



International Journal of Bank Marketing

A comprehensive hierarchical model of retail banking
Juhaida Abu Bakar, Michael Daniel Clemes, Kathryn Bicknell,

Article information:

To cite this document:

Juhaida Abu Bakar, Michael Daniel Clemes, Kathryn Bicknell, (2017) "A comprehensive hierarchical model of retail banking", International Journal of Bank Marketing, Vol. 35 Issue: 4, pp. -, doi: 10.1108/IJBM-03-2016-0041

Permanent link to this document:

<http://dx.doi.org/10.1108/IJBM-03-2016-0041>

Downloaded on: 10 April 2017, At: 02:49 (PT)

References: this document contains references to 0 other documents.

To copy this document: permissions@emeraldinsight.com

The fulltext of this document has been downloaded 2 times since 2017*



Access to this document was granted through an Emerald subscription provided by emerald-srm:173272 []

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.

A comprehensive hierarchical model of retail banking

Purpose - This research develops and tests a comprehensive hierarchical model of behavioural intentions in the Malaysian retail banking industry.

Design/Methodology/Approach - The data were analysed using EFA, CFA and structural modelling.

Findings - The findings illustrate that customer satisfaction is the most important determinant of behavioural intentions, followed by switching costs, corporate image and perceived value. Service quality is indirectly related to behavioural intentions and customer satisfaction mediates the relationship between the two constructs. Customer satisfaction is strongly influenced by service quality, corporate image and perceived value. Service quality is also an antecedent of perceived value, corporate image, and switching costs. The empirical results also support a hierarchical and multidimensional approach for conceptualizing and measuring customers' perceptions of service quality.

Research limitations/implications - The comprehensive hierarchical model developed in this research can be used as framework for additional studies on the banking industry.

Practical implications - The findings provide Malaysian bank managers with empirically-based insights into behavioural intentions and offer guidelines for assessing and improving service quality.

Originality/value - This is the first study that uses comprehensive hierarchical modelling to synthesise the effects of service quality, customer satisfaction, perceived value, corporate image and switching costs on the behavioural intentions of retail bank customers.

Keywords – Retail banking, Comprehensive hierarchical modelling, Behavioural intentions, Structural equation modelling.

Paper type Research paper

Introduction

The world banking industry is constantly changing and has undergone a dramatic transformation in recent years for several reasons e.g., financial deregulation, and globalisation, rapid technological advancement and changes in consumer demand for banking services. The recent structural changes in the global banking industry necessitate an increased understanding of customer behavioural intentions and its antecedents. For example, competition in the Malaysian banking industry has increased since the introduction of the “open enterprise policy” (Munusamy, Chelliah, and Mun, 2010). The 2008/2009 financial crisis also increased the risks stemming from the presence of foreign banks in a local market. Claessens and van Horen (2012) conclude that the foreign subsidiaries of multinational banks from relatively developed countries may benefit from the underdevelopment (i.e., a developing country) of the host country's financial system,. This contention is supported by research reporting that foreign banks outperform domestic banks in certain developing countries (Berger, Hasan, and Zhou, 2009) including Malaysia (Detragiache and Gupta, 2006). Allowing foreign banks to enter the Malaysian market has meant that the challenges faced by the local banks to maintain market share have become more rigorous (Sufian *et al.*, 2012).

Local banks in Malaysia now must compete not only among themselves and against their foreign banking counterparts, but also against non-financial institutions

(Sufian *et al.*, 2012). Consumers have the ability to purchase homogeneous financial products and services from non-financial institutions that were normally only available from commercial banks (Baumann, Elliott and Burton, 2012). Consumers are also exhibiting an increased preference for “multi-banking” for many of their financial transactions (Lam and Burton, 2005; Clemes, Gan and Zhang, 2010).

The intense competition in the Malaysian banking industry has heightened the importance of understanding the behavioural intentions of bank customers as favourable intentions generally have a positive impact on key corporate outcomes such as retention rates, deposit amounts, costs to the bank in providing services, and future earnings (Arbore and Busacca, 2009). For example, Reichheld and Sasser (1990) demonstrated that higher customer retention rates normally increase an organization’s profitability. Veloutsou, Daskou and Daskou (2004) report that a five percent increase in customer retention may lead to an 85% increase in a bank’s profits. Customers that remain with a bank tend to consume more of a bank’s products, offer word-of-mouth (WOM) advertising and may not seek an alternative service provider (O’Cass and Grace, 2004).

Zeithaml, Berry and Parasuraman (1996) note that positive behavioural intentions may act as an indicator of customer retention. Several other researchers have supported that contention and recognise the importance of using the behavioural intentions of customers as a measure to predict customer retention rates (Norman and Smith, 1995; Patterson, 2004) and loyalty (Hu, Kandampully and Juwaheer, 2009).

The findings in previous studies conducted on various service industries using comprehensive hierarchical modelling have empirically investigated the interrelationships among higher order marketing constructs such as service quality, customer satisfaction, perceived value, corporate image, and switching costs (Clemes, Shu and Gan, 2014; Clemes, Gan and Ren, 2011).. However, to date, there has been no empirical research on banking that has investigated all these six important higher order marketing constructs in a single comprehensive framework, or tested the interrelationships relationships simultaneously. As a result, the assessment of behavioural intentions in banking has been fragmented (Bontis, Booker and Serenko 2007) and the complex interrelationships among these constructs have not been fully discovered or explained (Lewis and Soureli, 2006; Caruanga, 2002). This is particularly the case in the Malaysian banking context (Ndubisi, Malhotra and Wah (2009). Several service marketing academics have urged future researchers to develop a richer model of behavioural intentions (Narteh, 2013; Lewis and Soureli, 2006) to improve the understanding of the interrelationships and their effects on customer behavioural intentions (Hu, *et al.*, 2009).

Scholars have empirically investigated the interrelationships among these constructs and behavioural intentions in studies on the banking industry using a series of ‘partial’ models (Amin, Isa and Fontaine, 2013; de Matos, Henrique and de Rosa, 2009). Empirical studies have been also conducted on service quality in the banking industry using the SERVQUAL Instrument and one of its derivatives (Suhaimi, Saban, and Hamali, 2011; Kheng, Mahamad, Ramayah, and Mosahab, 2010; Munusamy *et al.*, 2010; Kumar, Kee and Charles, 2010; Kumar *et al.*, 2009; Amin). However Servqual has been criticised on both theoretical and operational grounds by several researchers and its drawbacks have been identified (Van Dyke, Kappelman and Prybutok, 1997; Cronin and Taylor, 1992).

This is the first empirical research that develops and tests a comprehensive hierarchical model to synthesise the effects of service quality and its dimensional structure, customer satisfaction, perceived value, corporate image and switching costs

on the behavioural intentions of retail bank customers. This research also provides empirical support for the use of a multidimensional and hierarchical modelling approach as a third order conceptualization of service quality as perceived by retail bank customers in Malaysia. The findings provide Malaysian bank managers with empirically-based insights into service quality and offer guidelines for assessing and improving service quality as a method to promote positive behavioural intentions. This research also contributes to the banking literature by focusing on a developing economy in Southeast Asia, rather than a developed Western economy.

The specific objectives of this study are:

- (1) to identify the service quality dimensions as perceived by Malaysian retail bank customers;
- (2) to determine the least and most important service quality dimensions as perceived by Malaysian retail bank customers; and
- (3) to test the interrelationships among service quality, customer satisfaction, perceived value, corporate image, switching costs and behavioural intentions.

Literature review and hypotheses

Behavioural Intentions

Behavioural intentions are indicators that signal whether customers will remain with, or defect from, a company. The items ‘intention to repurchase/visit’ and ‘willingness to recommend’ are often used as indicators of behavioural intentions (Marinkovic and Obradovic, 2015). In this current study, behavioural intentions are measured as a customer’s intention to remain with their main bank over the long term. Therefore, ‘repurchase and recommendation’, ‘WOM communication’ and ‘intention to purchase’ were used as indicators to measure the construct. This approach is consistent with those in other studies investigating behavioural intentions in banking (Marinkovic and Obradovic, 2015).

Constructs related to Behavioural Intentions

Customer Satisfaction

Satisfaction refers to the overall experiences of customers while receiving service from their bank over time. In banking, customer satisfaction functions as a link to important consumer behaviours such as cross buying of financial services, positive word-of-mouth, willingness to pay a premium-price and a tendency to consider one’s bank as a “relationship” bank (Ndubisi, 2006). These behavioural reactions of clients ultimately affect the profitability of banks by influencing customer retention rates, the volume and value of deposits and the costs of providing services (Marinkovic and Obradovic, 2015). As a result, many retail banks are increasing their strategic focus on customer satisfaction (Arbore and Busacca, 2009; Zameer, Tara, Kausar and Mohsin, 2015).

The theoretical and empirical support for the linkages between overall satisfaction and behavioural intentions in a range of industries gives rise Hypothesis 1:

- H1. Higher perceptions of customer satisfaction will positively affect customers’ behavioural intentions.

Service Quality

Parasuraman, Zeithaml and Berry (1988) define service quality as a global judgment or attitude relating to the overall superiority of the service. Within a modelling context, Brady and Cronin (2001) and Dabholkar, Thorpe, and Rentz (1996) conceptualise and measure service quality as a multidimensional construct with a hierarchical structure. Customers evaluate their overall perceptions of service quality at three ordered and hierarchical levels: an overall level, a primary dimensional level, and a sub-dimensional level. Brady and Cronin (2001) explain that the overall level is the customers' overall perceptions of service quality. The primary dimensional level consists of at least three primary dimensions: interaction quality (IQ), physical environment quality (EQ), and outcome quality (OQ). The sub-dimensional level consists of sets of sub-dimensions pertaining to the primary dimensions.

