975). Based on previous research in the context of customer decision making, there are several types of perceived risk that are considered including financial risk, performance/product risk, and time and effort risk. Forsythe et al. (2006) developed a scale to measure perceived risks in terms of financial risk and performance/product risk. This scale demonstrates and obtains a high degree of confidence in terms of the reliability (coefficient alpha) to measure perceived risks. In addition, Peter and Tarpey (1975) developed a scale to measure perceived risks in terms of time and effort involved in customer decision making. As a result, four questions from Forsythe et al. (2006) and five questions from Peter and Tarpey (1975) were adapted for this research to measure perceived risks. Furthermore, the research adapted another one item from Wang, Lo, and Yang's (2004) study regarding customer-perceived service quality in the context of the telecommunications industry. In sum, ten questions were adapted for this research to measure perceived risks and are presented in Table 3.4.

**Table 3.4: Measures of perceived risks**

<b>Authors</b>	<b>Question</b>
Forsythe et. al (2006)	It is difficult to try and evaluate the service due to its intangibility.
Forsythe et. al (2006)	I might be overcharged by an alternative service provider.
Forsythe et. al (2006)	I may not get the service I expect when choosing a new service provider.
Forsythe et. al (2006)	I cannot be sure when the service will be properly installed by alternative providers.
Peter and Tarpey (1975)	Any inconvenience caused by using an alternative service provider is very important to me.
Peter and Tarpey (1975)	Any financial loss incurred by choosing an alternative service provider would be considered very important to me.
Peter and Tarpey (1975)	I think that the purchase of high-speed internet from an alternative service provider would lead to a financial loss (i.e. due to its poor warranty, high monthly payments etc).
Peter and Tarpey (1975)	I may have to waste a lot of time and effort getting the service adjusted/repaired if I swap to an alternative service provider.
Peter and Tarpey (1975)	Any convenience incurred from using an alternative service provider would be considered very important.
Adapted from Wang, Lo, and Yang (2004)	I cannot be sure if the internet signal will be stable if I choose another service provider.

Source: Developed for this research

## **Information**

Information searching is the process of information collection by customers. Customers search for information because they want to reduce the level of perceived risk (McColl-Kennedy & Fetter 1999). A search for information includes an internal search and external search (Bettman & Park 1980). While internal information comes from knowledge and memory of past experiences (Hoyer & MacInnis 1997), external information searches usually occur when the customer is motivated to search for information concerning their purchase from sources other than memory (Heaney & Goldsmith 1999). McColl-Kennedy and Fetter (1999) developed a seven-item scale to assess respondents' information searches across service industries. These items appear to have good degree of confidence in terms of validity and high reliability (coefficient alpha). Consequently, these seven items were adapted to be used in this research as shown in Table 3.5.

**Table 3.5: Measures of information**

<b>Authors</b>	<b>Question</b>
McColl-Kennedy and Fetter (1999)	I usually talk about alternative service providers with other people.
McColl-Kennedy and Fetter (1999)	I usually spend a lot of time choosing what kind of internet packages suit me.
McColl-Kennedy and Fetter (1999)	I usually seek advice from other people prior to purchasing this kind of service.
McColl-Kennedy and Fetter (1999)	I usually take many factors into account before purchasing this type of service.
McColl-Kennedy and Fetter (1999)	I would be interested in reading a consumer report article about this service.
McColl-Kennedy and Fetter (1999)	I have compared service characteristics between firms that provide this service.
McColl-Kennedy and Fetter (1999)	I would be interested in reading information about how this service is performed by alternative providers.

Source: Developed for this research

### **Corporate image**

Corporate image has the potential to impact on customer selection and customer loyalty toward the firms (Andreassen & Lindestad 1998; Nguyen & Leblanc 2001). Corporate image plays a vital role for every business not only to attract new customers but also to retain existing customers (Andreassen & Lindestad 1998). When services are difficult to evaluate, corporate image is believed to be an important factor influencing the customer's perceptions of quality, value, customer satisfaction, and customer loyalty (Andreassen & Lindestad 1998). Nguyen and Leblanc (2001) developed a set of questions aimed at measuring the relationship between customer loyalty and corporate image in three service industries including the telecommunications service industry. The scale from this previous study obtained high degree of confidence in terms of reliability as well as validity. As a result, four items were selected and adapted to be used in this research as shown in Table 3.6.

**Table 3.6: Measures of corporate image**

<b>Authors</b>	<b>Question</b>
Nguyen and Leblanc (2001)	I have always had a good impression of my current internet service provider.
Nguyen and Leblanc (2001)	In my opinion, the current service provider has a good image/reputation.
Nguyen and Leblanc (2001)	I believe that my current service provider has a better reputation and image than its competitors.
Nguyen and Leblanc (2001)	I believe that my current service provider always fulfils the promises that it makes to its customers.

Source: Developed for this research

## **Tangibility**

Service tangibility can be viewed as the physical facilities, equipment, and personal appearance of a business (Parasuraman, Zeithaml & Berry 1988). It is assumed that service providers will try to make the appearance of the firm's tangible asset attractive. For example, the service provider has up-to-date equipment or employees are well dressed and appear neat. In addition, Cronin and Taylor (1992) developed a widely accepted four-item scale to measure service tangibility. Based on Cronin and Taylor (1992), Wang, Lo and Yang (2004) adapted these three items to measure service tangibility in the context of the telecommunications industry. Consequently, these four items, which obtained a high degree of confidence in terms of their reliability, are relevant to the present research. As a result, based on Cronin and Taylor (1992) and Wang, Lo and Yang (2004), this research adopted these four items to measure service tangibility as shown in Table 3.7.

**Table 3.7: Measures of tangibility**

<b>Authors</b>	<b>Question</b>
Cronin and Taylor (1992)	The service provider has up-to-date equipment (e.g. internet modem).
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	The service provider's physical facilities are visually appealing
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	The service provider's employees are well dressed and appear neat.
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	All environments of the service provider's shops are clean and well maintained.

Source: Developed for this research

## Reliability

Reliability can be defined as an ability to accurately perform and deliver services as promised (Parasuraman, Zeithaml & Berry 1988). Reliability involves consistency of performance and dependability. For example, this means that if a firm is reliable it will perform a service right at the first time, or that the firm will honour its promises to customers (Parasuraman, Zeithaml & Berry 1985). Cronin and Taylor (1992) developed a widely accepted four-item scale to measure service reliability. Based on Cronin and Taylor (1992), Wang, Lo and Yang (2004) adapted these four items and developed one new item to measure service reliability in the context of the telecommunications industry. These items obtained a high degree of confidence in terms of their reliability and are relevant to the present research. As a result, based on Cronin and Taylor (1992) and Wang, Lo and Yang (2004), this research adopted these five items to measure service reliability as shown in Table 3.8.

**Table 3.8: Measures of reliability**

<b>Authors</b>	<b>Question</b>
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	The service provider delivers its services at the times it promises to do so.
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	When the service provider promises to do something by a certain time, it does so.
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	When customers have a problem, the service provider shows a sincere interest in solving it.
Cronin and Taylor (1992)	The service provider is dependable.
Wang, Lo, and Yang (2004)	The service provider always performs the service right the first time.

Source: Developed for this research

## Responsiveness

Responsiveness can be viewed as a willingness to help and provide prompt service to customers (Parasuraman, Zeithaml & Berry 1988). It also concerns the readiness and timeliness of employees in providing services (Parasuraman, Zeithaml & Berry 1985). For instance, responsive employees will always give prompt services and are always willing to help customers. Cronin and Taylor (1992) developed a widely accepted four-item scale to

measure service responsiveness. Based on Cronin and Taylor (1992), Wang, Lo and Yang (2004) adapted these four items to measure service responsiveness in the context of the telecommunications industry. These four items obtained a high degree of confidence in terms of their reliability and are closely relevant to the present research. As a result, based on Cronin and Taylor (1992) and Wang, Lo and Yang (2004), this research adopted these four items to measure service responsiveness as shown in Table 3.9.

**Table 3.9: Measures of responsiveness**

<b>Authors</b>	<b>Question</b>
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	Employees are always willing to help me.
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	Employees give me prompt service.
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	Employees tell me exactly when services will be performed.
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	Employees are never too busy to respond to my requests.

Source: Developed for this research

## **Assurance**

Assurance refers to the knowledge and courtesy of employees including their ability to convey trustworthiness and confidence to customers (Parasuraman, Zeithaml & Berry 1988). It involves the knowledge and skill of the contact personnel, the capability of employees to instil confidence in customers or to properly answer customers' questions. Cronin and Taylor (1992) developed a widely accepted scale to measure service assurance. Accordingly, based on Cronin and Taylor (1992), Wang, Lo and Yang (2004) adapted these four items and developed two new items to measure service assurance in the context of the telecommunications industry. These items obtained a good degree of confidence in terms of their reliability and are closely related to the present research. As a result, this research adapted and incorporated these six items to measure service assurance as shown in Table 3.10.

**Table 3.10: Measures of assurance**

<b>Authors</b>	<b>Question</b>
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	Employees are consistently well-mannered with customers.
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	I feel safe in transactions with this service provider.
Cronin and Taylor (1992)	I can trust employees of this service provider.
Cronin and Taylor (1992)	Employees get adequate support from the service provider to do their jobs well.
Wang, Lo, and Yang (2004)	Employees have the knowledge to answer customers' questions.
Wang, Lo, and Yang (2004)	Employees instil confidence in customers.

Source: Developed for this research

## **Empathy**

Empathy can be viewed as the caring and individualised attention that business firm provides to its customers (Parasuraman, Zeithaml & Berry 1988). It involves understanding and knowing the customer and making the effort to understand the customer's needs, for instance, by learning the customer's specific requirements or providing individualised attention. Cronin and Taylor (1992) developed a five-item scale to measure service empathy. Subsequently, Wang, Lo and Yang (2004) adapted these five items to measure service empathy in the context of the telecommunications market. These five items obtained a good degree of confidence in terms of their reliability and are closely relevant to the present research. As a result, based on Cronin and Taylor (1992) and Wang, Lo and Yang (2004), this research adopted these five items to measure service empathy as shown in Table 3.11.

**Table 3.11: Measures of empathy**

<b>Authors</b>	<b>Question</b>
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	The service provider has the customers' best interest at heart.
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	The service provider gives customers individual attention.
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	The service provider has operating hours and locations which are convenient to its customers.
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	Employees give their personal attention to customers.
Cronin and Taylor (1992), Wang, Lo, and Yang (2004)	Employees understand customers' specific needs.

Source: Developed for this research

### **Network quality**

Network quality is one of the most important drivers of overall service quality in the context of the telecommunications industry (Wang, Lo & Yang 2004). Wang, Lo and Yang (2004) developed two items to measure network quality in the context of the telecommunications industry which closely related with the present research. In addition, these two items demonstrated a good degree of confidence in terms of their reliability (coefficient alpha). Therefore, these two items were adapted and used in this present research to measure network quality in high-speed internet service market as shown in Table 3.12.

**Table 3.12: Measures of network quality**

<b>Authors</b>	<b>Question</b>
Wang, Lo, and Yang (2004)	The quality of the network is always stable.
Wang, Lo, and Yang (2004)	The quality and strength of the network signal is always excellent.

Source: Developed for this research

### **Trust**

Morgan and Hunt (1994, p. 23) conceptualise trust as 'the confidence in an exchange partner's reliability and integrity'. Service providers can be trusted based on their reputation regarding what they have done in the past (Chow & Holden 1997). Sanzo,



Santos, Vazquez and Alvarez (2003) developed a set of questions to measure trust in the relationship between buyer and seller. Four questions were selected and adapted to measure trust for the present research since they obtained a good degree of confidence in terms of the reliability (coefficient alpha) for measuring trust. These four questions are shown below in Table 3.13.

**Table 3.13: Measures of trust**

<b>Authors</b>	<b>Question</b>
Sanzo et al. (2003)	Though circumstances may change, I believe that the service provider will be ready and willing to offer me assistance and support.
Sanzo et al. (2003)	This service provider is known to be concerned about customers' interest.
Sanzo et al. (2003)	This service provider can be relied on to keep its promises.
Sanzo et al. (2003)	I have complete trust in doing business with this service provider.

Source: Developed for this research

### **Switching costs**

Based on previous research in the telecommunications context, switching costs in terms of economic risk costs and evaluation costs are believed to be underlying factors that have an impact on customer loyalty (Burnham, Frels & Mahajan 2003; Hu & Hwang 2006). Switching costs can be defined as the one-time costs that customers associate with the process of switching from one service provider to another (Burnham, Frels & Mahajan 2003). Customers will make their choice between staying with the current service provider or switching to another based on their perceptions of what they will get and what may need to be sacrificed (Ravald & Gronroos 1996).

Hu and Hwang (2006) developed a scale to measure switching costs in terms of economic risk. In addition, Burnham, Frels and Mahajan (2003) developed a scale to measure switching cost in terms of the evaluation costs related to customer loyalty. These two scales obtained high degrees of confidence in terms of the reliability (coefficient alpha) in measuring switching costs. Significantly, both scales from these two previous studies were used to measure switching costs in the context of telecommunications industries. As a

result, eight questions from Hu and Hwang (2006) and Burnham, Frels and Mahajan (2003) were incorporated and adapted to measure switching costs in this research as shown below in Table 3.14.

**Table 3.14: Measures of switching costs**

<b>Authors</b>	<b>Question</b>
Burnham, Frels, and Mahajan (2003)	I cannot afford the time needed to get the information to fully evaluate other service providers.
Burnham, Frels, and Mahajan (2003)	It will take too much time/effort to get the information I need to feel comfortable evaluating new service providers.
Hu and Hwang (2006)	The rate plan or monthly fees offered by a new provider may be worse than those at present.
Burnham, Frels, and Mahajan (2003), Hu and Hwang (2006)	Comparing different service providers is very difficult.
Burnham, Frels, and Mahajan (2003), Hu and Hwang (2006)	Switching to a new service provider may entail some unforeseen difficulties.
Burnham, Frels, and Mahajan (2003), Hu and Hwang (2006)	Comparing the benefits offered by my current provider and those offered by other companies would take a lot of time and mental effort.
Burnham, Frels, and Mahajan (2003), Hu and Hwang (2006)	I don't know what kind of relationship I would have with a new service provider.
Burnham, Frels, and Mahajan (2003), Hu and Hwang (2006)	Switching to a new provider may entail certain hidden costs or expenses.

Source: Developed for this research

## Perceived value

Customer perceived value can be defined as the ratio between perceived benefit and perceived sacrifice (Ravald & Gronroos 1996). Perceived value is influenced by the consumer's perceptions of service quality, marketing mix, brand name, and the reputation and image of the company (Andreassen 1994). Wang, Lo and Yang (2004) developed three items to measure customer value in the context of the telecommunications market. These three items obtained a high degree of confidence in terms of reliability (coefficient alpha). Therefore, these three items were adapted and used in this present research to

measure customer-perceived value in the high-speed internet service market as shown in Table 3.15.

**Table 3.15: Measures of perceived value**

<b>Authors</b>	<b>Question</b>
Wang, Lo, and Yang (2004)	The chosen offerings are worth what is given up such as time, energy and effort.
Wang, Lo, and Yang (2004)	Compared with major competitors, the transaction with the provider is a good choice.
Wang, Lo, and Yang (2004)	Overall, the chosen offerings are value for money.

Source: Developed for this research

### **Customer's selection**

Customer's selection or customer's decision-making process is a process of choosing among alternatives (Berning & Jacoby 1974). Meanwhile goods can be evaluated prior to purchase, services can only be evaluated only during or after the service delivery (Gronroos 2000; Kugyte & Sliburyte 2005; Zeithaml & Bitner 2003; Zeithaml, Parasuraman & Berry 1985). Many times, consumers tend to compare the same service offered by different providers with standards in mind which serve as elements to eliminate alternatives in the middle phases of the choice process (Bettman & Park 1980). One question is adapted from Nguyen and Leblanc's (2001) study and used to measure customer's selection in Thai household high-speed internet service market as shown in Table 3.16.

**Table 3.16: Measures of customer's selection**

<b>Authors</b>	<b>Question</b>
Nguyen and Leblanc (2001)	This service provider is my first choice for my future high-speed internet service needs.

Source: Developed for this research

## Customer satisfaction

The term customer satisfaction refers to the consumer's holistic feeling toward a product or service, which results from the summation of their evaluation of each aspect of an offering (Parasuraman, Zeithaml & Berry 1988; Zeithaml, Berry & Parasuraman 1996). Customer satisfaction is the accumulated experience of customers' purchase and consumption experience influenced by two factors: expectation and perceived service performance (Gotlieb, Grewal & Brown 1994). Ranaweera and Prabhu (2003), developed three items to measure customer satisfaction in the context of the telecommunications industry. These three items obtained a high degree of confidence in terms of their reliability (coefficient alpha). Thus, these three items were adapted and used in this research to measure customer satisfaction in high-speed internet service market as shown in Table 3.17.

**Table 3.17: Measures of customer satisfaction**

<b>Authors</b>	<b>Question</b>
Ranaweera and Prabhu (2003)	My current service provider meets my expectations.
Ranaweera and Prabhu (2003)	I think I did the right thing when I joined this company.
Ranaweera and Prabhu (2003)	Overall, I am happy with my current service provider.

Source: Developed for this research

## Customer loyalty

Customer loyalty can be explained as the customers' intention to stay with their current service provider (Dick & Basu 1994). It also relates to their behaviour when they hold a favourable attitude toward a brand or to their current service provider (Oliver 1999). Nguyen and Leblanc (2001) used four items to measure customer loyalty in three service industries including telecommunications. The scales from this previous study obtained a high degree of confidence in terms of the reliability as well as validity. As a result, these four items were adapted to be used in this research as shown in Table 3.18.

**Table 3.18: Measures of customer loyalty**

<b>Authors</b>	<b>Question</b>
Nguyen and Leblanc (2001)	I would recommend this service provider as the best high-speed internet service company in the area.
Nguyen and Leblanc (2001)	I would encourage friends and relatives to do business with this service provider.
Nguyen and Leblanc (2001)	I will continue to do business with this service provider.
Nguyen and Leblanc (2001)	This service provider is my first choice for my future high-speed internet service needs.

Source: Developed for this research

The last section of the questionnaire is Section 5. In this section, respondents were asked several demographic questions about their gender, age, education, occupation, and income. In addition, the last question invited respondents to add open-ended comments about the important factors that have an impact on their decision when selecting a high-speed internet service provider and/or, on increasing the levels of their satisfaction and loyalty towards their current high-speed internet service provider. The questions in this section are presented in Figure 3.3.

**Figure 3.3: Section 5 of the questionnaire: Demographic questions**

<b>Section 5: General information (Demographic questions)</b>	
The survey is almost complete now. I would just like to ask the following information about you to end with:	
1. Gender (interviewer to tick)	1 Female      2 Male
2. What age group do you belong to?	
1 18 – 19 years old	2 20 – 29 years old
3 30 – 39 years old	4 40 – 49 years old
5 50 – 59 years old	6 60 years old and above
3. What is your highest educational level?	
1 High school	2 Diploma
3 Bachelor degree	4 Master degree
5 Doctoral degree	6 Other, please specify .....
4. What is your occupation?	
1 Government employee	2 Employee of state owned enterprise
3 Private business employee	4 Self-employed / Business owner
5 Home duties / not employed	6 Student
7 Retired	8 Other, please specify .....
5. What is your average income per month (Baht)?	
1 Less than 10,000	2 10,000 – 20,000
3 20,001 – 30,000	4 30,001 – 40,000
5 40,001 – 50,000	6 Over 50,001
6. Do you have any additional comments to add about the factors that have an impact on your selection of high-speed internet service provider and/or, how to increase your satisfaction and loyalty towards the current high-speed internet service provider. Please use the space below.	
.....	
.....	
.....	
.....	
.....	

Source: Developed for this research

### **3.6.4 Target population**

The target population is the complete group of people relevant to the research project that the researcher wishes to investigate (Sekaran 2000). It is very important for researchers to define the target population in order to choose the proper source from which the data are to be collected (Zikmund 2000). The target population of this study is defined as respondents who have high-speed internet access at home. Downtown areas in Bangkok were chosen to be the target locations for this research because many high-speed internet users are believed to be found in these areas (Thuvasethakul 2008). Further details regarding the sampling size and method, the pilot test, and reliability and validity are now provided.

## **3.7 Sampling**

Sampling can be described as the process of selecting a sufficient proportion of people from the entire population (Sekaran 2000). The research results from the sample can reflect the overall population (Sekaran 2000; Zikmund 2000). Sampling is used when the total population is too large for researchers to survey all members. Normally, it is impossible to collect all data, or test, or interview everyone in the population because of limitations such as costs and time. Studying results from a sample rather than studying the whole population sometimes gives more reliable results because it avoids the exhaustion involved in canvassing an entire population and there would be fewer errors in the resulting data collection especially when the population is extremely large (Sekaran 2000).

In this study, the sample was a group of household high-speed internet users in Thailand. A process of random sampling was used in the data collection for this research. The target population for this study was defined as individuals who have high-speed internet access at home. Many of these individuals work in office buildings located in downtown areas in Bangkok such as Silom, Sathorn, Siamsquare, Chidlom, and Sukhumvit. The researcher located himself at these key public locations in central Bangkok where it is likely that many high-speed internet users were to be found (Thuvasethakul 2008). Every fifth person who was encountered in each selected downtown location of Bangkok was approached and asked to be a respondent in this research. This sampling method aimed to reduce bias in the sample of chosen respondents (Veal 2005). In other words, all members of the population had an equal chance to be included in the sample.

### 3.7.1 Sample size

Sample size can be described as ‘the number of observations or cases that are specified by the estimated variance of the population, the magnitude of acceptable error, and the confidence level’ (Zikmund 2000, p. 388). If the sample size is too small, the results of the study may not truly represent the population (Gay, Mills & Airasian 2006). Therefore, the sample size should be large enough to answer the research question. In general, the ratio of observations to independent variables should never fall below five to one. The desired level is between 15 and 20 observations for each independent variable (Hair, Anderson, Tatham & Black 1998). There are 14 independent variables in this research, and so to obtain the desired sample size, between 210 and 280 respondents were needed. Hence, in conducting the data collection for this research, 300 questionnaire surveys were administered, enabling a confidence level of 95 percent to be applied to the data analysis. The actual sample size, along with the response rate will be discussed in further detail in Chapter 4.

