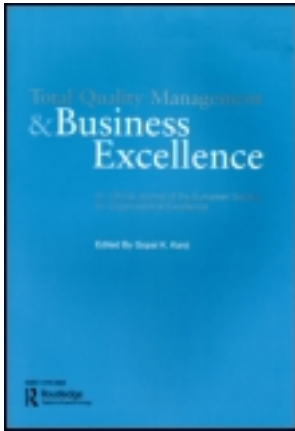


This article was downloaded by: [National Chiao Tung University 國立交通大學]

On: 24 April 2014, At: 19:02

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



## Total Quality Management & Business Excellence

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/ctqm20>

### The role of service value and switching barriers in an integrated model of behavioural intentions

Tim Lu <sup>a</sup>, Rungting Tu <sup>b</sup> & William Jen <sup>c</sup>

<sup>a</sup> Department of Marketing and Logistics, Vanung University, Tanyuan, Taiwan

<sup>b</sup> Department of Marketing, Guanghua School of Management, Peking University, Beijing, China

<sup>c</sup> Department of Transportation Technology and Management, National Chiao Tung University, Hsinchu, Taiwan

Published online: 20 Oct 2011.

To cite this article: Tim Lu, Rungting Tu & William Jen (2011) The role of service value and switching barriers in an integrated model of behavioural intentions, Total Quality Management & Business Excellence, 22:10, 1071-1089, DOI: [10.1080/14783363.2011.614867](https://doi.org/10.1080/14783363.2011.614867)

To link to this article: <http://dx.doi.org/10.1080/14783363.2011.614867>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms &

Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

## The role of service value and switching barriers in an integrated model of behavioural intentions

Tim Lu<sup>a</sup>, Rungting Tu<sup>b</sup> and William Jen<sup>c\*</sup>

<sup>a</sup>Department of Marketing and Logistics, Vanung University, Tanyuan, Taiwan; <sup>b</sup>Department of Marketing, Guanghua School of Management, Peking University, Beijing, China; <sup>c</sup>Department of Transportation Technology and Management, National Chiao Tung University, Hsinchu, Taiwan

There are many ways to increase consumers' purchase intentions, and most studies explore this issue by adopting the 'quality–satisfaction–behavioural intentions' paradigm. However, this approach may overlook a few important factors including customer sacrifice, perceived value, and switching barriers. This study proposes an integrated model that incorporates the service value and switching barriers perspectives to further examine the formation of behavioural intentions. Specifically, our research model synthesises two key determinants of service values (service sacrifice and service quality) and the two main switching barriers (switching cost and alternative attractiveness). Furthermore, because previous studies on the links among these constructs are rather divergent and fragmented, we build structural causal relationships among these factors to explain consumers' decision processes. Several competing theories are also presented and compared to this new research model. The results, as hypothesised, suggest that service value is the most effective predictor of satisfaction and customers' behavioural intentions; the findings also support previous research indicating that cognitive evaluations precede emotional responses. We highlight the delivery of service value as a strategic imperative and stress the research stream of service value measurement.

**Keywords:** service quality; service value; satisfaction; switching barriers; behavioural intentions

### Introduction

Research has shown that customer behavioural intention can directly influence a company's profits (Cronin, Brady, & Hult, 2000; Oh, 1999; Zeithaml, 1988). Specifically, the company makes a profit from customers' favourable behavioural intentions, which refers to customers' willingness to praise the company, recommend them to other customers, remain loyal to them, and increase the volume of their purchase (Cronin & Taylor, 1992; Cronin et al., 2000; Zeithaml, Berry, & Parasuraman, 1996). Most researchers argue that the more favourable a customer's behavioural intentions, the greater the possibility of that customer's retention, and the less likely a switch to a competitor, securing financial benefits to the firms currently serving the customers. Previous research has also shown that one or both of the following strategies are often used to encourage desirable consumer behavioural intentions (Fornell, 1992; Patterson & Smith, 2003): establishing customers' true attitudinal loyalty so that they have little interest in competitors' offerings (Bolton & Drew, 1991; Cronin et al., 2000); and/or raising switching barriers so that customers are

---

\*Corresponding author. Email: wljen@mail.nctu.edu.tw

unlikely to change to an alternative provider (Balabanis, Reynolds, & Simintiras, 2006; Jones, Mothersbaugh, & Beatty, 2000; Liu, Leach, & Bernhardt, 2005; Wathne, Biong, & Heide, 2001).

To better understand the influence of customers' true attitudinal loyalty, researchers have started to focus on the cognitive aspects of decision making. Among these studies, there has been a great body of research emphasising the relationships among service quality, satisfaction, and behavioural intentions (Choi, Cho, Lee, Lee, & Kim, 2004; Cronin et al., 2000; Dabholkar, Shepherd, & Thorpe, 2000; Oliver, 1993). Research indicates that when customers receive higher service quality, they are more satisfied and have more positive behavioural intentions. The 'quality–satisfaction–behavioural intentions' paradigm mainly concentrates on the benefit aspect of service. However, other research suggests that the sacrifice aspect, including price, time, and effort, should also be included (Dodds, Mornoe, & Grewal, 1991; Grewal, Monroe, & Krishnan, 1998; Zeithaml, 1988). Adopting this view, researchers further propose that service value, i.e. the trade-off between perceived benefits and perceived sacrifice (PB/PS), can provide a more comprehensive viewpoint of behavioural intentions (Bolton & Drew, 1991; Grewal et al., 1998; Monroe, 1991). Some researchers emphasise that service value is a strategic imperative for behavioural intentions (Caruana, Money, & Berthon, 2000; Choi et al., 2004; Lapierre, Filiatrault, & Chebat, 1999; Pura, 2005). However, there is no consistent conclusion regarding the relationships among quality, sacrifice, value, satisfaction, and behavioural intentions. This study aims at providing a more complete view of consumer behavioural intentions by integrating service value into the 'quality–satisfaction–behavioural intentions' paradigm and further examining the interrelationships among the factors.

Furthermore, due to the high costs of attracting new customers and the infeasibility of satisfying every customer, companies also raise different barriers to encourage customer loyalty, such as imposing higher switching costs or developing alternative ties to customers, e.g. frequent flier programmes or loyalty programmes, in an effort to 'lock' customers into an existing relationship with that service provider (Bansal & Taylor, 1999; Jones et al., 2000; Patterson & Smith, 2003). When switching barriers are high, customers find it difficult to defect even if they are not very satisfied or experience short-term fluctuations in service quality (Ranaweera & Prabhu, 2003; Wathne et al., 2001). Despite the fact that the role of switching barriers has received more attention recently, there is little knowledge regarding the relationship between switching barriers and customers' attitudinal loyalty. The complex interrelationships among service sacrifice, service quality, service value, satisfaction, switching barriers, and behavioural intentions are particularly not well understood. Moreover, few existing studies have empirically investigated these constructs in an integrated framework.

The main purpose of this study, as indicated, is to propose an integrated model that incorporates service value and switching barriers perspectives into the 'quality–satisfaction–behavioural intentions' paradigm (see Figure 1). Our model helps to (1) extend existing consumer behavioural intentions models which focus mostly on satisfaction, and (2) clarify the relationships among service sacrifice, service quality, service value, satisfaction, and switching barriers in the prediction of behavioural intentions.

## **Theoretical background**

### ***Relationships among service quality, satisfaction, and behavioural intentions***

There are several areas of study regarding customers' behavioural intentions, such as total quality management, customer satisfaction management, and customer value management.