Empirical studies exploring the service quality construct have consistently confirmed these three primary dimensions of service quality, with varying sets of sub-dimensions (Clemes et al. 2014; Clemes et al. 2011; Dagger, Sweeney and Johnson 2007; Lu, Zhang and Wang 2009; Martínez and Martínez 2008). This current study also uses the three aforementioned primary dimensions as the antecedents of overall service quality. The proposed sets of sub-dimensions pertaining to each of the three primary dimensions of service quality were derived from the literature review, refined after focus group discussions and validated using EFA and CFA.

Interaction Quality (IQ)

IQ reflects the quality of a customer's interaction with the service provider during service delivery based on the perceptions of sub-dimensions such as attitude, behaviour and expertise of the service provider (Brady and Cronin, 2001; Lemke, Clark and Wilson, 2011). Research has shown that IQ is a significant driver of service quality, especially in banking (Gan, Clemes, Wei and Kao, 2011; Hossain, Dwivedi and Naseem, 2014). The interactions between a customer and the bank take place through the tellers and other employees via banking counters, personal financial assistance, internet and telephone banking facilities. The empirical link between IQ and service quality leads to the second hypothesis:

H2. There is a significant positive relationship between the IQ primary dimension and retail bank customers' overall service quality perceptions in Malaysia.

Researchers have identified the following set of sub-dimensions that customers evaluate as components of IQ during a service encounter in banking: (a) attitude (Kaura, 2013); (b) behaviour (Kashif, Wan Shukran, Abdul Rehman and Sarifuddin 2015); (c) expertise (Al-Hawari, 2015; Brady and Cronin, 2001); (d) problem solving (Al-Hawari, 2015); and (e) information (Hossain *et al.*, 2014; Gan et al., 2011). These sub-dimensions are posited to constitute the IQ primary dimension, thus H3:

H3. There is a significant positive relationship between the sub-dimensions of IQ (H3a, H3b, H3c, H3d and H3e) and the IQ primary dimension.

Physical Environment Quality (PEQ)

Brady and Cronin (2001) and Gan *et al.*, (2011) have confirmed that environment quality, or the tangible dimension, has an important influence on the evaluation of

bank service quality. However, the physical environment varies in its importance to overall perceived quality, depending on the service type (Reimer and Kuehn, 2005). In banking, the tangible dimension has been identified as an antecedent of service quality (Gan *et al.*, 2011; Hossain *et al.*, 2014). Branch banking and ATMs remain the most common and popular methods for conducting banking transactions in Malaysia, despite the authorities encouraging the banks to adopt new technology (Kumar *et al.*, 2010). The fourth hypothesis focuses on the relationship between PEQ and Service Quality. Specifically:

H4. There is a significant positive relationship between the PEQ primary dimension and retail bank customers' overall service quality perceptions.

The following four sub-dimensions are hypothesised to relate to the physical environment in banking; (a) ambient conditions (Kashif *et al.*, 2015; Kaura, 2013); (b) equipment (Al-Hawari, 2015; Gan *et al.*, 2011); (c) physical appeal (Hossain *et al.*, 2014); and (d) social factors (Brady and Cronin, 2001). Thus, H5:

H5. There is a significant positive relationship between the sub-dimensions of PEQ (H5a, H5b, H5c, and H5d) and the PEQ primary dimension.

Outcome Quality (OQ)

Outcome was labelled "technical quality" by Grönroos (1984, p. 38), who defined it as "what the customer is left with after service delivery is complete". Outcome quality reflects the customer's perception of the superiority of the service experience. Many scholars agree that a service comprises an outcome component and a process component, where outcome is the achievement (or not) by the customer of some end (Brady and Cronin, 2001; Grönroos, 1984). Examples include: cash from an ATM, an appropriate insurance policy, or a loan from a financial institution (Blanchard and Galloway, 1994). There is a consensus in the literature that the outcome of the service encounter positively influences customer perceptions of bank service quality (Gan *et al.*, 2011; Hossain *et al.*, 2014). Therefore, H6 is formulated:

H6. There is a significant positive relationship between the OQ primary dimension and retail bank customers' overall service quality perceptions.

The following sub-dimensions are expected to positively affect OQ in banking: (a) waiting time (Clemes *et al.*, 2014, Paul, Mittal and Srivastav, 2016); (b) convenience (Kumar *et al.*, 2010); (c) valence¹ (Martínez and Martínez, 2008); (d) security and privacy (Al-Hawari, Hartley and Ward, 2006); (e) reliability (Gan *et al.*, 2011; Kashif *et al.*, 2015); and (f) speed of decisions and responses (Al-Hawari, 2015). Thus, H7:

H7. There is a significant positive relationship between the sub-dimensions of OQ (H7a, H7b, H7c, H7d, H7e and H7f) and the OQ primary dimension.

Empirical evidence from the literature suggests that bank service quality significantly influences customer satisfaction (Gan *et al.*, 2011; Kaura, 2013; Paul *et al.*, 2016). In retail banking, as in other service industries, delivering superior service

¹ Valence captures attributes that control whether customers believe that service outcome is good or bad, regardless of their evaluation of any other aspect of the experience (Brady and Cronin, 2001).

quality enhances customer satisfaction and contributes to profitability (Ladhari, Souiden and Ladhari, 2011). Service quality is widely accepted as an antecedent of customer satisfaction and the increased awareness among bank customers of receiving good service highlights the importance of focusing on this relationship. Amin and Isa (2008) report that customer satisfaction in the Malaysian Islamic banking industry is dependent on service quality attributes including the efficiency of services and speed of transactions, staff friendliness, and confidentiality. Thus, H8:

H8. Higher perceptions of service quality positively affect customer satisfaction.

Research on service quality and behavioural intentions indicate that service quality may affect customer loyalty either directly (Choudhury, 2013; Kumar *et al.*, 2010; Ladhari *et al.*, 2011), or indirectly (Karatepe, 2011) in banking. For the direct effect, Zeithaml *et al.* (1996) argued that superior service quality enhances customers' favourable behavioural intentions; such as willingness to buy more, cross-buying, being less price sensitive, and telling others about their positive experiences. Sayani (2015) illustrates that providing superior services gives banks a competitive edge, lowers defection rates, and attracts new customers through positive word of mouth from existing customers. Thus H9:

H9a. Higher perceptions of service quality positively affect favourable behavioural intentions.

The extant literature also suggests that customer satisfaction may mediate the impact of service quality on behavioural intentions and loyalty in multiple service industries (Cronin, Brady and Hult, G. T. M. Cronin *et al.*, 2000). In banking, Ladhari *et al.* (2011) and Caruana (2002) also confirm customer satisfaction as a mediating variable between service quality and loyalty. Therefore, H9b:

H9b. Higher perceptions of service quality positively indirectly affects favourable behavioural intentions through customer satisfaction.

Customer Perceived Value

Perceived value signifies the trade-off between costs and benefits and arises from both quality and price (Heinonen, 2004). The quality of service is a fundamental element in the perception of value, as it is difficult for competitors to imitate (Parasuraman and Grewal, 2000), and it is the basis on which differentiation and competitive advantage are sustained (Reichheld and Sasser, 1990). Within a banking context, Zameer *et al.* (2015) suggest that a focus on service quality in the Pakistani banking sector was likely to increase perceived value. Thus, H10:

H10. Higher perceptions of service quality positively affect customer perceived value.

The findings in several studies provide empirical support for the relationship between perceived value and satisfaction. Chen (2008) demonstrates that customer perceived value is an important driver of customer satisfaction in the airline industry. Gallarza and Saura (2006) focus on students' travel behaviour, and confirm that satisfaction is the behavioural consequence of perceived value. Gan *et al.* (2011) and Roig, Guillén, Coll and Saumell (2013) contend that perceived value is an antecedent

of, and has a positive and direct effect on customer satisfaction in retail banking. Thus, H11:

H11. Higher customer perceived value will positively affect customer satisfaction.

Chi and Gursoy (2009) explain that customers recognise and value an outstanding service experience, and over time, these experiences create loyalty behaviours. Angur, Natarajan and Jahera (1999) reported the importance of perceived value in high consumer involvement industries such as banking. More recently, Roig *et al.* (2013) point out that banks should realise that customers will be loyal if their organisation can deliver greater value than their competitors. Thus, H12:

H12. Higher customer perceived value will positively affect behavioural intentions.

Perceived Switching Cost

Burnham, Frels and Mahajan (2003) define switching costs as any barrier that makes it difficult or costly (psychologically, relationally, or economically) to change service providers. In banking, switching costs may be generated by activities such as transferring funds, opening new accounts, closing old accounts, and registering for online banking systems (Goddard, Molyneux, Wilson and Tavakoli, 2007). Brush, Dangol and O'Brien (2012) demonstrate that, in banking, customers' switching costs may contribute to profitability only in the presence of high levels of internal cross-selling capabilities. A superior level of service quality can act as a switching barrier if customers' favourable perceptions of service quality increase perceived switching costs (Clemes *et al.* 2014; Aydin, Özer and Arasil, 2005). Thus, H13:

H13. Higher perceptions of service quality increase perceived switching costs.

Perceived switching costs may, in turn, influence behavioural intentions (Burnham *et al.*, 2003; Dick and Basu, 1994). Beerli, Martin and Quintana (2004) maintain that as switching costs increase, the level of customer loyalty also increases. Customers may face high risks in changing to an alternative provider as many services are difficult to evaluate before the actual purchase, (i.e., customers face the uncertainty of whether they will find a better alternative) (Caruana, 2004). Thus, H14:

H14. Higher perceived switching costs will positively affect behavioural intentions.

Corporate Image

Corporate image has been described as the overall impression of a company (Barich and Kotler, 1991). Hu *et al.*, (2009), note that customers transform the perceived quality of the service they receive into their overall impression of the provider. Nguyen and LeBlanc (1998) found that bank customers who perceived high service quality over repeated service encounters, had an overall favourable image of the bank. The authors' suggested that high levels of perceived service quality instil high levels of a company's brand image. Thus, H15:

H15. Higher perceptions of service quality positively affect corporate image.