### 3.7.2 Pilot study

The term pilot study refers to a small-scale version of a full-scale study and specific pre-testing of a particular research instrument including a questionnaire or interview schedule (Zikmund 2000). The purposes of the pilot study are to test and evaluate the questionnaire wording, sequencing, and layout, as well as testing and evaluating data collection and data analysis procedures. It can also help in gaining familiarity with respondents, estimating response rates, and estimating interview or questionnaire completion times (Veal 2005). In addition, the pilot test provides an advance opportunity for researchers to recheck the accuracy of data collection in order to minimise errors and weaknesses from improper survey design as well as to discover and reduce confusing interviewing instructions (Zikmund 2000). If the analysis of the data collection from the pilot survey does not properly answer the research questions, the questionnaire should be redesigned (Zikmund 2000). In this study, the questionnaire was tested by giving it to 30 pilot respondents who were representative of the respondents in the main study. This group of respondents has high-speed internet access at home.



Based on the pilot study, it appeared that the survey took approximately 15 minutes for each respondent to complete. No survey items appeared problematic to respondents. Furthermore, the wording of all questions in questionnaire survey was easily understood. Hence, no substantive changes were needed to the survey.

### **3.7.3 Reliability and Validity**

In order to obtain significant interpretations of data, the reliability and validity of the measuring instruments needs to be ensured (Gay, Mills & Airasian 2006). The purpose of reliability and validity is to reduce errors and evaluate measures (Zikmund 2003). In addition, reliability and validity are concerned with how concrete measures, or indicators, are developed for each construct (Dooley 1995; Neuman 2006).

#### **Reliability**

Reliability can be defined as the dependability or consistency of the measure of a variable – that is, the degree to which measures are free from error and therefore provide consistent results (Neuman 2006; Zikmund 2000).

This research used Cronbach's coefficient alpha to measure reliability. The coefficient alpha is a commonly used method to examine reliability for multipoint-scaled items, and it can be considered a perfectly adequate index to test the consistency (Sekaran 2000). The coefficient alpha ranges from 0 to 1. A perfectly reliable test will have a reliability coefficient of 1.00 (Cronbach 1951; Gay, Mills & Airasian 2006). Where the coefficient alpha is greater than 0.7, this can be considered an acceptable level of reliability (Hair et al. 1998). The closer the coefficient alpha is to 1, the higher the internal consistency reliability (Zikmund 2000).

#### **Validity**

Validity can be defined as the accuracy of measurement used to measure what is supposed to be measured (Gay, Mills & Airasian 2006; Neuman 2006; Zikmund 2000). There are several types of validity tests as described below:

- 1) Content validity: Content validity is a measure of whether a scale logically appears to accurately reflect what it is intended to measure (Zikmund 2003). In other words, content validity refers to the measure that includes an adequate and representative set of items (Sekaran 2003).
- 2) Criterion validity: Criterion refers to an existing measure that is considered as an adequate and valid indicator for the target construct (Dooley 1995). Criterion validity is the ability of a measure to correlate with other measures of the same construct (Zikmund 2003). This involves correlating the criterion with the new measure that the researchers try to assess. If a new measure correlates with a criterion measure at the same time, then it is a concurrent validity (Zikmund 2003). In contrast, if a new measure correlates with a criterion measure in the future, then it is a predictive validity (Zikmund 2003).
- 3) Construct validity: Construct validity is a measure to confirm a network of a related hypotheses generated from a theory based on concepts which are established during the statistical analysis of the data (Zikmund 2003). Its purpose is to measure how well the test or measure reflects the target construct (Dooley 1995).

An assessment of content validity was undertaken in this research to ensure that the questionnaire measured an adequate and representative set of items that answer the research questions (Sekaran 2000). To establish the content validity for this research, the measurements from previous studies in the context of service industries including the telecommunications market were reviewed and adapted to be included in the scale used in this study. The scale was then tested on a group of respondents similar to the sample of this study. According to opinions and feedback from previous studies and the pre-test respondents, the measurements were finally modified. Consequently, a good degree of confidence of the content validity was achieved.

In addition, in order to increase the levels of questionnaire accuracy, five industry experts assisted the researcher by checking the questionnaire survey to see if it included all relevant questions. Two of them also assisted in the back-translation procedure to ensure that the language translation of the questionnaire was accurate and interpretable. The other three re-checked that all questions in the survey are suitable for the telecommunications and high-speed internet market in Thailand. Further details regarding the reliability and validity of the survey measures will be presented in Chapter 4.

### **3.8 Data analysis strategy**

Once all data have been collected, the next step is the process of data analysis in order to address the research questions (Sekaran 2000). The raw data from the collection procedure has to be transformed into information in a format that is suitable for decision-making (Zikmund 2000). In this section, data processing procedures and analytical techniques used in this research are discussed in more detail.

#### **3.8.1 Data processing procedures**

The procedure of converting raw data into information consists of several processes including editing, coding, data entry, and data analysis (Zikmund 2000). Editing is the first step in the data processing procedure. It is the process of checking and adjusting the data to make the data ready for coding and transfer to data storage. The aim of editing is to ensure that all data have completeness, consistency, and reliability (Zikmund 2000). There are two types of editing: field editing and in-house editing (Zikmund 2000). Field editing is mostly used with data from interviews. Its purpose is to recheck, on the same day as the interview, for such things as legibility of handwriting. On the other hand, in-house editing is particularly used with questionnaire surveys. Hence, in this research, in-house editing was conducted to check for errors and omissions in the questionnaires before coding in order to ensure that all data collected were adjusted to be readable, complete, and consistent.

After all data were edited, coding is the second step of the data processing procedure. It is a crucial process because computer analysis was conducted by using the coded information from the questionnaires. Coding is the process that identifies and classifies the answers from questionnaires by using numerical scores or other character symbols, before these scores or symbols are transferred to the computer (Sekaran 2000; Zikmund 2000). In this research, closed questions were mainly used for the data collection, whereby respondents were asked to select only one appropriate answer for each question, and a numerical score was assigned to each answer.

The third step is data entry. Data entry is the process of transferring data from a survey questionnaire to a computer (Zikmund 2000). Manual keyboarding was used in this research in order to enter the data into a computer via the Statistical Package for the Social Sciences (SPSS) version 12.0. To ensure accuracy in entering data, error checking was conducted to recheck if all codes were verified and corrected as necessary.

Data analysis is the final step for the data processing procedures. Analysis is the application of reasoning to understand and interpret the data that have been collected (Zikmund 2000). There are three main objectives of the data analysis: (1) to check the preliminary ideas regarding frequencies, central tendency and dispersion; (2) to test the goodness of data in terms of reliability and validity; and (3) to test whether the hypotheses are substantiated (Sekaran 2000). In this research, the Statistical Package for the Social Sciences (SPSS) was chosen to analyse the data in terms of descriptive statistics. The descriptive statistics analysis aimed to describe or summarise information from the data collected including the calculation of averages, frequency distributions, and percentage distributions (Zikmund 2000).

### **3.8.2 Analytical techniques**

Once the data were collected, edited, coded, and entered into the computer, the process of data analysis was undertaken. The techniques used to analyse the data along with a brief outline of the data analysis in this research are now described below. A more detailed discussion of the analytic methods used is provided in the relevant sections of the results chapter.

#### **Factor analysis**

Factor analysis is a multivariate statistical technique which defines the underlying structure among a large number of variables (Hair, Black, Babin, Anderson & Tatham 2006). The two fundamental purposes of factor analysis are to summarise the information contained in a large number of variables and condense the data into smaller number of factors (Hair et al. 2006; Zikmund 2003). In this research, there were 14 factors that were assumed to have

an impact on customers' intentions to select and stay with a high-speed internet provider. Factor analysis was used to analyse the collected data as it is a useful tool that allows the researcher to create factors for each of the 14 measurement constructs. In addition, factor analysis helped the researcher to determine which factors were highly correlated to customers' loyalty in a high-speed internet service industry (Hair et al. 2006; Ticehurst & Veal 2000).

### **Pearson's correlation coefficient**

Correlation can be measured by means of the correlation coefficient (Veal 2005). Pearson's correlation coefficient was used in this research in order to examine the relationships between two or more research variables (Blaikie 2003; Veal 2005). According to Veal (2005), the relationships between the variables can take different forms. If the value of the correlation coefficient is 1.0, then there is a perfect positive correlation between two variables (they increase together). In contrast, if the value of correlation coefficient is -1.0, it can be concluded that there is a perfect negative correlation between two variables (one increases while the other decreases). In addition, there is no relationship between two variables if the value of correlation coefficient is zero.

### **Multiple regression analysis**

Multiple regression analysis is a statistical technique that is used to analyse the relationship between several independent variables and a single dependent variable (Hair et al. 2006). In other words, this analysis technique allows researchers to indicate how much of the variance in the dependent variable is explained by a set of independent variables (Sekaran 2003). Multiple regression analysis was used to examine the simultaneous effects of several independent variables on a dependent variable.

Further details regarding methods including factor analysis, Pearson's correlation coefficient, and multiple regression analysis, along with the results of the data analyses are provided in Chapter 4.

### **3.9 Ethical considerations**

Ethical considerations are important to research. Research ethics refers to rules of morally good conduct for researchers. The primary purpose of ethical considerations in research is to protect interviewees from harm and undesirable consequences that might occur during and after the data collection process (Veal 2005). The researchers should not misrepresent the nature of the study to respondents and should not force respondents to participate in any survey (Sekaran 2000). In this research, prior to the respondents voluntarily taking part in the study, a covering letter was presented to inform every respondent about all research aspects such as the research purpose, objectives, and procedures, as well as their right to terminate the interview at any time. In addition, confidentiality and anonymity were addressed to ensure that all respondents were protected from harm and undesirable consequences that might have occurred after the data collection process. In other words, the respondents were not asked to provide their names or individual information which could have led to loss of privacy or compromised the security of the respondents.

Importantly, ethics issues were incorporated in this research. The English version of the questionnaire was submitted to, and approved by, the Ethics Committee of the Graduate Research College: Southern Cross University.

### **3.10 Conclusion**

This chapter has covered the methodology adopted in conducting this research. Justifications for the research methodology and research design were discussed. The survey design, administration, and data collection procedures were outlined. Based on a quantitative research method, the information for this research was gathered by a survey questionnaire instrument. The questionnaire was divided into 5 sections including: (1) experience with high-speed internet service providers; (2) opinions on high-speed internet service quality; (3) future intentions towards service providers; (4) approaches to choosing a high-speed internet service providers; and (5) general information (demographic questions). In order to properly gather the data, interviewer-completed method via face-to-face interviews was applied. A pilot study was conducted to evaluate and test the

instrument (questionnaire) itself. Once data was properly collected, the statistical program, SPSS, was used to analyse the data. Finally, the ethical considerations and issues of anonymity and confidentiality were taken into considerations in this present research. The next chapter, Chapter 4, presents the data analysis and results of the research in more detail.

## **CHAPTER 4**

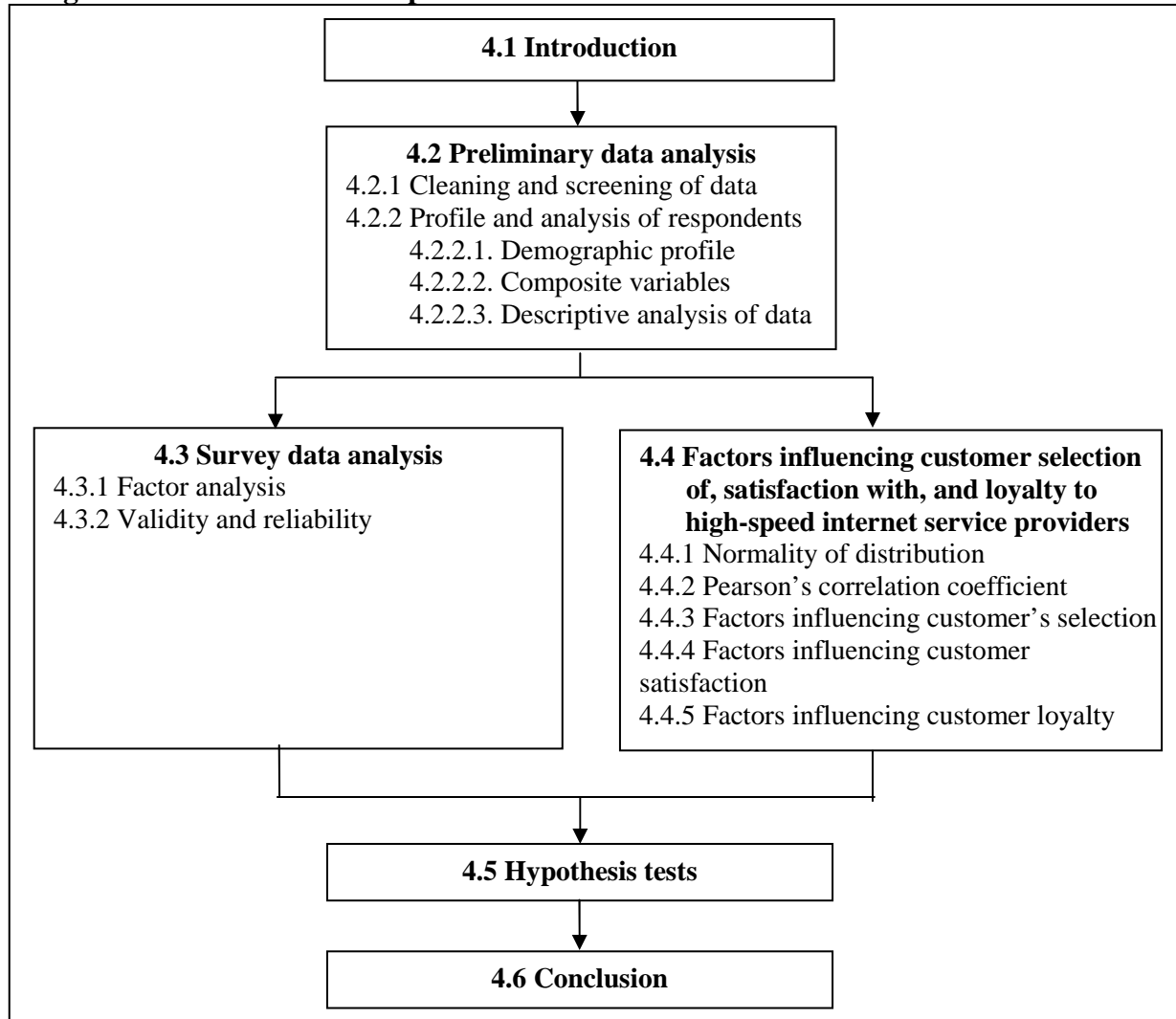
### **ANALYSIS OF DATA**

#### **4.1 Introduction**

Chapter 3 justified the research paradigms and research approaches for the study. In addition, it explained the details of data collection including the chosen survey research method and sampling. The purpose of the study is to investigate customers' perceptions of high-speed internet services in Thailand. The data processing procedures and analytical techniques developed for this research were also outlined. This chapter provides the results of the data analysis and interpretations of research findings.

The purpose of this chapter is to answer the research questions and tests the study hypotheses in order to reach conclusions regarding customers' intention to select and stay with particular high-speed internet providers in Thailand. The chapter is divided into six sections as shown in Figure 4.1. A preliminary data analysis appears in Section 4.2. The analysis of the survey data, including factor analysis, validity, and reliability is presented in Section 4.3. Section 4.4 describes the impact of the independent variables on dependent variables, followed by hypothesis tests which are presented in Section 4.5. Finally, the chapter ends with a conclusion in Section 4.6.



**Figure 4.1: Structure of Chapter 4**

Source: Developed for this research

## 4.2 Preliminary data analysis

Primary data for this research were collected by using a survey questionnaire administered during September and October 2008 in Bangkok, Thailand. The 300 completed surveys from respondents who have high-speed internet access at home were collected and analysed in the main study. The software program used to analyse the data in this research was the Statistical Package for the Social Sciences (SPSS) version 12.0. Before analysing the data, the researcher needed to be familiar with the data and understand the relationship between each variable in the model (Hair et al. 1998). Therefore, this chapter begins with preliminary data analysis which consists of two parts: 4.2.1 discusses cleaning and screening of data and 4.2.2 discusses the profile and analysis of respondents.

### **4.2.1 Cleaning and screening of data**

The first step after entering data into the SPSS program is cleaning and screening of data. This aims to increase the accuracy of the data and to ensure that there are no out-of-range values (Tabachnick & Fidell 2007). If there is a significant amount of data missing, the data analysis results may be distorted.

However, missing data was not a problem for this research because the questionnaire survey was conducted using an interviewer-assisted approach. The respondents completed all questions in the survey as the interviewer guided them through the series of questions. As a result, no missing data was found in this research and no treatment for missing data was necessary. Moreover, after screening of data, no incorrect data was found and no scores that were out of the acceptable range of values were entered.

### **4.2.2 Profile and analysis of respondents**

The sample size should be large enough to answer the research question (Gay, Mills & Airasian 2006). In general, the ratio of observations to independent variables should never fall below five to one. Nevertheless, the desired level is between 15 and 20 observations for each independent variable (Hair et al. 1998). As there are 14 independent variables in this research, to obtain the required sample size, between 210 and 280 observations were needed. Hence, in conducting the data collection for this research, the surveying process continued until 300 surveys were completed. In order to survey a total of 300 respondents, the researcher randomly approached 581 respondents and invited them to participate in the survey. 184 respondents who were approached were not eligible for inclusion in the study as they indicated that they did not have high-speed internet access at home. There were 97 respondents who had high speed internet access at home but indicated that they did not have enough time to complete the survey questionnaire. As a result, the eligible response rate for this research is 75.6 percent (300/397).

#### 4.2.2.1 Demographic profile of the respondents

A demographic profile of the 300 respondents who participated in this research is classified and presented into five categories of gender, age, education, occupation, and personal income. Demographic characteristics, frequency, and percentage for each group of the respondents are included in Table 4.1.

**Table 4.1: Demographic profile of respondents**

	Item	Number of respondents	Percentage
<b>1. Gender</b>	Female	158	52.7
	Male	142	47.3
	<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>2. Age</b>	18 – 19 years old	3	1.0
	20 – 29 years old	123	41.0
	30 – 39 years old	121	40.3
	40 – 49 years old	47	15.7
	50 – 59 years old	4	1.3
	60 years old and above	2	0.7
	<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>3. Education (Highest level)</b>	High school	8	2.7
	Diploma	29	9.7
	Bachelor degree	192	64.0
	Master degree	67	22.3
	Doctoral degree	4	1.3
	<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>4. Occupation</b>	Government employee	88	29.3
	Employee of state owned enterprise	19	6.3
	Private business employee	135	45.0
	Business owner	27	9.0
	Home duties	1	0.3
	Student	12	4.0
	Retired	1	0.3
	Other	17	5.8
	<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>5. Income (Baht / month)</b>	Less than 10,000	42	14.0
	10,000 – 20,000	105	35.0
	20,001 – 30,000	64	21.3
	30,001 – 40,000	35	11.7
	40,001 – 50,000	23	7.7
	Over 50,001	31	10.3
	<b>Total</b>	<b>300</b>	<b>100.0</b>

Source: Data analysis developed for this research

**Gender:** Since gender is not a key variable of interest in this study and the researcher collected questionnaire surveys using a random approach, there were slightly different numbers of females (158 respondents or 52.7 percent of all respondents) and males (142 respondents or 47.3 percent of all respondents).

This is similar to both Thai internet users' surveys in 2007 by the Thai National Statistical Office (NSO) and the Thai National Electronics and Computer Technology Center (NECTEC). These two surveys reveal that the number of female internet users is slightly higher than the number of males. Based on the NSO survey 52.2 percent of internet users are female and 47.8 percent are male (Thai National Statistical Office 2008). Similarly, the NECTEC survey indicates that 57.1 percent of internet users are female and 42.9 percent are male (Thuvasethakul 2008). The gender profile of the survey respondents therefore appears to reflect the national population of Thai internet users.

**Age:** The 300 respondents represented a range of ages from 18 years old to 60 years old and above. The majority of respondents (81.3 percent) were within the 20–39 age group and 15.7 percent were within the 40–49 age group, with a further 3 percent were either within the 18–19 age group or were more than 50 years old. These results indicate that the 20–39 age group was the largest segment of the Thai population that has high-speed internet access at home.

In the same way, the NECTEC survey of Thai internet users conducted in 2005 points out that the age group of 20–29 years is a major segment for Thai internet users (51 percent) (Boonruang 2006). Further, the NSO survey conducted in 2007 indicates that the 15–34 age group is a major segment of Thai internet users (63.2 percent) (Thai National Statistical Office 2008).

**Education:** Respondents were asked to nominate the highest level of education they had completed. Table 4.1 indicates that for 64 per cent of respondents, a bachelor degree was the highest level education. while for 22.3 percent the highest level attained was a masters degree, and 1.3 percent had doctoral degrees. These results indicate that almost 88 percent of respondents had a tertiary-level award. Moreover, 9.7 percent of all respondents reported they had a diploma certificate and 2.7 percent had a high school certificate.

Similarly, the information from the NSO and NECTEC surveys about the education of Thai internet users in 2007 points out that for most users, a bachelor's degree represented the highest level of education (Thai National Statistical Office 2008; Thuvasethakul 2008).

**Occupation:** For the present research, the majority of respondents were employees in private business (45 percent), and in government (29.3 percent). The remainder were either employees of state-owned enterprises, business owners, students, were retired, were occupied with home duties, or had other occupations. Likewise, the 2007 NSO survey indicates that the majority of Thai internet users are employees in private business (40.4 percent) and in government (38.2 percent) (Thai National Statistical Office 2008).

**Income:** Respondents were asked to indicate their personal income per month with ranges from under 10,000 Baht to more than 50,001 Baht. The majority of respondents (35 percent) had an income ranging from 10,001 to 20,000 Baht per month, and 21.3 percent had a monthly income of between 20,001 and 30,000 Baht. These results suggest that the largest group of respondents (56.3 percent), who have high-speed internet access at home, were customers with an income between 10,000 and 30,000 Baht per month.

Based on the NECTEC survey conducted in 2007, the majority of Thai internet users had a household income per month ranging from 30,000 to 50,000 Baht (Thuvasethakul 2008). If it is assumed that there are 2 or 3 members in each household, the average individual income will be in the same range as the respondents in this research.

In summary, Table 4.1 provides an overview of demographic data of the respondents who have high-speed internet access at home. The respondents were 52.7 percent female and 47.3 percent male. The majority of respondents (81.3 percent) were within the age group 20–39 with a highest education qualification of a bachelors degree. Respondents were mainly employed in private business or government with a monthly income within the range of 10,000 to 30,000 Baht.