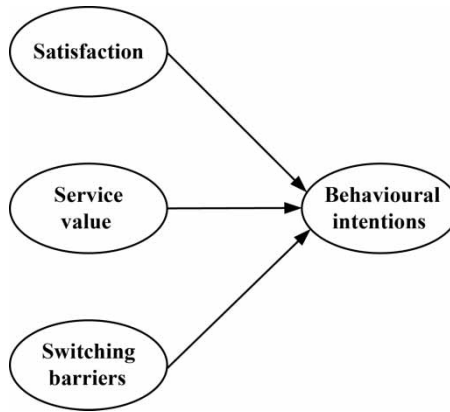


Figure 1. Conceptual model.

These research streams often begin with the study of service quality and then carry through to satisfaction research, which is called the ‘quality–satisfaction–behavioural intentions’ paradigm (Caruana et al., 2000; Dabholkar et al., 2000; Lapierre et al., 1999). Existing literature notes past use of expectancy disconfirmation theory in interpreting the two concepts of service quality and satisfaction (Oliver, 1993; Parasuraman, Zeithaml, & Berry, 1988; Rust & Oliver, 1994); however, since the two constructs share similar properties, researchers have not always been able to distinguish between them. Several studies attempt to provide conceptual and operational distinctions between service quality and satisfaction. For example, some researchers indicate that expectation in service quality can be viewed as either ‘ideal’ or ‘should’, whereas expectation in satisfaction refers to ‘desired’ or ‘will’ (Boulding, Kalra, Staelin, & Zeithaml, 1993). Some also argue that dimensions underlying service quality are rather specific, whereas satisfaction judgements have a broader range of dimensions which also include service quality aspects (Oliver, 1993). Furthermore, satisfaction assessments require customer experience, whereas service quality does not (Cronin & Taylor, 1992; Parasuraman et al., 1988).

The undistinguishable characteristics of service quality and satisfaction further induce argument surrounding causality. Traditionally, research has suggested that satisfaction would lead to an overall evaluation about service quality (Boulding et al., 1993; Fornell, 1992; Parasuraman et al., 1988). From this viewpoint, satisfactory service quality experiences may lead consumers to develop and modify their global attitude in the long run, such that an accumulation of specific evaluation (satisfaction with a transaction) results in a global evaluation (service quality) (Lapierre et al., 1999; Ledden, Kalafatis, & Samouel, 2007). Thus, satisfaction is treated as an antecedent of service quality. However, a dominant view on the relationship between service quality and satisfaction is that service quality represents a cognitive judgement, whereas satisfaction is more of an effective evaluation (Cronin et al., 2000; Oliver, 1993). According to the multi-attribute attitude model framework, i.e. cognition→affect→conation model (Wilkie, 1986), service quality is an antecedent to satisfaction and in turn, drives behavioural intentions. Moreover, a theoretical justification also be attributed to the appraisal→emotional response→coping framework (Bagozzi, 1992), which indicates that satisfaction strongly mediates the effect of service quality on behavioural intentions. Hence, the relationship of service quality→satisfaction→behavioural intentions has been treated as a research paradigm, and several studies have found empirical support for this model (Brady, Robertson, &

Cronin, 2001; Choi et al., 2004; Dabholkar et al., 2000; Yu, Wu, Chiao, & Tai, 2005). According to previous research results, when customers perceive higher service quality, they feel more satisfied and exhibit more positive behavioural intentions. Building upon these findings, the first two hypotheses in this study are as follows:

*H*<sub>1</sub>: Customers' perception of service quality has a positive impact on satisfaction.

*H*<sub>2</sub>: Customers' satisfaction has a positive impact on behavioural intentions.

### ***Relationships among service sacrifice, service quality, and service value***

In marketing literature, scholars highlight the delivery of service value as a strategic imperative for achieving customer loyalty and reducing defection rates (Lapierre et al., 1999; Ledden et al., 2007; Liu et al., 2005). These studies suggest that service value leads to favourable behavioural intentions (Wang, Lo, Chi, & Yang, 2004). Other research further indicates that service value represents a new paradigm that creates and sustains a competitive advantage and requires a more comprehensive approach than a simple focus on service quality or satisfaction (Ruiz, Gremler, Washurn, & Carrión, 2008).

Service value serves as a widespread construct which simultaneously integrates customers' perception of benefits and sacrifices. Researchers also reached considerable agreement in conceptualising service value as the trade-off between benefits and sacrifices: Zeithaml (1988) defines value as 'customer's overall assessment of the utility of a product based in perceptions of what is received and what is given'; Monroe (1991) defines customer perceived value as the relationship between PB/PS; and Day (2000) introduces the value equation as a mechanism for understanding service value, with the value represented as the difference between PB–PS. Hence, customers cognitively combine their perceptions of what they can get (i.e. benefits and/or gain) and what they have to give up (i.e. sacrifices and/or loss) in order to obtain a service. Furthermore, marketers can increase the value of their service by improving the service benefits, reducing sacrifice through productivity, or a combination of both.

Although previous research indicates that the key components of service value are PB and PS, service value has most often been operationalised in terms of the trade-off between service quality and price (Bolton & Drew, 1991; Dodds et al., 1991; Grewal et al., 1998; Zeithaml, 1988). Bolton and Drew (1991) have shown that quality and price perception influence value perceptions. Lapierre et al. (1999) suggest that perceived value of a service results in part from service quality. Caruana et al. (2000) refers to the idea that customers buy bundles of attributes that together represent a certain level of service quality offered by a firm at a certain price level. According to previous research, service quality is most commonly used to represent PB, and serves as an important element of service value. Researchers further offer significant empirical evidence in support of a relationship between service quality and service value (Cronin et al., 2000; Lam, Shankar, Erramolli, & Murthy, 2004; Oh, 1999; Yang & Peterson, 2004). Hence, when customers get better service quality from a firm, they perceive the firm offers a valuable service. Thus,

*H*<sub>3</sub>: Customers' perception of service quality has a positive impact on service value.

Although service quality is an important element of service value, research suggests that price is another crucial component, in which consumers pay to acquire a service. Previous research defines service sacrifice as what is given up or cost to acquire a service (Heskett, Sasser, & Hart, 1990; Zeithaml, 1988). In this regard, sacrifices can be divided into two types: monetary prices and non-monetary prices (Choi et al., 2004;

Wang et al., 2004). The former can be assessed by a direct measure of the dollar price of the service, and the latter can be defined as the time, effort, and energy invested by a customer to obtain that service. Since it can be difficult to measure non-monetary prices, most studies use monetary prices to assess service sacrifice (e.g. Heskett et al., 1990; Oh, 1999). However, researchers also indicate that for some customers or in certain situations, non-monetary prices could prove more important than monetary prices. For example, time-constrained consumers patronise convenience stores and increasingly shop online to save time (Ruiz et al., 2008; Wang et al., 2004). In this context, both time spent making the buying decision and time spent waiting to access, receive, and complete the service are relevant (Berry, Swider, & Grewal, 2002). Service sacrifice is one of the key determinants of customer perceived service value, and many empirical studies have confirmed the relationship between these two variables. These findings suggest that the more customers have to give up or sacrifice to acquire services, the less value they perceive in the services. Hence, we have:

*H<sub>4</sub>*: Customers' perception of service sacrifice has a negative impact on service value.

Previous research also consistently agrees that service value is a stable construct with which to predict satisfaction and customers' behavioural intentions (Anderson & Srinivasan, 2003; Brady et al., 2001; Cronin et al., 2000; Grewal et al., 1998; Liu et al., 2005; Pura, 2005; Yang & Peterson, 2004). These studies find that customers' value perceptions can increase satisfaction, brand preference, and willingness to buy, while decreasing customers' search intentions for alternatives. Many empirical evidences from the health care service, sport service, telephone service, insurance service, and mobile service industries further support the relationship between service value and behavioural intentions (e.g. Bolton & Drew, 1991; Brady et al., 2001; Cronin et al., 2000; Yu et al., 2005). Thus, we propose that:

*H<sub>5</sub>*: Customers' perception of service value has a positive impact on satisfaction.