Andreassen and Lindestad (1998) confirmed that corporate image has a strong influence on customer satisfaction, especially if the customer has little knowledge of

the service. A positive relationship between corporate image and satisfaction has been empirically demonstrated in various industries, including mobile telecommunications (Clemes *et al.*, 2014; Lai, Griffin and Babin, 2009), education (Clemes, Cohen and Wang, 2013), and tourism (Chen and Phou, 2013). The impact of image on customer satisfaction has been also been investigated in a banking context by Ball, Coelho and Vilares (2006); Gan *et al.*, (2011); and Marinkovic and Obradovic, (2015). The authors' report that a strong corporate image may help banks create customer satisfaction and establish long-term, profitable relationships with their customers. Thus, H16:

H16. Higher perceptions of corporate image will positively affect perceptions of customer satisfaction.

Aydin *et al.*, (2005) report that the image of a product or service has a strong influence on customer loyalty. The authors illustrate that image initially attracts consumers, and ultimately contributes to the decision to purchase a product or service. These results are consistent with the findings of Clemes *et al.* (2014), and Dick and Basu (1994), who conclude that a favourable image can influence repeat patronage. Studies by Ladhari *et al.* (2011), Lewis and Soureli (2006), Rehman and Afsar (2012) and Nguyen and LeBlanc (1998) also suggest that a positive bank image is important in retaining bank customers. Therefore, H17:

H17. Higher perceptions of corporate image will positively affect favourable behavioural intentions.

[Figure 1 about here]

Research design and methods

A seven-point Likert-type scale ranging from "1 = strongly disagree" to "7 = strongly agree" was used to measure the constructs in this study. Questionnaire items were generated from the literature review and focus group interviews (see Hair, Bush and Ortinau, 2000). All items adopted to represent the constructs were modified to fit the retail banking services context. A pre-test and pilot test were conducted to increase the reliability and validity of the measurements. As a pre-test, an expert panel of four bank managers and four academics were involved in stage one to assess the relevance, readability, and ambiguity of the questionnaire. Then a pilot test was conducted, using a draft of the questionnaire and a convenience sample of 50 Malaysian retail bank customers. All the respondents were encouraged to provide constructive feedback to further improve the questionnaire's face validity. Next, Cronbach's alpha test was used to test the reliability and internal consistency of the measurements. No reliability alpha was below the threshold point of 0.60, demonstrating internal consistency (Nunnally, 1978). At the conclusion of this process, minor modifications to the scales were made to ensure that the questionnaire would be effective for data collection and achieve the research objectives.

The final questionnaires were self-administered to bank customers above 18 years old who had held an account with the bank for at least the last three months. A mall-intercept approach was used, based on convenience sampling. The data was gathered at major shopping malls in the Klang Valley, Malaysia, on different days of the week, and at different times of the day to reduce location and timing biases (Bush and Hair,

1985). A total of 544 questionnaires were distributed and returned over four weeks. However, 23 questionnaires were excluded from analysis because they were over 25% incomplete (Sekaran, 2005). Therefore, 521 usable questionnaires were valid for data screening. After data screening (missing data, outliers, and a normality test) 491 cases remained for subsequent analysis. All valid responses were analysed using SPSS and AMOS Version 18.

The finalised data set was randomly split into two sub-samples of approximately equal size (Kline 2011). The first subsample (240) was subjected to EFA, and the second subsample (251) was subjected to CFA and the structural analysis. The EFA was conducted first to identify the underlying factors that make up the sub-dimensions of each primary dimension. Next, CFA and structural analysis were performed on the remaining samples. CFA serves as cross-validation for the EFA and assess the psychometric properties of the measurement models developed in this study for the sub-dimensions, primary dimensions, and the six major constructs. Finally, structural analysis was used to evaluate the interrelationships between the six high order constructs.

Data analysis and results

EFA

Principal components analysis (PCA) with a VARIMAX rotation on the first subsample was used to extract the items that had been generated for IQ, PEQ, and OQ (Malhotra, 2004). Items with factor loadings of less than 0.50 in absolute value and cross loading items were removed from the item pool. The data set was first examined to ensure its appropriateness for EFA. The result for IQ, PEQ, and OQ showed that the majority of items in the correlation matrix were above the recommended level of 0.30 with no correlations above 0.90 (Hair, Black, Babin and Anderson, 2010). Bartlett's Test of Sphericity were all statistically significant at the 0.001% level and Kaiser-Meyer-Olkin (KMO) test result was >0.90 , with values close to 1.0 being desirable (Kaiser and Rice, 1974). Therefore, the data set was deemed adequate for EFA (Hair *et al.*, 2010), (see Table 1).

[Table 1 about here]

All items that had cross-loadings > 0.40 or < 0.50 were removed from the analysis. Factor loadings for the remaining items ranged from 0.653 to 0.866; no item loaded on more than one factor, suggesting adequate unidimensionality (Tabachnick and Fidell, 2007). After identifying the factors for each primary dimension, a reliability test was performed using Cronbach's coefficient alpha (Cronbach, 1951). All factors had a Cronbach's coefficient alpha of greater than 0.70, indicating internal consistency of the variables in the exploratory study (Nunnally and Bernstein, 1994).

CFA

Nine confirmatory factor analysis models were developed and assessed in this research: 5 first order confirmatory factor analysis models (IQ, PEQ, OQ, SQ and the 6 higher order constructs); and 4 second order confirmatory factor analysis models (IQ, PEQ, OQ and SQ).

The result of the first order measurement models

Four of the preliminary first-order CFA models (IQ, PEQ, OQ and the six higher order constructs) were modified due to misfit or high coefficient correlations between constructs indicating a lack of discriminant validity (Kline, 2011). Modifications were made based on standardised residuals less than 2.58 (Schumacker and Lomax, 2004) and modification indices (MI) greater than 3.84 with large expected change estimates demonstrated by the expected parameter change (MacKenzie, Podsakoff and Podsakoff, 2011). Table 2 summarise the results of the final first-order CFA models.

The essential aspects of the construct were captured by the remaining items. In addition, the item removal did not exceed the 20% rule proposed by Hair *et al.* (2010). All the goodness-of-fit-indices were improved and within their recommended thresholds, except for the GFI values, which were close to the recommended 0.90 threshold. The factor loadings were statistically significant at the 0.001% level, and satisfied the 0.50 rule of thumb (Nunnally and Bernstein, 1994). The CFI indices were above the recommended threshold of 0.90, providing strong evidence of unidimensionality (Sureshchandar, Rajendran and Anantharaman, 2001). The CR values for each of the sub-dimensions were greater than the 0.70 cut-off value and all AVE values exceeded the minimum criterion of > 0.50, supporting the reliability and validity and convergent validity of all sub-dimensions (Nunnally, 1978). The correlation estimates of all pairs of the sub-dimensional factors in the five measurement models were less than 0.85 indicating discriminant validity (Hair *et al.*, 2010).

[Table 2 about here - landscape]

The result of the second order CFA

Tables 3, 4, and 5 present a summary of the results of the second-order CFA models designed to test the relationships between the primary sub-dimensions of service quality (IQ, PEQ and OQ), and their corresponding primary dimension. All diagnostic tests indicate that these models fit the sample data adequately. These results support Hypotheses 3, 5 and 7.

[Table 3 about here]

[Table 4 about here]

[Table 5 about here]

The second order model for service quality (Table 6) was designed to test the relationships among the three primary dimensions and one independent second-order construct (SQ). All diagnostic tests indicate that this model fits the sample data adequately, providing support for Hypotheses 2, 4 and 6.

[Table 6 about here]

Structural analysis

The structural model (Figure 5) was designed to test the relationships among the six higher order constructs: service quality, customer satisfaction, customer perceived value, corporate image, perceived switching costs and behavioural

intentions. The majority of the goodness-of-fit indices were within their recommended thresholds, except for the chi-square and the GFI, indicating an adequate model fit. The chi-square and the GFI are acceptable as both indices are sensitive to sample size (Bagozzi and Yi, 2012). Therefore, the model was deemed a reasonable fit based on the other goodness-of-fit indicators and all parameter estimates being significant ($p < 0.001$). Table 7 summarises the results of the structural model and the hypothesis tests. The only direct relationship that was not supported statistically was between service quality and behavioural intentions. This relationship is explored further in the following section.

[Table 7 about here]

[Figure 2 about here – test results below need to go directly under Figure 2.]

χ^2 : 580.044, df: 313, GFI: 0.856, RMSEA: 0.058, SRMR: 0.081, CFI: 0.951, TLI: 0.945, χ^2 /df: 1.853, PGFI: 0.709

Mediation Effect

Hypothesis 9b postulated that customer satisfaction has a mediating effect on the relationship between service quality and behavioural intentions. This relationship is tested with a Baron and Kenny (1986) approach illustrated in Figure 6. Results from Model 1 indicate a significant relationship ($t = 11.316$) between service quality and behavioural intentions. However, Model 2 indicates that this coefficient path becomes insignificant ($t = 1.377$) when customer satisfaction is included in the model. The coefficient paths between service quality and customer satisfaction, and between customer satisfaction and behavioural intentions, are both significant in Model 2. This result indicates full mediation, and provides empirical support for Hypothesis 9b.

[Figure 3 about here]

Discussion and implications for the sub and primary dimensions

Sub dimensions

The factor loadings shown in Tables 3, 4 and 5 represent the importance rankings for the sub-dimensions. These will be discussed in sequence below.

