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Customer Intention to Stay with Banks: The Role of Virtual Service

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Abstract - **Identifying the success factors that contribute to customer satisfaction and loyalty are crucial and it is a continuous process in order for firms to stay competitive. This paper examines the factors that determine the customer satisfaction and loyalty and its causal effects using a theoretical model. The research model consists of four exogenous latent constructs, namely service quality, perceived value, brand image and online banking quality. Customer satisfaction is the mediator and the endogenous variable is intention to stay. Data relating to the constructs were collected from 12 banks' customers located in the Klang Valley by using convenience sampling method, and subjected to Structural Equation Modeling (SEM) analysis. The hypothesized structural model fits the data well. The results disclose that perceived value and online banking quality have a direct and indirect effect on intention to stay, while service quality and brand image have only an indirect effect on intention to stay.**

Keywords *- Banking customer satisfaction, Customer loyalty, Online banking quality, Service quality.*

1. Introduction

The banking industry is highly competitive in many countries due to the liberalization of the sector and technological innovation. Furthermore, consumers nowadays have a higher expectation for more value added services such as efficient mobile banking and technology driven product. A survey conducted by Ernst and Young (Ernst and Young, 2016) on global consumer banking reveals that 40% of customers express that they are less dependent on their primary financial service providers. In addition, only one third of customers perceive product differentiation. The research also reveals that there are three threats in retail banking, namely, changing of consumer behaviour due to a greater experience in digitalization of businesses, poor response of the banking sector to customer expectations, and substitution of financial services.

The reasons on why customers decide to stay or switch to another bank are not easy to determine. This may be due to intrinsic factors such as psychological elements like higher demand for service quality, and extrinsic factors such as response to competitors' value offer. Thus, the efforts of finding out the real drivers of customer intentions are crucial for long-term business sustainability. This study is to identify customer intention to stay with banks in Malaysia setting with presence of customer satisfaction as moderator.

The rest of the paper is organised as follows. The next section explains the literature review on intention to stay in banking industry. Section 3 explains the methodology employed to estimate and analyse data. Section 4 provides the empirical findings and discusses the results. Section 5 concludes this study and finally, Section 6 critically reviewed and discussed the theoretical and managerial implications of customer intention to stay with banks.

2. Literature Review and Hypothesis Development

Ref. [17] argue that consumers' perceptions of service quality are along a continuum ranging from ideal quality to totally unacceptable quality. It depends on whether customers' perceptions on the received services are meeting, falling short or exceeding their expectations. Ref. [15] defines that service quality is about a consumer's prior expectations about the performance of the firm, and this attitude affects their intentions to purchase. Ref. [11] measures the relationships between service quality and customer loyalty by using SERVQUAL model. This study discloses that service quality is positively associated with customer satisfaction in banking setting. In the same setting, Ref. [22]'s study shows that service quality is also positively related to customer satisfaction and subsequently leads to customer loyalty. The author suggests that SERVQUAL model is a suitable instrument to measure bank service quality. Thus, the hypothesis is as below:

H1: Service quality has a direct positive relationship on intention to stay.

Ref. [24] defines perceived value as the consumers' overall assessment of the utility of a product based on perceptions of what is received and what is given. The perception of values can be in the form of low price, product value, product quality or worth for money. The author highlights that customers who perceive "value for money" are more satisfied than customers who do not perceive

"value for money". Ref. [13] highlights that perceived value created from usefulness and compatibility of mobile banking has a strong positive influence on intention to use mobile banking. It is due to the convenience that is created from service delivery channel offers value for customers due to accessibilities at anytime and anywhere. In addition, Ref. [18] discloses that perceived value, service quality and trust are the drivers of intention to stay. Thus, the hypothesis is as below:

H2: Perceived value has a direct positive relationship on intention to stay.

Ref. [10] defines brand image as consumer's response to the brand. He highlights that consumer-based brand image occurs when the consumer is familiar with the brand and holds some favorable, strong and unique brand association in memory. On the other hand, Ref. [23] examines the role of brand image in managing long-term customer relationships. The result discloses that there is a strong direct positive relationship to both customer satisfaction and intention to stay. In addition, it enhances customer loyalty level and reduces switching behavior through customer satisfaction as mediation. Thus, the hypothesis is as below:

H3: Brand image has a direct positive relationship on intention to stay.

According to Ref. [2], the trend of consumers have move towards capitalizing digital channels to perform business transactions in financial institutions in which mobile channel has the capacity to delight customer and obtain a higher customer loyalty. Ref. [25] acknowledges that the online service quality has the same scenario as offline service quality for banking whereby the service quality exerts an indirect influence on customer loyalty through customer satisfaction. Based on a local study, Ref. [1] reveals that security and convenience are the major drivers of customer service delivery of online banking in Malaysia and it contributes to customer satisfaction in electronic banking context. Likewise, Ref. [12] reveals that internet banking services are able to increase customer satisfaction, hence increasing both customer loyalty and word-of-mouth. Thus, the hypothesis is as below:

H4: Online banking quality has a direct positive relationship on intention to stay.