*H<sub>6</sub>*: Customers' perception of service value has a positive impact on behavioural intentions.

### ***Relationship between service barriers and behavioural intentions***

Emerging research suggests that two strategies are often used to increase customers' behavioural intentions: (1) increasing customer satisfaction so that customers are willing to stay; and (2) making any switch difficult for the customer (Balabanis et al., 2006; Huang, Cheng, & Farn, 2007; Jones et al., 2000; Ranaweera & Prabhu, 2003). Studies further argue that satisfaction plays a lesser role when switching barriers are high. Jones et al. (2000) notes the importance of switching barriers in potentially fostering greater customer retention in general and helping companies to weather short-term fluctuations in service quality that might otherwise result in defection. Sharma and Patterson (2000) also indicate that customers often face a considerable risk in switching to an alternative service provider because it is difficult to evaluate a service before actually purchasing it. It is sometimes a case of the 'devil you know is better than the devil you don't'. Research further shows that switching barriers explain more of the variation in repurchasing behaviour than satisfaction (Burnham, Frels, & Mahajan, 2003; Patterson & Smith, 2003). Hence, not only satisfaction but also switching barriers should be taken into account in forming a more complete framework for studying customers' behavioural intentions.

Previous research notes that switching barriers refer to many factors, making it difficult or costly for customers to change providers (Jones et al., 2000). Many studies focus

discussion on the property of switching costs, i.e. costs incurred when a customer changes from one service provider to another. Researchers find that switching costs not only have economic in nature, but can have psychological and emotional characters as well (Burnham et al., 2003; Jones, Mothersbaugh, & Beatty, 2002; Sharma & Patterson, 2000; Yang & Peterson, 2004). For instance, customers wishing to switch to other service providers may be forced to terminate a current relationship in which they have already invested a great deal. Researchers view switching costs as sunk costs which represent a customers' perception of the non-recoupable money, time, and emotional effort involved in establishing and maintaining a friendly, quasi-social relationship with a service provider (Patterson & Smith, 2003). Furthermore, customers must secure an alternative prior to changing service providers. Hence, customers have to spend money, time, and effort, i.e. search costs, in order to look for an acceptable alternative service provider (Jones et al., 2000). Other research also indicates that switching costs can not only be categorised into financial switching and procedural switching costs (i.e. search cost), but also relational switching costs causing psychological or emotional discomfort due to a loss of identity and the breaking of brands (Burnham et al., 2003; Vasudevan, Gaur, & Shinde, 2006). Hence, as the switching costs of an activity increase, the likelihood of customers engaging in such behaviour should diminish, and they are 'locked' into a relationship with the incumbent service provider.

Past research also emphasises that alternative attractiveness is an important factor when customers consider switching providers (Jones et al., 2000; Patterson & Smith, 2003; Wathne et al., 2001; Yim, Cjan, & Hung, 2007). Alternative attractiveness is conceptualised as the customer's estimate of the likely satisfaction available in an alternative relationship (Patterson & Smith, 2003; Sharma & Patterson, 2000). Competitors encourage customers to switch by offering superior service quality, reputation, and brand image than those of the existing provider. Some new competitors even conduct marketing programmes to captivate customers, such as lower prices or enhanced value offers through a service portfolio whose breadth exceeds that of the current provider in meeting future needs (Wathne et al., 2001). Empirical evidence suggests that when the alternative attractiveness increases, the expressed customer satisfaction with the existing provider decreases (Patterson & Smith, 2003; Yim et al., 2007) and repurchase intentions increase (Jones et al., 2000; Wathne et al., 2001). Comprehensively, if customers are either unaware of attractive alternatives or simply do not perceive them as any more attractive than the current relationship, they are likely to remain in the current relationship.

Although most studies show that switching barriers play a critical role in the process of improving customer behavioural intention, the effect of switching barriers on behavioural intentions is less than conclusive. One research stream indicates that switching barriers has main/direct effect on customer behavioural intentions (Burnham et al., 2003; Jones et al., 2002; Liu et al., 2005; Wathne et al., 2001), whereas the other proposes the moderating/interaction effect of switching barriers (Balabanis et al., 2006; Jones et al., 2000; Patterson & Smith, 2003; Ranaweera & Prabhu, 2003; Sharma & Patterson, 2000). The former viewpoint suggests switching barriers represent one of the main antecedents of customer behavioural intentions: the higher the switching barrier, the more a customer is forced to stay with the incumbent provider (Jones et al., 2002; Liu et al., 2005) and the less the likelihood of the customer defecting (Wathne et al., 2001). Other studies find that switching barriers have moderate effects on the link between satisfaction and retention (Balabanis et al., 2006; Jones et al., 2000; Ranaweera & Prabhu, 2003) and the relationship between trust and commitment (Sharma & Patterson, 2000). These research results show that when switching barriers are substantial or the switching process especially painful, customers



remain in relationships with service providers even if not highly satisfied. Patterson and Smith (2003), however, propose that there are no significant interaction effects between satisfaction and switching barriers. On the basis of the foregoing arguments and evidence, we further propose:

*H<sub>7</sub>*: Customer perception of switching cost has a positive impact on behavioural intentions.

*H<sub>8</sub>*: Customer perception of alternative attractiveness has a negative impact on behavioural intentions.

### ***Competing models***

As shown in the literature review, many researchers have clarified the relationships among service quality, service value, satisfaction, switching barriers, and such consequences as repurchase intention, customer loyalty, and switching behaviour. However, a detailed assessment of previous research shows little uniformity regarding which of the aforementioned variables, or combinations therein, directly affect behavioural intentions. For example, if the purpose of the research is to evaluate customer satisfaction implications, then the associated model tends to be 'satisfaction dominated', in which the major link to behavioural intentions is through satisfaction. This could also be found in the studies that focus on either service value or switching barriers. To better understand the underlying relationships among these variables, an investigation of a more collective model is needed (Jones et al., 2000). We, in this study, construct three competing models inspired by the different focus areas of previous and designed according to the nature of the relationship as found in the dominant literature of that area.

The first model seen in Figure 2 is derived from satisfaction literature, where satisfaction is suggested to lead directly to customer behavioural intentions (Butcher, Sparks, & O'Callghan, 2001; Dabholkar et al., 2000; Eggert & Ulaga, 2002; Hsu, Chen, & Hsueh, 2006; Lapierre et al., 1999; Yim et al., 2007; Yu et al., 2005). The second model is based on service value literature, which defines service value as the primary and direct link to customer behavioural intentions (Bolton & Drew, 1991; Choi et al., 2004; Grewal et al., 1998; Ruiz et al., 2008; Sweeney, Soutar, & Johnson, 1999; Wang et al., 2004; Zeithaml, 1988). The third model emanates from switching barriers literature which indicates that switching barriers represent the key antecedent of behavioural intentions (Burnham et al., 2003; Jones et al., 2002; Lam et al., 2004; Liu et al., 2005; Patterson & Smith, 2003; Ranaweera & Prabhu, 2003; Wathne et al., 2001).

With our hypotheses, we propose a fourth model which suggests that all three variables (service value, satisfaction, and switching barriers) directly lead to favourable behavioural intentions. We believe this fourth model goes further in exploring the relationship between these variables than the three existing competing models described above and thus account for a greater share of variance in customer behavioural intentions.