IQ sub-dimensions:

The information sub-dimension is the main driver of IQ, indicating that customers prefer to be kept up-to-date by their banks for all of their personal banking transactions. Retail bank customers in the sample are also concerned about how effectively and supportively the bank manages customer service problems. The positive behaviour of bank staff should be encouraged, as it can markedly influence their customers' perceptions and assessment of service quality. The expertise of bank personnel (reflected in staff knowledge and/or banking skills) contributes to IQ and staff need to be trained in technical skills as well as people skills. Finally, the positive attitude of bank staff helps to create a good impression for first time customers and are an important factor in retaining existing customers.

PEQ sub-dimensions:

The physical facilities of banks need to be attractive and comfortable and have a professional layout and interior design. The ambient conditions of a bank, such as the adequacy of space, the attractiveness from the outside, the interior temperature and noise level, and the overall comfort of the environment all positively influence customers' perceptions of service quality. In addition, modern equipment and easily accessible ATMs that function properly also contribute to the ambient and equipment sub-dimension of the PEQ. The result for social factors indicates that the Malaysian bank customers represented in the sample are not overly concerned by the presence of and/or interaction with other customers while waiting in que or for personal service during their banking transactions.

OQ sub-dimensions:

Malaysian bank customers are, of course, concerned about the privacy of their bank transactions and this finding is supported by Lassar, Manolis and Winsor (2000). Security is the second most important sub-dimension and includes the personal safety of the customer and their possessions. The Malaysian customers of the retail banks represented in the sample care that their resources are being kept confidential and safe by trustworthy employees and highly credible banking institutions. In addition, bank customers also want to feel safe inside the bank.

Customers also require suitable operating hours, convenient branch locations, a variety of transactions available at ATMs, and clear guidance and information for using bank services and facilities. Although bank services are moving on-line, many customers still visit branches looking for the convenience aspect (Culiberg and Rojšek, 2010). Bank customers represented in the sample expect timely decisions and a prompt, and efficient service. Ultimately, a smooth bank service is the main criterion that customers expect.

To date, no empirical study has identified valence as an important sub-dimension of service quality in the banking industry. Valence, in a banking context, refers to what customers perceive about the service encounter even if their loan application was unsuccessful. Finally, the lower importance ranking of waiting time may reflect the fact that queuing in Malaysia is expected, since queuing is an everyday phenomenon at some banks, especially in a big city like Kuala Lumpur (Munusamy *et al.*, 2010). However, if the norm for queuing changes, then the expectations of queuing times may change accordingly.

Primary dimensions

The findings confirm that, for the retail banks represented in this sample, service quality is a hierarchical/multilevel construct with three underlying primary dimensions. IQ is the most important indicator of service quality and is consistent with Hossain *et al.*'s (2014) findings. OQ is the second most important indicator of service quality, followed by PEQ. The lower importance of PEQ is supported by Mattila (1999) who claimed that Asian customers are less likely to depend on tangible cues for evaluating service quality than their Western counterparts. See Table 6 for the factor loadings for the primary dimensions.

The interrelationships among the six high order constructs

Behavioural intentions

The findings of this study indicate that customer satisfaction, perceived value, corporate image, and switching costs all have strong, direct relationships with

behavioural intentions. Further, the impact of service quality is indirect, and fully mediated through customer satisfaction. Customer satisfaction has the greatest effect on behavioural intentions, followed by switching costs, corporate image, and perceived value. The degree to which customers are satisfied with their overall banking experience plays a vital role in their loyalty to the bank. This result is consistent with Hennig-Thurau, Gwinner and Gremler (2002), who maintained that customer satisfaction was the immediate antecedent of customer loyalty.

Switching costs play a positive, significant role in determining a customer's behavioural intentions towards the banks represented in the sample. The finding indicates that the higher the perceived switching costs, the more likely it is that customers will remain with their bank and is supported by Clemes, Gan and Zhang's (2010) results on Chinese bank customers' switching behaviour. The result for corporate image is supported by Bravo, Montaner and Pina (2012) who note that corporate image is an important driver of future intended repurchases behaviour and the intention to use particular banking services.

The results demonstrate that perceived value is not a strong driver of behavioural intentions. The pricing of key products and services are under the control of the central bank (Bank Negara Malaysia) and the Association of Banks in Malaysia (ABM) and many customers in the sample did not perceive that there was much of a price difference in core products and services offered by the banks.

Bank customers in the sample generally perceived service quality to be high. Previous studies have produced inconsistent results on the nature of the relationship between service quality and behavioural intentions, with researchers suggesting that service quality could affect customer behavioural intentions either directly, indirectly or both ways. Ladhari (2009, p. 323) note: "It would seem that the significance of these direct and indirect influences might depend on the particular service setting under investigation".

The effect of service quality on behavioural intentions was indirect, and fully mediated through customer satisfaction. These results are consistent with those of Caruana (2002); Ladhari *et al.* (2011) and; Lai *et al.* (2009), and highlight that customer satisfaction performs a crucial intervening role in the relationship between service quality and behavioural intentions. This result suggest that customers who perceive a higher level of service quality will not engage in behavioural intentions unless their overall level of satisfaction is high.

Customer satisfaction

The empirical results Service quality is the most important determinant of customer satisfaction, followed by corporate image and perceived value. Research by Gan *et al.*, (2011) on New Zealand banking also reveals that customer satisfaction is more quality driven than either perceived value or corporate image driven. The results of this current study provide additional evidence that service quality is a major antecedent of satisfaction, and indicates that customer satisfaction can be increased by delivering high-quality services. A bank needs to focus on this relationship because satisfaction normally drives long-term customer relationships, and positive WOM (Amin *et al.*, 2013) which in turn may contribute to bank profitability (Ladhari *et al.*, 2011). Customer satisfaction is also a key factor for survival in the competitive banking sector. Measuring customer satisfaction helps management monitor the performance matrix by providing actionable information. Banks that satisfy customers cultivate customer loyalty necessary for customer retention (Zameer *et al.*, 2015)

Corporate image is also an important determinant of customer satisfaction and the current finding suggests that a good impression and image can enhance customer satisfaction for the banks represented in the sample. Several studies involving other industries have also supported this relationship (Andreassen and Lindstead, 1998; Chen and Phou, 2013; Lai *et al.*, 2009). The current finding provides additional insight for the banking industry as the linkage between image and satisfaction has received minimal attention in the banking literature.

Finally, perceived value is the weakest determinant of customer satisfaction. Although customers in the sample did not consider perceived value to have a major impact on their level of their bank satisfaction, perceived value remains an important source of a company's competitive advantage (Korda and Snoj, 2010). As noted, customers in the sample found little relative difference between the price and costs offered by various Malaysian retail banks. Thus, perceived value did not strongly influence customer satisfaction.

Service quality as an antecedent of corporate image, perceived value, and switching costs

Corporate image

For customers represented in this sample, a high degree of service quality was associated with a positive corporate image. These results are consistent with Nguyen and LeBlanc (1998) who also concluded that superior service quality leads to an overall favourable corporate image for banks.

Perceived value

The current results provide further empirical evidence on the relationship between service quality and perceived value, an important result since this relationship has not been widely investigated in the banking industry (Korda and Snoj, 2010; Vera and Trujillo, 2013). Contrary to the current results, Vera and Trujillo (2013) report that service quality does not constitute a real source of superior customer perceived value in Mexican retail banks. However, Zameer *et al.*, (2015) report that service quality has a significant influence on perceived value in Pakistan banks. The result for perceived value in this current study is consistent with those on mobile telecommunications (Clemes *et al.*, 2014; Lai *et al.*, 2009) and higher education (Clemes *et al.*, 2013).

Switching costs

The results reported switching costs for the banks in the sample indicate that providing high quality retail bank services may help to act as a switching barrier. Licata and Chakraborty (2009) explain that if switching service providers is inhibited it may be partially attributed to a perception that the costs to switch exceed the level of quality consumers' expect from another service provider.

Theoretical contributions

This study contributes to the services marketing literature by offering a more comprehensive and integrative model of behavioural intentions in retail banking. The theoretical model developed and tested in this study is the first initiative in the banking literature to empirically test the interrelationships among all six important marketing constructs in a single modelling framework simultaneously. This research also identifies the key drivers of behavioural intentions in the retail banking industry from the perspective of a non-western country.

This current research also identifies the role of customer satisfaction in mediating the relationship between service quality and behavioural intentions in the retail banking industry. Service quality has only an indirect influence on behavioural intentions. Therefore, the link between service quality and behavioural intentions may not be straight forward one and this highlights the important role of customer satisfaction in improving favourable behavioural intentions.

The third theoretical contribution of this study is confirmation of the value of a multidimensional and hierarchical conceptualisation and measurement of the service quality construct and its dimensions in a Malaysian retail banking context (Brady and Cronin, 2001; Clemen *et al.*, 2014).

Managerial contributions and implications

The theoretical research model developed and tested in this study has clarified the complex nature of the interrelationships among the six higher order constructs (service quality, perceived value, satisfaction, corporate image, switching costs and behavioural intentions) in a retail banking context. The current results reveal that all of the five high order constructs are important key drivers of behavioural intentions, either directly or indirectly. The model provides a viable framework for bank management to use in examining and formulating their strategic market planning to increase customer retention rates. Management must identify the determinants of behavioural intentions as the construct is recognised as a key component for a company's long-term sustainability. There is also a nexus between customer loyalty and company profitability and organisations with loyal customers are able to create a competitive advantage.

Bank management can use the information gained from comprehensive hierarchical modelling as a foundation to correctly allocate banking resources, serve as a platform for longitudinal and cross cultural studies, and integrate it for other banks operating under the same brand. The model can also be used by corporate banks and other financial institutions as a framework for assessing their activities.

The multidimensional and hierarchical view of service quality also enables management to gain a clear understanding of how their customers assess the quality of the bank's services. This information can be used to formulate relationship quality improvement activities, loyalty programmes and service recovery to keep customers engaged with the bank.

