EVALUATING SPECIFIC SERVICE QUALITY DIMENSIONS WHICH IMPACT ON CUSTOMERS’ BEHAVIOURAL LOYALTY IN HIGH-TECH INTERNET SERVICES

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ABSTRACT

This study aims to investigate the antecedents to customer retention and brand loyalty of Internet Service Providers in Thailand. The findings reveal that customers’ commitment and value are influenced by information support, privacy and security. Additionally, the positive relationships between information quality and privacy and behavioural loyalty were revealed. Customers’ commitment and value were positively associated with behavioural loyalty. However, surprisingly, there was no support for the hypothesised positive association between customers’ value with behavioural loyalty. Practical implications that can be drawn from this research will form a foundation for service providers in the residential internet market to develop new retention strategies. These providers would be able to reduce the current issues relating to the high customer churn rate. By making customers more central in company operations, these strategies can potentially reduce the expenses associated with acquiring new customers.

Keywords: Behavioural loyalty, Commitment, Value, Internet Service Providers (ISP), Thailand

INTRODUCTION

This research aims to investigate the antecedents to customer retention of Internet Service Providers (ISPs) in Thailand, especially when customer turnover has become a contentious issue in the ISP industry in many countries. For example, the Australian ISP market witnessed a customer churn rate of approximately 35% in 2007 (Spiller, Vlasic, & Yetton, 2007). Thaichon, Lobo, and Mitsis (2012) report that an average of 10% of home internet customers in Thailand switched service providers each year over the period from 2003 to 2009. Hence, the telecommunications industry is under pressure to keep, maintain and increase their existing customer base (Thaichon, Quach, & Lobo, 2013). This scenario provides an opportunity for ISPs in Thailand and in other developing countries to evaluate determinants that influence brand loyalty, which in turn, can be employed to nurture long term customer retention in the competitive home ISP market.

Business performance improves as the number of loyal consumers increase (Jahanzeb, Fatima, & Khan, 2011). Customer retention increasingly becomes very important and

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appears to be the main concern of many businesses, especially when many companies are facing costly challenges in customer acquisition (Abdolvand, Charkari, & Mohammadi, 2006) and high customer turnover (Spiller et al., 2007). A 2% increase in the customer retention rate generally equates to a 10% decrease in the cost of customer acquisition in the mobile phone service industry in China (Han, Lu, & Leung, 2012). Hence, retaining a loyal customer is more profitable in the long run in comparison to acquiring new customers (C. Wang & Wu, 2012). However, there is limited research about customer retention in the ISP context. Therefore, this paper presents the findings of how information quality and privacy are related to customers’ commitment and value in the Thai ISP context. It also investigates how customers’ commitment and value are associated with behavioural loyalty.

LITERATURE REVIEW

Based on extant literature a conceptual model was developed which is depicted in Figure 1. Customer loyalty generally results in repeat purchase over time (K. Jaiswal & Niraj, 2011). Therefore this study examines loyalty associated with the behavioural perspective which results in repurchase intention. The dependent construct of behavioural loyalty in this study, is influenced by customer value, customer commitment, website support and security.

Businesses need to provide information that helps customers to understand the products offerings and supports customer decision making (Hasley & Gregg, 2010), such as detailed product description, transparent price information, company information, professional advice, research reports, contact information, and hyperlinks to relevant websites (Yang, Bi, & Zhou, 2005). Relevant, timely, and reliable information helps customers to obtain information and enable effective decision making (Hsieh, 2013). According to Yang, Bi and Zhou’s (2005) research, lack of information completeness makes it harder for customers to get the right message and picture of the offering. On the other hand, excessive information might make it more difficult for customers in finding what they really want. Moreover, information quality plays an important role in building customers’ overall positive attitude towards the company (A. K. Jaiswal, Niraj, & Venugopal, 2010). In fact, a service provider facilitating high levels of information quality and website support is often perceived to have better service quality (Thaichon, Lobo, & Mitsis, 2013), and is able to maintain a long term relationship with customers (Canhoto & Clark, 2013). Likewise, researchers report that website design is found to be a determinant of loyalty of online customers in South Africa and Australia (Caruana & Ewing, 2010). Other website characteristics such as ease of use and information are significant influencers of customer loyalty in e-commerce (Toufaily, Ricard, & Perrien, 2013). Based on the above discussion, the following are hypothesised:

\[ H_1 - H_3: \] Information quality and website support influence customer commitment, customer value, and behavioural loyalty in an ISP context.