## **Research design**

### ***Methodology selection and data collection***

Our integrated model explores many causal relationships among constructs (e.g. service quality, service value, and behavioural intentions), and a series of linear equations need to be solved. Moreover, each construct can be measured through indicators. Therefore,

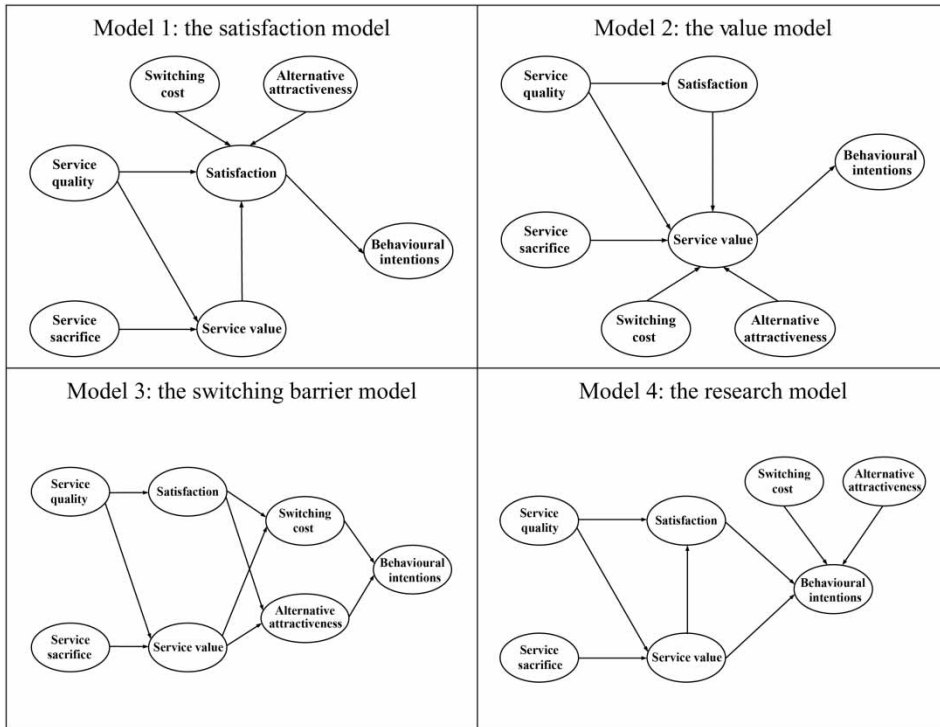


Figure 2. Proposed model.

on the basis of research model formulation, structural equation modelling (SEM) serves as a suitable method to examine our theoretical model, largely because SEM results can easily help explain the pattern of a series of interrelated dependence relations simultaneously between a set of latent constructs, each measured by one or more indicators (Reisinger & Turner, 1999).

Previous studies also suggest that SEM is the superior method on both theoretical and empirical statistical ground than other approaches (Iacobucci, Saldanha, & Deng, 2007; Reisinger & Turner, 1999). More specific, SEM makes it possible to identify measurement errors, while other methods (e.g. regression) typically do not take into account measurement error in the observed variables and thus susceptible to these biases (Steenkamp, & Baumgartner, 2000). Furthermore, SEM is a covariance-based modelling technique which is more focused on explaining the phenomena than on predicting specific outcome variables.

This study selected coach passengers in Taiwan as research subjects. To receive passenger transportation service, customers must physically enter the service system, and they must be prepared to spend time interacting and working with the service provider (Lovelock & Wirtz, 2007). Customers' high involvement could result in a more accurate evaluation of the service, and, in turn, help the researchers better understand their behavioural intentions. Considering the population distribution, transfer distances, and popular routes in Taiwan, we selected the passengers of a middle distant route (Taichung–Kaohsiung) and a long distant route (Taipei–Tainan) as our investigation subjects.

The questionnaire was distributed randomly in waiting areas. We asked respondents to fill out the questionnaire after they finished their trip and then mailed the completed

questionnaires back to us. This helped to avert responses based on recollections of a remote consumption experience, and avoid responses from non-users. However, mail survey might cause the low response rate. Furthermore, because a meaningful SEM analysis tends to require a larger sample of 200 subjects and above (Hatcher, 1994), we distributed 500 questionnaires in each city of the routes. A total of 2000 questionnaires were distributed, and we obtained a valid sample of 543 passengers, and both routes were in excess of 200 subjects (Taichung–Kaohsiung route: 257 subjects, Taipei–Tainan route: 286 subjects). Among the respondents, 52.7% were male, 40.1% were students, and 61.7% were between ages 20–29.

### *Measurement*

Multi-item scales validated in previous studies are selected and modified to support our study setting. The questionnaire contains items of seven constructs including service sacrifice, service quality, satisfaction, service value, switching costs, alternative attractiveness, and behavioural intentions (see Appendix). All indicators are adopted from relative studies and further modified to fit for the coach service and cultural context to ensure content validity of the indicators.

For measuring service quality, abundant evidence in the existing literature supports the use of expectancy disconfirmation theory (Oliver, 1993; Parasuraman et al., 1988; Rust & Oliver, 1994). We follow these studies and measure both perceived and expected performance of all service quality items. Research further suggests that service quality can be divided into several sub-dimensions, and a hierarchical approach is more suitable for representing the relationships among service quality, its sub-dimension, and associated indicators (Brady & Cronin, 2001; Rust & Oliver, 1994). We follow the literature and measure service quality along three primary dimensions: interaction quality, physical environment quality, and convenience quality (Brady & Cronin, 2001; Rust & Oliver, 1994). We use four items to measure interaction quality ( $V_1$ – $V_4$ ), four items to measure physical environment quality ( $V_5$ – $V_8$ ), and four items to measure convenience quality ( $V_9$ – $V_{12}$ ) (Brady & Cronin, 2001; Jen, Tu, & Lu, 2011; Lin, Lee, & Jen, 2008; Rust & Oliver, 1994).

Furthermore, previous studies indicate that service sacrifice can be categorised into monetary prices and non-monetary prices (Choi et al., 2004; Wang et al., 2004). Hence, items that represent customers' perception of the monetary and non-monetary prices are used as indicators of the service sacrifice construct. Monetary price is measured by the dollar price of the service ( $V_{13}$ ). Time spent was utilised to assess the non-monetary price associated with the service ( $V_{14}$ – $V_{16}$ ) (Choi et al., 2004; Jen et al., 2011; Lin et al., 2008; Wang et al., 2004).

Our assessment of satisfaction is based on effective evaluation (Oliver, 1993), reflecting the degree to which customers believe that possession of a service evokes positive feelings (Rust & Oliver, 1994). In this context, we adapt the measurement developed by Cronin et al. (2000) and Westbrook and Oliver (1991), which uses three emotion words ( $V_{17}$ – $V_{19}$ ). Previous research consistently agreed that service value is the trade-off between PB/PS (Day, 2000; Monroe, 1991; Zeithaml, 1988). Following these studies, we include three direct measures of service value ( $V_{20}$ – $V_{22}$ ) (Bolton & Drew, 1991; Dodds et al., 1991; Jen et al., 2011; Lin et al., 2008).

In our study, switching barriers consist of both switching costs and alternative attractiveness. We define switching costs as customer perceptions regarding the time, money, and effort associated with changing service providers, and alternative attractiveness as

customer perceptions regarding the extent to which competitors offer equal or superior services. Following these definitions, we adopt three items to measure switching costs (V<sub>23</sub>–V<sub>25</sub>), and another three items to assess alternative attractiveness (V<sub>26</sub>–V<sub>28</sub>) (Jen et al., 2011; Jones et al., 2000; Lin et al., 2008; Patterson & Smith, 2003).

Customer behavioural intention was operationalised with three items (V<sub>29</sub>–V<sub>31</sub>) including loyalty, recommendations to others, and increased spending on the existing service provider (Jen et al., 2011; Lin et al., 2008; Zeithaml et al., 1996). We use a five-point, Likert-type response format, ranging from ‘strongly agree’ to ‘strongly disagree’ to measure all items. The links between the eight constructs and their indicators, and the research hypotheses are shown in Figure 3.