Further, the holistic modelling framework allows the service quality construct to be assessed systematically. If problems occur that effect the overall level of service quality, bank managers can first measure their performance on the three primary dimensions of service quality confirmed in this study. Once a general problem is identified, the performance on the pertaining sub-dimensions can then be investigated and this helps to narrow the problem area and facilitate a solution.

Bank managers can opt to assess their service quality at all three levels, or they can broadly measure it at an overall level, depending on their time and budget constraints. However, monitoring performance on the sub-dimensions should be ongoing as it provides insights for management about what specific areas need to be improved, maintained, or ignored. The modelling framework also identifies the least to most important primary and sub-dimensions impacting on customers' perceptions of service quality to aid resource allocation. For example, the current results illustrate that interaction and outcome quality are the main contributors to overall bank service

quality. Therefore, managers of the banks in the sample need to highlight and allocate more effort and resources to these two primary dimensions because they are more important to their customers.

The customer satisfaction construct has a positive influence on behavioural intentions as well as acting as a significant mediator between service quality and behavioural intentions. Thus, bank managers should continually monitor the level of satisfaction among their customers in order to proactively manage any situation that creates increased satisfaction, or has the ability to generate dissatisfaction.

The results of this current study do not support a direct relationship between service quality and behavioural intentions. However, service quality has the most important influence on customer satisfaction and customer satisfaction has a mediating effect on the coefficient path between service quality and behavioural intentions. Thus, delivering high levels of service quality should also reinforce the other positive drivers of behavioural intentions including: customer satisfaction, perceived value, corporate image and increase switching cost assessments. Management must also ensure that they deliver high levels of service quality relative to their competitors as this acts to increase perceived switching costs (lowering the propensity to switch) and to encourage customers to remain with the bank.

Achieving a favourable bank corporate image is crucial, especially in this highly competitive industry where many retail banks offer similar services and advances in information technology make options such as internet banking and mobile banking more common-place. The rapid advances in technology have also instigated changes in level of customer expectations concerning a good brand image. Nothing travels faster than a bad reputation and this is particular the case today with the speed of information through the worldwide internet.

Limitations and directions for future research

The results of this study are based on a convenience sample that was drawn from the Klang Valley, Malaysia so the results will not fully represent the perceptions and opinions of all Malaysian retail bank customers. As is the case with any convenience sample, generalising the results to other retail banks or cultural settings must be done with caution.

Although this study has examined the complex interrelationships between the six higher order constructs in a Malaysian banking context, there are some potential relationships that are absent from the conceptual framework. For example, perceived switching costs have been identified as having a moderating effect on the relationship between customer satisfaction and customer loyalty (Dagger and David, 2012). In addition, perceived value has been identified as having moderating effect on the relationship between service quality and customer satisfaction (Wang, Lo and Yang, 2004). These relationships have not been explored in this study.

Future empirical studies on the global banking industry should examine the aforementioned relationships and also model additional higher order constructs that are emerging in the marketing literature. Most recently, the customer engagement construct has attracted the attention of marketing scholars and could be included in a comprehensive hierarchical model on retail banking.

Future researchers can use the current study as a viable framework to conceptualise and model the interrelationships between the higher order constructs that may exist in retail banks in their own cultural setting.

References

- Al-Hawari, M.A., (2015),"How the personality of retail bank customers interferes with the relationship between service quality and loyalty", *International Journal of Bank Marketing*, 33(1) pp. 41 – 57.
- Al-Hawari, M. A. and Ward, T. (2006), "The effect of automated service quality on Australian banks' financial performance and the mediating role of customer satisfaction", *Marketing Intelligence & Planning*, 24(2), pp. 127-147.
- Amin, M. and Isa, Z., (2008) "An examination of the relationship between service quality perception and customer satisfaction: A SEM approach towards Malaysian Islamic banking", *International Journal of Islamic and Middle Eastern Finance and Management*, 1(3), pp.191 – 209.
- Amin, M., Isa, Z. and Fontaine, R. (2013), "Islamic banks: contrasting the drivers of customer satisfaction on image, trust, and loyalty of Muslim and non-Muslim customers in Malaysia", *International Journal of Bank Marketing*, 31(2), pp. 79-97.
- Andreassen, T. W. and Lindestad, B. (1998), "Customer loyalty and complex services: the impact of corporate image on quality, customer satisfaction and loyalty for customers with varying degrees of service expertise", *International Journal of Service Industry Management*, 9(1), pp. 7-23.
- Angur, M. G., Natarajan, R. and Jahera, J. S. (1999), "Service quality in the banking industry: an assessment in a developing economy", *The International Journal of Bank Marketing*, 17(3), pp. 116-122.
- Arbore, A., and Busacca, B. (2009), "Customer satisfaction and dissatisfaction in retail banking: Exploring the asymmetric impact of attribute performances", *Journal of Retailing and Consumer Services*, 16, pp. 271-280.
- Aydin, S., and Özer, G. (2005), "The analysis of antecedents of customer loyalty in the Turkish mobile telecommunication market", *European Journal of Marketing*, 39(7/8), pp. 910-925.
- Aydin, S., Özer, G. and Arasil, O. (2005), "Customer loyalty and the effect of switching costs as a moderator variable: a case in the Turkish mobile phone market", *Marketing Intelligence & Planning*, 23(1), pp. 89-103.
- Ball, D., Coelho, P.S. and Vilares, M.J. (2006), "Service personalization and loyalty", *Journal of Services Marketing*, Vol. 20 No. 6, pp. 391-403.
- Bagozzi, R. P. and Yi, Y. (2012), "Specification, evaluation, and interpretation of structural equation models", *Journal of the Academy of Marketing Science*, 40, pp. 8-34.
- Barich, H. and Kotler, P. (1991), "A framework for marketing image management", *Sloan Management Review*, 32(2), pp. 94-105.
- Baron, R.M. and Kenny, D. A. (1986), "The moderator-mediator variable distinction in social psychological research: conceptual, strategic, and statistical considerations", *Journal of Personality & Social Psychology*, 51, pp. 1173-1182.
- Baumann, C., Elliott, G. and Burton, S. (2012), "Modelling customer satisfaction and loyalty: survey data versus data mining", *Journal of Services Marketing*, 26(3), pp. 148-157.
- Beerli, A., Martín, J. D. and Quintana, A. (2004), "A model of customer loyalty in the retail banking market", *European Journal of Marketing*, 38(1/2), 253-275.

- Berger, A.N., Hasan, I. and Zhou, M. (2009), "Bank ownership and efficiency in China: What will happen in the world's largest nation?", *Journal of Banking & Finance*, 33(1), pp. 113-130
- Blanchard, R. F. and Galloway, R. L. (1994), "Quality in retail banking", *International Journal of Service Industry Management*, 5(4), pp. 5-23.
- Bontis, N., Booker, L. D. and Serenko, A. (2007), "The mediating effect of organizational reputation on customer loyalty and service recommendation in the banking industry", *Management Decision*, 45(9), pp. 1426-1445.
- Brady, M. K. and Cronin, J. J. (2001), "Some new thoughts on conceptualizing perceived service quality: a hierarchical approach", *Journal of Marketing*, 65, pp. 34-49.
- Bravo, R., Montaner, T. and Pina, J. M. (2012), "Corporate brand image of financial institutions: a consumer approach", *Journal of Product & Brand Management*, 21(4), pp. 232-245.
- Brush, T. H., Dangol, R., O'Brien, J. (2012), Customer capabilities, switching costs, and bank performance, *Strategic Management Journal*, 33, pp. 1499-1515.
- Burnham, T. A., Frels, J. K. and Mahajan, V. (2003), "Consumer switching costs: a typology, antecedents, and consequences", *Academy of Marketing Science Journal*, 31(2), pp. 109.
- Bush, A.J. and Hair, J.F. (1985), "An assessment of mall intercept on a data collection method", *Journal of Marketing Research*, 22, pp. 158-167.
- Caruana, A. (2002), "Service loyalty: the effects of service quality and the mediating role of customer satisfaction", *European Journal of Marketing*, 36(7/8), pp. 811-828.
- Caruana, A. (2004), "The impact of switching costs on customer loyalty: a study among corporate customers of mobile telephony", *Journal of Targeting, Measurement and Analysis for Marketing*, 12(3), pp. 256-268.
- Chen, C. F., and Phou, S. (2013), "A closer look at destination: image, personality, relationship and loyalty", *Tourism Management*, 36, pp. 269-278.
- Chen, C.-F. (2008), "Investigating structural relationships between service quality, perceived value, satisfaction, and behavioral intentions for air passengers: evidence from Taiwan", *Transportation Research Part A: Policy and Practice*, 42(4), pp. 709-717.
- Chi, C. G. and Gursoy, D. (2009), "Employee satisfaction, customer satisfaction, and financial performance: an empirical examination", *International Journal of Hospitality Management*, 28(2), pp. 245-253.
- Choudhury, K. (2013), "Service quality and customers' purchase intentions: An empirical study of the Indian banking sector". *International Journal of Bank Marketing*, 31(7), pp. 529-543.
- Claessens, S and N van Horen (2012), "Foreign Banks: Trends, Impacts and Financial Stability", IMF Working Paper WP/12/10, International Monetary Fund.
- Clemes, M. D., Cohen, D. A., and Wang, Y. (2013), "Understanding Chinese university students' experiences: an empirical analysis", *Asia Pacific Journal of Marketing and Logistics*, 25(3), pp. 391-427.
- Clemes, M. D., Gan, C. and Ren, M. (2011), "Synthesizing the effects of service quality, value, and customer satisfaction on behavioral intentions in the motel industry: an empirical analysis", *Journal of Hospitality & Tourism Research*, 35(4), pp. 530-568.