Additionally security and privacy are associated with customers’ feelings of protection and safety during their transactions and usage (Vlachos & Vrechopoulos, 2008). Security is defined as an extent to which a customer perceives an entire transaction, including payment methods, and instruments for storing and transmitting all confidential information, as safe (Chang & Chen, 2009). Apart from that,
perceived security refers to a threat that forms a case, condition, or incident with potential to cause economic privation to data or network resources under destruction, exposure, alteration of data, rejection of service, misuse and mistreatment (Roca, García, & Vega, 2009). Privacy is often a concern of customers of high-tech services, which relates to customers’ perception of the quality of processes used for personal information transmission and storage (Özgüven, 2011). Security and privacy are generally strongly related to an ISP’s reliability and responsiveness (Thaichon, Lobo, & Mitsis, 2014). These attributes can be considered as cognitive evaluations of performance over time which are anticipated in building affective attachment (Fullerton, 2005). It has been confirmed that customer privacy plays a significant part in determining loyalty in both retailing and content sites (A. K. Jaiswal et al., 2010). Recently, Limbu, Wolf, and Lunsford (2011) report a positive link between customer privacy and website loyalty in the USA. Based on the above discussion, we hypothesise the following:

\[ H_4 - H_6: \] Security and privacy influence customer commitment, customer value, and behavioural loyalty in an ISP context.

Customer commitment refers to consumer’s conviction to continue a relationship that results in functional and emotional benefits (Tuškej, Golob, & Podnar, 2013). Numerous studies have recently demonstrated that there is a positive correlation between customer commitment and customer repurchase. For example, Cater and Zabkar (2009) report that affective and calculative commitment positively affects the customers’ intention to continue a relationship with their service provider in Central and Eastern Europe service sector. Bügel, Buunk, and Verhoef (2010) demonstrate that customers with high levels of calculative commitment are unwilling to switch to another service provider because of the great switching costs. Verhoef (2003) finds a positive connection between affective commitment and customer loyalty in the financial services industry. Fullerton (2005) states that calculative commitment and affective commitment positively influence behavioural intentions (Cater & Zabkar, 2009; Fullerton, 2005). Furthermore, customer value is concerned with how customers perceive the trade-off between benefits and sacrifices in their relationships with the company (Blocker, 2011). A research study in the Australian mobile services context reports that value had a greater impact on loyalty than service quality and switching costs (R. Lee & Murphy, 2008). In the Chinese mobile data services market, customer value has direct effects on repurchase intention (Qian, Peiji, & Quanfu, 2011; Y. Wang, Lo, & Yang, 2004). As a result, it can be concluded that an ISP with greater value has a higher level of behavioural loyalty among its customers. Based on extant literature the following relationships were hypothesised and shown in Figure 1:

\[ H_7: \] Customers’ commitment influences behavioural loyalty
\[ H_8: \] Customers’ perceived value influences behavioural loyalty

Figure 1. The proposed conceptual model

METHODOLOGY

The study sample
To test the hypotheses, an online survey was designed and conducted in all regions of Thailand. Thailand is ranked third in South East Asia by way of residential internet usage with an estimated 17,483,000 internet users in 2009 (CIA, 2013) and over 24
million internet users in 2012 (IWS, 2013). The number in 2012 represented over one-third of the Thai population. The competition in Thailand among residential internet service providers is intense. Currently there are three majors ISPs and sixteen smaller ones across the country (Thaichon & Quach, 2013). In this highly competitive market, the churn rate of internet users was approximately 12% in 2009 (Thaichon et al., 2012). This scenario, therefore, poses huge challenges to ISPs especially in the area of customers’ repurchase intention.