## Research results

### Measurement model

We utilised a two-step modelling approach following Anderson and Gerbing (1988). The measurement model was tested by confirmatory factor analysis (CFA), and the quality of the measurement model was assessed on reliability, convergent validity, and discriminant validity (Table 1). The level of internal consistency in each construct is acceptable, with Cronbach’s alpha estimates ranging from 0.676 (alternative attractiveness) to 0.908 (satisfaction). Furthermore, we computed a composite reliability index for each latent factor included in the model. The estimations of composite reliability ranged from 0.729 (alternative attractiveness) to 0.931 (service quality), suggesting acceptable measurement reliabilities. Consequently, these results reflect the internal consistency of the indicators.

Convergent validity for the measurement model was supported by a good overall fit:  $\chi^2 = 872.392$ ,  $df = 410$  ( $P < 0.001$ ), CFI (comparative fit index) = 0.945, GFI (goodness of fit index) = 0.905, NFI (Bentler–Bonett normed fit index) = 0.902, IFI (Bollen’s incremental fit index) = 0.945, RMSEA (root mean square error of approximation) = 0.046. Moreover, all factor loadings for the indicators assessing the same latent variable are statistically significant (see Table 1), also serving as evidence in

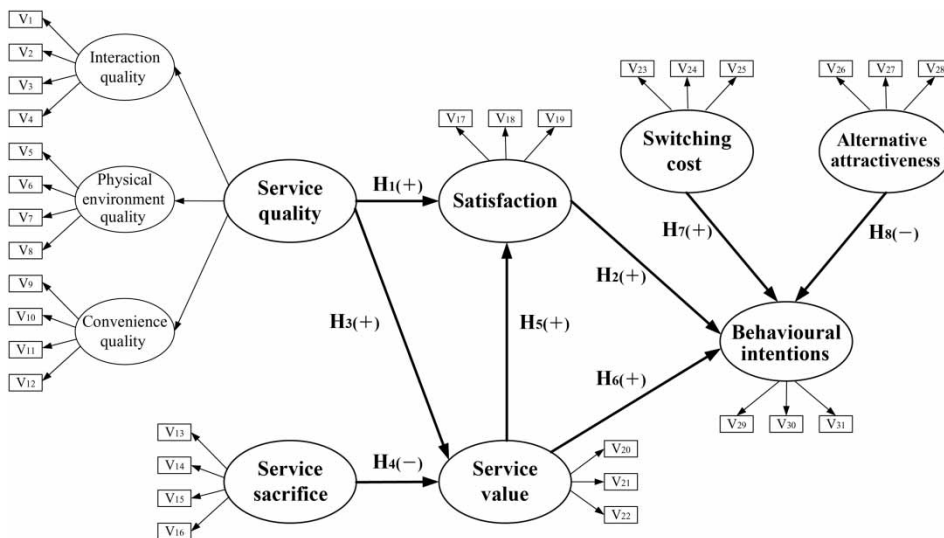


Figure 3. Measurement model and research hypotheses.

Table 1. The property of CFA results.

Latent variable	Standardised factor loadings	Cronbach's $\alpha$	Composite reliability	AVE
Service quality				
IQ	0.734***	0.885	0.931	0.819
PEQ	0.892***			
CQ	0.818***			
Interaction quality				
V <sub>1</sub>	0.618***	0.744	0.790	0.488
V <sub>2</sub>	0.550***			
V <sub>3</sub>	0.740***			
V <sub>4</sub>	0.706***			
Physical environment quality				
V <sub>5</sub>	0.648***	0.772	0.796	0.494
V <sub>6</sub>	0.620***			
V <sub>7</sub>	0.740***			
V <sub>8</sub>	0.704***			
Convenience quality				
V <sub>9</sub>	0.665***	0.849	0.845	0.578
V <sub>10</sub>	0.735***			
V <sub>11</sub>	0.814***			
V <sub>12</sub>	0.796***			
Service sacrifice				
V <sub>13</sub>	0.669***	0.803	0.843	0.574
V <sub>14</sub>	0.774***			
V <sub>15</sub>	0.742***			
V <sub>16</sub>	0.674***			
Satisfaction				
V <sub>17</sub>	0.903***	0.908	0.914	0.781
V <sub>18</sub>	0.944***			
V <sub>19</sub>	0.776***			
Service value				
V <sub>20</sub>	0.837***	0.846	0.870	0.513
V <sub>21</sub>	0.851***			
V <sub>22</sub>	0.748***			
Switching cost				
V <sub>23</sub>	0.645***	0.780	0.758	0.488
V <sub>24</sub>	0.738***			
V <sub>25</sub>	0.832***			
Alternatives attractiveness				
V <sub>26</sub>	0.423***	0.676	0.729	0.677
V <sub>27</sub>	0.763***			
V <sub>29</sub>	0.744***			
Behavioural intentions				
V <sub>29</sub>	0.901***	0.861	0.861	0.710
V <sub>30</sub>	0.925***			
V <sub>31</sub>	0.699***			

Notes: IQ, interaction quality; PEQ, physical environment quality; CQ, convenience quality.

\*\*\* $P < 0.001$ .

supporting the convergent validity of our measurement model (Anderson & Gerbing, 1988; Hatcher, 1994). To assess discriminant validity, we computed the average variance extracted (AVE), which should be greater than the variances shared between the construct (Fornell & Lacker, 1981). This comparison can be incorporated into a correlation matrix (see Table 2), including the correlations between different constructs in the off-diagonal

Table 2. Discriminant validity.

	SQ	SS	SA	SV	SWC	AA	BI
SQ	<b>0.901</b>						
SS	-0.453	<b>0.757</b>					
SA	0.559	-0.652	<b>0.884</b>				
SV	0.582	-0.762	0.798	<b>0.831</b>			
SWC	0.174	-0.160	0.413	0.344	<b>0.716</b>		
AA	-0.227	0.100	-0.338	-0.343	-0.189	<b>0.798</b>	
BI	0.533	-0.564	0.720	0.754	0.455	-0.337	<b>0.823</b>

Notes: SQ, service quality; SS, service sacrifice; SA, satisfaction; SV, service value; SWC, switching cost; AA, alternatives attractiveness; BI, behavioural intentions. The bold numbers on the diagonal are the square root of the AVE. Off-diagonal elements are correlations among constructs.

elements of the matrix, and the square roots of AVE for each of the constructs along the diagonal. After examining the results, we infer that the constructs have adequate discriminant validity.

### Structural equation model

Having established confidence in our measurement model, we examined the four structural equation models by estimating path coefficients, model fit index, and  $R^2$  value. Each model was tested on the whole sample ( $n = 543$ ), and the results of the model comparisons are shown in Table 3. The path estimates showed that service quality had a positive impact on satisfaction in four models ( $H_1$  supported), and results from the satisfaction model (Model 1) and the research model (Model 4) both indicated that satisfaction is a determinant of behavioural intentions ( $H_2$  supported). These results agreed with the 'quality-satisfaction-behavioural intentions' paradigm. For the paths leading to service value, the results across the four models supported the trade-off relationships among service value, service quality, and service sacrifice. As we hypothesised, service quality had a positive effect on service value ( $H_4$  supported), whereas sacrifice had a negative influence on service value ( $H_5$  supported). Furthermore, the positive link between service value and satisfaction ( $H_3$  supported) was consistently significant across the four models.

Regarding the impact of service value and switching barriers, the path estimates from the value model (Model 2) and the research model (Model 4) both suggested that service value had a positive effect on behavioural intentions ( $H_6$  supported). Moreover, the results across the four models consistently showed that switching costs had a positive impact on behavioural intentions ( $H_7$  supported), whereas alternative attractiveness exerted a negative influence on behavioural intentions ( $H_8$  supported). Comprehensively, except for the statistically insignificant relationship between service value and switching costs in the switching barrier model (Model 3), all other links are significant in the four models.