- Clemes, M. D., Gan, C., and Zhang, D. (2010) "Customer Switching Behaviour in the Chinese retail banking industry", *International Journal of Bank Marketing*, 28(7), pp.519-546.
- Clemes, M. D., Shu, X. and Gan, C. (2014), "Mobile communications: a comprehensive hierarchical modelling approach", *Asia Pacific Journal of Marketing and Logistics*, 26(1), pp. 114-146.
- Cronbach, L. J. (1951), "Coefficient alpha and the internal structure of tests", *Psychometrika*, 16(3), pp. 297-334.
- Cronin, J. J., Brady, M. K. and Hult, G. T. M. (2000), "Assessing the effects of quality, value, and customer satisfaction on consumer behavioral intentions in service environments", *Journal of Retailing*, 76(2), pp. 193-218.
- Cronin, J. J. and Taylor, S. A. (1992), "Measuring service quality: a reexamination and extension", *Journal of Marketing*, 56, pp. 55-68.
- Culiberg, B. and Rojšek, I. (2010), "Identifying service quality dimensions as antecedents to customer satisfaction in retail banking", *Economic and Business Review*, 12(3), pp.151-166.
- Dabholkar, P. A., Thorpe, D. I. and Rentz, J. O. (1996), "A measure of service quality for retail stores: scale development and validation", *Academy of Marketing Science*, 24(1), pp. 3-16.
- Dagger, T. S. and David, M. E. (2012), "Uncovering the real effect of switching costs on the satisfaction-loyalty association: the critical role of involvement and relationship benefits", *European Journal of Marketing*, 46(3/4), pp. 447-468.
- Dagger, T. S., Sweeney, J. C. and Johnson, L. W. (2007), "A hierarchical model of health service quality: scale development and investigation of an integrated model", *Journal of Service Research*, 10(2), pp. 123-142.
- de Matos, C.A., Henrique, J.L. and de Rosa, F., (2009) "The different roles of switching costs on the satisfaction-loyalty relationship", *International Journal of Bank Marketing*, 27(7), pp.506 – 523.
- Detragiache, E. and Poonam, G. (2006), Foreign banks in emerging market crises: Evidence from Malaysia, *Journal of Financial Stability*, 2(3), p. 217-242.
- Dick, A. S. and Basu, K. (1994), "Customer loyalty: toward an integrated conceptual framework", *Journal of the Academy of Marketing Science*, 22, pp. 99-113.
- Gallarza, M. G. and Gil Saura, I. (2006), "Value dimensions, perceived value, satisfaction and loyalty: an investigation of university students' travel behaviour", *Tourism Management*, 27(3), pp. 437-452.
- Gan, C., Clemes, M., Wei, J. and Kao, B. (2011), "An empirical study of New Zealand bank customers satisfaction", *Banks and Banks System*, 6(3), pp. 63-73.
- Goddard, J., Molyneux, P., Wilson, J. O. S. and Tavakoli, M. (2007), "European banking: an overview", *Journal of Banking & Finance*, 31, pp. 1911-1935.
- Grönroos, C. (1984), "A service quality model and its marketing implications", *European Journal of Marketing*, 4, pp. 36-44.
- Hair, J.F., Bush, R.P., and Ortinau, D.J. (2000) *Marketing Research: A Practical Approach for the New Millennium*, Irwin Professional Publishing.
- Hair, J.F., Black, W. C., Babin, B. J., and Anderson, R. E. (2010), *Multivariate Data Analysis: A Global Perspective*, 7th ed., Pearson Education: Upper Saddle River, NJ.
- Heinonen, K. (2004), "Reconceptualizing customer perceived value: the value of time and place", *Managing Service Quality*, 14(2/3), pp. 205-215.

- Hennig-Thurau, T., Gwinner, K. P. and Gremler, D. D. (2002), "Understanding relationship marketing outcomes an integration of relational benefits and relationship quality", *Journal of Service Research*, 4(3), pp. 230-247.
- Hu, H., Kandampully, J. and Juwaheer, T. D. (2009), "Relationships and impacts of service quality, perceived value, customer satisfaction, and image: an empirical study", *The Service Industries Journal*, 29(2), pp. 111-125.
- Hossain, M. A., Dwivedi, Y. K. and Naseem, S. (2014), "Developing and validating a hierarchical model of service quality of retail banks", *Total Quality Management & Business Excellence*, pp. 1-16.
- Kaiser, H.F. and Rice, J. (1974), "Little Jiffy, Mark IV", *Educational and Psychology Measurement*, Vol. 34 No. 1, pp. 111-117.
- Kashif, M., Wan Shukran, S.S., Rehman, M.A. and Sarifuddin, S. (2015), "Customer satisfaction and loyalty in Malaysian Islamic banks: a PAKSERV investigation", *International Journal of Bank Marketing*, 33(1), pp. 23 – 40.
- Kaura, V. (2013), "Antecedents of customer satisfaction: a study of Indian public and private sector banks", *International Journal of Bank Marketing*, 31(3), pp. 167-186.
- Kheng, L.L., Mahamad, O., Ramayah, T., M. and Mosahab, R. (2010). "The impact of service quality on customer loyalty: a study of banks in Penang. Malaysia". *International Journal of Marketing Studies*, 2(2): pp. 57-66.
- Kline, R.B. (2011), *Principles and Practice of Structural Equation Modeling*, Guilford Press, New York, NY.
- Korda, A. P. and Snoj, B. (2010), "Development, validity and reliability of perceived service quality in retail banking and its relationship with perceived value and customer satisfaction", *Managing Global Transitions*, 8(2), pp. 187–205.
- Kumar, M., Kee, F. T. and Charles, V. (2010), "Comparative evaluation of critical factors in delivering service quality of banks: an application of dominance analysis in modified SERVQUAL model", *International Journal of Quality & Reliability Management*, 27(3), 351-377.
- Ladhari, R. (2009), "Service quality, emotional satisfaction, and behavioural intentions: a study in the hotel industry", *Managing Service Quality*, 19(3), pp. 308-331.
- Ladhari, R., Souiden, N., and Ladhari, I. (2011), "Determinants of loyalty and recommendation: The role of perceived service quality, emotional satisfaction and image", *Journal of Financial Services Marketing*, 16(2), pp. 111–124.
- Lai, F., Griffin, M. and Babin, B. J. (2009), "How quality, value, image, and satisfaction create loyalty at a Chinese telecom", *Journal of Business Research*, 62, pp. 980-986.
- Lam, R. and Burton, S. (2005), "Bank selection and share of wallet among SMEs: apparent differences between Hong Kong and Australia", *Journal of Financial Services Marketing*, 9(3), pp. 204-213.
- Lassar, W. M., Manolis, C. and Winsor, R. D. (2000), "Service quality perspectives and satisfaction in private banking", *Journal of Services Marketing*, 14(3), pp. 244-271.
- Lemke, F., Clark, M. and Wilson, H. (2011), "Customer experience quality: an exploration in business and consumer contexts using repertory grid technique", *Journal of the Academy of Marketing Science*, 39(6), pp. 846-869.
- Lewis, B. R. and Soureli, M. (2006), "The antecedents of consumer loyalty in retail banking", *Journal of Consumer Behaviour*, 5, pp. 15-31.

- Licata, J. W. and Chakraborty, G. (2009), "The effects of stake, satisfaction, and switching on true loyalty: a financial services study", *International Journal of Bank Marketing*, 27(4), pp. 252-269.
- Lu, Y., Zhang, L. and Wang, B. (2009), "A multidimensional and hierarchical model of mobile service quality", *Electronic Commerce Research and Applications*, pp. 1-13.
- MacKenzie, K. K., Podsakoff, P. M. and Podsakoff, N. P. (2011), "Construct measurement and validation procedures in MIS and behavioral research: integrating new and existing techniques", *MIS Quarterly*, 35(2), pp. 293-334.
- Malhotra, N. K. (2004), *Marketing Research*, NJ: Pearson Education, Englewood Cliffs.
- Marinkovic, V. and Obradovic, V. (2015), "Customers' emotional reactions in the banking industry", *International Journal of Bank Marketing*, 33(3), pp. 243 – 260.
- Martínez Caro, L. and Martínez García, J. A. (2008), "Developing a multidimensional and hierarchical service quality model for the travel agency industry", *Tourism Management*, 29, pp. 706–720.
- Mattila, A. S. (1999), "The role of culture in the service evaluation processes", *Journal of Service Research*, 1(3), pp. 250-261.
- Munusamy, J., Chelliah, S., and Mun, H. W. (2010). Service quality delivery and its impact on customer satisfaction in the banking sector in Malaysia. *International Journal of Innovation, Management and Technology*, 1(4), 398-404.
- Narteh, B. (2013), "Key determinant factors for retail bank switching in Ghana", *International Journal of Emerging Markets*, 8(4), pp. 409-427.
- Ndubisi, N.O. (2006) "A structural equation modelling of the antecedents of relationship quality in the Malaysia banking sector", *Journal of Financial Services Marketing*, 11(2), pp. 131-141.
- Ndubisi, N.O., Malhotra, N.K. and Wah, C.K. (2008) "Relationship Marketing, Customer Satisfaction and Loyalty: A Theoretical and Empirical Analysis From an Asian Perspective", *Journal of International Consumer Marketing*, 21(1), pp. 5-16.
- Norman, P. and Smith, L. (1995), "The theory of planned behaviour and exercise: An investigation into the role of prior behaviour, behavioural intentions and attitude variability", *European Journal of Social Psychology*, 25(4), pp. 403-415.
- Nguyen, N. and LeBlanc, G. (1998), "The mediating role of corporate image on customers' retention decisions: an investigation in financial services", *The International Journal of Bank Marketing*, 16(2), pp. 52.
- Nunnally, J. (1978), *Psychometric Theory*, McGraw-Hill: New York, NY.
- Nunnally, J., and Bernstein, I. (1994), *Psychometric Theory*, McGraw-Hill: New York, NY.
- O'Cass, A. and Grace, D. (2004), "Service brands and communication effects", *Journal of Marketing Communications*, 10(4), pp. 241-254.
- Parasuraman, A. and Grewal, D. (2000), "The impact of technology on the quality-value-loyalty chain: a research agenda", *Academy of Marketing Science Journal*, 28(1), pp.168-174.
- Parasuraman, A., Zeithaml, V. A. and Berry, L. L. (1988), "SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality", *Journal of Retailing*, 64(Spring), pp. 12-40.