Data collection
Data was collected from residential internet users in Thailand. A selective customer database of a well-established ISP in Thailand was utilised as the sampling frame. This database included customers throughout Thailand who were not locked into any fixed term contract with the ISP. It was a requirement that the participants were over 18 years of age and they should have used home internet services. The survey instrument was administered online using the university’s Opinio platform. The web link of the online survey was relayed by the chosen ISP to households in the sampling frame. The university’s Opinio platform was kept live for a period of three months.

It was calculated that the representative sample of Thailand’s population would be a number exceeding 700 (using a confidence level of 95%). However, owing to the large number of variables included in the survey, plus the fact that this study intended to undertake advanced statistical analysis using Structural Equation Modeling, the ideal sample size was 2000. The average response rate for surveys via email is approximately 30% (Nulty, 2008). Hence a total of 8000 surveys were emailed in two stages, i.e. 4000 surveys were distributed in all geographical regions of Thailand and the other 4000 were similarly emailed to participants a week later. The final usable sample size was 2059. In terms of respondents’ profiles, 65.5% of the total respondents were male, and 34.5% female. The age group of 18 to 28 made up 22.6% of the total respondents; 38.7% were 29 to 39 years old; 24.8% belonged to the 39 to 49 age group; and 13.9% were 50 years or older.

RESULTS
Since the scales used in this study were validated in previous research (Table 1), exploratory factor analysis was not essential. The multi-scale nature of the data and the use of ordinal scales requires the use of polychoric correlation matrices of software programs (Hair, Anderson, Tatham, & Black, 1998). Hence, AMOS Version 20 was used. Confirmatory factor analysis was performed to examine whether theoretical relationship between items and their hypothesised factors were supported by the data (Cunningham, 2010). Subsequently, the measurement models were linked as in the proposed model using Structural Equation Modelling (SEM). In addition bias corrected bootstrap techniques was employed to further understand the possible mediating effects among constructs. The fit indices (Chi-square = 611.304; p-value = 0.000, CMIN/DF = 7.547, GFI = 949; AGFI = 0.924, TLI = 0.962, CFI = 0.971, RMSEA = 0.066, 90%CI = (0.061, 0.070), SRMR = 0.0522) indicate that the model was a reasonable fit to the data. The results from the structural model are shown in Table 2. All direct relationships between constructs were supported except that the effects of information and website support, and security and privacy on behavioural loyalty were indirect as indicated in Table 3. All direct effects ranged from moderate
to strong with an exception of value and behavioural loyalty where the association was found to be relatively weak.

**Table 1: Study Constructs**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Item</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information</td>
<td>The ISP provides high quality information</td>
<td>Kim and Niehm (2009)</td>
</tr>
<tr>
<td>and website</td>
<td>The ISP provides relevant information</td>
<td></td>
</tr>
<tr>
<td>support</td>
<td>The ISP provides timely information</td>
<td></td>
</tr>
<tr>
<td>Security and</td>
<td>This ISP has high security features</td>
<td>Vlachos and Vrehopoulos</td>
</tr>
<tr>
<td>Privacy</td>
<td>I feel safe in my transactions with this ISP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I feel like my privacy is protected at this ISP</td>
<td></td>
</tr>
<tr>
<td>Value</td>
<td>I would consider this Internet service package to be a good buy</td>
<td>Kim and Niehm (2009)</td>
</tr>
<tr>
<td></td>
<td>The service package of this Internet service provider is worthwhile</td>
<td></td>
</tr>
<tr>
<td>Commitment</td>
<td>Even if this ISP would be more difficult to buy, I would still keep buying it</td>
<td>Eisingerich and Rubera (2010)</td>
</tr>
<tr>
<td></td>
<td>I am willing 'to go the extra mile' to remain a customer of this ISP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I will not buy this ISP again in the future</td>
<td></td>
</tr>
<tr>
<td>Behavioural Loyalty</td>
<td>I would do more business with this ISP in the next few years (-)</td>
<td>Zeithaml, Berry, and Parasuraman (1996)</td>
</tr>
<tr>
<td></td>
<td>I would do less business with this ISP in the next few years</td>
<td></td>
</tr>
</tbody>
</table>