Although most of the relationships in the four models are significant, we compare their power of explanation by examining model fit indices and  $R^2$  value. The results show that the  $\chi^2$  value for the research model is 973.620 with  $df = 417$ . This is compared to  $\chi^2$  values for the competing models ranging from 1018.158 with  $df = 418$  (the satisfaction model) to 1359.682 with  $df = 421$  (the switching barrier model). Our research model yields a better  $\chi^2/df$  ratio. The research model also shows a better fit in terms of goodness-of-fit indices than the other three models, with CFI = 0.934, IFI = 0.934,

Table 3. Results of model comparisons.

Fit/path	The research model	The satisfaction model	The value model	The switching barrier model
$\chi^2/df$	973.620/417	1018.158/418	1103.011/418	1359.682/421
CFI	0.934	0.929	0.919	0.889
IFI	0.934	0.929	0.919	0.889
TLI	0.926	0.921	0.910	0.877
RMSEA	0.050	0.051	0.055	0.064
SQ→SA	0.136**	0.131**	0.674***	0.820***
SV→SA	0.726***	0.673***	–	–
SWC→SA	–	0.199***	–	–
AA→SA	–	–0.085*	–	–
SQ→SV	0.321***	0.298***	0.140*	0.609***
SA→SV	–	–	0.473***	–
SS→SV	–0.637***	–0.651***	–0.388***	–0.345***
SWC→SV	–	–	0.110**	–
AA→SV	–	–	–0.131***	–
SA→SWC	–	–	–	0.429***
SV→SWC	–	–	–	0.059
SA→AA	–	–	–	–0.272***
SV→AA	–	–	–	–0.209**
SA→BI	0.236***	0.745***	–	–
SV→BI	0.503***	–	0.787***	–
SWC→BI	0.198***	–	–	0.452***
AA→BI	–0.075*	–	–	–0.361***
$R^2$ (BI)	0.630	0.555	0.619	0.400

Notes: SQ, service quality; SA, satisfaction; SV, service value; SWC, switching cost; AA, alternatives attractiveness; SS, service sacrifice; BI, behavioural intentions.

\* $P < 0.1$ .

\*\* $P < 0.01$ .

\*\*\* $P < 0.001$ .

TLI (Tucker–Lewis index) = 0.926, RMSEA = 0.050. Moreover, the relative ability of our research model to explain variation in behavioural intentions was 0.630 (as measured by  $R^2$  value), accounting for a greater share of the data than the competing models, whose  $R^2$  values ranged from 0.400 (the switching barrier model) to 0.619 (the value model). Consequently, we inferred that the research model yields a better fit to data and accounts for a greater share of the variance in behavioural intentions than the three competing models.

### Research model description

In order to further affirm our theory, specific discussion of the hypotheses' results will be restricted to the research model (see Figure 4). Path coefficients from the results showed that service value had a greater effect ( $\gamma = 0.726$ ,  $t = 14.200$ ,  $P < 0.001$ ) on satisfaction than service quality ( $\gamma = 0.136$ ,  $t = 2.815$ ,  $P < 0.01$ ). The  $R^2$  of satisfaction was 0.666, indicating that the independent variables (service quality and service value) accounted for 66.6% of the variance in satisfaction. As for the determinants of service, the path estimation suggested that service sacrifice ( $\gamma = -0.637$ ,  $t = -11.604$ ,  $P < 0.001$ ) had a stronger effect on service value than service quality ( $\gamma = 0.321$ ,  $t = 6.431$ ,  $P < 0.001$ ). Thus, we inferred that customers were more concerned about the sacrifice aspects, such as monetary price and time, than the benefit aspects when evaluating the value of a service. The  $R^2$  of

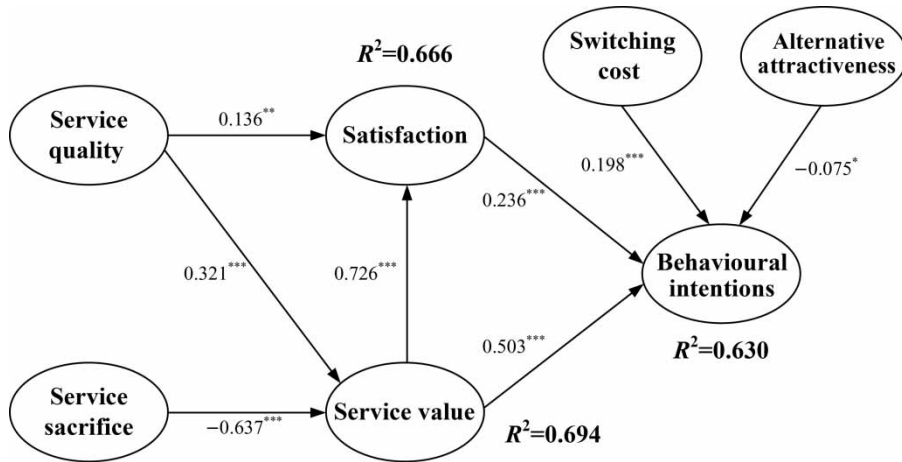


Figure 4. Results of the research model testing.

Note: \* $P < 0.1$ ; \*\* $P < 0.01$ ; \*\*\* $P < 0.001$ .

service value was 0.694, indicating that service quality and service sacrifice accounted for 69.4% of the variance in service value. Furthermore, in terms of predictors of behavioural intentions, the results from our research model indicated that service value had the greatest influence on behavioural intentions ( $\gamma = 0.503$ ,  $t = 7.346$ ,  $P < 0.001$ ), with the switching cost component of switching barriers ( $\gamma = 0.198$ ,  $t = 5.355$ ,  $P < 0.001$ ) having greater effect than the alternative attractiveness component ( $\gamma = -0.075$ ,  $t = -2.018$ ,  $P < 0.1$ ). These findings showed that switching barriers could discourage customer disloyalty, but service value was more useful in encouraging favourable consumer behavioural intentions. The  $R^2$  of behavioural intentions was 0.630, indicating that satisfaction, service value, switching cost and alternative attractiveness accounted for 63.0% of the variance in service value.

## Discussion

The objective of this study was to examine the relationships among service sacrifice, service quality, service value, satisfaction, switching barriers, and behavioural intentions. Our research model incorporated the service value theory and the switching barriers theory into the 'quality–satisfaction–behavioural intentions' paradigm. The results presented in the previous sections suggest that this research model fits well and outperforms the competing models in explaining the data collected. More specifically, according to our results, service value is the most important predictor of satisfaction and customers' behavioural intentions. Hence, our findings provide support for previous research indicating that cognitive evaluations precede emotional responses (Bagozzi, 1992; Wilkie, 1986). In our model, we also propose service value as a trade-off between service quality and service sacrifice. Further, this study conducts a hierarchical approach to assess service quality. Our empirical results indicate that service quality perceptions are composed of multiple sub-dimensions: interaction, physical environment, and convenience quality. Moreover, the empirical results show that customers perceived the service as more valuable when they received better quality of service and when they did not need to sacrifice much to acquire the service. However, if companies wish to charge higher or premium prices,



they will have to provide value-added service to justify customers' sacrifice. For example, in the airline industry, customers might choose to spend double the amount of money in purchasing a business-class ticket rather than economy class, in an effort to obtain better service values through monetary sacrifice, i.e. in exchange for better check-in service (convenience quality), spacious accommodation on the plane (physical environment quality), and a more personable and responsive service (interaction quality).

For switching barriers, we find that customers are indeed more likely to stay with current service providers when the trouble of switching providers increases, e.g. when switching costs increase and/or the attractiveness of alternatives decreases. Therefore, the optimal strategy for service providers is to both provide value-added service to customers and increase switching costs. For example, in order to reduce alternative attractiveness, companies could develop customised services that cannot be made available through other firms. Companies can also adopt bucket pricing strategies, which encourage customers to pay a larger amount in advance for more service which, in turn, impose higher switching costs. It is worthwhile to note that such efforts to lock in customers can be short-term orientated and should only be used in addition to providing customers with higher satisfaction through better service values.