Respondents were also asked to answer some questions regarding their experience with high-speed internet service providers. Their responses are summarised below in Table 4.2.

**Table 4.2: Experience of respondents with their high-speed internet service providers**

	Item	Number of respondents	Percentage
<b>1. Who is your current service provider?</b>	TOT	99	33.0
	TRUE	154	51.4
	TT&T	31	10.3
	Other	16	5.3
	<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>2. How long have you been with this service provider?</b>	Less than 1 year	73	24.3
	1 – 2 years	115	38.4
	2 – 3 years	72	24.0
	More than 3 years	40	13.3
	<b>Total</b>	<b>300</b>	<b>100.0</b>
<b>3. Main reason for using high-speed internet?</b>	Work	81	27.0
	Education / Study	85	28.3
	Shopping	2	0.7
	Entertainment	55	18.3
	Personal business	57	19.0
	Other	20	6.7
	<b>Total</b>	<b>300</b>	<b>100.0</b>

Source: Data analysis developed for this research

**Current service provider:** Since there are three main high-speed internet providers in Thailand (Siamturakij 2008), the survey questionnaire provided potential high-speed internet providers with three categories representing TOT Public Company Limited (TOT), TRUE Corporation Public Company Limited (TRUE), and TT&T Public Company Limited (TT&T). The majority of respondents (51.4 percent) indicated that TRUE was their current service provider, followed by 33 percent using TOT, and 10.3 percent using TT&T.

**Period of time:** Respondents were asked how long they had used their current service provider. The majority of respondents (38.4 percent) had used their current service providers for 1–2 years. There were 24.3 percent of the respondents who had used their current service providers less than 1 year, and 24 percent who had used their current service providers for about 2–3 years. There were 13.3 percent of the respondents who had been with their current service providers for more than 3 years.

**Main reason:** The main reasons for using high-speed internet were classified into six categories of work, education/study, shopping, entertainment, personal business, and other. Table 4.2 shows that there were two main reasons for having high-speed internet at home.

These two reasons were education/study and work with 28.3 and 27 percent, respectively, followed by usage for personal business (19 percent), entertainment (18.3 percent), other (6.7 percent), and shopping (0.7 percent).

#### **4.2.2.2 Development of composite variables**

In this study, there are 15 variables including (1) Perceived risks, (2) Information, (3) Corporate image, (4) Tangibility, (5) Reliability, (6) Responsiveness, (7) Assurance, (8) Empathy, (9) Network quality, (10) Trust, (11) Switching cost, (12) Perceived value, (13) Customers' selection, (14) Customer satisfaction, and (15) Customer loyalty. Each variable, with the exception of 'customers' selection' is measured via a series of questions which are then used to create new composite variables. The customers' selection variable was measured by Question 15 from Section 3 of the questionnaire (S3\_15): 'This service provider is my first choice for my future high-speed internet service needs'. Therefore, 14 composite variables for this research were generated by taking an average across the questionnaire items. For example, the composite variable, 'perceived risks', was created from the mean score across ten individual questionnaire items (Section 4, Questions. 3, 5, 7, 10, 13, 15, 17, 20, 22, 24).

The new composite variables of the original 14 variables for this research were calculated based on the survey items shown in Table 4.3. The factor analysis, validity, and reliability of these composite variables will be discussed in Section 4.3.

**Table 4.3: Questionnaire items used to develop each composite variable**

Composite variables	Individual questionnaire items		
	Section	No	Item
<b>Perceived risks</b>	4	3	Any inconvenience caused by using an alternative service provider is very important to me.
		5	I cannot be sure if the internet signal will be stable if I choose another service provider.
		7	It is difficult to try and evaluate the service due to its intangibility.
		10	I might be overcharged by an alternative service provider.
		13	Any financial loss incurred by choosing an alternative service provider would be considered very important to me.
		15	I think that the purchase of high-speed internet from an alternative service provider would lead to a financial loss (i.e. due to its poor warranty, high monthly payment etc).
		17	I may have to waste a lot of time and effort getting the service adjusted/repaired if I swap to an alternative service provider.
		20	I may not get the service I expect when choosing a new service provider.
		22	I cannot be sure when the service will be properly installed by alternative providers.
		24	Any convenience incurred from using an alternative service provider would be considered very important.
<b>Information</b>	4	1	I usually talk about alternative service providers with other people.
		2	I usually spend a lot of time choosing what kind of internet packages suit me.
		8	I usually seek advice from other people prior to purchasing this kind of service.
		12	I usually take many factors into account before purchasing this type of service.
		16	I would be interested in reading a consumer report article about this service.
		19	I have compared service characteristics between firms that provide this service.
		23	I would be interested in reading information about how this service is performed by alternative providers.



Composite variables	Individual questionnaire items		
	Section	No	Item
<b>Corporate image</b>	3	3 5 14 17	In my opinion, the current service provider has a good image/reputation. I have always had a good impression of my current internet service provider. I believe that my current service provider always fulfils the promises that it makes to its customers. I believe that my current service provider has a better reputation and image than its competitors.
<b>Tangibility</b>	2	1 4 9 13	The service provider has up-to-date equipment (e.g. internet modem). The service provider's employees are well dressed and appear neat. All environments of the service provider's shops are clean and well maintained. The service provider's physical facilities are visually appealing
<b>Reliability</b>	2	5 7 14 16 19	The service provider delivers its services at the times it promises to do so. The service provider is dependable. When the service provider promises to do something by a certain time, it does so. The service provider always performs the service right the first time. When customers have a problem, the service provider shows a sincere interest in solving it.
<b>Responsiveness</b>	2	2 8 17 24	Employees are always willing to help me. Employees give me prompt service. Employees tell me exactly when services will be performed. Employees are never too busy to respond to my requests.
<b>Assurance</b>	2	10 15 18 20 21 25	I can trust employees of this service provider. Employees are consistently well-mannered with customers. I feel safe in transactions with this service provider. Employees have the knowledge to answer customers' questions. Employees instil confidence in customers. Employees get adequate support from the service provider to do their jobs well.

Composite variables	Individual questionnaire items		
	Section	No	Item
<b>Empathy</b>	2	3	The service provider has the customers' best interest at heart.
		6	The service provider gives customers individual attention.
		11	The service provider has operating hours and locations which are convenient to its customers.
		22	Employees give their personal attention to customers.
		26	Employees understand customers' specific needs.
<b>Network quality</b>	2	12	The quality of the network is always stable.
		23	The quality and strength of the network signal is always excellent.
<b>Trust</b>	3	1	This service provider is known to be concerned about customers' interest.
		8	Though circumstances may change, I believe that the service provider will be ready and willing to offer me assistance and support.
		11	This service provider can be relied on to keep its promises.
		16	I have complete trust in doing business with this service provider.
<b>Switching cost</b>	4	4	The rate plan or monthly fees offered by a new provider may be worse than those at present.
		6	I cannot afford the time needed to get the information to fully evaluate other service providers.
		9	Comparing different service providers is very difficult.
		11	Switching to a new service provider may entail some unforeseen difficulties.
		14	Comparing the benefits offered by my current provider and those offered by other companies would take a lot of time and mental effort.
		18	It will take too much time/effort to get the information I need to feel comfortable evaluating new service providers.
		21	I don't know what kind of relationship I would have with a new service provider.
		25	Switching to a new provider may entail certain hidden costs or expenses.

Composite variables	Individual questionnaire items		
	Section	No	Item
<b>Perceived value</b>	3	2	The chosen offerings are worth what is given up such as time, energy and effort.
		13	Compared with major competitors, the transaction with the provider is a good choice.
		18	Overall, the chosen offerings are value for money.
<b>Customer satisfaction</b>	3	4	My current service provider meets my expectations.
		7	I think I did the right thing when I joined this company.
		9	Overall, I am happy with my current service provider.
<b>Customer loyalty</b>	3	6	I would recommend this service provider as the best high-speed internet service company in the area.
		10	I would encourage friends and relatives to do business with this service provider.
		12	I will continue to do business with this service provider.
		15	This service provider is my first choice for my future high-speed internet service needs.

Source: Data analysis developed for this research

#### 4.2.2.3 Descriptive analysis of data

The purpose of descriptive statistical analysis is to summarise information from the data collected including minimum, maximum, and mean responses as well as standard deviation and variance for each variable (Zikmund 2003). Descriptive statistics for each composite variable in this study are summarised and presented in Table 4.4.

A seven-point Likert-type scale was used to measure each item contained within the composite variables, with 1 representing 'strongly disagree' (the most unfavourable attitude) and 7 representing 'strongly agree' (the most favourable attitude). The mean scores of the composite variables in this research were between 4.403 and 4.961, which means that the respondents have given average scores on most composite variables. The standard deviations of the composite variables were between 0.778 and 1.457, and the variances were between 0.606 and 2.124.

**Table 4.4: Descriptive analysis of data**

Variable	Minimum	Maximum	Mean	Std. Deviation	Variance
Perceived Risks	2.20	7.00	4.782	0.778	0.606
Information	1.86	7.00	4.825	0.941	0.885
Corporate image	1.50	7.00	4.961	0.994	0.989
Tangibility	2.00	7.00	4.886	0.845	0.714
Reliability	1.20	7.00	4.879	0.963	0.928
Responsiveness	1.50	7.00	4.681	1.028	1.056
Assurance	1.67	7.00	4.758	0.897	0.805
Empathy	1.80	7.00	4.679	0.911	0.830
Network quality	1.00	7.00	4.403	1.451	2.104
Trust	2.00	7.00	4.852	0.986	0.973
Switching cost	1.75	6.63	4.576	0.816	0.666
Perceived value	1.33	7.00	4.786	1.132	1.281
Selection	1.00	7.00	4.610	1.457	2.124
Satisfaction	1.00	7.00	4.834	1.225	1.501
Loyalty	1.00	7.00	4.657	1.240	1.538

Source: Data analysis developed for this research

The descriptive analysis of data in Table 4.4 will be used later to test hypotheses and draw conclusions about the relationships between dependent and independent variables. Furthermore, skewness and kurtosis values for the distributions which were created from descriptive data analysis will be used to determine the univariate outliers and the normality of data distribution in Section 4.4.1.

### 4.3 Survey data analysis

Data is now available to analyse and test hypotheses regarding the theoretical framework described in Chapter 3. Before the data are used for those purposes, the factor analysis, validity, and reliability tests of the composite variables must be assessed in order to ensure that valuable interpretations of the data can be made (Gay, Mills & Airasian 2006). The procedures used to assess factor analysis, validity and reliability of the survey data are now outlined.

### **4.3.1 Factor analysis**

Factor analysis is a multivariate statistical technique which defines the underlying structure among a large number of variables (Hair et al. 2006). It aims to summarise the information contained in a large number of variables and reduce them into a smaller number of factors (Hair et al. 2006; Zikmund 2003). In this research, factor analysis using Principal Components Analysis (PCA) with varimax rotation was conducted in order to examine the internal consistency of the composite variable. Separate factor analyses were conducted for each set of variables given that the items used to design the survey in the current study were based on well tested constructs adapted from other contexts. PCA was performed to examine whether the questionnaire items could be considered to measure each single underlying construct. Varimax rotation is an appropriate approach in this study because it was used to minimise the number of variables that have high loadings on each factor in the first stage (Pallant 2007; Tabachnick & Fidell 2001). Varimax rotation has the additional advantage of being easy to interpret and report (Pallant 2007; Tabachnick & Fidell 2001). If the questionnaire items measure a single underlying concept or dimension, then only one component will be found with an eigenvalue greater than 1 (Manning & Munro 2007). On the other hand, if more than one component was extracted with an eigenvalue greater than 1 in any construct, it would then be concluded that the questionnaire items were not homogenous and were measuring more than one concept (Manning & Munro 2007). Prior to reporting the results of factor analysis, the issues of scale validity and reliability are now considered.

### **4.3.2 Validity and Reliability**

#### **Validity**

Validity is the degree to which a scale or instrument actually measures what it claims to measure (Manning & Munro 2007). Content validity was undertaken in this research to ensure that the designed questionnaire measures an adequate and representative set of items that answer the research questions (Sekaran 2000). To establish the content validity for this research, the measurements from previous studies in the context of service

industries including the telecommunications market were reviewed and adapted to be included in the scale used of this study (Details are presented in Section 3.6.3).

Following on from factor analysis, the validity of the questionnaire items was assessed by examining the item-to-total correlations between each composite variable for the 14 constructs and the component questionnaire items. If each component questionnaire item is measuring the same thing as the total, the item-to-total should exceed 0.5 and then the scale is homogenous (Hair et al. 1998; Manning & Munro 2007).

### **Reliability**

Reliability can be defined as the dependability or consistency of the variable's measurement – that is, the degree to which measures are free from error and therefore provide consistent results (Neuman 2006; Zikmund 2000). The Cronbach coefficient alpha is a commonly used method to examine the reliability for multipoint-scaled items. It can be considered a perfectly adequate index to test the consistency reliability (Sekaran 2000). Therefore, the Cronbach coefficient alpha was used in this research as the key test to measure scale reliability. The coefficient alpha ranges from 0 to 1. A perfectly reliable test would have a reliability coefficient of 1.00 (Cronbach 1951; Gay, Mills & Airasian 2006). Where the coefficient alpha of the dimensions is greater than 0.7, this can be considered an acceptable reliability (Hair et al. 1998).

The results of factor analysis, validity and reliability tests for each composite variable of this research are summarised and presented in the following section.

**Factor analysis, validity and reliability tests for each composite variable****Perceived risks**

Table 4.5 presents the factor analysis result for the variable ‘Perceived risks’.

**Table 4.5: Factor analysis of perceived risks**

Question in Section 4		FACTOR	
		1	2
No.	Item	Risk of Wasted Time & Money	Risk of Inconvenience
24	Any convenience incurred from using an alternative service provider would be considered very important.		0.736
3	Any inconvenience caused by using an alternative service provider is very important to me.		0.726
13	Any financial loss incurred by choosing an alternative service provider would be considered very important to me.		0.575
5	I cannot be sure if the internet signal will be stable if I choose another service provider.		0.553
17	I may have to waste a lot of time and effort getting the service adjusted/repared if I swap to an alternative service provider.	0.802	
15	I think that the purchase of high-speed internet from an alternative service provider would lead to a financial loss (i.e. due to its poor warranty, high monthly payment etc).	0.726	
10	I might be overcharged by an alternative service provider.	0.722	
20	I may not get the service I expect when choosing a new service provider.	0.661	
22	I cannot be sure when the service will be properly installed by alternative providers.	0.638	
7	It is difficult to try and evaluate the service due to its intangibility.	0.395	
<b>Eigenvalue</b>		<b>3.505</b>	<b>1.255</b>
<b>% of Variance</b>		<b>35.050</b>	<b>12.553</b>

Source: Data analysis developed for this research

The result indicates that two factors were extracted with eigenvalues greater than 1. That is, these ten questionnaire items appear to be measuring two different things. The first factor with an eigenvalue of 3.505, accounted for 35.050 percent of variance in the set of perceived risks variable. This factor was named ‘Risk of Wasted Time & Money’ and it

consisted of Questions 7, 10, 15, 17, 20, and 22 in Section 4. For this factor, Question 17 in Section 4 had the largest component loading (0.802) and Question 7 in Section 4 had the smallest component loading (0.395).

Factor 2 had an eigenvalue of 1.255, accounting for 12.553 percent of variance in the set of perceived risks variable. The name of this factor was ‘Risk of Inconvenience’ and it consists of Questions 3, 5, 13, and 24 in Section 4. For this factor, Question 24 in Section 4 had the largest component loading (0.736) and Question 5 had the smallest component loading (0.553).

As a result, these two factors of the perceived risks variable, ‘Risk of Wasted Time and Money’ and ‘Risk of Inconvenience’ were examined for their validity and reliability. The results are presented in Table 4.6 (a) and Table 4.6 (b).

**Table 4.6(a): Validity and reliability test of ‘Risk of Wasted Time and Money’**

Questions in Section 4		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No.	Item		
7	It is difficult to try and evaluate the service due to its intangibility.	0.290	0.790
10	I might be overcharged by an alternative service provider.	0.545	0.709
15	I think that the purchase of high-speed internet from an alternative service provider would lead to a financial loss (i.e. due to its poor warranty, high monthly payment etc).	0.571	0.702
17	I may have to waste a lot of time and effort getting the service adjusted/repaired if I swap to an alternative service provider.	0.617	0.691
20	I may not get the service I expect when choosing a new service provider.	0.510	0.720
22	I cannot be sure when the service will be properly installed by alternative providers.	0.523	0.716

Source: Data analysis developed for this research

The overall Cronbach’s alpha of the perceived risks variable for this construct was 0.757 which presented ‘acceptable reliability’ with a coefficient alpha above 0.7. However, the results from Table 4.6(a) indicated that the reliability of this scale could be improved by deleting Question 7 in Section 4. In addition, the item-total correlation of Question 7 was very low (0.290). Therefore, it was appropriate to delete this questionnaire item from the



scale. Deletion of this questionnaire item improved the overall scale of reliability to 0.790. The remaining scale containing five items showed a high degree of reliability and item correlation. Hence, these remaining five questions were included in subsequent analyses.

**Table 4.6(b): Validity and reliability test of ‘Risk of Inconvenience’**

Question in Section 4		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No.	Item		
3	Any inconvenience caused by using an alternative service provider is very important to me.	0.449	0.490
5	I cannot be sure if the internet signal will be stable if I chose another service provider.	0.365	0.556
13	Any financial loss incurred by choosing an alternative service provider would be considered very important to me.	0.381	0.545
24	Any convenience incurred from using an alternative service provider would be considered very important.	0.368	0.555

Source: Data analysis developed for this research

The overall Cronbach's alpha of the perceived risks variable for this construct was 0.609 which is below an acceptable reliability (0.7). In addition, the results from Table 4.6(b) showed that the item-total correlation of this set of questions was low (below 0.5 for all questions). Deletion of any questionnaire item would not have improved the overall reliability of this scale. Therefore, this construct (Risk of Inconvenience) was not used in subsequent analyses. This is supported by Hair et al. (1998) who suggest that reliability is considered unacceptable where the coefficient alpha is below 0.7.

### **Information**

Table 4.7 presents the factor analysis results for the variable ‘Information’. For this variable, the results indicate that there were two factors extracted with eigenvalues greater than 1. That is, the seven questionnaire items appear to measure two different things. The first factor with an eigenvalue of 3.019, accounted for 43.126 percent of the variance in the ‘information variable. This factor was named ‘Type of Information Sought’ and consisted of Questions 1, 16, 19, and 23 in Section 4. For this factor, Question 23 in Section 4 had

the largest component loading (0.830) and Question 1 in Section 4 had the smallest component loading (0.580).

**Table 4.7: Factor analysis of information**

Question in Section 4		FACTOR	
		1	2
No.	Item	Type of Information Sought	Depth of Information Sought
8	I usually seek advice from other people prior to purchasing this kind of service.		0.784
2	I usually spend a lot of time choosing what kind of internet packages suit me.		0.690
12	I usually take many factors into account before purchasing this type of service.		0.688
23	I would be interested in reading information about how this service is performed by alternative providers.	0.830	
19	I have compared service characteristics between firms that provide this service.	0.780	
16	I would be interested in reading a consumer report article about this service.	0.708	
1	I usually talk about alternative service providers with other people.	0.580	
<b>Eigenvalue</b>		<b>3.019</b>	<b>1.021</b>
<b>% of Variance</b>		<b>43.126</b>	<b>14.589</b>

Source: Data analysis developed for this research

Factor 2 had an eigenvalue of 1.021, accounting for 14.589 percent of the variance for this variable. This factor was named ‘Depth of Information Sought’ and consisted of Questions 2, 8, and 12 in Section 4. For this factor, Question 8 in Section 4 had the largest component loading (0.784) and Question 12 had the smallest component loading (0.688).

As a result, these two factors within the information variable, ‘Type of Information Sought’ and ‘Depth of Information Sought’ were then examined for their validity and reliability. The results are presented in Table 4.8 (a) and Table 4.8 (b).

**Table 4.8(a): Validity and reliability test of ‘Type of Information Sought’**

Question in Section 4		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No.	Item		
1	I usually talk about alternative service providers with other people.	0.455	0.740
16	I would be interested in reading a consumer report article about this service.	0.514	0.707
19	I have compared service characteristics between firms that provide this service.	0.565	0.678
23	I would be interested in reading information about how this service is performed by alternative providers.	0.649	0.632

Source: Data analysis developed for this research

The overall Cronbach's alpha of this construct was 0.749 which presented an acceptable reliability (above 0.7). As shown in Table 4.8(a), no improvement in the overall reliability of the scale occurred when any of these questions were deleted. Thus, factor 1 of the information variable which is ‘Type of Information Sought’ is reliable and was included in subsequent analyses.

**Table 4.8(b): Validity and reliability test of ‘Depth of Information Sought’**

Question in Section 4		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No.	Item		
2	I usually spend a lot of time choosing what kind of internet packages suit me.	0.457	0.463
8	I usually seek advice from other people prior to purchasing this kind of service.	0.361	0.602
12	I usually take many factors into account before purchasing this type of service.	0.468	0.471

Source: Data analysis developed for this research

The overall Cronbach's alpha of the construct named ‘Depth of Information Sought’ was 0.613 which is below an acceptable reliability (0.7). In addition, the results from Table 4.8(b) showed that the item-total correlation of this set of questions was low (below 0.5 for all questions) and deletion of any item would not have improved the overall reliability of this scale. Therefore, factor 2 of the information variable which is ‘Detailed and in-depth information’ was not included in subsequent analyses. This is supported by Hair et al.

(1998) who suggest that reliability is considered unacceptable where the coefficient alpha is below 0.7.

### Corporate image

Table 4.9 presents the factor analysis results for the variable ‘Corporate image’.

**Table 4.9: Factor analysis of corporate image**

Question in Section 3		FACTOR
No.	Item	1
3	In my opinion, the current service provider has a good image/reputation.	0.834
14	I believe that my current service provider always fulfils the promises that it makes to its customers.	0.828
17	I believe that my current service provider has a better reputation and image than its competitors.	0.826
5	I have always had a good impression of my current internet service provider.	0.774
<b>Eigenvalue</b>		<b>2.661</b>
<b>% of variance</b>		<b>66.529</b>

Source: Data analysis developed for this research

As shown in Table 4.9, only one factor was extracted with an eigenvalue greater than 1 and hence unidimensionality was assumed. The factor with an eigenvalue of 2.661 accounted for 66.529 percent of variance in the corporate image variable. All questionnaire items displayed loadings of greater than 0.5. Question 3 in Section 3 had the largest component loading (0.834). Question 5 in Section 3 had the smallest component loading (0.774). Consequently, the corporate image variable was examined for validity and reliability. The results are present in Table 4.10.