- Patterson, P. G. (2004), "A contingency model of behavioural intentions in a services context", *European Journal of Marketing*, 38(9/10), pp. 1304-1315.
- Paul, J., Mittal, A., and Srivastav, G. (2016), "Impact of service quality on customer satisfaction in private and public sector banks", *International Journal of Bank Marketing*, 34(5), pp. 606-622.
- Rehman, M. and Afsar, B. (2012), "Relationship among corporate image, intangible perceived quality, choosing, habit and customer loyalty", *Management & Marketing*, Vol. X No. 1, pp. 183-197.
- Reichheld, F. F. and Sasser, W. E. (1990). "Zero defections: quality comes to services", *Harvard Business Review*, 68, pp.105-111.
- Reimer, A. and Kuehn, R. (2005), "The impact of servicescape on quality perception", *European Journal of Marketing*, 39(7/8), pp. 785-808.
- Roig, J. C. F., Guillén, M. E., Coll, S. F. and i Saumell, R. P. (2013), "Social value in retail banking", *International Journal of Bank Marketing*, 31(5), pp. 348-367.
- Sayani, H. (2015), "Customer satisfaction and loyalty in the United Arab Emirates banking industry", *International Journal of Bank Marketing*, 33 (3), pp. 351 – 375.
- Schumacker, R. E. and Lomax, R. G. (2004), *A Beginner's Guide To Structural Equation Modeling*, 2nd ed., Lawrence Erlbaum Associates: Mahwah, NJ.
- Sekaran, U. (2005), *Research Methods for Business a Skill Building Approach*, 4th ed., John Wiley & Sons.
- Shamdasani, P., Mukherjee, A. and Malhotra, N. (2008), "Antecedents and consequences of service quality in customer evaluation of self-service internet technologies", *The Service Industries Journal*, 28(1), pp. 117-138.
- Sufian, F., Muhamad, J., Bany-Arifin, A. N., Yahya, M. H. and Kamarudin, F. (2012), "Assessing the effect of mergers and acquisitions on revenue efficiency: evidence from Malaysian banking sector", *Vision: The Journal of Business Perspective*, 16(1), pp. 1-11.
- Sureshchandar, G.S., Rajendran, C. and Anantharaman, R.N. (2001), "A holistic model for total quality service", *International Journal of Service Industry Management*, 12(4), pp. 378-412.
- Tabachnick, B.G., and Fidell, L.S. (2007), *Using Multivariate Statistics*, 6th ed., Pearson Education: Boston.
- Van Dyke, Thomas P., Leon A. Kappelman, and Victor R. Prybutok. "Measuring Information Systems Service Quality: Concerns on the Use of the SERVQUAL Questionnaire." *MIS Quarterly* 21.2 (1997): 195-208.
- Veloutsou, C., Daskou, S. and Daskou, A. (2004), "Are the determinants of bank loyalty brand specific?". *Journal of Financial Services Marketing*, 9(2), pp. 113-125.
- Vera, J. and Trujillo, A. (2013), "Service quality dimensions and superior customer perceived value in retail banks: an empirical study on Mexican consumers", *Journal of Retailing and Consumer Services*, 20(6), pp. 579-586.
- Wang, Y., Lo, H.-P. and Yang, Y. (2004), "An Integrated Framework for Service Quality, Customer Value, Satisfaction: evidence from China's Telecommunication Industry", *Information Systems Frontiers*, 6(4), pp. 325-340.
- Zameer, H., Tara, A., Kausar, U. and Mohsin, A. (2015), "Impact of service quality, corporate image and customer satisfaction towards customers' perceived value in the banking sector in Pakistan", *International Journal of Bank Marketing*, 33(4), pp. 442 – 456.

- Zeithaml, V. A. (1988), "Consumer perceptions of price, quality, and value: a means-end model and synthesis of evidence", *The Journal of Marketing*, 52(3), pp. 2-22.
- Zeithaml, V. A., Berry, L. L. and Parasuraman, A. (1996), "The behavioral consequences of service quality", *The Journal of Marketing*, 60(2), pp. 31-46.

Figures

Figure 1: The conceptual research model

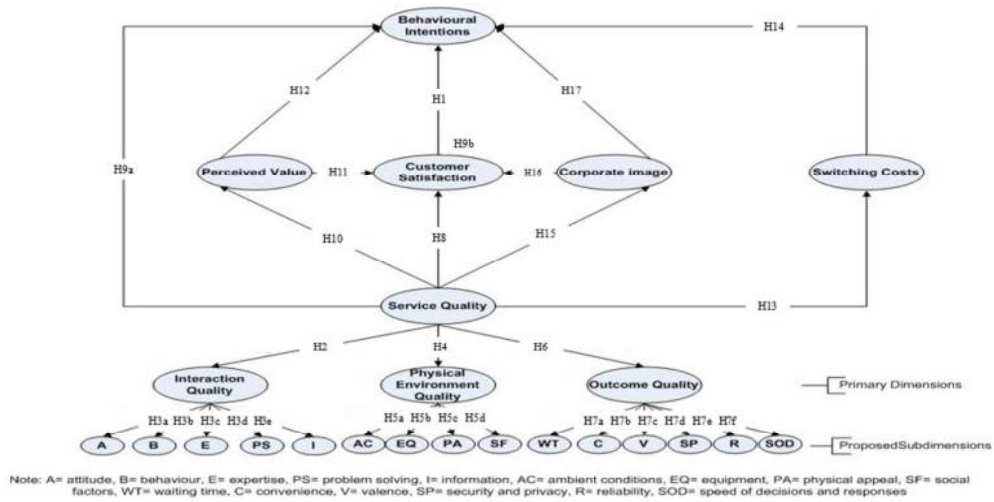
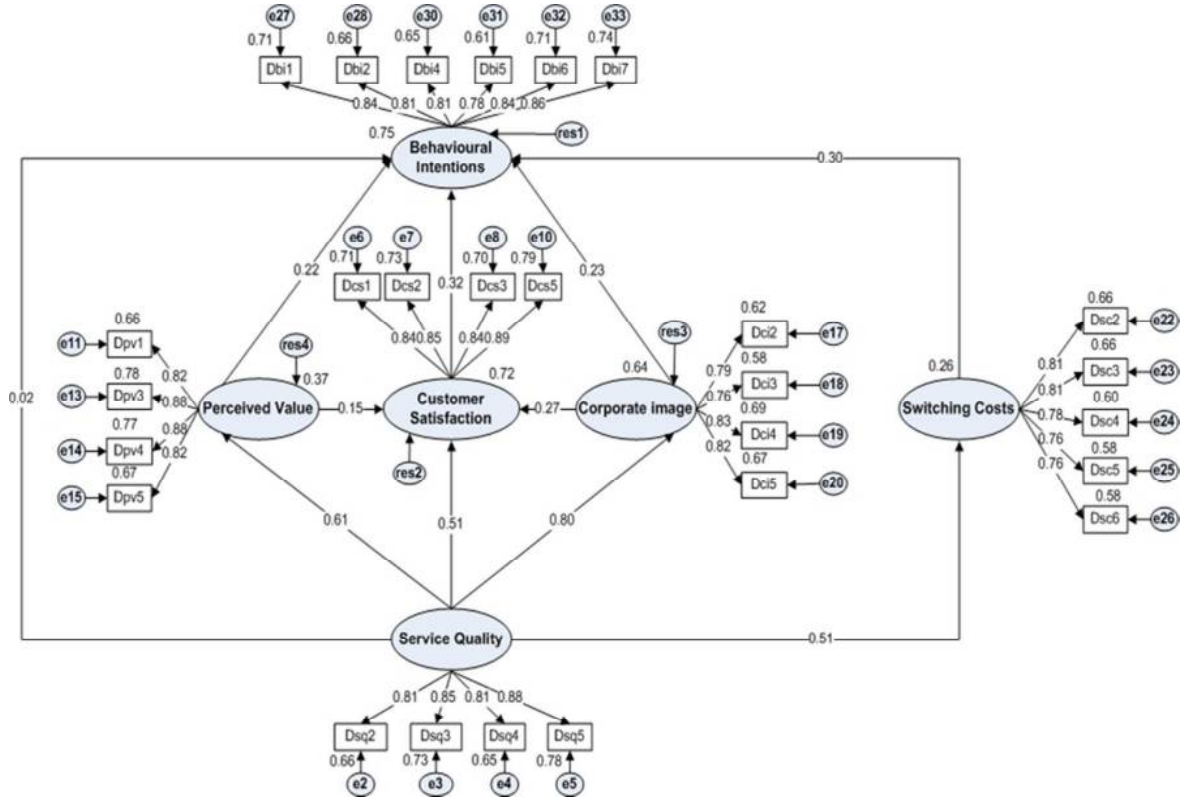
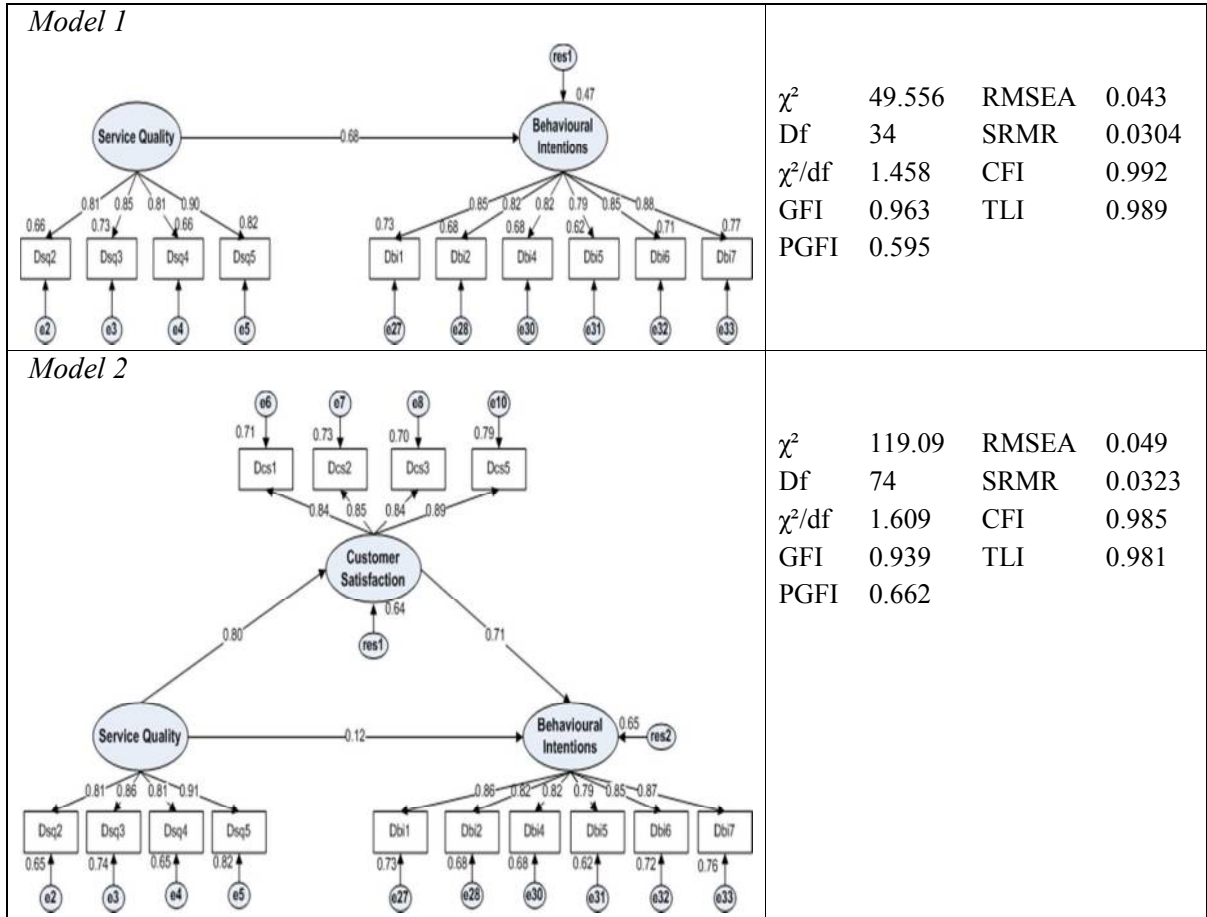