Table 1 above presents the scales that were used to operationalise the constructs within this study. The survey instrument was developed in English and translated into Thai by a bilingual researcher. The survey was then translated back into English to verify translation reliability. The translated versions were also cross-checked by three other bilingual researchers to ensure both content and face validity.

**Table 2. Results of Hypotheses Testing**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>p</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment &lt;-- Information</td>
<td>.520</td>
<td>.049</td>
<td>10.542</td>
<td>***</td>
<td>.478</td>
</tr>
<tr>
<td>Value &lt;-- Information</td>
<td>.572</td>
<td>.056</td>
<td>10.199</td>
<td>***</td>
<td>.429</td>
</tr>
<tr>
<td>Commitment &lt;-- Security</td>
<td>.302</td>
<td>.044</td>
<td>6.848</td>
<td>***</td>
<td>.298</td>
</tr>
<tr>
<td>Value &lt;-- Security</td>
<td>.371</td>
<td>.051</td>
<td>7.238</td>
<td>***</td>
<td>.299</td>
</tr>
<tr>
<td>Behavioural &lt;-- Commitment</td>
<td>.733</td>
<td>.042</td>
<td>17.630</td>
<td>***</td>
<td>.743</td>
</tr>
<tr>
<td>Behavioural &lt;-- Value</td>
<td>.067</td>
<td>.022</td>
<td>3.099</td>
<td>.002</td>
<td>.084</td>
</tr>
<tr>
<td>Behavioural &lt;-- Information</td>
<td>.004</td>
<td>.044</td>
<td>.080</td>
<td>.936</td>
<td>.003</td>
</tr>
<tr>
<td>Behavioural &lt;-- Security</td>
<td>.040</td>
<td>.037</td>
<td>1.085</td>
<td>.278</td>
<td>.040</td>
</tr>
</tbody>
</table>

*** p values are statistical significant at 0.001 levels
Table 3: Standardised indirect effects of Information and website support, and Security and privacy on Behavioural loyalty

<table>
<thead>
<tr>
<th>Construct</th>
<th>Standardised Indirect Effect</th>
<th>95% CI (*)</th>
<th>Two tailed Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lower Bounds</td>
<td>Upper Bounds</td>
</tr>
<tr>
<td>Information</td>
<td>.391</td>
<td>.292</td>
<td>.341</td>
</tr>
<tr>
<td>Security</td>
<td>.247</td>
<td>.155</td>
<td>.493</td>
</tr>
</tbody>
</table>

(*) The 95% CI is obtained by the bias-corrected bootstrap with 2,000 bootstrap samples.  
*** p values are statistical significant at 0.001 levels

DISCUSSION

The results reveal that both information and website support, and privacy and security had significant influences on customer commitment. This proves that if customers perceive that they have access to a trusty and complete information source, they are more determined to engage with the service provider. In other words, an ISP with a high perceived quality and quantity of information provided on the company websites is able to retain their customers. Nowadays customers value information and website support because it is most likely their preferred method to interact with the company and they usually need a lot of information since their everyday life is considerably involved with the internet. Similarly, ISP subscribers who feel safe with their privacy and security will automatically commit themselves to the company. When customers perceive that their privacy is protected and their transaction with the company is secured, they feel that the company is reliable and start engaging with the company. This is evitable as online frauds and cheats as well as privacy invasion are an everyday occurrence. In excess of $500 billion dollars were lost as a result of cybercrime in 2012 (IC3, 2012). In addition, according to a report by the Financial Times, basic demographical information of customers are on sale for just $0.0005 per individual, or $0.50 per thousand people (Steel, 2013). This has made privacy and security one of biggest concerns of customers (Roca et al., 2009).