The overall coefficient alpha for these four questionnaire items was 0.829 which was found to be good (above 0.80). Furthermore, all 4 items reported in Table 4.10 have high item-total correlations (above 0.50). Deletion of any questionnaire item would not have improved the overall reliability of this scale. Hence, the corporate image variable is reliable and was included in subsequent analyses.

**Table 4.10: Validity and reliability test of corporate image**

Question in Section 3		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No.	Item		
3	In my opinion, the current service provider has a good image/reputation.	0.684	0.775
5	I have always had a good impression of my current internet service provider.	0.606	0.807
14	I believe that my current service provider always fulfils the promises that it makes to its customers.	0.681	0.777
17	I believe that my current service provider has a better reputation and image than its competitors.	0.674	0.777

Source: Data analysis developed for this research

### Tangibility

Table 4.11 presents the factor analysis result for the variable 'Tangibility'.

**Table 4.11: Factor analysis of tangibility**

Question in Section 2		FACTOR 1
No.	Item	
9	All environments of the service provider's shops are clean and well maintained.	0.758
4	The service provider's employees are well dressed and appear neat.	0.724
13	The service provider's physical facilities are visually appealing.	0.695
1	The service provider has up-to-date equipment (e.g. internet modem).	0.694
<b>Eigenvalue</b>		<b>2.064</b>
<b>% of variance</b>		<b>51.602</b>

Source: Data analysis developed for this research

As shown in Table 4.11, only one factor was extracted with an eigenvalue greater than 1 and hence unidimensionality was assumed. The factor with an eigenvalue of 2.064 accounted for 51.602 percent of variance in the set of tangibility variable. All questionnaire items displayed loadings greater than 0.5. Question 9 in Section 2 had the largest component loading with 0.758. Question 1 in Section 2 had the smallest component loading (0.694). Consequently, the tangibility variable was examined for validity and reliability. The results are presented in Table 4.12.

**Table 4.12: Validity and reliability test of tangibility**

Question in Section 2		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No.	Item		
1	The service provider has up-to-date equipment (e.g. internet modem).	0.453	0.628
4	The service provider's employees are well dressed and appear neat.	0.464	0.621
9	All environments of the service provider's shops are clean and well maintained.	0.501	0.596
13	The service provider's physical facilities are visually appealing	0.454	0.627

Source: Data analysis developed for this research

The overall coefficient alpha for these four questionnaire items was 0.683 which found not to be an acceptable reliability (below 0.70). Nevertheless, 0.683 was very close to the acceptable range (Hair et al. 1998). That is, if a coefficient alpha value 0.683 is rounded up to 1 decimal place, it becomes exactly 0.70. Besides, all four items reported in Table 4.12 have item-total correlation values close to 0.50, and deletion of any questionnaire item would not have improved the overall reliability of this scale. Hence, the tangibility variable is reliable and was included in subsequent analyses.

## Reliability

Table 4.13 presents the factor analysis results for the variable 'Reliability'.

**Table 4.13: Factor analysis of reliability**

Question in Section 2		FACTOR
No.	Item	1
7	The service provider is dependable.	0.806
16	The service provider always performs the service right the first time.	0.800
19	When customers have a problem, the service provider shows a sincere interest in solving it.	0.800
14	When the service provider promises to do something by a certain time, it does so.	0.759
5	The service provider delivers its services at the times it promises to do so.	0.751
<b>Eigenvalue</b>		<b>3.070</b>
<b>% of variance</b>		<b>61.393</b>

Source: Data analysis developed for this research

As shown in Table 4.13, there was only one factor which was extracted with an eigenvalue greater than 1 and hence unidimensionality was assumed. The eigenvalue was 3.070 and accounted for 61.393 percent of variance in the set of the reliability variable. All questionnaire items displayed loadings greater than 0.5. Question 7 in Section 2 had the largest component loading (0.806) and Question 5 in Section 2 had the smallest component loading (0.751). Consequently, the reliability variable was examined for validity and reliability. The results are presented in Table 4.14.

**Table 4.14: Validity and reliability test of reliability**

Question in Section 2		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No.	Item		
5	The service provider delivers its services at the times it promises to do so.	0.608	0.820
7	The service provider is dependable.	0.678	0.800
14	When the service provider promises to do something by a certain time, it does so.	0.617	0.815
16	The service provider always performs the service right the first time.	0.664	0.803
19	When customers have a problem, the service provider shows a sincere interest in solving it.	0.666	0.802

Source: Data analysis developed for this research

The overall coefficient alpha for these five questionnaire items was 0.840 which was found to be good (above 0.80). Furthermore, all 5 items reported in Table 4.14 have high item-total correlations (above 0.50) and deletion of any questionnaire item would not have improved the overall reliability of this scale. Hence, the reliability variable is reliable and was included in subsequent analyses.

### **Responsiveness**

Table 4.15 presents the factor analysis results for the variable 'Responsiveness'. As shown in Table 4.15, only one factor was extracted with an eigenvalue greater than 1 and hence unidimensionality was assumed. The factor with an eigenvalue of 2.526 accounted for 63.162 percent of variance in the set of the responsiveness variable. All questionnaire items displayed loadings greater than 0.5. Question 8 in Section 2 had the largest

component loading with 0.864. Question 17 in Section 2 had the smallest component loading (0.703).

**Table 4.15: Factor analysis of responsiveness**

Question in Section 2		FACTOR
No.	Item	1
8	Employees give me prompt service.	0.864
2	Employees are always willing to help me.	0.804
24	Employees are never too busy to respond to my requests.	0.800
17	Employees tell me exactly when services will be performed.	0.703
<b>Eigenvalue</b>		<b>2.526</b>
<b>% of variance</b>		<b>63.162</b>

Source: Data analysis developed for this research

Consequently, the responsiveness variable was examined for validity and reliability. The results are presented in Table 4.16.

**Table 4.16: Validity and reliability test of responsiveness**

Question in Section 2		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No.	Item		
2	Employees are always willing to help me.	0.626	0.751
8	Employees give me prompt service.	0.720	0.701
17	Employees tell me exactly when services will be performed.	0.513	0.804
24	Employees are never too busy to respond to my requests.	0.620	0.753

Source: Data analysis developed for this research

The overall coefficient alpha for these four questionnaire items was 0.804 which was found to be good (above 0.80). Furthermore, all 4 items reported in Table 4.16 have high item-total correlations (above 0.50) and deletion of any questionnaire item would not have improved the overall reliability of this scale. Hence, the responsiveness variable is reliable and was included in subsequent analyses.



**Assurance**

Table 4.17 presents the factor analysis results for the variable ‘Assurance’.

**Table 4.17: Factor analysis of assurance**

Question in Section 2		FACTOR
No.	Item	1
21	Employees instil confidence in customers.	0.868
20	Employees have the knowledge to answer customers’ questions.	0.824
15	Employees are consistently well-mannered with customers.	0.779
10	I can trust employees of this service provider.	0.757
25	Employees get adequate support from the service provider to do their jobs well.	0.737
18	I feel safe in transactions with this service provider.	0.606
<b>Eigenvalue</b>		<b>3.523</b>
<b>% of variance</b>		<b>58.712</b>

Source: Data analysis developed for this research

As shown in Table 4.17, there was only one factor which was extracted with an eigenvalue greater than 1 and hence unidimensionality was assumed. The eigenvalue was 3.523 and accounted for 58.712 percent of variance in the set of the assurance variable. All questionnaire items displayed loadings greater than 0.50. Question 21 in Section 2 had the largest component loading (0.868) and Question 18 in Section 2 had the smallest component loading (0.606). Consequently, the assurance variable was examined for validity and reliability. The results are presented in Table 4.18.

**Table 4.18: Validity and reliability test of assurance**

Question in Section 2		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No.	Item		
10	I can trust employees of this service provider.	0.632	0.832
15	Employees are consistently well-mannered with customers.	0.665	0.826
18	I feel safe in transactions with this service provider.	0.478	0.862
20	Employees have the knowledge to answer customers’ questions.	0.705	0.817
21	Employees instil confidence in customers.	0.775	0.804
25	Employees get adequate support from the service provider to do their jobs well.	0.617	0.835

Source: Data analysis developed for this research

The overall coefficient alpha for these six questionnaire items was 0.854 which was found to be good (above 0.80). Nevertheless, regarding Table 4.18, Question 18 in Section 2, 'I feel safe in transactions with this service provider' needed to be deleted to increase the Cronbach's Alpha reliability from 0.854 to 0.862, as the item-total correlation of Question 18 in Section 2 is relatively low (0.478 which is below 0.50). After Question 18 in Section 2 was deleted from the reliability test, the reliability of the assurance variable increased to 0.862. All five remaining items still had high item correlations (above 0.50), hence the assurance variable is reliable and was included in subsequent analyses.

### Empathy

Table 4.19 presents the factor analysis results for the variable 'Empathy'.

**Table 4.19: Factor analysis of empathy**

Question in Section 2		FACTOR
No.	Item	1
6	The service provider gives customers individual attention.	0.830
3	The service provider has the customers' best interest at heart.	0.814
22	Employees give their personal attention to customers.	0.769
26	Employees understand customers' specific needs.	0.742
11	The service provider has operating hours and locations which are convenient to its customers.	0.625
<b>Eigenvalue</b>		<b>2.885</b>
<b>% of variance</b>		<b>57.697</b>

Source: Data analysis developed for this research

As shown in Table 4.19, only one factor was extracted with an eigenvalue greater than 1 and hence unidimensionality was assumed. The factor with an eigenvalue of 2.885 accounted for 57.697 percent of variance in the set of the empathy variable. All questionnaire items displayed loadings greater than 0.5. Question 6 in Section 2 had the largest component loading with 0.830, and Question 11 in Section 2 had the smallest component loading (0.625). Consequently, the empathy variable was examined for validity and reliability. The results are presented in Table 4.20.

**Table 4.20: Validity and reliability test of empathy**

Question in Section 2		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No.	Item		
3	The service provider has the customers' best interest at heart.	0.673	0.756
6	The service provider gives customers individual attention.	0.691	0.751
11	The service provider has operating hours and locations which are convenient to its customers.	0.464	0.818
22	Employees give their personal attention to customers.	0.619	0.774
26	Employees understand customers' specific needs.	0.580	0.785

Source: Data analysis developed for this research

The overall coefficient alpha for these six questionnaire items was 0.814 which was found to be good (above 0.80). Nevertheless, regarding Table 4.20, Question 11 in Section 2, 'The service provider has operating hours and locations which are convenient to its customers' needed to be deleted to increase the Cronbach's Alpha reliability from 0.814 to 0.818, as the item-total correlation of Question 11 in Section 2 is relatively low (0.464 which below 0.50). After Question 11 in Section 2 was deleted from the reliability test, the reliability of the empathy variable increased to 0.818. All four remaining items still had high item correlations (above 0.50). Hence the empathy variable is reliable and was included in subsequent analyses.

### Network quality

Table 4.21 presents the factor analysis results for the variable 'Network quality'.

**Table 4.21: Factor analysis of network quality**

Question in Section 2		FACTOR
No.	Item	1
12	The quality of the network is always stable.	0.936
23	The quality and strength of the network signal is always excellent.	0.936
<b>Eigenvalue</b>		<b>1.751</b>
<b>% of variance</b>		<b>87.541</b>

Source: Data analysis developed for this research

As shown in Table 4.21, there was only one factor which was extracted with an eigenvalue greater than 1 and hence unidimensionality was assumed. The eigenvalue was 1.751 and

accounted for 87.541 percent of variance in the set of the network quality variable. These two questionnaire items displayed a high value of loadings (0.936). Consequently, the network quality variable was examined for validity and reliability. The results are presented in Table 4.22.

**Table 4.22: Validity and reliability test of network quality**

Question in Section 2		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No.	Item		
12	The quality of the network is always stable.	0.751	-
23	The quality and strength of the network signal is always excellent.	0.751	-

Source: Data analysis developed for this research

The overall coefficient alpha for these two questionnaire items was 0.858 which was found to be good (above 0.80). Furthermore, these two items reported in Table 4.22 have high item-total correlations (above 0.50) and deletion of any questionnaire item would not have improved the overall reliability of this scale. Hence, the network quality variable is reliable and was included in subsequent analyses.

## Trust

Table 4.23 presents the factor analysis results for the variable 'Trust'.

**Table 4.23: Factor analysis of trust**

Question in Section 3		FACTOR
No.	Item	1
16	I have complete trust in doing business with this service provider.	0.880
8	Though circumstances may change, I believe that the service provider will be ready and willing to offer me assistance and support.	0.835
1	This service provider is known to be concerned about customers' interest.	0.792
11	This service provider can be relied on to keep its promises.	0.774
<b>Eigenvalue</b>		<b>2.699</b>
<b>% of variance</b>		<b>67.468</b>

Source: Data analysis developed for this research

As shown in Table 4.23, only one factor was extracted with an eigenvalue greater than 1 and hence unidimensionality was assumed. The factor with an eigenvalue of 2.699 accounted for 67.468 percent of variance in the set of the trust variable. All questionnaire items displayed loadings greater than 0.5. Question 16 in Section 3 had the largest component loading with 0.880, and Question 11 in Section 3 had the smallest component loading (0.774). Consequently, the trust variable was examined for validity and reliability. The results are presented in Table 4.24.

**Table 4.24: Validity and reliability test of trust**

Question in Section 3		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No.	Item		
1	This service provider is known to be concerned about customers' interest.	0.634	0.812
8	Though circumstances may change, I believe that the service provider will be ready and willing to offer me assistance and support.	0.691	0.788
11	This service provider can be relied on to keep its promises.	0.610	0.821
16	I have complete trust in doing business with this service provider.	0.758	0.755

Source: Data analysis developed for this research

The overall coefficient alpha for these four questionnaire items was 0.839 indicates good reliability (above 0.80). Furthermore, all four items reported in Table 4.24 have high item-total correlations (above 0.50) and deletion of any questionnaire item would not have improved the overall reliability in this scale. Hence, the trust variable is reliable and was included in subsequent analyses.

### Switching cost

Table 4.25 presents the factor analysis results for the variable 'Switching costs'.

**Table 4.25: Factor analysis of switching costs**

Question in Section 4		FACTOR	
		1	2
No.	Item	Unknown service standards	Cost of seeking new information
6	I cannot afford the time needed to get the information to fully evaluate other service providers.		0.770
9	Comparing different service providers is very difficult.		0.745
21	I don't know what kind of relationship I would have with a new service provider.	0.714	
25	Switching to a new provider may entail certain hidden costs or expenses.	0.706	
11	Switching to a new service provider may entail some unforeseen difficulties.	0.674	
4	The rate plan or monthly fees offered by a new provider may be worse than those at present.	0.571	
18	It will take too much time/effort to get the information I need to feel comfortable evaluating new service providers.	0.569	
14	Comparing the benefits offered by my current provider and those offered by other companies would take a lot of time and mental effort.	0.535	
<b>Eigenvalue</b>		<b>2.987</b>	<b>1.070</b>
<b>% of variance</b>		<b>37.341</b>	<b>13.379</b>

Source: Data analysis developed for this research

The results from Table 4.25 indicate that two factors were extracted with eigenvalues greater than 1. That is, these eight questionnaire items appear to be measuring two different things. The first factor, with an eigenvalue of 2.987, accounted for 37.341 percent of variance in the set of the switching costs variable. This factor was named 'Unknown service standards' and consisted of Questions 4, 11, 14, 18, 21, and 25 in Section 4. For this factor, Question 21 in Section 4 had the largest component loading (0.714) and Question 14 in Section 4 had the smallest component loading (0.535).

Factor 2 had an eigenvalue of 1.070 and accounted for 13.379 percent of variance in the set of the switching costs variable. This construct was named 'Cost of seeking new information' and consists of Questions 6 and 9 in Section 4. For this component, there were only two questionnaire items. They had component loadings of 0.770 and 0.745.

As a result, these two factors of the switching costs variable – the constructs named ‘Unknown service standards’ and ‘Cost of seeking new information’ were examined for validity and reliability. The results are presented in Table 4.26(a) and Table 4.26(b).

**Table 4.26(a): Validity and reliability test of switching costs for ‘Unknown service standards’**

Question in Section 4		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No.	Item		
4	The rate plan or monthly fees offered by a new provider may be worse than those at present.	0.367	0.747
11	Switching to a new service provider may entail some unforeseen difficulties.	0.522	0.704
14	Comparing the benefits offered by my current provider and those offered by other companies would take a lot of time and mental effort.	0.520	0.704
18	It will take too much time/effort to get the information I need to feel comfortable evaluating new service providers.	0.540	0.698
21	I don't know what kind of relationship I would have with a new service provider.	0.529	0.702
25	Switching to a new provider may entail certain hidden costs or expenses.	0.455	0.722

Source: Data analysis developed for this research

The overall Cronbach's alpha of switching costs for this construct was 0.749 which presented ‘acceptable reliability’ with a coefficient alpha above 0.7. In addition, the result from Table 4.26(a) indicated that no improvement in the overall reliability of the scale could be achieved by deleting any of these six questions. Therefore, switching costs in terms of unknown service standards is reliable and was included in subsequent analyses.

**Table 4.26(b): Validity and reliability test of switching costs for ‘Seeking more/new information’**

Question in Section 4		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No.	Item		
6	I cannot afford the time needed to get the information to fully evaluate other service providers.	0.282	-
9	Comparing different service providers is very difficult.	0.282	-

Source: Data analysis developed for this research

The overall Cronbach's alpha of switching costs for this construct was 0.440 which is below an acceptable reliability (0.7). Moreover, according to Table 4.26(b), the result indicated that the item-total correlation of this set of questions was very low (0.282) and deletion of any questionnaire item would not have improved the overall reliability of this scale. Therefore, the factor of switching costs named 'Cost of seeking new information' was not included in subsequent analyses. This is supported by Hair et al. (1998) who suggest that reliability is considered unacceptable where the coefficient alpha is below 0.7.

### Perceived value

Table 4.27 presents the factor analysis results for the variable 'Perceived value'.

**Table 4.27: Factor analysis of perceived value**

Question in Section 3		FACTOR
No.	Item	1
18	Overall, the chosen offerings are value for money.	0.900
13	Compared with major competitors, the transaction with the provider is a good choice.	0.853
2	The chosen offerings are worth what is given up such as time, energy and effort.	0.836
<b>Eigenvalue</b>		<b>2.236</b>
<b>% of variance</b>		<b>74.546</b>

Source: Data analysis developed for this research

As shown in Table 4.27, only one factor was extracted with an eigenvalue greater than 1 and hence unidimensionality was assumed. The factor, with an eigenvalue of 2.236, accounted for 74.546 percent of variance in the set of perceived value variable. All questionnaire items displayed loadings greater than 0.5. Question 18 in Section 3 had the largest component loading with 0.900. Question 2 in Section 3 had the smallest component loading (0.836) which is also a good loadings value. Consequently, the perceived value variable was examined for validity and reliability. The results are presented in Table 4.28.



**Table 4.28: Validity and reliability test of perceived value**

Question in Section 3		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No.	Item		
2	The chosen offerings are worth what is given up such as time, energy and effort.	0.644	0.805
13	Compared with major competitors, the transaction with the provider is a good choice.	0.670	0.781
18	Overall, the chosen offerings are value for money.	0.752	0.697

Source: Data analysis developed for this research

The overall coefficient alpha for these three questionnaire items was 0.829 which was found to be good (above 0.80). Furthermore, all three items reported in Table 4.28 have high item-total correlations (above 0.50) and deletion of any questionnaire item would not have improved the overall reliability of this scale. Hence, the perceived valued variable is reliable and was included in subsequent analyses.

### Customer satisfaction

Table 4.29 presents the factor analysis results for the variable 'Customer satisfaction'.

**Table 4.29: Factor analysis of customer satisfaction**

Question in Section 3		FACTOR
No.	Item	1
9	Overall, I am happy with my current service provider.	0.933
7	I think I did the right thing when I joined this company.	0.914
4	My current service provider meets my expectations.	0.905
<b>Eigenvalue</b>		<b>2.526</b>
<b>% of variance</b>		<b>84.187</b>

Source: Data analysis developed for this research

As shown in Table 4.29, there was only one factor which was extracted with an eigenvalue greater than 1 and hence unidimensionality was assumed. The eigenvalue was 2.526 and accounted for 84.187 percent of variance in the set of the customer satisfaction variable. All questionnaire items displayed very good loading values (above 0.9). Question 9 in Section 3 had the largest component loading (0.933) and Question 4 in Section 3 had the smallest component loading (0.905). Consequently, the customer satisfaction variable was examined for validity and reliability. The results are presented in Table 4.30.

**Table 4.30: Validity and reliability test of customer satisfaction**

Question in Section 3		Corrected Item-Total Correlation	Cronbach' s Alpha if Item Deleted
No.	Item		
4	My current service provider meets my expectations.	0.789	0.885
7	I think I did the right thing when I joined this company.	0.805	0.870
9	Overall, I am happy with my current service provider.	0.842	0.838

Source: Data analysis developed for this research

The overall coefficient alpha for these three questionnaire items was 0.905 which was found to be very good (above 0.90). Furthermore, all three items reported in Table 4.30 have high item-total correlations (above 0.50) and deletion of any questionnaire item would not have improved the overall reliability of this scale. Hence, the customer satisfaction variable is reliable and was included in subsequent analyses.

### Customer loyalty

Table 4.31 presents the factor analysis results for the variable 'Customer loyalty'.

**Table 4.31: Factor analysis of customer loyalty**

Question in Section 3		FACTOR
No.	Item	1
6	I would recommend this service provider as the best high-speed internet service company in the area.	0.913
10	I would encourage friends and relatives to do business with this service provider.	0.909
15	This service provider is my first choice for my future high-speed internet service needs.	0.903
12	I will continue to do business with this service provider.	0.833
<b>Eigenvalue</b>		<b>3.170</b>
<b>% of variance</b>		<b>79.251</b>

Source: Data analysis developed for this research

As shown in Table 4.31, only one factor was extracted with an eigenvalue greater than 1 and hence unidimensionality was assumed. The factor, with an eigenvalue of 3.170, accounted for 79.251 percent of variance in the set of the customer loyalty variable. All questionnaire items displayed loadings greater than 0.5. Question 6 in Section 3 had the largest component loading with 0.913. Question 12 in Section 3 had the smallest

component loading (0.833). Consequently, the customer loyalty variable was examined for validity and reliability test. The results are presented in Table 4.32.