Figure 2: The Structural Model of Behavioural Intentions in Malaysian Retail Banks



χ^2 : 580.044, df: 313, GFI: 0.856, RMSEA: 0.058, SRMR: 0.081, CFI: 0.951, TLI: 0.945,
 χ^2 /df: 1.853, PGFI: 0.709

Figure 3: The Mediation Effects of Customer Satisfaction on Service Quality and Behavioural Intentions



Tables

Table 1: The results of the EFA

	<i>Sub-dimensions</i>	<i>No of items</i>	<i>Total variance explained (%)</i>	<i>Rotation loading</i>	<i>Cronbach's alpha</i>
IQ	Attitude	5	72.679	0.760-0.785	0.904
	Behaviour	6		0.583-0.744	0.921
	Expertise	5		0.615-0.788	0.908
	Problem solving	5		0.643-0.729	0.930
	Information	7		0.633-0.806	0.916
PEQ	Ambient and equipment	11	74.638	0.682-0.825	0.953
	Physical appeal	4		0.723-0.825	0.941
	Social factors	4		0.839-0.926	0.909
OQ	Waiting time	5	76.050	0.736-0.820	0.904
	Convenience	5		0.772-0.866	0.900
	Valence	3		0.743-0.864	0.865
	Security	3		0.683-0.804	0.905
	Privacy	3		0.802-0.848	0.877
	Speed of decisions and response	6		0.653-0.798	0.894

Table 2: The results of the first-order CFA models

<i>Model</i>	<i>First-Order factors</i>	<i>Factor loadings</i>	<i>CR</i>	<i>AVE</i>	<i>Correlation coefficients</i>					
IQ	Attitude	0.794-0.865	0.901	0.694	0.61-0.85					
	Behaviour	0.693-0.774	0.847	0.526						
	Expertise	0.561-0.821	0.878	0.548						
PEQ	Problem solving Information	0.721-0.865 0.704-0.830	0.872 0.894	0.631 0.586	0.39-0.65					
	Ambient & equipment	0.646-0.879	0.921	0.569						
OQ	Physical appeal	0.659- 0.821	0.841	0.570	0.65-0.81					
	Social factors	0.777-0.833	0.884	0.656						
	Waiting time	0.754-0.863	0.895	0.682						
	Convenience	0.717-0.868	0.882	0.653						
	Valence	0.796-0.922	0.895	0.740						
	Security	0.818-0.864	0.882	0.714						
Six higher order constructs	Privacy	0.847-0.851	0.886	0.721	0.967 0.963 0.962 0.973 0.963 0.717					
	Speed of decisions & responses	0.689-0.906	0.906	0.661						
	<i>Model-Fit-Indices</i>	<i>df</i>	<i>GFI</i>	<i>RMSEA</i>		<i>SRMR</i>	<i>CFI</i>	<i>TLI</i>	<i>χ^2/df</i>	<i>PGFI</i>
	IQ	481.868	0.863	0.057		0.0405	0.946	0.939	1.506	0.704
	PEQ	259.629	0.890	0.070		0.0546	0.943	0.933	2.238	0.675
	OQ	327.131	0.898	0.052		0.0438	0.968	0.962	1.686	0.689
Service quality	74.997	0.946	0.058	0.0395	0.980	0.973	1.829	0.587		
Six higher order constructs	485.012	0.877	0.048	0.0438	0.967	0.963	1.570	0.717		

Table 3: Standardised factor loadings and goodness of fit tests for the IQ sub-dimensions

<i>Sub-dimensions</i>	<i>Factor Loading (λ)</i>	<i>t-value ($p < 0.001$)</i>
Information	0.922	12.316
Problem Solving	0.891	12.479
Behaviour	0.882	11.045
Expertise	0.824	11.094
Attitude	0.811	11.702

Model-Fit-Indices
 χ^2 : 509.332, df: 270; GFI: 0.858, RMSEA: 0.060, SRMR: 0.0457, CFI: 0.940, TLI: 0.934, χ^2 /df: 1.886, PGFI: 0.713

Table 4: Standardised factor loadings and goodness of fit tests for the PEQ sub-dimensions

<i>Sub-dimensions</i>	λ	<i>t-value ($p < 0.001$)</i>
Physical Appeal	0.819	10.054
Ambient and Equipment	0.789	8.458
Social Factors	0.504	6.600

Model-Fit-Indices
 χ^2 : 259.830, df: 117, GFI: 0.890, RMSEA: 0.070, SRMR: 0.0549, CFI: 0.943, TLI: 0.934 χ^2 /df: 2.221, PGFI: 0.681

Table 5: Standardised factor loadings and goodness of fit tests for the OQ sub-dimensions

<i>Sub-dimensions</i>	λ	<i>t-value ($p < 0.001$)</i>
Privacy	0.886	13.761
Security	0.848	12.511
Convenience	0.828	10.806
Speed of Decisions and Responses	0.827	11.496
Valence	0.822	12.842
Waiting Time	0.802	12.546

Model-Fit-Indices
 χ^2 : 364.060, df: 203 GFI: 0.884, RMSEA: 0.056, SRMR: 0.0489, CFI: 0.962, TLI: 0.956 χ^2 /df: 1.793, PGFI: 0.709

Table 6: Service Quality (SQ)

<i>Primary dimensions</i>	λ	<i>t-value ($p < 0.001$)</i>
IQ	0.908	13.311
OQ	0.881	12.196
PEQ	0.624	9.304

Model-Fit-Indices
 χ^2 : 78.178, df: 42, GFI: 0.943, RMSEA: 0.059, SRMR: 0.0441, CFI: 0.978, TLI: 0.972, χ^2 /df: 1.861, PGFI: 0.600

<i>Outcome</i>	<i>Determinant</i>	<i>Causal effect λ (t-value)</i>	<i>Hypothesis</i>	<i>Assessment</i>
BI ($R^2 = 0.751$)	SQ	0.019 (0.182)	H9a	Not Supported
	CS	0.323(3.651***)	H1	Supported
	PV	0.217(3.970***)	H12	Supported
	CI	0.231(2.775**)	H17	Supported
	SC	0.303(5.853***)	H14	Supported
CS ($R^2 = 0.725$)	SQ	0.515(5.402***)	H8	Supported
	PV	0.150 (2.680**)	H11	Supported
	CI	0.275 (3.222**)	H16	Supported
PV ($R^2 = 0.370$)	SQ	0.608 (9.251***)	H10	Supported

Table 7: The statistical results for the structural model

CI ($R^2 = 0.643$)	SQ	0.802 (12.522***)	H15	Supported
SC ($R^2 = 0.259$)	SQ	0.509 (7.349***)	H13	Supported

Note: Statistically significant at *** $\alpha = .001$; ** $\alpha = .01$; and * $\alpha = 0.10$.

BI – behavioural intentions; SQ – service quality; CS – customer satisfaction; PV – perceived value; CI – corporate image; SC – switching costs