### ***Suggestions for future research***

As we propose in the model, service value is composed of service sacrifice and service quality, and service value is a specified higher-level construct. Equity theory indicates that customers are concerned about whether the sacrifice is fair, right, and/or deserved. Hence, future research could investigate different properties of service value. For example, customers might evaluate the fairness for how much they have to pay or how long they have to wait to obtain a service respectively. Furthermore, customers might also assess whether they are paying for interaction quality or convenience quality, which may potentially have different evaluations on values. Future research could also explore the effect of different service values on customers' intentions.

Furthermore, research suggests that the nature of switching barriers provides no intrinsic benefits and creates feelings of entrapment including through high membership and application fees (Jones et al., 2000; Ranaweera & Prabhu, 2003). These 'negative' barriers may possibly do more harm than good in the long run. For example, customers may remain with the present service provider but may not provide positive word of mouth references. Hence, future research studies could emphasise some 'positive' barriers, such as interpersonal relationships, which provide intrinsic benefits. Moreover, studies could further compare the effect of 'negative' and 'positive' barriers on customers' behavioural intentions.

Future research could also consider some objective barriers, such as competitive situations. Studies might conduct a comparative analysis of a low-competition market (e.g. oligopoly industry) and a high-competition market (e.g. perfectly competitive industry). By comparing the perceived switching barriers and the objective switching barriers, we could obtain a deeper understanding of customers' intentions.

### **References**

- Anderson, J.C., & Gerbing, D.W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411–423.
- Anderson, R.E., & Srinivasan, S.S. (2003). E-satisfaction and e-loyalty: A contingency framework. *Psychology & Marketing*, 20(2), 123–138.

- Bagozzi, R.P. (1992). The self regulation of attitudes, intentions, and behavior. *Social Psychology Quarterly*, 55(2), 178–204.
- Balabanis, G., Reynolds, N., & Simintiras, A. (2006). Bases of e-store loyalty: Perceived switching barriers and satisfaction. *Journal of Business Research*, 59(2), 214–224.
- Bansal, H.S., & Taylor, S.F. (1999). The service provider switching model: A model of customer switching behaviour in the service industry. *Journal of Service Research*, 2(2), 200–218.
- Berry, L.L., Swider, K., & Grewal, D. (2002). Understanding service convenience. *Journal of Marketing*, 66(3), 1–17.
- Bolton, R.N., & Drew, J.H. (1991). A multistage model of customers' assessments of service quality. *Journal of Consumer Research*, 17(4), 375–384.
- Boulding, W., Kalra, A., Staelin, R., & Zeithaml, V.A. (1993). A dynamic model of service quality: From expectations to behavioral intentions. *Journal of Marketing Research*, 30(1), 7–27.
- Brady, M.K., & Cronin, J.J. Jr. (2001). Some new thoughts on conceptualizing perceived service quality: A hierarchical approach. *Journal of Marketing*, 65(3), 34–49.
- Brady, M.K., Robertson, C.J., & Cronin, J.J. Jr. (2001). Managing behavioral in diverse cultural environment: An investigation of service quality, service value and satisfaction for American and Ecuadorian fast-food customers. *Journal of International Management*, 7(2), 129–149.
- Burnham, T.A., Frels, J.K., & Mahajan, V. (2003). Customer switching costs: A typology, antecedents, and consequences. *Journal of the Academy of Marketing Science*, 31(2), 109–126.
- Butcher, K.J., Sparks, B., & O'Callghan, F. (2001). Evaluative and relational influences on service loyalty. *International Journal of Service Industry Management*, 12(4), 310–327.
- Caruana, A., Money, A.H., & Berthon, P.R. (2000). Service quality and satisfaction—the moderating role of value. *European Journal of Marketing*, 34(11/12), 1338–1352.
- Choi, K.S., Cho, W.H., Lee, S., Lee, H., & Kim, C. (2004). The relationships among quality, value, satisfaction and behavioral intention in health care provider choice: A South Korean study. *Journal of Business Research*, 57(8), 913–921.
- Cronin, J.J. Jr., Brady, M.K., & Hult, G.T.M. (2000). Assessing the effect of quality, value and customer satisfaction on consumer behavioral intention in service environment. *Journal of Retailing*, 76(2), 193–218.
- Cronin, J.J. Jr., & Taylor, S.A. (1992). Measuring service quality: A reexamination and extension. *Journal of Marketing*, 56(3), 55–68.
- Dabholkar, P., Shepherd, C.D., & Thorpe, D.I. (2000). A comprehensive framework for service quality: An investigation of critical conceptual and measurement issues through a longitudinal study. *Journal of Retailing*, 76(2), 139–173.
- Day, J. (2000). Commentary – the value and importance of the small firm to the world economy. *European Journal of Marketing*, 34(9/10), 1033–1037.
- Dodds, W.B., Mornoe, K.B., & Grewal, D. (1991). Effects of price, brand and store information on buyers' product evaluation. *Journal of Marketing Research*, 28(3), 307–319.
- Eggert, A., & Ulaga, W. (2002). Customer perceived value a substitute for satisfaction in business market? *The Journal of Business & Industrial Marketing*, 17(2/3), 107–118.
- Fornell, C. (1992). A national customer satisfaction barometer: The Swedish experience. *Journal of Marketing*, 56(1), 6–21.
- Fornell, C., & Lacker, D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50.
- Grewal, D., Monroe, K.B., & Krishnan, R. (1998). The effects of price-comparison advertising on buyers' perceptions of acquisition value, transaction value, and behavioral intentions. *Journal of Marketing*, 62(2), 46–59.
- Hatcher, L. (1994). *A step-by-step approach to using the SAS system for factor analysis and structural equation modeling*. North Carolina: SAS Institute Inc.
- Heskett, J.L., Sasser, W.E., & Hart, C.W.L. (1990). *Service breakthroughs: Changing the rules of the game*. New York: The Free Press.
- Hsu, S.H., Chen, W.H., & Hsueh, J.T. (2006). Application of customer satisfaction study to derive customer knowledge. *Total Quality Management*, 17(4), 439–454.
- Huang, L.T., Cheng, T.C., & Farn, C.K. (2007). The mediating effect of commitment on customer loyalty towards e-brokerages: An enhanced investment model. *Total Quality Management*, 18(7), 751–770.