**Table 4.32: Validity and reliability test of customer loyalty**

Question in Section 3		Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
No.	Item		
6	I would recommend this service provider as the best high-speed internet service company in the area.	0.839	0.872
10	I would encourage friends and relatives to do business with this service provider.	0.834	0.874
12	I will continue to do business with this service provider.	0.719	0.914
15	This service provider is my first choice for my future high-speed internet service needs.	0.820	0.879

Source: Data analysis developed for this research

The overall coefficient alpha for these four questionnaire items was 0.912 which suggests a very good reliability (above 0.90). Nevertheless, regarding Table 4.32, Question 12 in Section 3, 'I will continue to do business with this service provider' needed to be deleted to increase the Cronbach's Alpha reliability (from 0.912 to 0.914), as the item-total correlation of Question 12 in Section 3 is relatively low when compared with the others. As a result, after Question 12 in Section 3 was deleted from the reliability test, the reliability of the customer loyalty variable increased to 0.914, and all three remaining items still had high item correlations (above 0.80). Hence the customer loyalty variable is reliable and was included in subsequent analyses.

A summary of the reliability test results for the composite variables included in this research is presented in Table 4.33.

**Table 4.33: Reliability of composite variables**

Composite variable	Cronbach's Alpha
Perceived risks for risk of wasted time and money	0.790
Perceived risks for risk of inconvenience	0.609
Type of information sought	0.749
Depth of information sought	0.613
Corporate image	0.829
Tangibility	0.683
Reliability	0.840
Responsiveness	0.804
Assurance	0.862
Empathy	0.818
Network quality	0.858
Trust	0.839
Switching costs for unknown service standards	0.749
Switching costs for cost of seeking new information	0.440
Perceived value	0.829
Customer satisfaction	0.905
Customer loyalty	0.914

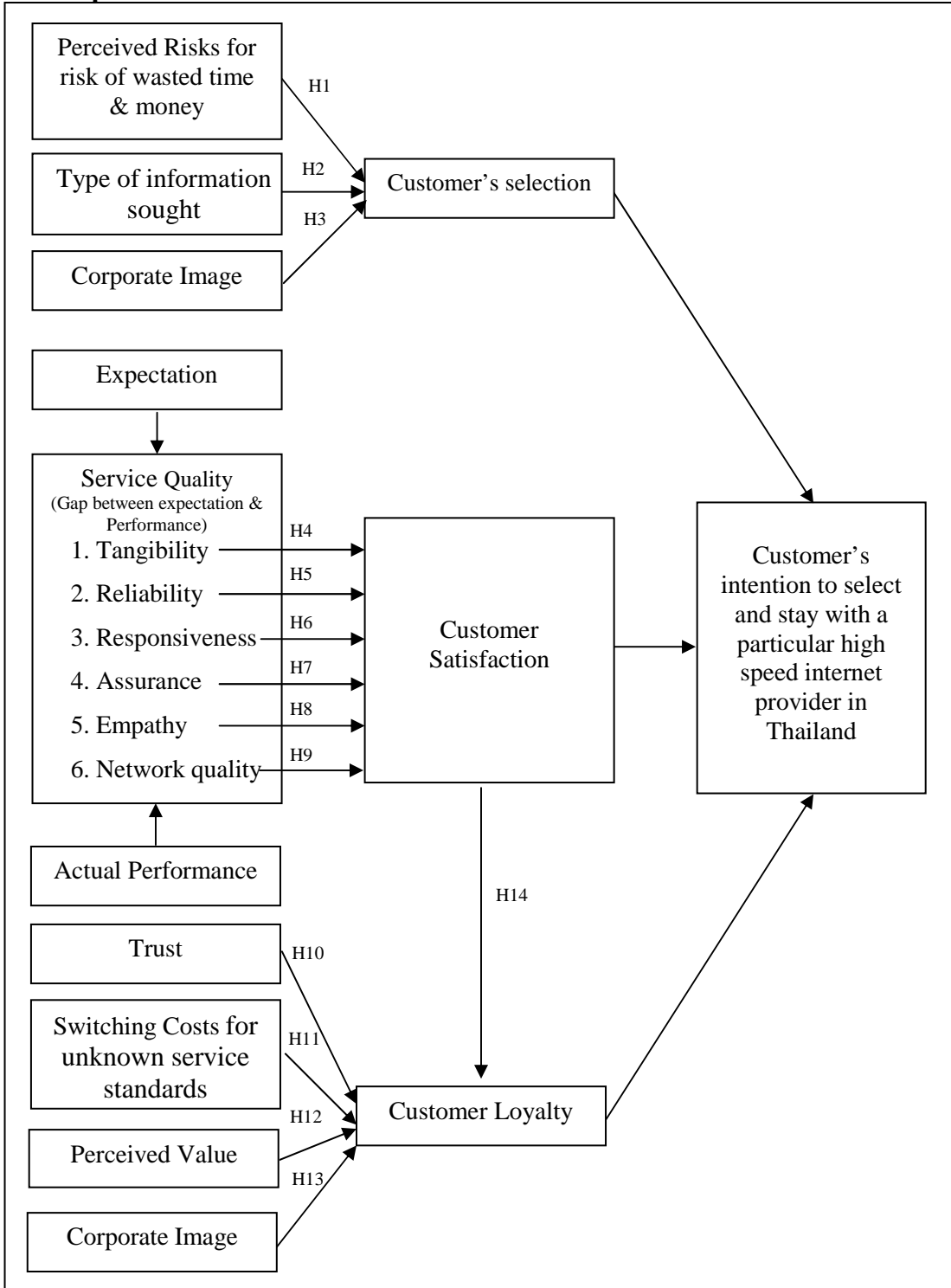
Source: Data analysis developed for this research

As shown in Table 4.33, there were three composite variables which had 'acceptable reliability' with coefficient alpha values of above 0.7; eight composite variables which had 'good reliability' with coefficient alpha values of above 0.8; and two composite variables which had 'excellent reliability' with coefficient alpha values of above 0.9. There was only one composite variable (Tangibility) that had a coefficient alpha below 0.7 (0.683). However, the coefficient alpha value of 0.683 is very close to the acceptable range (0.7), that is, if 0.683 is rounded up to 1 decimal place, it becomes exactly 0.70. As a result, all composite variables were considered reliable and were included in subsequent analyses in this research.

Furthermore, there are three independent variables that appear to extract into two separate factors. These three variables are perceived risks, information, and switching costs. However, perceived risks for risk of inconvenience (Cronbach's Alpha = 0.609), depth of information sought (Cronbach's Alpha = 0.613), and switching cost for cost of seeking new information (Cronbach's Alpha = 0.440) were not included in further analyses

because their reliability values were not close to 0.70. Hence, the revised theoretical framework for customer loyalty to high-speed internet service providers in Thailand is presented in Figure 4.2.

**Figure 4.2: Revised theoretical framework for customer loyalty to high-speed internet service providers in Thailand**



Source: Developed for this research

## **4.4 Factors influencing customer selection of, satisfaction with, and loyalty to, high-speed internet service providers**

In this research, the impacts of independent variables on three separate issues (selection, satisfaction, and loyalty) are examined in order to draw conclusions regarding customers' intentions to select and stay with particular high-speed internet providers in Thailand. As a result, multiple regression analysis was used in this research to determine how much of the variance in the dependent variable is explained by a set of independent variables (Sekaran 2003). Multiple regression analysis allows the researcher to relate two or more independent variables (predictors) to a single dependent variable (Hair et al. 1998). As the researcher was not looking for direct interrelationships between these three dependent variables, it was not appropriate to use Structural Equation Modelling (SEM). That is because SEM is a multivariate technique used to examine a series of dependence relationships simultaneously, and it is used to study the relationships among observable variables by analysis of covariance among those variables (Hair et al. 1998; Hoyle 1995). Therefore, multiple regression analysis was used in this study to separately assess the impact of independent variables on each of the three dependent variables (selection, satisfaction, and loyalty).

### **4.4.1 Normality of distribution**

Before running multiple regression analysis, it is necessary to ensure that the distribution of the interval or ratio scale variable is 'normal' or close to normal. The graphic representation of a normal distribution is often described as 'bell shaped' (Manning & Munro 2007). Typically, variable scores that significantly deviate from normal may lead to some errors when calculating statistical values. Skewness and Kurtosis values for the distributions are two tests that are commonly used to determine the univariate outliers and the shape of the distribution (Tabachnick & Fidell 2007). To test whether the distribution's skew significantly deviated from the normality, the skew value was divided by the standard error of skew to create a Z-score. The sample surveyed for this research was greater than 300, and hence the skew is significant if the calculated value (Z-score) exceeds an absolute value of 3.29 (Tabachnick & Fidell 2007). For instance, the Z-score of the reliability variable was calculated from the skew value (-0.868) divided by the standard

error of skew (0.141) which yielded a Z-score -6.16. This was judged to be a significant skew as the Z-score exceeded an absolute value of 3.29.

The details of skew and kurtosis values including the Z-score values are summarised and presented in Table 4.34

**Table 4.34: Skew and kurtosis value of variables**

Variable	Skewness			Kurtosis		
	Statistic	Std. Error	Z-score	Statistic	Std. Error	Z-score
Perceived risks for risk of wasted time & money	-0.271	0.141	-1.92	0.278	0.281	0.99
Type of information sought	-0.398	0.141	-2.82	0.023	0.281	0.08
Tangibility	-0.365	0.141	-2.59	0.505	0.281	1.80
Reliability	-0.868	0.141	<b>-6.16</b>	1.531	0.281	<b>5.45</b>
Responsiveness	-0.495	0.141	<b>-3.51</b>	0.488	0.281	1.74
Assurance	-0.578	0.141	<b>-4.10</b>	1.064	0.281	<b>3.79</b>
Empathy	-0.371	0.141	-2.63	0.480	0.281	1.71
Network quality	-0.523	0.141	<b>-3.71</b>	-0.296	0.281	-1.05
Trust	-0.526	0.141	<b>-3.73</b>	0.213	0.281	0.76
Switching costs for unknown service standards	-0.270	0.141	-1.91	0.641	0.281	2.28
Perceived value	-0.748	0.141	<b>-5.30</b>	0.424	0.281	1.51
Corporate image	-0.670	0.141	<b>-4.75</b>	0.590	0.281	2.10
Customers' selection	-0.578	0.141	<b>-4.10</b>	0.101	0.281	0.36
Customer satisfaction	-0.900	0.141	<b>-6.38</b>	0.439	0.281	1.56
Customer loyalty	-0.597	0.141	<b>-4.23</b>	0.090	0.281	0.32

Source: Data analysis developed for this research

Table 4.34 presents the 15 variables with their skew values and standard error skew values in the second and third columns respectively. The negative values for skewness of all composite variables indicates that there is a negative skew. The Z-score values were calculated and are presented in the fourth column. The results indicate that there were ten variables that had significant skews (that is, the Z-score exceeded an absolute value of 3.29). These results are presented in bold and italics. These ten score variables had to be transformed by being subjected to a square-root transformation, and then reflected back, since a moderate negative skew problem was observed (Manning & Munro 2007). Details

of the skew values of the new variables after transformation are summarised and presented in Table 4.35.

**Table 4.35: New variables and skew value after transforming variables**

Variable	Skewness			Kurtosis		
	Statistic	Std. Error	Z-score	Statistic	Std. Error	Z-score
Reliability_sq	-0.257	0.141	-1.82	0.835	0.281	2.97
Responsiveness_sq	0.033	0.141	0.23	0.296	0.281	1.06
Assurance_sq	0.010	0.141	0.07	0.714	0.281	2.54
Network quality_sq	-0.064	0.141	-0.45	-0.450	0.281	-1.60
Trust_sq	-0.036	0.141	-0.26	0.168	0.281	0.60
Perceived value_sq	-0.285	0.141	-2.02	-0.086	0.281	-0.31
Corporate image_sq	-0.157	0.141	-1.11	0.182	0.281	0.65
Selection_sq	-0.013	0.141	-0.09	-0.283	0.281	-1.01
Satisfaction_sq	-0.460	0.141	-3.26	-0.148	0.281	-0.53
Loyalty_sq	-0.080	0.141	-0.57	-0.170	0.281	-0.60

Source: Data analysis developed for this research

In summary, the reflected-square root-reflected method was applied for significant skew, and as a result ten new variables were created including reliability\_sq, responsiveness\_sq, assurance\_sq, network quality\_sq, trust\_sq, perceived value\_sq, corporate image\_sq, customers' selection\_sq, customer satisfaction\_sq, and customer loyalty\_sq. Finally, five original variables (perceived risks for risk of wasted time and money, type of information sought, tangibility, empathy, and switching costs for unknown service standards) and ten new variables were now ready for further analysis.

#### 4.4.2 Pearson's correlation coefficient

Pearson's correlation coefficient (Pearson's  $r$ ) which is suitable for interval-scaled variables was used in this research in order to examine the relationships among the variables (Sekaran 2003). The value of the Pearson product-moment correlation ranges from -1 to 1, If  $r = -1$  then there is a perfectly negative relationship, if  $r = 0$  then there is no relationship, and if  $r = 1$  then there is a perfectly positive relationship (Manning & Munro 2007). Correlation analysis of the independent and dependent variables is summarised and presented in Table 4.36.



**Table 4.36: Correlation analysis among independent and dependent variables**

Independent variable	Dependent variable	Pearson Correlation	Sig (2-tailed)	Level
Perceived risks for risk of wasted time & money	Customers' selection_sq	0.219	0.000	0.01
Type of information sought		-0.015	0.790	0.01
Corporate Image_sq		0.790	0.000	0.01
Tangibility	Customer satisfaction_sq	0.628	0.000	0.01
Reliability_sq		0.745	0.000	0.01
Responsiveness_sq		0.719	0.000	0.01
Assurance_sq	Customer loyalty_sq	0.711	0.000	0.01
Empathy		0.742	0.000	0.01
Network quality_sq		0.729	0.000	0.01
Trust_sq	Customer loyalty_sq	0.835	0.000	0.01
Switching costs for unknown service standards		0.335	0.000	0.01
Perceived_value_sq		0.827	0.000	0.01
Corporate_image_sq	Customer loyalty_sq	0.850	0.000	0.01
Customer satisfaction_sq		0.858	0.000	0.01

Source: Data analysis developed for this research

The results as shown in Table 4.36 are reported as follows;

- A significant positive correlation was found between perceived risks for risk of wasted time and money and customers' selection,  $r = 0.219$ ,  $p < 0.05$ .
- A significant correlation was not found between type of information sought and customers' selection,  $r = -0.015$ ,  $p > 0.05$ .
- A significant positive correlation was found between corporate image and customers' selection,  $r = 0.790$ ,  $p < 0.05$ .
- A significant positive correlation was found between tangibility and customer satisfaction,  $r = 0.628$ ,  $p < 0.05$ .
- A significant positive correlation was found between reliability and customer satisfaction,  $r = 0.745$ ,  $p < 0.05$ .
- A significant positive correlation was found between responsiveness and customer satisfaction,  $r = 0.719$ ,  $p < 0.05$ .

- A significant positive correlation was found between assurance and customer satisfaction,  $r = 0.711, p < 0.05$ .
- A significant positive correlation was found between empathy and customer satisfaction,  $r = 0.742, p < 0.05$ .
- A significant positive correlation was found between network quality and customer satisfaction,  $r = 0.729, p < 0.05$ .
- A significant positive correlation was found between trust and customer loyalty,  $r = 0.835, p < 0.05$ .
- A significant positive correlation was found between switching costs for unknown service standards and customer loyalty,  $r = 0.335, p < 0.05$ .
- A significant positive correlation was found between perceived value and customer loyalty,  $r = 0.827, p < 0.05$ .
- A significant positive correlation was found between corporate image and customer loyalty,  $r = 0.850, p < 0.05$ .
- A significant positive correlation was found between customer satisfaction and customer loyalty,  $r = 0.858, p < 0.05$ .

In sum, a significant positive correlation was found between two independent variables (perceived risks for risk of wasted time and money and corporate image) and customers' selection. Six independent variables (tangibility, reliability, responsiveness, assurance, empathy, and network quality) have significant positive correlation with customer satisfaction. Finally, significant positive correlations were found between five independent variables (trust, switching costs for unknown service standards, perceived value, corporate image, and customer satisfaction) and customer loyalty.

#### **4.4.3 Factors influencing customers' selection of a high-speed internet service provider**

The results of multiple regression analysis which was performed with customers' selection as a dependent variable and the variables of perceived risk of wasted time and money; type of information sought; and corporate image\_sq as independent variables are summarised in Table 4.37.

**Table 4.37: Multiple regressions between independent variables and customers' selection**

Variable	Standardised Coefficients Beta	t	Sig.	Correlations Part
(Constant)		-2.288	0.023	
Perceived risks of wasted time & money	0.084	2.224	<b><i>0.027</i></b>	0.078
Type of information sought	-0.091	-2.460	<b><i>0.014</i></b>	-0.086
Corporate image_sq	0.778	21.656	<b><i>0.000</i></b>	0.761

Source: Data analysis developed for this research

As shown in Table 4.37, the multiple correlation coefficient ( $R = 0.796$ ) was significantly different from zero,  $F(3,296) = 171.216$ ,  $p < 0.05$ , and 63.1% of the variation in the dependent variable was explained by the set of independent variables ( $R^2 = 0.634$ , adjusted  $R^2 = 0.631$ ). All three independent variables including (1) Perceived risks of wasted time and money,  $sr_i^2 = 0.078^2 = 0.006$ ,  $t = 2.224$ ,  $p < 0.05$  ( $p = 0.027$ ); (2) Type of information sought,  $sr_i^2 = -0.086^2 = 0.007$ ,  $t = -2.460$ ,  $p < 0.05$  ( $p = 0.014$ ); and (3) Corporate image,  $sr_i^2 = 0.761^2 = 0.579$ ,  $t = 21.656$ ,  $p < 0.05$  ( $p = 0.000$ ), were found to significantly and uniquely contribute to the prediction of customers' selections. These significant values are presented in Table 4.37 above in bold and italics. The results indicate that corporate image is the most important factor influencing customers' selection of high-speed internet service providers.

#### 4.4.4 Factors influencing customer satisfaction with high-speed internet service providers

The results of multiple regression analysis using customer satisfaction\_sq as a dependent variable and independent variables of tangibility\_sq; reliability\_sq; responsiveness\_sq; assurance\_sq; empathy; and network quality\_sq are summarised in Table 4.38.

**Table 4.38: Multiple regressions between independent variables and customer satisfaction**

Variable	Standardised Coefficients Beta	t	Sig.	Correlations Part
(Constant)		-0.767	0.444	
Tangibility	0.021	0.455	0.649	0.014
Reliability_sq	0.163	2.382	<b>0.018</b>	0.075
Responsiveness_sq	0.052	0.775	0.439	0.024
Assurance_sq	0.142	2.235	<b>0.026</b>	0.070
Empathy	0.206	3.034	<b>0.003</b>	0.095
Network quality_sq	0.389	9.222	<b>0.000</b>	0.290

Source: Data analysis developed for this research

As shown in Table 4.38, the multiple correlation coefficient ( $R = 0.843$ ) was significantly different from zero,  $F(6,293) = 119.780$ ,  $p < 0.05$ , and 70.4% of the variation in the dependent variable was explained by the set of independent variables ( $R^2 = 0.710$ , adjusted  $R^2 = 0.704$ ). Four independent variables including (1) Reliability,  $sr_i^2 = 0.075^2 = 0.006$ ,  $t = 2.382$ ,  $p < 0.05$  ( $p = 0.018$ ); (2) Assurance,  $sr_i^2 = 0.070^2 = 0.005$ ,  $t = 2.235$ ,  $p < 0.05$  ( $p = 0.026$ ); (3) Empathy,  $sr_i^2 = 0.095^2 = 0.009$ ,  $t = 3.034$ ,  $p < 0.05$  ( $p = 0.003$ ); and (4) Network quality,  $sr_i^2 = 0.290^2 = 0.084$ ,  $t = 9.222$ ,  $p < 0.05$  ( $p = 0.000$ ), were found to significantly and uniquely contribute to the prediction of customer satisfaction. These significantly values are presented in bold and italics in Table 4.38 above. However, tangibility and responsiveness were found not to provide any significant unique contribution to the prediction ( $t = 0.455$ ,  $p > 0.05$ ,  $p = 0.649$  and  $t = 0.775$ ,  $p > 0.05$ ,  $p = 0.439$ , respectively). The result indicate that network quality is the most important factor influencing customer satisfaction with high-speed internet service providers.

#### 4.4.5 Factors influencing customer loyalty to high-speed internet service providers

The results of the multiple regression analysis performed using customer loyalty\_sq as a dependent variable and the variables of trust\_sq; switching cost for unknown service standards; perceived value\_sq; corporate image\_sq; and customer satisfaction\_sq as independent variables are summarised in Table 4.39.

**Table 4.39: Multiple regressions between independent variables and customer loyalty**

Variable	Standardised Coefficients Beta	t	Sig.	Correlations Part
(Constant)		-5.491	0.000	
Trust_sq	0.169	2.855	<b>0.005</b>	0.073
Switching costs for unknown service standards	0.053	1.937	0.054	0.050
Perceived value_sq	0.228	4.412	<b>0.000</b>	0.113
Corporate image_sq	0.230	3.613	<b>0.000</b>	0.093
Customer satisfaction_sq	0.306	4.993	<b>0.000</b>	0.128

Source: Data analysis developed for this research

As shown in Table 4.39, the multiple correlation coefficient ( $R = 0.898$ ) was significantly different from zero,  $F(5,294) = 243.786$ ,  $p < 0.05$ , and 80.2% of the variation in the dependent variable was explained by the set of independent variables ( $R^2 = 0.806$ , adjusted  $R^2 = 0.802$ ). Four independent variables including (1) Trust,  $sr_i^2 = 0.073^2 = 0.005$ ,  $t = 2.855$ ,  $p < 0.05$  ( $p = 0.005$ ); (2) Perceived value,  $sr_i^2 = 0.113^2 = 0.013$ ,  $t = 4.412$ ,  $p < 0.05$  ( $p = 0.000$ ); (3) Corporate image,  $sr_i^2 = 0.093^2 = 0.009$ ,  $t = 3.613$ ,  $p < 0.05$  ( $p = 0.000$ ); and (4) Customer satisfaction,  $sr_i^2 = 0.128^2 = 0.016$ ,  $t = 4.993$ ,  $p < 0.05$  ( $p = 0.000$ ), were found to significantly and uniquely contribute to the prediction of customer loyalty. These significantly values are presented in bold and italics in Table 4.39 above. The variable 'switching cost for unknown service standards' was found not to provide a significant unique contribution to prediction ( $t = 1.937$ ,  $p > 0.05$ ,  $p = 0.054$ ). Nevertheless, a significance level of 0.054 was very close to the acceptable range (0.05). That is, if a significance level of 0.054 is rounded up to 2 decimal places, it becomes exactly 0.05. Hence, switching costs for unknown service standards was also found to significantly and uniquely contribute to the prediction of customer loyalty. The results indicate that perceived value and customer satisfaction are the two main factors that influence customer loyalty to high-speed internet service providers.