These two specific factors of service quality in ISP context were also found to positively influence customer value. Customers would consider that a package of an ISP is worthy if the service is perceived to have high quality information as they can make informed decision and reduce the risk of choosing the wrong option. Moreover, reliable transactions and communications practices decrease the chance of losing money or private information, thereby increasing the value of the services. Evidently this supports previous work conducted by the likes of Kim and Niehm (2009). On the other hand, value and commitment were direct antecedents to behavioural loyalty. There was moderate support for the hypotheses regarding the relationship between customer commitment, and behavioural loyalty. When customers have a sense of belonging with a service provider, they tend to feel loyal towards that service provider. This supports previous work conducted by the likes of Fullerton (2005). However, the effect of perceived value on behavioural loyalty is relatively weak as compared to that of commitment. A possible explanation could be that the influence of value manifests itself through other antecedents of loyalty such as satisfaction.
The information quality reflects the depth and range of information on product or service offerings. In addition, privacy and security is often referred as one of the main reasons why customers are unlikely to complete a transaction as they are usually concerned about consequences of providing personal information for example credit card data to the service providers (O. Lee & Turban, 2001). Surprisingly there were no direct effects of either “information and website support” or “security and privacy”, on customer repurchase intention, this in contrast to the findings of a research study by Kim and Niehm (2009). Instead, their influences were indirect through commitment and value. Higher quality of information support as well protected privacy and secured transactions prompt an ISP’s customers to feel committed to their service providers, which results in repeat purchase. In general, information and website support exerted more influence on commitment and value than security and privacy did. Commitment was also a stronger predictor of behavioural loyalty than value.

**MANAGERIAL IMPLICATIONS AND FUTURE RESEARCH DIRECTIONS**

This study has provided understanding of the relationships between information and website support, and security and privacy, customer affective and cognitive evaluations, and loyalty. The proposed research develops an understanding about consumer buyer behaviour of home Internet services in Thailand, and creates an ideal model aimed at customer retention. It provides valuable insights into consumer retention in the home Internet services of Thailand. This study is the first of its kind which investigates the different effects of information support and privacy and security on customer affective and cognitive evaluations as well as customer repurchase intention in the high tech services context. ISP services are an interesting context as information and transactions/communications between service providers and customers take place through both online and offline channels. There has not been a thorough study examining these elements and their outcomes.

Additionally, this research contributes a new body of knowledge with regards to the future potential of the ISPs in Thailand and for other ISPs in similar developing countries. Beneficiaries of this study include various stakeholders, including consumers of ISPs, ISPs themselves, the government, and other commercial interests. Practical implications that can be drawn from this research will form a foundation for service providers in the home ISP to develop new retention strategies. By making customers more central in company operations, these strategies can potentially reduce the expenses associated with acquiring new customers. As a result, ISPs will be able to reduce the current issues relating to customer switching in the home ISP in Thailand, as well as in other countries that have similar demographic profiles. In terms of practical implications, ISPs need to consider information and website support, as well as their privacy and security practice in order to retain their customers. By enhancing these factors, firms can influence customers’ commitment and perceived values, which are critical for an ISP’s success and long term sustainability.

There are several limitations of this study. Firstly, the proposed conceptual model in this study was empirically tested using data of ISP customers in Thailand which could be different from customers in other service industries as well as in other cultures. Future research should be conducted to test the generalisability of this model in other
contexts such as Vietnam, Cambodia and Burma. Secondly, this study only examines the relationships between value and commitment on customer loyalty. Other cognitive and affective evaluations by customers, for example customers’ trust, and satisfaction can be a fruitful research area in order to further understand other determinants of behavioural loyalty and their interrelationships with information and website support, and security and privacy. Finally, a longitudinal study of ISP’s customers should be carried out to determine the changing patterns of customers’ needs and desires.

References


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**Figure 1. The proposed conceptual model**