- Iacobucci, D., Saldanha, N., & Deng, X. (2007). A meditation on mediation: Evidence that structural equations models perform better than regressions. *Journal of Consumer Psychology, 17*(2), 139–153.
- Jen, W., Tu, R., & Lu, T. (2011). Managing passenger behavioral intention: An integrated framework for service quality, satisfaction, perceived value, and switching barriers. *Transportation, 38*(2), 321–342.
- Jones, M.A., Mothersbaugh, D.L., & Beatty, S.E. (2000). Switching barriers and repurchase intentions in services. *Journal of Retailing, 76*(2), 259–274.
- Jones, M.A., Mothersbaugh, D.L., & Beatty, S.E. (2002). Why customers stay: Measure the underlying dimensions of services switching costs and managing their differential strategic outcomes. *Journal of Business Research, 55*(6), 441–450.
- Lam, S.Y., Shankar, V., Erramolli, M.K., & Murthy, B. (2004). Customer value, satisfaction, loyalty, and switching costs: An illustration from a business-to-business service context. *Journal of the Academy of Marketing Science, 32*(3), 293–311.
- Lapierre, J., Filiatrault, P., & Chebat, J.C. (1999). Value strategy rather than quality strategy: A case of business-to-business professional service. *Journal of Business Research, 45*(2), 235–246.
- Ledden, L., Kalafatis, S.P., & Samouel, P. (2007). The relationship between personal values and perceived value of education. *Journal of Business Research, 60*(9), 965–974.
- Lin, J.H., Lee, T.R., & Jen, W. (2008). Assessing asymmetric response effect of behavioral intention to service quality in an integrated psychological decision making process model of intercity bus passengers: A case of Taiwan. *Transportation, 35*(1), 129–144.
- Liu, A.H., Leach, M.P., & Bernhardt, K.L. (2005). Examining customer value perceptions of organizational buyers when sourcing from multiple vendors. *Journal of Business, 58*(5), 559–568.
- Lovelock, C., & Wirtz, J. (2007). *Services marketing: People, technology, strategy* (6th ed.). Upper Saddle River, NJ: Pearson/Prentice Hall.
- Monroe, K.B. (1991). *Pricing, marking profitable decision* (2nd ed.). New York: McGraw-Hill.
- Oh, M. (1999). Service quality, customer satisfaction, and customer value: A holistic perspective. *International Journal of Hospitality Management, 18*(1), 67–82.
- Oliver, R.L. (1993). A conceptual model of service quality and service satisfaction: Compatible goals, different concepts. In T.A. Swartz, D.E. Bowen, & S.W. Brown (Eds.), *Advances in service marketing and management: Research and practice* (pp. 65–85). Greenwich, CT: JAI Press.
- Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1988). SERVAUAL: A multiple-item scale for measuring customer expectations of service. *Journal of Retailing, 64*(1), 12–40.
- Patterson, P.G., & Smith, T. (2003). A cross-cultural of switching barriers and propensity to stay with service providers. *Journal of Retailing, 79*(2), 107–120.
- Pura, M. (2005). Linking perceived value and loyalty in location-based mobile service. *Managing Service Quality, 15*(6), 509–538.
- Ranaweera, C., & Prabhu, J. (2003). The influence of satisfaction, trust and switch barriers on customer retention in a continuous purchasing setting. *International Journal of Service Industry Management, 14*(4), 374–395.
- Reisinger, Y., & Turner, L. (1999). Structural equation modeling with Lisrel: Application in tourism. *Tourism Management, 20*(1), 71–88.
- Ruiz, D.M., Gremler, D.D., Washurn, J.H., & Carrión, G.C. (2008). Service value revisited: Specifying a higher-order, formative measure. *Journal of Business Research, 61*(12), 1278–1291.
- Rust, R.T., & Oliver, R.L. (1994). *Service quality: Insights and managerial implication from the frontier*. New York: Sage Publications.
- Sharma, N., & Patterson, P.G. (2000). Switching cost, alternative attractiveness as moderators of relationship commitment in professional consumers service. *International Journal of Service Industry Management, 11*(5), 470–490.
- Steenkamp, J.-B.E.M., & Baumgartner, H. (2000). On the use of structural equation models for marketing modeling. *International Journal of Research in Marketing, 17*(2–3), 195–202.
- Sweeney, J.C., Soutar, G.N., & Johnson, L.W. (1999). The role of perceived risk in the quality-value relationship: A study in a retail environment. *Journal of Retailing, 75*(1), 77–105.
- Vasudevan, H., Gaur, S.S., & Shinde, R.K. (2006). Relational switching costs, satisfaction and commitment: A study in the Indian manufacturing context. *Asia Pacific Journal of Marketing and Logistics, 18*(4), 342–353.

- Wang, Y., Lo, H.P., Chi, R., & Yang, Y. (2004). An integrated framework for customer value and customer-relationship-management performance: A customer-based perspective from China. *Managing Service Quality*, 14(2/3), 169–182.
- Wathne, K.H., Biong, H., & Heide, J.B. (2001). Choice of supplier in embedded markets: Relationship and marketing program effects. *Journal of Marketing*, 65(2), 54–66.
- Westbrook, R.A., & Oliver, R.L. (1991). The dimensionality of consumption emotion patterns and consumer satisfaction. *Journal of Consumer Research*, 18(1), 84–91.
- Wilkie, W.L. (1986). *Consumer behavior*. New York: Wiley.
- Yang, Z., & Peterson, B.T. (2004). Customer perceived value, satisfaction, and loyalty: The role of switching costs. *Psychology & Marketing*, 21(10), 799–822.
- Yim, C.K., Cjan, K.W., & Hung, K. (2007). Multiple reference effects in service evaluations: Roles of alternative attractiveness and self-image congruity. *Journal of Retailing*, 83(1), 147–157.
- Yu, C.M.J., Wu, L.Y., Chiao, Y.C., & Tai, H.S. (2005). Perceived quality, customer satisfaction, and customer loyalty: The case of Lexus in Taiwan. *Total Quality Management*, 16(6), 707–719.
- Zeithaml, V.A. (1988). Consumer perceptions of price, quality and value: A means-end model and synthesis of evidence. *Journal of Marketing*, 52(3), 2–22.
- Zeithaml, V.A., Berry, L.L., & Parasuraman, A. (1996). The behavioral consequences of service quality. *Journal of Marketing*, 60(2), 31–46.

## Appendix: The survey items

### 1. Service Quality

#### 1.1 Interaction Quality

- V<sub>1</sub>: Drivers appreciate the safety of passengers when they get on/ off the vehicle.
- V<sub>2</sub>: Drivers are polite and friendly to communicate with passengers.
- V<sub>3</sub>: Drivers drive smoothly, and road craft is fine.
- V<sub>4</sub>: Drivers drive on right route and never fail to stop when passengers want to get on.

#### 1.2 Physical Environment Quality

- V<sub>5</sub>: Vehicles are clean inside.
- V<sub>6</sub>: Noise on the vehicle isn't too loud.
- V<sub>7</sub>: The equipment in the vehicle fulfills passengers' needs.
- V<sub>8</sub>: The air conditioning is very comfortable.

#### 1.3 Convenience Quality

- V<sub>9</sub>: The places of stops or stations are proper and convenient.
- V<sub>10</sub>: The information about routes is marked clearly.
- V<sub>11</sub>: The company will have fast notification on the cars when the routes and schedules are changed.
- V<sub>12</sub>: The company will quickly correct the information at stops or stations when the routes and schedules are changed.

### 2. Service Sacrifice

- V<sub>13</sub>: The fare charged to travel by this coach company is high.
- V<sub>14</sub>: The time required to arrive at the station is high.
- V<sub>15</sub>: The time required to wait at the station is high.
- V<sub>16</sub>: The time required to travel in the coach is high.

**3. Satisfaction**

V<sub>17</sub>: I felt interesting to travel by this company's coach.

V<sub>18</sub>: I felt enjoyable to travel by this company's coach.

V<sub>19</sub>: I felt surprised to travel by this company's coach.

**4. Service Value**

V<sub>20</sub>: The company's service offered is valuable.

V<sub>21</sub>: The company's service based on certain price is acceptable.

V<sub>22</sub>: It is worthier to travel by this company's coach than by other coach companies.

**5. Switching Cost**

V<sub>23</sub>: It would be a hassle for me to get information about other companies.

V<sub>24</sub>: For me, it would take a lot of costs to travel by other coach companies.

V<sub>25</sub>: For me, it would be a high risk to travel by other coach companies.

**6. Alternatives Attractiveness**

V<sub>26</sub>: If I needed to change coach companies or modes, there are other good companies or modes to choose from.

V<sub>27</sub>: I would probably be happy with the services of another coach company or mode.

V<sub>28</sub>: Compared to this coach company, there are other coach companies or modes with which I would probably be equally or more satisfied.

**7. Behavioural Intentions**

V<sub>29</sub>: I would like to travel by this coach company again.

V<sub>30</sub>: I would like to recommend this coach company to others.

V<sub>31</sub>: I would like to buy a monthly ticket or become a member of this coach company.