In summary, there were three variables – corporate image, type of information sought, and perceived risks in terms of wasted time and money, which significantly influenced customers' selection of high-speed internet service providers. There were four variables which had a significant and positive influence on customer satisfaction. These four

variables were network quality, empathy, reliability, and assurance, respectively. There were five variables including customer satisfaction, perceived value, corporate image, trust, and switching costs for unknown service standards, that positively influenced customer loyalty. These analytical results will be further discussed in Section 4.5 which deals with conclusions for the hypotheses.

## 4.5 Hypothesis tests

Once data and the impact of independent variables on dependent variables had been analysed, the final results of hypotheses testing were determined. They are summarised and shown in Table 4.40

**Table 4.40: Summary of the results of hypotheses testing**

<b>Hypothesis</b>	<b>Significant value</b>	<b>Results</b>
H1: The extent of perceived risk associated with other service providers in terms of 'risk of wasted time and money' positively influences customers' intention to select their chosen service provider.	<i>0.027</i>	<i>Supported</i>
H2: The more information consumers collect about alternative service providers in terms of 'type of information sought' the less likely they are to choose the current service provider.	<i>0.014</i>	<i>Supported</i>
H3: The corporate image of the service provider positively influences customers' selection of that provider as their high speed internet service.	<i>0.000</i>	<i>Supported</i>
H4: Tangibility positively influences customer satisfaction.	0.649	Not supported
H5: Reliability positively influences customer satisfaction.	<i>0.018</i>	<i>Supported</i>
H6: Responsiveness positively influences customer satisfaction.	0.439	Not supported
H7: Assurance positively influences customer satisfaction.	<i>0.026</i>	<i>Supported</i>
H8: Empathy positively influences customer satisfaction.	<i>0.003</i>	<i>Supported</i>
H9: Network quality positively influences customer satisfaction.	<i>0.000</i>	<i>Supported</i>
H10: Trust positively influences customer loyalty.	<i>0.005</i>	<i>Supported</i>

<b>Hypothesis</b>	<b>Significant value</b>	<b>Results</b>
H11: Switching costs in terms of 'unknown service standards' positively influence customer loyalty.	<i>0.054</i>	<i>Supported</i>
H12: Perceived value positively influences customer loyalty.	<i>0.000</i>	<i>Supported</i>
H13: Corporate image positively influences customer loyalty.	<i>0.000</i>	<i>Supported</i>
H14: Customer satisfaction positively influences customer loyalty.	<i>0.000</i>	<i>Supported</i>

Source: Data analysis developed for this research

***H1: The extent of perceived risk associated with other service providers in terms of 'risk of wasted time and money' positively influences customers' intention to select their chosen service provider.***

As shown in Table 4.40, the perceived risks variable was found to provide a significant contribution to the prediction of customers' selection at 0.027 ( $p < 0.05$ ). Thus Hypothesis 1 was accepted. It can be concluded that the perceived risks associated with choosing an alternative service provider in terms of 'risk of wasted time and money' positively influence customers' intention to select the current providers.

***H2: The more information consumers collect about alternative service providers in terms of 'type of information sought' the less likely they are to choose the current service provider.***

As shown in Table 4.40, the type of information sought variable was found to provide a significant contribution to the prediction of customers' selection at 0.014 ( $p < 0.05$ ). Thus, Hypothesis 2 was accepted. It is concluded that the level of information search about alternative service providers in terms of 'type of information sought' negatively influences customers to choose their current service providers.

***H3: The corporate image of the service provider positively influences customers' selection of that provider as their high speed internet service.***

As shown in Table 4.40, corporate image was found to provide significant contribution to the prediction of customers' selection at 0.000 ( $p < 0.05$ ), thus, Hypothesis 3 was accepted. It is therefore concluded that corporate image has a positive influence on customers' selection of high-speed internet service providers.

***H4: Tangibility positively influences customer satisfaction.***

As shown in Table 4.40, service tangibility was found to not provide any significant contribution to the prediction of customer satisfaction at 0.649 ( $p > 0.05$ ), thus, Hypothesis 4 was rejected. It is therefore concluded that service tangibility has no significant influence on customer satisfaction. More discussion of this conclusion is presented in Chapter 5.

***H5: Reliability positively influences customer satisfaction.***

As shown in Table 4.40, service reliability was found to provide a significant contribution to the prediction of customer satisfaction at 0.018 ( $p < 0.05$ ), thus, Hypothesis 5 was accepted. It can be concluded that the reliability of the service provider has a positive influence on customer satisfaction.

***H6: Responsiveness positively influences customer satisfaction.***

As shown in Table 4.40, service responsiveness was found to not provide any significant contribution to the prediction of customer satisfaction at 0.439 ( $p > 0.05$ ), thus, Hypothesis 6 was rejected. It can be concluded that the responsiveness of service has no significant influence on customer satisfaction. More details in interpretation are presented in Chapter 5.



***H7: Assurance positively influences customer satisfaction.***

As shown in Table 4.40, the assurance variable was found to provide a significant contribution to the prediction of customer satisfaction at 0.026 ( $p < 0.05$ ), thus, Hypothesis 7 was accepted. It can be concluded that service assurance has a positive influence on customer satisfaction.

***H8: Empathy positively influences customer satisfaction.***

As shown in Table 4.40, staff empathy was found to provide a significant contribution to the prediction of customer satisfaction at 0.003 ( $p < 0.05$ ), thus, Hypothesis 8 was accepted. It can be concluded that staff empathy has a positive influence on customer satisfaction.

***H9: Network quality positively influences customer satisfaction.***

As shown in Table 4.40, the quality of the internet network was found to provide a significant contribution to the prediction of customer satisfaction at 0.000 ( $p < 0.05$ ), thus, Hypothesis 9 was accepted. It can be concluded that the network quality has a strong positive influence on customer satisfaction.

***H10: Trust positively influences customer loyalty.***

As shown in Table 4.40, the trust variable was found to provide a significant contribution to the prediction of customer loyalty at 0.005 ( $p < 0.05$ ), thus, Hypothesis 10 was accepted. It can be concluded that trust in the internet company has a positive influence on customer loyalty.

***H11: Switching costs in terms of ‘unknown service standards’ positively influence customer loyalty.***

As shown in Table 4.40, the switching costs in terms of unknown service standards were found to not provide any significant contribution to the prediction of customer loyalty at 0.054 ( $p > 0.05$ ). Nevertheless, a significant level of 0.054 was very close to the acceptable range (0.05). That is, if a significance level of 0.054 is rounded up to 2 decimal places, it becomes exactly 0.05. Hence, Hypothesis 11 was accepted. It can be concluded that the switching costs in terms of ‘unknown service standards’ have a positive impact on customer loyalty.

***H12: Perceived value positively influences customer loyalty.***

As shown in Table 4.40, the perceived value variable was found to provide a significant contribution to the prediction of customer loyalty at 0.000 ( $p < 0.05$ ), thus, Hypothesis 12 was accepted. It can be concluded that the perceived value variable had a positive influence on customer loyalty.

***H13: Corporate image positively influences customer loyalty.***

According to Table 4.40, the corporate image variable was found to provide a significant contribution to the prediction of customer loyalty at 0.000 ( $p < 0.05$ ), thus, Hypothesis 13 was accepted. It can be concluded that the corporate image variable had a positive influence on customer loyalty.

***H14: Customer satisfaction positively influences customer loyalty.***

As shown in Table 4.40, the customer satisfaction variable was found to provide a significant contribution to the prediction of customer loyalty at 0.000 ( $p < 0.05$ ), thus, Hypothesis 14 was accepted. It can be concluded that the customer satisfaction variable had a positive influence on customer loyalty.

In addition, to the above results there are some opinions and recommendations made by customers in open-ended question regarding other influential factors that had an impact on their selection, satisfaction, and loyalty. Firstly, some factors that had an impact on their selection included price, promotion, signal speed, after-sales service. Customers were also likely to choose an internet provider with the same company who already provided them with their home phone.

Secondly, the additional factors that impacted on their satisfaction included signal speed, staff offers services that best suit customers' needs, staff willingness to help when the slightest problem happened, and staff willingness to help when any unexpected problem happened. Notably, customers were likely to be seriously dissatisfied if the same problem kept happening without any reasonable explanation or appropriate solution.

Finally, factors that had an impact on customers' loyalty included: the limited choice of providers, and additional services and promotions offered by their current providers. If there were no significant superior offers from other providers or if customers' internet networks and their home phone networks were the same, they were likely to stay with their current provider to avoid the inconvenience or expense that may have resulted from switching to another provider.

## **4.6 Conclusion**

This chapter presented the results of the data analysis and hypothesis testing for this research. First, preliminary data analysis, including cleaning and screening of data, was examined. Then, the respondent profiles were presented as descriptive statistics, and composite variables were described. Techniques of analysis to test the accuracy of data in terms of factor analysis, validity, and reliability were applied. Finally, the impacts of independent variables on dependent variables were investigated by using multiple regression analysis in order to draw conclusions about the validity of the hypotheses. Conclusions and implications of this research will be presented in Chapter 5.

# CHAPTER 5

## CONCLUSIONS AND IMPLICATIONS

### 5.1 Introduction

The purpose of this chapter is to present conclusions and implications of the findings from the analysis of data gathered from the questionnaire survey. This chapter consists of six sections as shown in Figure 5.1. Section 5.2 includes a restatement of the research problem, the research questions, research hypotheses, and a summary of the research findings. The implications of the study for academic theory and for practice are presented in Section 5.3. Section 5.4 discusses the delimitations of the research, followed by suggestions for future research which are presented in Section 5.5. Finally, the chapter ends with a conclusion in Section 5.6.

A summary of the previous four chapters is presented below.

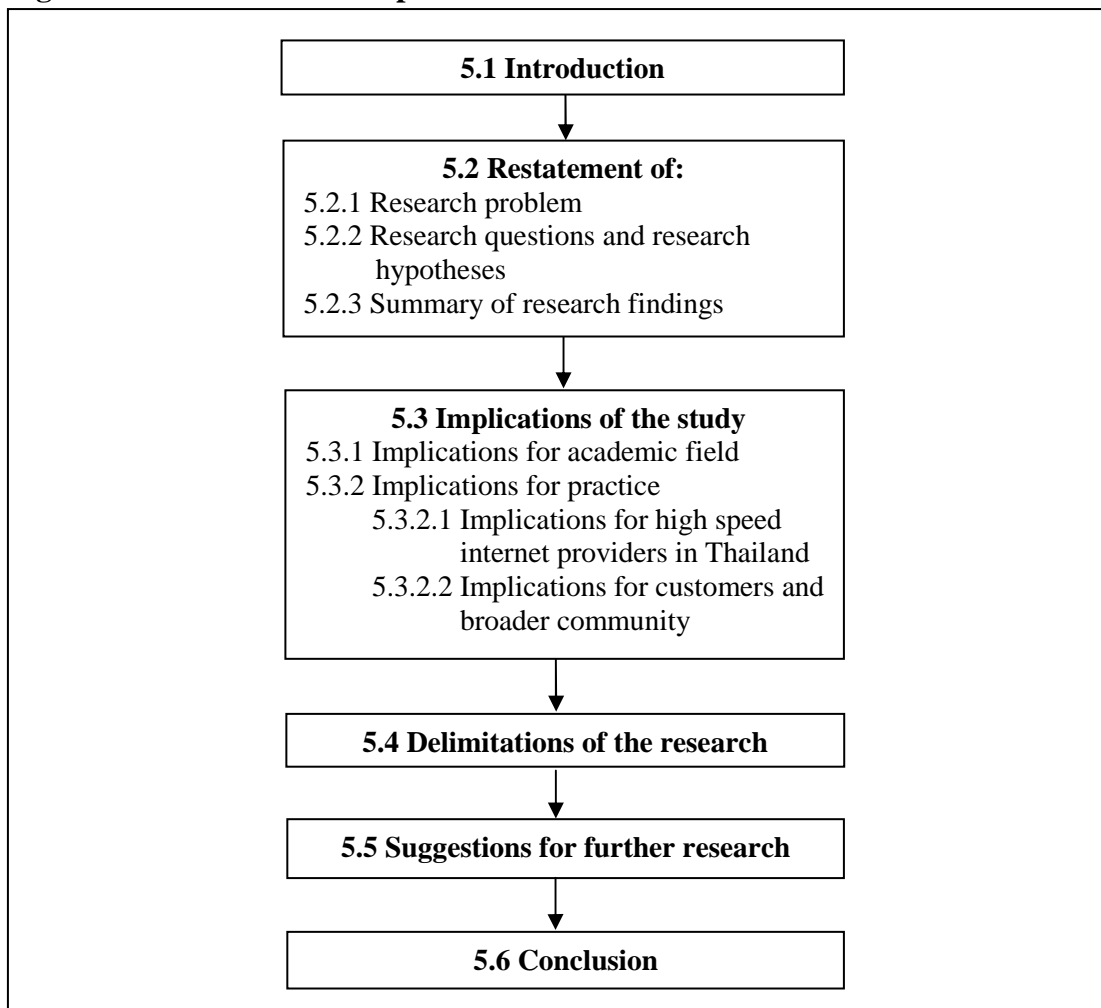
**Chapter 1** provided background and justification for the research and described the background of Thailand's high-speed internet industry to present the context of this study. In brief, Chapter 1 provides the basis for the later stages of this research.

**Chapter 2** examined background theory to the research problems by reviewing the literature relating to three parent areas: customer decision making (Section 2.2), customer satisfaction (Section 2.3), and customer loyalty (Section 2.4). Findings of the review of the literature, including the context of the telecommunication industry, form the basis of the theoretical model (Section 2.5). The outcome of Chapter 2 is the development of a set of research hypotheses.

**Chapter 3** justified the research paradigms and research approaches used in the study. In addition, it explained the details of data collection including the survey research method and sampling which aim to investigate customers' perceptions of high-speed internet service in Thailand. In this chapter, the data processing procedures and analytical techniques are outlined.

**Chapter 4** reported the results of data analysis from the questionnaire survey in terms of descriptive statistics which are analysed using the Statistical Package for the Social Science (SPSS) version 12.0. Data were adjusted before the statistical techniques were applied (Multiple Regression Analysis) to test fit of a theoretical model. The results indicate that a new model provided a better fit than the original theoretical model developed in Chapter 2. All hypotheses from the modified theoretical model were tested and the findings of the analysed data are discussed in this chapter.

**Figure 5.1: Structure of Chapter 5**



Source: Developed for this research

Finally, in this chapter, Chapter 5, conclusions and implications are drawn for the 14 hypotheses and the research problem. Conclusions and implications regarding the research problem are based on the findings of Chapter 4 compared with those of the literature review presented in Chapter 2. The implications of the study including those for the

academic field and those for practice are discussed in Section 5.3. Sections 5.4 and 5.5 outline the delimitations of the research and provide suggestions for future research. The conclusion of the research is drawn in Section 5.6.

## **5.2 Restatement of research problem, research questions, research hypotheses, and summary of research findings**

This section restates the research problem, questions, and hypotheses which were presented earlier in Section 1.3 and further detailed in Chapter 2. The literature review in Chapter 2 examined the research problems, research questions and the development of the research hypotheses. The statistical analyses in Chapter 4 presented the results and answered each research hypothesis. In this chapter, the response to the research problem, research questions and research hypotheses are discussed and linked to the literature review (detailed in Chapter 2) and to the analyses of the survey data (detailed in Chapter 4).

### **5.2.1 Research problem**

Telecommunication industries in many countries have now been liberalised and overseas operators are allowed to freely compete with the incumbent provider (Burnham, Frels & Mahajan 2003). Customer satisfaction and customer loyalty are believed to be the primary variables that impact customers' intentions to select and stay with particular service providers. Telecommunications service providers that satisfy customers can expect higher market shares and greater profitability and, in turn, encourage their customers to become loyal (Finkelman, Cetlin & Wenner 1992; Khatibi, Ismail & Thyagarajan 2002; Wang, Lo & Yang 2004). This research explored the three main areas being investigated for this research in the context of the household high-speed internet market in Thailand. Therefore, the literature in the context of service industries, including the telecommunications market, were reviewed.

The literature review focused on three main areas including consumer behaviour (with particular attention given to customer purchasing decision making), consumer satisfaction which concentrates on factors influencing customer satisfaction with their service providers, and customer loyalty (Figure 2.1, page 21). These three main areas have a significant role in helping service providers to achieve their goals which leads to business success.

The key research problem explored is ‘What are the factors that influence customers’ intentions to select and stay with particular high-speed internet providers in Thailand?’. This research problem is important because high-speed internet services are becoming more popular and the rapid development of information technologies is affecting almost every aspect of people’s lives. The findings of this research are very useful for service providers in the internet market as they will identify the most important variables, from the customer perspective, that have an impact on customer decision making, customer satisfaction, and customer loyalty. These will consequently determine customers’ intentions to select and stay with particular service providers. This research is the first known study that aims to study these issues specifically in Thailand. It focuses on factors that contribute to customer decision making, satisfaction, and loyalty in the telecommunications industry particularly in the Thai high-speed internet market. This information will enable service providers to retain existing customers as well as acquire new ones.

### **5.2.2 Research questions and research hypotheses**

From the research objectives initially discussed in Section 1.3.2, three main research questions were developed along with 14 hypotheses which were formulated to provide answers for these research questions. The research questions and research hypotheses of this study are restated in Table 5.1.

**Table 5.1: Summary of research questions and hypotheses**

<b>Research questions</b>	<b>Hypotheses</b>
1. What are the factors that influence customers' selection of high-speed internet service providers in Thailand?	H1: The extent of perceived risk associated with other service providers in terms of 'risk of wasted time and money' positively influences customers' intention to select their chosen service provider.
	H2: The more information consumers collect about alternative service providers in terms of 'type of information sought' the less likely they are to choose the current service provider.
	H3: The corporate image of the service provider positively influences customers' selection of that provider as their high speed internet service.
2. What are the factors that influence customer satisfaction with high-speed internet services in Thailand?	H4: Tangibility positively influences customer satisfaction.
	H5: Reliability positively influences customer satisfaction.
	H6: Responsiveness positively influences customer satisfaction.
	H7: Assurance positively influences customer satisfaction.
	H8: Empathy positively influences customer satisfaction.
3. What are the factors that influence customer loyalty to high-speed internet service providers in Thailand?	H9: Network quality positively influences customer satisfaction.
	H10: Trust positively influences customer loyalty.
	H11: Switching costs in terms of 'unknown service standards' positively influence customer loyalty.
	H12: Customer perceived value positively influences customer loyalty.
	H13: Corporate image positively influences customer loyalty.
	H14: Customer satisfaction positively influences customer loyalty.

Source: Developed for this research



### 5.2.3 Summary of research findings

Before determining what factors influence customers' intentions to select and stay with particular high-speed internet providers in Thailand, it was necessary to determine which factors had a significant effect on customers' selection, customer satisfaction, and customer loyalty. Based on the literature review and survey data analysis outcomes, responses to the research hypotheses are summarised in Table 5.2 and are discussed below.

***Hypothesis 1: The extent of perceived risk associated with other service providers in terms of 'risk of wasted time and money' positively influences customers' intention to select their chosen service provider.***

Table 5.2 shows that Hypothesis 1 was accepted because the multiple regression analysis between perceived risk (independent variable) and customers' selection (dependent variable) was positively significant. The standardised coefficient of the perceived risks variable was found to be 0.084, with a significance level of 0.027 which is below 0.05. Therefore, this hypothesis was accepted.

***Hypothesis 2: The more information consumers collect about alternative service providers in terms of 'type of information sought' the less likely they are to choose the current service provider.***

Table 5.2 shows that Hypothesis 2 was accepted because the multiple regression analysis between information (independent variable) and customers' selection (dependent variable) indicated that a negatively significant coefficient was obtained for the relationship between these two variables. The standardised coefficient of the information variable was found to be -0.091, with a significance level of 0.014 which below 0.05. Therefore, this hypothesis was accepted.

***Hypothesis 3: The corporate image of the service provider positively influences customers' selection of that provider as their high speed internet service.***

The results in Table 5.2 show that a positive and significant relationship between corporate image (independent variable) and customers' selection (dependent variable) was obtained for the relationship between these two variables. The standardised coefficient of the corporate image variable was found to be 0.778, with a significance level of 0.000 which is lower than 0.05. Therefore, this hypothesis was accepted.

***Hypothesis 4: Tangibility positively influences customer satisfaction.***

Hypothesis 4 was rejected as the results of the statistical test between tangibility (independent variable) and customer satisfaction (dependent variable) indicated that the correlation statistical test was not significant. The standardised coefficient of the tangibility variable was found to be 0.021, with a significance level of 0.649 which is above 0.05. Therefore, this hypothesis was rejected.

***Hypothesis 5: Reliability positively influences customer satisfaction.***

Hypothesis 5 was accepted as the results of the multiple regression analysis between reliability (independent variable) and customer satisfaction (dependent variable) indicated that there was a positive and significant coefficient between these two variables. Further, the standardised coefficient of the reliability variable was found to be 0.163, with a significance level of 0.018 which is below 0.05. Therefore, this hypothesis was accepted.

***Hypothesis 6: Responsiveness positively influences customer satisfaction.***

Hypothesis 6 was rejected as the results of the statistical test between responsiveness (independent variable) and customer satisfaction (dependent variable). The results indicated that the correlation statistical test was not significant. The standardised coefficient of the responsiveness variable was found to be 0.052, with a significance level of 0.439 which is more than 0.05. Therefore, this hypothesis was rejected.

***Hypothesis 7: Assurance positively influences customer satisfaction.***

Hypothesis 7 was accepted as the results of the statistical test between assurance (independent variable) and customer satisfaction (dependent variable) indicated that a positive and significant coefficient was obtained for the relationship between these two variables. The standardised coefficient of the assurance variable was found to be 0.142, with a significance level of 0.026 which below 0.05. Therefore, this hypothesis was accepted.

***Hypothesis 8: Empathy positively influences customer satisfaction.***

Hypothesis 8 was accepted as the results of the statistical test between empathy (independent variable) and customer satisfaction (dependent variable) indicated that a positive and significant coefficient was obtained for the relationship between these two variables. The standardised coefficient of the empathy variable was found to be 0.206, with a significance level of 0.003 which below 0.05. Therefore, this hypothesis was accepted.

***Hypothesis 9: Network quality positively influences customer satisfaction.***

Hypothesis 9 was accepted as the results of the statistical test between network quality (independent variable) and customer satisfaction (dependent variable) indicated that a positive and significant coefficient was obtained for the relationship between these two variables. The standardised coefficient of the network quality variable was found to be 0.389, with a significance level of 0.000 which below 0.05. Therefore, this hypothesis was accepted.

***Hypothesis 10: Trust positively influences customer loyalty.***

The results of multiple regression analysis between trust (independent variable) and customer loyalty (dependent variable) indicated that a positive and significant coefficient was obtained for the relationship between these two variables. Further, the standardised coefficient of the trust variable was found to be 0.169, with a significance level of 0.005 which below 0.05. Therefore, this hypothesis was accepted.

***Hypothesis 11: Switching costs in terms of ‘unknown service standards’ positively influence customer loyalty.***

The results of multiple regression analysis between switching costs (independent variable) and customer loyalty (dependent variable) revealed that the correlation statistical test between these two variables was not significant. The standardised coefficient of the switching costs variable was found to be 0.053, with a significance level of 0.054 which is above 0.05. Nevertheless, a significance level of 0.054 was very close to the acceptable range. That is, if a significance level of 0.054 is rounded up to 2 decimal places, it becomes exactly 0.05. Therefore, this hypothesis was accepted.

***Hypothesis 12: Perceived value positively influences customer loyalty.***

The results of multiple regression analysis between perceived value (independent variable) and customer loyalty (dependent variable) indicated that there was a positive and significant coefficient between these two variables. The standardised coefficient of the perceived value variable was found to be 0.228, with a significance level of 0.000 which below 0.05. Therefore, this hypothesis was accepted.

***Hypothesis 13: Corporate image positively influences customer loyalty.***

Hypothesis 13 was accepted as the results of the statistical test between corporate image (independent variable) and customer loyalty (dependent variable) indicated that a positive and significant coefficient was obtained for the relationship between these two variables. The standardised coefficient of the corporate image variable was found to be 0.230, with a significance level of 0.000 which below 0.05. Therefore, this hypothesis was accepted.

***Hypothesis 14: Customer satisfaction positively influences customer loyalty***

Hypothesis 14 was accepted as the results of the statistical test between satisfaction (independent variable) and customer loyalty (dependent variable) indicated that a positive and significant coefficient was obtained for the relationship between these two variables. The standardised coefficient of the satisfaction variable was found to be 0.306, with a significance level of 0.000 which below 0.05. Therefore, this hypothesis was accepted.

**Table 5.2: Summary of the results of hypotheses testing**

Hypothesis	Results
H1: The extent of perceived risk associated with other service providers in terms of ‘risk of wasted time and money’ positively influences customers’ intention to select their chosen service provider.	Supported ( <i>accept</i> the hypothesis)
H2: The more information consumers collect about alternative service providers in terms of ‘type of information sought’ the less likely they are to choose the current service provider.	Supported ( <i>accept</i> the hypothesis)
H3: The corporate image of the service provider positively influences customers’ selection of that provider as their high speed internet service.	Supported ( <i>accept</i> the hypothesis)
H4: Tangibility positively influences customer satisfaction.	Not supported ( <i>reject</i> the hypothesis)
H5: Reliability positively influences customer satisfaction.	Supported ( <i>accept</i> the hypothesis)
H6: Responsiveness positively influences customer satisfaction.	Not supported ( <i>reject</i> the hypothesis)
H7: Assurance positively influences customer satisfaction.	Supported ( <i>accept</i> the hypothesis)
H8: Empathy positively influences customer satisfaction.	Supported ( <i>accept</i> the hypothesis)
H9: Network quality positively influences customer satisfaction.	Supported ( <i>accept</i> the hypothesis)
H10: Trust positively influences customer loyalty.	Supported ( <i>accept</i> the hypothesis)
H11: Switching costs in terms of ‘unknown service standards’ positively influence customer loyalty.	Supported ( <i>accept</i> the hypothesis)
H12: Perceived value positively influences customer loyalty.	Supported ( <i>accept</i> the hypothesis)
H13: Corporate image positively influences customer loyalty.	Supported ( <i>accept</i> the hypothesis)

Hypothesis	Results
H14: Customer satisfaction positively influences customer loyalty.	Supported ( <u>accept</u> the hypothesis)

Source: Data analysis developed for this research

Based on the results of hypothesis testing, it can be concluded that there are three significant variables – corporate image, perceived risks for risk of wasted time and money, and type of information sought which significantly influence customers’ selection of high-speed internet service providers. Further, there are four significant variables which have a positive influence on customer satisfaction. These four variables are network quality, empathy, reliability, and assurance, respectively. Finally, there are also five significant variables – customer satisfaction, perceived value, corporate image, trust, and switching costs for unknown service standards, that positively influence customer loyalty.

In order to draw conclusions regarding the important factors that have an influence on customers’ intentions to select and stay with particular high-speed internet providers, Table 5.3 restates the results of the multiple regression analysis of the relationships between dependent and independent variables.

**Table 5.3: The results of multiple regression analysis**

<b>Dependent variable</b>	<b>Independent variable</b>	<b>Standardised Coefficients Beta</b>	<b>t</b>	<b>Sig.</b>
Customers' selection	Risk of wasted time and money	0.084	2.224	0.027
	Type of information sought	-0.091	-2.460	0.014
	Corporate image	0.778	21.656	0.000
Customer satisfaction	Tangibility	0.021	0.455	0.649
	Reliability	0.163	2.382	0.018
	Responsiveness	0.052	0.775	0.439
	Assurance	0.142	2.235	0.026
	Empathy	0.206	3.034	0.003
	Network quality	0.389	9.222	0.000
Customer loyalty	Trust	0.169	2.855	0.005
	Switching costs for unknown service standards	0.053	1.937	0.054
	Perceived value	0.228	4.412	0.000
	Corporate image	0.230	3.613	0.000
	Customer satisfaction	0.306	4.993	0.000

Source: Data analysis developed for this research

As shown in Table 5.3, for customers' selection, the results indicate that the most influential factor influencing customers' intentions to select a particular high-speed internet provider is corporate image (Beta = 0.778). This is supported by many researchers who propose that corporate image should be considered as an intangible asset that can contribute to a competitive advantage in the marketplace (Dowling 2004; Hall 1992; Milgrom & Roberts 1982). Service providers with a good corporate image can have a competitive advantage and are likely to acquire more customers (Gotsi & Wilson 2001; Grardberg & Fombrun 2002; Groenland 2002). Corporate image is believed to have an influence on customers' buying decisions when services are difficult to evaluate since it can simplify customers' selection process and help them to choose the most favourable choice from different service providers (Markus 1977). In other words, it can be concluded

that corporate image plays a vital role when customers are in the process of making decisions to select their service providers. The levels of perceived risks in terms of wasted time and money, and received information in terms of type of information sought, also have an impact on customers' selection processes.

For customer satisfaction, the results from Table 5.3 show that network quality (Beta = 0.389) is the most influential factor in the context of the Thai high-speed internet service industry. This supports Wang, Lo, and Yang's (2004) study about the dynamic relationship between service quality, customer value and customer satisfaction and their influence on customer behaviour in China's mobile phone market. The results of Wang, Lo, and Yang's (2004) study indicate that network quality is one of the most important drivers of overall customer-perceived value regarding service quality. Based on the results of this present research, there are three additional factors that can positively influence customer satisfaction. These three factors are empathy, reliability, and assurance. More discussion regarding each variable will be presented in Section 5.3.2.1: Implications for high-speed internet providers in Thailand.

For customer loyalty, Table 5.3 shows that customer satisfaction is the most influential factor (Beta = 0.306). Moreover, based on the results of this research, trust and perceived value are another two underlying factors that have a significant influence on customer loyalty. Similarly, Lin and Wang (2005) investigated the determinants of customer loyalty in the mobile commerce context in Taiwan and note that customer satisfaction plays a crucial role in transforming perceived value and trust into loyalty. Perceived value, trust and customer satisfaction cannot substitute for each other, but need to complement each other (Lin & Wang 2005).

In conclusion, based on the results of this research, customers' selections of high-speed internet providers can be influenced by corporate image, perceived risks of wasted time and money, and the levels of received information. In addition, once customers have chosen their internet providers, the level of customer satisfaction can be influenced by four underlying factors of network quality, empathy, reliability, and assurance. Customer loyalty, in turn, is influenced by five underlying factors including customer satisfaction, perceived value, corporate image, trust, and switching costs for unknown service standards.



As a result, all 12 of these variables have an influence on customers' intentions to select and stay with particular high-speed internet service providers.

### **5.3 Implications of the study**

The implications which have arisen from these research findings, (1) for academic researchers; (2) for high-speed internet providers in Thailand and (3) for customers and the broader community, are outlined and discussed in the following subsections.

#### **5.3.1 Implications for academic theory**

This research has provided an empirical investigation contributing to the understanding of consumer behaviour in relation to three main areas: customer decision making, customer satisfaction, and customer loyalty. It is the first known study of these issues applied specifically to the Thai high-speed internet market. This research has confirmed that customer decision making, customer satisfaction, and customer loyalty are positively related to customers' intentions to select and stay with a particular service provider. The results of this research are important and valuable because they have answered the research problem and research questions as originally proposed for this study:

1. What are the factors that influence customers' selection of high-speed internet service providers in Thailand?
2. What are the factors that influence customer satisfaction with high-speed internet services in Thailand?
3. What are the factors that influence customer loyalty to high-speed internet service providers in Thailand?

The results of this study have indicated that:

1. This research confirms the existing literature about customer decision making that customers' selection can be influenced by three main factors. These factors are perceived risks in terms of wasted time and money, type of information sought, and corporate image
2. The existing literature regarding customer satisfaction suggests that customer satisfaction can be influenced by customer-perceived service quality (tangibility, reliability, responsiveness, assurance, and empathy) together with network quality (especially in telecommunications industry). However, the results of this research reveal that there are four factors that have an influence on customer satisfaction in the context of Thai high-speed internet markets: reliability, assurance, empathy, and network quality. In fact, network quality is the most important factor that influences customer satisfaction. The reasons why tangibility and responsiveness are not key influential factors for customer satisfaction in the context of Thai high-speed internet market are discussed in Section 5.3.2.1.
3. Based on previous literature, five factors including trust, switching costs in terms of unknown service standards, perceived value, corporate image, and customer satisfaction, have a positive impact on customer loyalty. This research confirms that these factors are the key factors that have a positive impact on customer loyalty. Customer satisfaction and perceived value are the two most important factors that influence customer loyalty to high-speed internet service provider.

The outcomes of this study are consistent with the existing literature discussed in Chapter 2. For example, the study of Nguyen and Leblanc (2001) in the telephone service industry proposes that corporate image plays a vital role in influencing customer loyalty and the process of customers making decision to select their desired service providers. In terms of customer satisfaction, the result of this present research is similar to Wang, Lo and Yang's (2004) study about service quality in China's mobile market. Wang, Lo and Yang (2004) focus on the measurement model of service quality based on the well-known SERVQUAL model. The result reveals that in order for service providers to be successfully competitive, they must try to improve customer perceived service quality by focusing on all six underlying factors including tangibility, reliability, responsiveness, assurance, empathy, and network quality.

In addition, the analysis of the antecedents of customer loyalty in the Turkish mobile telecommunication market by Aydın and Ozer (2005) indicates that there are three factors which create customer loyalty. These three factors are trust, switching cost, and customer satisfaction. This is also supported by the study of Ranaweera & Prabhu (2003) about the influence of satisfaction, trust, and switching barriers on customer retention for fixed line telephone users in the UK. The researchers propose that there are positive main effects of satisfaction, trust, and switching barriers on customer retention and loyalty.

In sum, this research found that providing good service quality would increase customer satisfaction and the likelihood of customers being loyal to the service provider. Thus, high-speed internet providers, in order to ensure that customers will select and stay with them, should take into consideration three main areas: customer decision making, customer satisfaction, and customer loyalty. Furthermore, this research with its results and methods can be utilised by academics in presenting training programs on consumer behaviour analysis in terms of factors that influence customer purchasing decisions, customer satisfaction, and customer loyalty. The research methodology and research analyses will also be of interest to academics and can provide the basis for further research in the area. Interviewer-completed face-to-face interviews were used in this research because this method is considered to offer more accurate and competent responses (Ticehurst & Veal 2000). Face-to-face surveys increase the level of trust and cooperation between interviewer and interviewee (Dooley 1995). When this method is used, respondents are able to obtain more assistance from the interviewer because the interviewer can guide the respondents through the survey while asking questions verbally, rather than simply handing the survey to the respondents for them to complete. Significantly, this method is considered more appropriate to the Thai culture because respondents are likely to respond to surveys better if some guidance is provided.

### **5.3.2 Implications for practice**

Implications for practice in this study are divided into two sections: (1) implications for high-speed internet providers in Thailand and; (2) implications for customers and the broader community. Each is discussed below.

#### **5.3.2.1 Implications for high-speed internet providers in Thailand**

Based on the results discussed in Chapter 4, a customer's intention to select and stay with a particular high-speed internet service provider can be influenced by 12 of the 14 variables from the original hypotheses. Several implications for high-speed internet service providers exist. These implications will now be discussed by considering each of the 14 original independent variables contained in this study.

#### **Perceived risks**

Based on the results of factor analysis in this research, perceived risks were divided into 2 different factors: (1) risk of wasted time and money and (2) risk of inconvenience. As shown in Table 4.33 (page 148), risk of inconvenience was not included in the multiple regression analysis because the reliability value was not acceptable (below 0.70). 'Risk of wasted time and money' was included in the multiple regression analysis which investigated the relationship between perceived risks and customers' selection. The results shown in Table 5.2 above indicate that customers' selections can be influenced by the levels of perceived risks in terms of risk of wasted time and money.

These results indicate that customers' selection is influenced by their perceptions regarding financial risks, performance risks, product risks, and time. Customers will not want to risk having to waste a lot of time and effort to get the service adjusted or repaired. In addition, customers are concerned that they may not get the standard of service they want when choosing a new service provider. The finding supports the existing literature which suggests that customers' selections can be influenced by the levels of perceived risk (Forsythe et al. 2006; Peter & Tarpey 1975).

As a result, high-speed internet providers must provide enough useful information about their services in order to decrease the level of risks perceived by customers. For instance, in terms of financial risk, high-speed internet providers should offer and publicise money-back guarantees in their advertising in case customers cannot get the service they were promised. To minimise performance/product risks for their customers, high-speed internet providers could consider undertaking to respond within 24 hours to customers' requests for after-sales technical support to get their service adjusted or repaired. Providing customers with answers to frequently asked questions can also decrease customer's perceived risks. Notably, service providers must ensure that this information is well communicated and reaches their target customers. Indeed, by providing enough information regarding their services, such as the benefits of services or troubleshooting information, service providers can help customers reduce the risks associated with choosing services that they are not familiar with. If customers clearly understand how the products or services work, they can more easily make their decision to choose the option that best fulfils their needs.

### **Information**

Based on the results of factor analysis in this research, information variables were divided into two types: (1) type of information sought; and (2) depth of information sought. As shown in Table 4.33 (page 148), depth of information sought was not included in the multiple regression analysis because the reliability value was not acceptable (below 0.70). The factor 'type of information sought' was included in the multiple regression analysis to investigate the relationship between information and customers' selections of internet providers. The results shown in Table 5.2 indicate that customers' selections can be influenced by the type of information sought.

Customers will search for information about high-speed internet service providers before they make their final purchase decision. For instance, customers are interested in reading information about how the service performs as well as reading consumer report articles about high-speed internet services. Customers will talk about high-speed internet services with others and compare the service characteristics of different internet providers that offer the same service. The findings of this study support the existing literature which suggests that customers' selections can be influenced by the levels of received information (McCull-Kennedy & Fetter 1999; Murray 1991). However, too much depth of information,

especially inconsistent information, can confuse customers during their purchase decision making (Malhotra 1982). Therefore, it is not surprising that this research did not find any correlation between depth of information sought and customers' selection of service provider.

Managerial understanding of what customers are looking for and how they will evaluate the service offerings is important for all service providers to succeed in acquiring target customers. There are two principal conceptual ideas that influence a customer's product choice selection which should be taken into account by high-speed internet providers in Thailand: (1) product information availability and (2) prior experience with the products (Bettman & Park 1980) High-speed internet providers must constantly provide useful information about their service that is easy for customers to understand. This information can be consumer report articles or advertisements about the overall achievements of the service provider. Importantly, internet providers must ensure that this information is efficiently communicated and reaches their target customers. Secondly, another way to provide a clear message and inform customers about the benefits that the service can provide is to offer free trial programs. With free trial programs, customers can experience the benefits they can gain from using, as well as find out how to use, the service. This information can assist them to make their purchasing decision for a product that they are not familiar with such as a high-speed internet service. Enabling customers to do this is not only a good way to provide good information to customers, but also can create good corporate image for service providers which leads to increased customer loyalty.

### **Corporate image**

Table 5.2 above shows that corporate image positively influences customers' selection. Customers tend to make their purchase decision to select a particular service provider if they think the service provider has a good image. Furthermore, Table 5.2 also indicates that corporate image positively influences customer loyalty. The level of customer loyalty tends to be higher when customers' perceptions of corporate image are positive. This is because customers believe that a service provider with a good image will always perform well and keep its promises. This is consistent with the existing literature which proposes that corporate image contributes to customer loyalty (Anisimova 2007; Aydin & Ozer 2005; Methlie & Nysveen 1999; Nguyen & Leblanc 2001) and customers' selections are

positively influenced by corporate image (Markus 1977; Nguyen & Leblanc 2001). In sum, it can be concluded that corporate image plays a vital role in influencing customer loyalty and the process of customers making decisions to select their desired service providers.

As a result, internet service providers should view corporate image as an intangible asset that can contribute to their competitive advantage. Given that corporate identity influences image (Melewar, Husser & Srivoravilai 2005), care must be taken to ensure that elements such as company name, logo, and other features that distinguish the company from its competitors are outstanding in the consumer's mind. Management must continually promote these identities in advertising, point-of-sale material, and other promotional activities directed at selling services to customers. At the same time, the extrinsic characteristics of service providers can have significant influences on its corporate image (Nguyen & Leblanc 2001). Tangible elements such as personal contact, physical environment, and technical support can be used to create a positive impression of the corporate image (Nguyen & Leblanc 2001). Rather than only focus on the technical aspects of the product, focusing on the extrinsic characteristics such as making the product pleasant to look at and nice to feel and touch, should always be considered to be a great strategic marketing technique to develop corporate image (Lau & Lee 1999).

In their marketing communication strategies and advertisements, service providers should incorporate customer service information and include physical evidence of the intrinsic attributes of their respective services to positively influence the decision making processes of the customers (Erevelles, Srinivasan & Rangel 2003; Nguyen & Leblanc 2001). Service providers should develop advertising strategies aimed at building up a good corporate image such as sponsoring public or social activities that are beneficial for the public and the community, or setting up contest and giving the rewards to internet users (contestants) who can identify the highest number of benefits of using high-speed internet.

Since the interactions between customers and employees are part of the service and are likely to affect customer satisfaction, increase the likelihood of repeat business and enhance a company's image, internal marketing efforts must be focused on convincing employees that image building is part of their job and all employees must get involved in the establishment of quality standards. In fact, motivated and happy employees can build

greater customer satisfaction which leads to the enhancement of customer loyalty. Care must be taken by high-speed internet service providers to motivate their employees to be happy, stay with the company longer, and get to know their customers better. This will lead to better service performance, build greater satisfaction, and improve the relationship between customers and the company. Satisfied and happy customers are believed to extend their referrals, endorsements, and spread their approval by word of mouth, which will have a crucial effect on generating a superior corporate image (Jones & Sasser 1995; Zeithaml, Berry & Parasuraman 1996). Word of mouth communication is viewed as one of the most important factors not only for acquiring new customers but also for improving corporate image. In other words, corporate image can be improved by focusing on customer satisfaction (Bontis, Booker & Serenko 2007).

Indeed, corporate image has the potential to influence an organisation's competitive standing. A better understanding of the importance of image can be of strategic value when developing marketing and advertising strategies aimed at creating customer loyalty.

### **Reliability**

The findings from the study indicate that reliability of service providers positively influences customer satisfaction. The importance of the reliability of the service on internet users' rating of a high-speed internet provider presents some obvious implications for service providers. Internet users tend to be willing to use a service if they have confidence in the reliability of the service. For example, when customers have a problem with the service, they expect their service providers to show a sincere interest in solving it. In addition, customers have the expectation that their service providers are dependable. Hence, service providers should deliver the service at the time promised and always perform the service correctly the first time. These findings are consistent with the existing literature (Cronin & Taylor 1994; Parasuraman, Zeithaml & Berry 1988) which states that reliability is one of the components that influences customer-perceived service quality. Furthermore, Khatibi, Ismail, and Thyagarajan (2002) and Wang, Lo, and Yang (2004) suggest that in the telecommunications industry, improvements made to service quality will also increase customer satisfaction levels.



Reliability is one of the antecedents for service quality. To be more reliable, internet service providers must ensure that their internet signal is available for their subscribers at all times. High-speed internet is defined as a service that is always on and does not disturb the usage of the telephone line. A cheap connection is not worth the money saved if customers get disconnected every ten minutes. Good internet providers must ensure that their internet users remain connected at all times. Customers do not expect to have downtime on their internet signal. They can become dissatisfied and may transfer to other service providers if this problem occurs frequently. Service providers must provide a quick and easy register package that helps customers in getting online connections without any delay and make sure that customers who are subscribed to their service are able to have their internet access and are able to get to websites when needed. High-speed internet providers should also provide a technical support call centre which is able to solve problems for customers 24 hours a day and 7 days a week, so customers can feel safe and have someone to rely on when any unexpected problem regarding the service occurs. In cases when customers cannot solve problems by themselves, there should be technician available that can come to help customers at their place. High-speed internet providers must give adequate notice to customers of any change, delay or outage of their service and should be able to tell when the service will get back on track. The notice needs to be sent to customers ahead of time. In short, more effort from internet service providers should be put into making high-speed internet services as reliable as fixed telephone lines used to be.

### **Assurance**

The findings of this study indicate that assurance has an important influence on customer satisfaction. That is, assurance positively influences customer satisfaction. This finding is supported by previous studies which find that assurance can positively influence customer satisfaction (Cronin & Taylor 1992; Parasuraman, Zeithaml & Berry 1988). For example, employees of service providers should instil confidence in customers. Employees need to have the knowledge to answer customers' questions, and employees should be consistently well-mannered with customers. In addition, service providers should bear in mind that the high-speed internet industry in Thailand is a new market which is still in the growth stage and the majority of customers do not have much knowledge about the products and services (Thuvasethakul 2008). Hence, employees' knowledge and confidence is

imperative to increase customer confidence in the service in order to promote customer satisfaction.

It would be wise if service providers set up professional training programs to teach and train their employees about the internet services and equipment. This is especially important for front-line staff who need to serve and interact with customers such as staff in sales, marketing, and technical support departments. To provide superior customer service quality, employees in all customer-contact points need to have considerable skills in informing customers about the specific services offered by the company. Management should make these key performers aware of their role and provide them with adequate training in order for them to offer a consistently high standard of service delivery and to minimise fail points in customer encounters. These steps will increase customers' confidence in the company and will result in a positive experience and strong customer referrals.

### **Empathy**

Table 5.2 reveals that service staff empathy was positively associated with the overall perception of service quality. This result confirms findings in the literature that one of the key variables in service quality is staff empathy (Cronin & Taylor 1992; Parasuraman, Zeithaml & Berry 1988). High-speed internet is a dynamic service in which the situation constantly changes. Therefore changes to information or new information about the service needs to be continuously updated (Thuvasethakul 2008). Receiving such personal attention is important for internet users, particularly because high-speed internet is a new service in Thailand. Thus, receiving personal attention from employees of service provider is more important to customers and can increase the levels of customer satisfaction. Besides, the survey of Thai National Electronics and Computer Technology Centre (NECTEC) about Thai internet users in 2007, indicates that the majority of customers do not have sufficient information and knowledge on how to get the service set up and installed (Thuvasethakul 2008). Therefore, staff's empathy is important in this research context.

To conclude, customers' levels of satisfaction with high-speed internet providers are often based on their interactions with service providers' customer-contact personal staff – those who are always answering questions, taking payments for goods and services, and helping

customers to find what they are seeking. The customer-contact employees must be considered as being first in line to provide services for walk-in customers. Hence, management must keep in mind that it is very much important for all staff, especially those in customer-encounter points, to be motivated and satisfied. This can be explained as employees who are satisfied, motivated and have a clear understanding about the tasks of their positions are likely to be more customer-oriented which is essential to create and improve staff empathy (Reichheld, 1993).

### **Network quality**

As noted in Table 5.2, network quality positively influences customer satisfaction. The results show that high network quality results in a good image and has a positive influence on customers' perceptions. In addition, Table 5.3 shows that network quality is the most important factor for high-speed internet service providers to create customer satisfaction. In other words, customers' level of satisfaction tends to be based on the levels of network quality. This research finding is similar to the conclusions of Wang, Lo, and Yang's (2004) study about the importance of network quality in China's telecommunications industry. Wang, Lo and Yang suggest that network quality is one of the most important drivers of overall perceived service quality (Wang, Lo & Yang 2004). Furthermore, Khatibi, Ismail, and Thyagarajan (2002) suggest that in the telecommunications industry, improvements made to service quality will also enhance customer satisfaction levels.

According to the NECTEC survey about Thai internet users in 2007, network quality is one of the main points that service providers should take into a consideration when they want to improve their service quality (Thuvasethakul 2008). Therefore, internet providers must make providing a good signal their first priority. For instance, it is important that the internet signal is randomly reassessed in every service area to measure the quality of high-speed internet signals on a regular basis or that the internet system and network is designed to allow instant rerouting in case of equipment failure. The present research aims to test whether network quality also has an impact on high-speed internet user's loyalty. More details about the implications for high-speed internet providers regarding network quality is also presented in the section on tangibility below.

**Trust**

The result shown in Table 5.2 reveals that trust positively influences customer loyalty. When customers trust and believe in a particular service provider, their levels of their loyalty will be increased. For instance, the degree of customer loyalty will be high when (1) customers believe that their service provider can be relied on to keep its promises even though the circumstances may change; and (2) when customers believe that the service provider will always be ready and willing to offer them assistances and support. This finding is supported by the study of Lau and Lee (1999) which proposes that when customers place their trust in a brand, it can create and link to brand loyalty. Furthermore, Aydin and Ozer's (2005) suggest in their study about customer loyalty in the Turkish mobile telecommunications market that trust is one of the antecedents of customer loyalty. Therefore, it will be beneficial for high-speed internet providers to create and gain trust from their customers' in order to retain their loyalty. For example, to generate a higher level of trust, service providers should focus on keeping their promises and always be willing to offer assistance and support to customers.

Service providers must know how to give high quality service to customers, provide customers with helpful hints and guidelines that pertain to what the company is selling and make sure they are consistent in the services provided to customers. Managers must strive to provide customer support, fast and reliable download speeds, and a range of great discounts for existing customers. If customers see their service provider as a professional who knows what he is doing and saying, they will trust the company quickly. In addition, high-speed internet service providers should not harm customers' trust with unrealistic advertising, having hidden charges, and giving poor customer service. Simply stated, to get customers to trust them, providers need to offer sincere and professional service. Service providers must show their customers that the company is an expert in the field and that the company is not there to trap them. Internet providers may encourage more confidence in customers by providing guarantees. Significantly, the quickest way to gain trust from customers is when the company is recommended by someone they trust.

**Switching costs**

Switching costs can be defined as the one-time costs that customers associate with the process of switching from one service provider to another (Burnham, Frels & Mahajan 2003). Based on the existing research in the telecommunications context, switching costs in terms of financial costs, convenience costs, and evaluation and seeking information costs are believed to be the underlying factors that have an impact on customer loyalty (Burnham, Frels & Mahajan 2003; Hu & Hwang 2006). The switching costs variable in this research can be divided into two factors: (1) switching costs for unknown service standards; and (2) the switching cost having to seek new information. In this present research, switching costs in terms of the cost of seeking new information, the second factor of the switching costs variable, was not included in the analysis of this research because the reliability value was not acceptable (below 0.70). On the other hand, switching costs in terms of unknown service standards, the first factor of switching costs variable, were included in the multiple regression analysis of the proposed research because the reliability value was acceptable (above 0.70).

The results of multiple regression analysis shown in Table 5.2 reveal that switching costs in terms of unknown service standards positively influence customer loyalty in the context of this study. Notably, the switching costs variable has the least impact on customer loyalty when compared with other variables including customer satisfaction, perceived value, corporate image, and trust. This may be because the respondents of this present research were all high-speed internet users who already have sufficient knowledge and experience of using high-speed internet services. There were several reasons why this group of respondents chose to have their high-speed internet access at home, such as obtaining faster access to the internet, the convenience of being able to look up something quickly, having internet access without disturbing the telephone line, faster file downloads, faster performance of job-related tasks, use for education, and use for entertainment purposes such as easily downloading music and movies. This group of respondents was more likely to engage in more complex and advanced online activities or more complicated consumer transactions such as downloading software and content exchanges with other users, and the use of internet technology to view movies and videos, develop photographs, and to engage in consumer and financial transactions. In sum, this group of respondents were high-speed internet users who had time, education, enough experience

and economic resources to use high-speed internet and get the connection access at home. Hence, the switching costs in terms of unknown service standards and other related factors do not seem to have had much impact on this group of respondents to prevent them switching to other providers if they preferred to. In addition, since they had enough knowledge and experience, they know what points need to be considered and where to get information in order to manage with types of switching costs that may occur.

However, an ideal way for high-speed internet service providers in Thailand to prevent customer defection is to keep a balance between creating switching costs and, at the same time, adding more value to their service. For example, service providers should always inform customers about the advantages and benefits of continually being its subscribers, such as offering excellent promotion packages, high network quality, a 24-hours call centre and technical support. In addition, telecom service providers may offer special promotion plan for bundling service packages such as special discounts for customers who use two or more products/services (home phone, internet, mobile phone, cable TV, etc.) from the same provider. These will encourage customers to feel that they chose the right option and have no need to transfer to other providers.

### **Perceived value**

Perceived value can be defined as the ratio between perceived benefit and perceived sacrifice (Ravald & Gronroos 1996; Zeithaml 1988). It can be viewed as a major competitive weapon for service providers and can be used to improve their competitive advantage (Devlin, Gwynne & Ennew 2002; Khatibi, Ismail & Thyagarajan 2002). The results shown in Table 5.2 confirm that perceived value positively influences customer loyalty in the context of this study. For example, when internet users believe that their current service provider is worth the costs involved and is the best choice compared with other internet providers, they will not switch to another provider. In such cases, it can be assumed that internet users have committed themselves to retaining long-term relationships with their current service provider. This result supports the existing literature which suggests that perceived value contributes to customer loyalty (Aydin & Ozer 2005; Bolton & Drew 1991; Khatibi, Ismail & Thyagarajan 2002). Customers will remain with a firm for longer period if they are pleased with the received benefits and will tend to buy

additional services as well as spread favourable word-of-mouth recommendations of the firm (Berry, Lefkowitz & Clark 1988; Boulding et al. 1993; Parasuraman, Zeithaml & Berry 1988). Thus, in order to obtain higher loyalty and increase the likelihood of customer retention, service providers should improve consumer-perceived value by increasing their service quality and pricing their service attractively. Significantly, the ultimate aim of adding more value to the service in order to enhance customer loyalty can successfully be achieved when the value added is customer-oriented. That is, to be able to increase the levels of perceived value, service providers need to understand the needs of their existing and potential customers.

### **Customer satisfaction**

The results shown in Table 5.2 indicate that customer satisfaction positively influences customer loyalty. In addition, Table 5.3 shows that customer satisfaction is the most influential factor in creating customer loyalty. The research results show that if internet users get good service that meet their expectations and are happy with their service provider, they are more likely to rely on their current service providers. In other words, when internet users have a higher level of satisfaction, they are more likely to be loyal to their current high-speed internet service providers. These research findings are consistent with the previous telecommunications literature which proposes that customer satisfaction appears to be a valid predictor of customer loyalty (Bolton & Drew 1991; Gerpott, Rams & Schindler 2001; Gronholdt, Martensen & Kristensen 2000; Kim & Yoon 2004; Mittal & Lassar 1998). Eshghi, Haughton and Topi (2007) investigated the determinants of customer loyalty in the wireless telecommunications industry and propose that service providers need to improve customer satisfaction in order to create true loyalty and minimise customer defection. As it has been noted, levels of customers satisfaction can be improved when all underlying factors such as network quality, empathy, assurance, and reliability are all taken into account. In sum, customer satisfaction is an essential function that can contribute to customer loyalty and internet providers should take this into consideration when attempting to expand their loyal customer base. Expanding a loyal customer base can assist in generating a business's profitability because the cost of retaining existing customers is less than the cost of acquiring new customers (Reichheld 1993; Reichheld & Teal 1996).

**The implications of the two independent variables not supported by the research**

Table 5.2 contains two factors, tangibility and responsiveness, whose influence was not supported by the testing of the hypotheses. According to previous literature, tangibility and responsiveness should be factors that have an influence on customer satisfaction. Nevertheless, according to the results of this research, tangibility and responsiveness are not associated with customer satisfaction. Hence, these findings are inconsistent with the previous literature. The implications of these results are now discussed.

**Tangibility**

Service tangibility can be viewed as the physical facilities, equipment, and personal appearance of a business (Parasuraman, Zeithaml & Berry 1988). To have the attractiveness of the physical facilities, examples include the service provider's employees being well dressed and appearing neat, or the service provider having up-to-date equipment (e.g. internet modems). As noted in Table 5.2, tangibility did not positively influence customer satisfaction. This can be explained by the fact that high-speed internet is primarily an intangible service. People or customers are mostly concerned and focused on the quality of internet signal, which is intangible, rather than on physical facilities, equipment, or the personal appearance of staff.

Rather than only focus on traditional tangible factors such as the physical environment, in the context of high-speed internet services, it is essential for internet providers to focus on the quality of their internet signal or network quality as if it is a tangible rather than an intangible component. That is because, in this context, the speed and quality of the internet signal can obviously be measured and evaluated by customers. Internet users are able to tell how fast/slow, strong, stable and reliable the signal is when they use the internet. Management therefore needs to ensure that the high-speed internet signal is at least as fast as advertised, and that it is stable at all times.

Although the results from this research show that the traditional service tangibility does not influence customer satisfaction, it cannot be overlooked by internet providers. That is because high standards of physical environment can enhance customers' impressions at the first sight. When customers have a good impression at first sight, it is likely they will



become more satisfied with the service (Burns 1995; Julian & Ramaseshan 1994; Nguyen & Leblanc 2001). In addition, customer contact employees play an important role in affecting customer perceptions of service quality (Burns 1995; Julian & Ramaseshan 1994). It is important for management to identify the relevant extrinsic cues used by consumers when they evaluate service quality. For instance, managers need to ensure that all tangible attributes related to employee performance create a desirable impact on customers' perceptions of quality and value for money. This is important as customers continue to seek tangible cues as a way make judgments about the quality of service encounters. Therefore, a managerial priority should be to identify the most important performance cues used by customers in assessing quality within their respective establishments, and thereafter ensure that the key performers such as sales persons and front-line staff are equipped to perform well.

### **Responsiveness**

As noted in Table 5.2, this study finds that responsiveness has no significant influence on customer satisfaction. This can be explained as being because there are three main service providers in the Thai high-speed internet market and customers do not have so many choices. Moreover, since network quality is the most significant factor influencing the levels of customer satisfaction in the context of this research, it seems that high-speed internet users are likely to be concerned about network quality and other related factors. Responsiveness may therefore be less important for the market situation in this research context. However, it is important to keep in mind that if there were more high-speed internet providers in the future, and all of them performed well without any problems regarding network quality, responsiveness would probably become more important for customers when they are in the process of evaluating their satisfaction levels and this should be of interest for future research.

This result is consistent with the study of Wang, Lo, and Yang (2004) regarding China's telecommunications industry. The researchers investigate customers' perceptions of wireless phone services in China. There are two main wireless phone providers in the research context and the results reveal that customers are mostly concerned with network quality. The researchers suggest that not all of the SERVQUAL factors contribute to

customer satisfaction equally, and that responsiveness does not have a significant influence on customer satisfaction (Wang, Lo & Yang 2004).

However, although the results from this research and the study of Wang, Lo and Yang (2004) indicate that responsiveness does not influence customer satisfaction, service providers cannot afford to simply ignore this dimension entirely. Management must ensure that services are offered and delivered in a responsive and timely manner so that customers do not have to wait for service longer than they expected. Waiting too long for a service can have a negative effect on service evaluation and reduce the levels of customer satisfaction. Internet service providers must keep in mind that when responsiveness is taken together with other factors such as network quality, empathy, reliability, and assurance, it is likely to enhance the levels of customer satisfaction which will also result in a higher degree of customer loyalty. This will be especially true in the future if there is more competition and if every internet provider is able to provide a stable and strong internet signal without any network outage time.

In addition, all managers should ensure that their staff is prompt and shows a willingness to serve the customers' needs. Management should make sure that there are always enough staff to cope with peaks times of service delivery and should provide a consistent service at all times. Although this may be difficult when managers strive to minimise wage costs by reducing staffing levels, it would be far better for a company to focus on the long-term benefits of customer loyalty and the potential of repeat business.

## **Conclusion**

In conclusion, in order to gain new customers as well as retain existing customers, high-speed internet providers need to take into consideration three main areas: (1) customers' selection or customer decision making; (2) customer satisfaction; and (3) customer loyalty.

Firstly, regarding customers' selection of a provider, there are three independent variables which have an impact and need to be considered. These three independent variables are: corporate image, type of information sought, and risk of wasted time and money.

Secondly, to ensure high levels of customer satisfaction, there are four underlying factors that service providers must focus on: network quality, empathy, reliability, and assurance. Finally, to maximise customer loyalty, there are five issues that service providers must consider to maintain good business relationships with their customers. These five important issues are: customer satisfaction, perceived value, corporate image, trust, and switching costs for unknown service standards.

To achieve the aims of this research, a questionnaire survey was designed to measure what factors customers consider when choosing their high-speed internet providers and to discover customers' opinions regarding their current service providers. The research results provide more understanding of customers' attitudes toward selecting and staying with particular high-speed internet providers. Hence, this research will be valuable for high-speed internet service providers in Thailand because service providers can apply the research results with their service and marketing strategies in order to acquire new customers as well as to retain their existing ones. Service providers may use this study as a guideline for their marketing strategies. This research could help service providers develop suitable services and their image to improve customer satisfaction and customer loyalty.

### **5.3.2.2 Implications for customers and the broader community**

This research provides insights and valuable knowledge for high-speed internet providers to help them understand what areas need to be considered in order to acquire more customers and expand their loyal customer base. The findings from this study will improve the competitiveness levels of high-speed internet providers. Once internet service providers are equipped with these valuable insights and knowledge, they will try their best to improve their service performance in order to compete with each other. There will be more variety of service packages and promotions launched to serve different target groups of customers who have different needs when using their high-speed internet. Consumers' range choices will expand because service providers will be driven to improve quality and to offer new bundles of services to differentiate themselves. Customers will be able to purchase services from among multiple providers since there will be a variety of consumer choice. Consequently, this will increase the levels of competition in the high-speed internet industry in Thailand.

Competition will force service providers to create innovations that provide more benefits to customers. Consumers will be able to gain several benefits from the increased competition such as lower prices, increased consumer choice and improved service quality. As the level of competition increases, together with attractive access costs and reliable services, customers will have more options when choosing the service that best suits their needs. In addition, high-speed internet access is now considered by international organisations as a key to enhance the levels of competitiveness and to sustain economic growth for many countries (Paltridge 2001, 2002). The expansion of high-speed internet services to cover a wider area will be beneficial for the nation and the broader community. That is because broadband or high-speed internet is a telecommunication service that could promote both economic and social development of a nation (Oh, Ahn & Kim 2003).

#### **5.4 Delimitations the research**

The scope of this research has some delimitations which apply to how broadly its outcomes can be applied. These delimitations must be acknowledged to add context to the conclusions from the research results.

1. This research was delimited to respondents living in Thailand and those having high-speed internet access at home. The researcher therefore collected and analysed the data pertaining only to household high-speed internet service in Thailand.
2. Consent is implied by a person's agreement to participate and allows the participants to make an informed choice about whether to participate or not. Consequently, the views reflected in the research results only reflect those of the persons who were willing to share their opinions about their current high-speed internet providers.
3. The target population for this study is defined as individuals who have high-speed internet access at home. Many of these individuals work in office buildings located in downtown and working office areas in Bangkok. Therefore, the distribution of consumer surveys was limited to public areas nearby to these selected areas in Bangkok where many of high-speed internet users could easily be found.

4. Data was collected in 2008 when particular economic and government policy conditions applied in Thailand. Therefore, the findings might not be exactly applicable in the future. Data collected at other times may produce different results.
  
5. In the context of the high-speed internet market, customers are able to access networks with a range of signal qualities. Hence, further research may consider including network quality as one of the tangible factors to be measured.

These delimitations do not detract from the value of the study's results, but rather they indicate areas where further research into high-speed internet services may be of value. The further research applications are discussed in the following section before drawing a conclusion to the thesis.

## **5.5 Suggestions for further research**

According to the results of this research and the limitations noted in the previous section, further research may consider the following points:

- The high-speed internet industry is at its growth stage in Thailand. This research provides valuable knowledge from customers' point of view of the Thai high-speed internet market. The results and knowledge gained from this research can be used as a guideline for future research that aims to study customers' perceptions regarding high-speed internet services.
  
- This thesis's results apply only to Thailand. The same findings may not occur in other countries because of cultural differences. Further research could apply the findings of this thesis as an example to the high-speed internet market in other countries
  
- There are only three main service providers who provide high-speed internet services in Thailand. Nevertheless, in the future, the number of service providers may increase, and new marketing strategies might be launched. Hence, future research could focus on the new services and marketing strategies of both

newcomers and established service providers in the Thai high-speed internet industry.

- In order to get a clear picture and better understanding of consumer decision making behaviour, further research may investigate other factors such as the impact of cultural differences on different countries, which this research has not investigated. This research investigates specific variables which were assumed to have an impact on customers purchasing decisions including perceived risks, information, and corporate image. Future research may study different and additional variables that could influence consumer decision making in high-speed internet industry. In addition, as the proposed research deals with the attitudes of people, group interviews may be useful for further research.

In brief, this research contributed to the existing knowledge about service and marketing strategies in the telecommunications industry in Thailand and has set the foundation for further research in that country and in other countries.

## **5.6 Conclusion**

The research problem investigated in this study was: What are the factors that influence customer's intention to select and stay with a particular high-speed internet providers in Thailand? This chapter has summarised the research findings related to the research problem, the three research questions, and the 14 hypotheses presented in Chapter 2. It has also examined the implications of the study for both academic study and for practice. The implications for practice include implications for high-speed internet providers in Thailand, and implications for customers and the broader community. Finally, the delimitations of the research were presented and described, followed by the descriptions and suggestions for future research.

This research found that high-speed internet providers should take into consideration; (1) three factors that influence on customers' selection (corporate image, type of information sought, and perceived risks in terms of wasted time and money); (2) four factors that influence customer satisfaction (network quality, empathy, reliability, and assurance,

correspondingly); and (3) five factors that influence customer loyalty (customer satisfaction, perceived value, corporate image, trust, and switching costs for unknown service standards, respectively). That is because these three main areas are capable of assisting high-speed internet providers to acquire new customers and to retain their existing ones.

The findings of this research provide direction for high-speed internet providers to determine which attributes to focus on in order to enhance overall customer satisfaction and retention. The research has value because it proposed and justified a theoretical model to explain customer decision making, satisfaction, and loyalty in the Thai high-speed internet context. In sum, the research achieved its objectives because the outcomes of the study provided answers to the research problem and research questions.

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