Ref. [15] defines satisfaction as consumers' fulfilment response. It is a judgment that a product or service provides a pleasurable level of consumption related fulfilment. The levels of fulfilment can be under or over the fulfilment. According to Ref. [1], customer or consumer satisfaction is a response pertaining to a particular focus determined at a particular time. Therefore, the response can be cognitive, emotional or conative in nature. The response is focused on a particular object such as products, services, expectations and consumption experiences. This response occurs at a particular time, such as during consumption, after consumption or post purchase or based on accumulated experiences.

One of the possible outcomes of customer satisfaction is well documented as customer loyalty (e.g. American Customer Service Index model; European Customer Satisfaction Index Model). Ref. [15] defines loyalty as a deeply held commitment to repurchase or intention to stay with a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behavior. In this aspect, it is referring to attitudinal loyalty. Although the outcome of customer satisfaction is well defined but the customer satisfaction construct itself is a complex construct due to various possible ways to relate it. It can be acted in terms of independent, dependent, mediator or moderator variable (Ref. [16]). In addition, it has various dimensions (Ref. [6]; Ref. [25]) have identified that customer satisfaction acts as mediator between drivers of customer satisfaction and intention to stay in the banking sector. Thus, the hypotheses are as follows:

H5: Service quality has an indirect positive relationship on intention to stay via customer satisfaction.

H6: Perceived value has an indirect positive relationship on intention to stay via customer satisfaction.

H7: Brand image has an indirect positive relationship on intention to stay via customer satisfaction.

H8: Online banking quality has an indirect positive relationship on intention to stay via customer satisfaction.

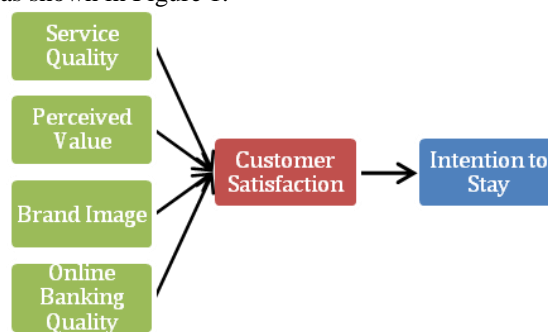Thus, this study proposes a conceptual framework as shown in Figure 1.

Figure 1. Conceptual framework

3. Methodology

The data was collected from 12 bank branches' customers within the Klang Valley in Malaysia by convenience sampling method. Convenience sampling strategy was used to ensure that bank users were sampled conveniently available to achieve the objectives of the study (Ref. [21]). A self-administered questionnaire-based survey was conducted. The measurement scales of respective constructs in this study are adapted from previous studies with modifications in the wording in order to

be consistent and reflect the local context. The instrument consists of six measurement scales with four in exogenous variables (service quality, perceived value, brand image and online banking quality), one mediator (customer satisfaction) and one endogenous variable (intention to stay). All the items were measured using a five-point Likert Scale anchored by 1 (strongly disagree) and 5 (strongly agree). The last section of the questionnaire requested participants to fill in their profiles. A total of 700 questionnaires were handed out to the respondents and only 503 questionnaires returned were usable providing a response rate of about 72% and that non-response error is not a major issue (Ref. [14]).

Three statistical methods which are reliability analysis, factor analysis and path analysis were used to test the hypothesis presented in this study. These statistical analyses were conducted using the recent advancement in statistical analysis method, namely Partial Least Squares Structural Equation Modeling (PLS-SEM). PLS-SEM allows the development of parsimonious predictive-based research model and more confirmatory oriented as compared to covariance-based SEM (CB-SEM) (Ref. [8]). In addition, PLS-SEM employs variance-based method and relaxes assumptions on sample size, number of indicators as well as data normality. It makes theory development promising and appropriate in various contexts of study (Ref. [3]).

4. Findings

Table 1 shows the profile of the respondents who contributed in this survey. From the 503 respondents, 277 were female (55.1%) and 226 were male (44.9%). As for marital status, 58.8% of them were single, 38.6% of them were married, and 2.6% of them were divorced or separated. In term of ethnic composition, 61.8% of them were Chinese, 21.9% of them were Malay, 15.7% of them were Indian and 0.6% of them were others. The majority or 46.7% of them were between 20 and 29 years old. Followed by 6.8% of them were 19 years and below, 27.2% of them were 30 to 39 years old, 12.5% of them were 40 to 49 years old, 5.8% of them were 50 to 59 years old and 1.0% of them were 60 years old and above. About respondents' educational profile, 12.7% of them were secondary level of education, 28.4% of them were diploma level of education, 51.3% of them were undergraduate level of education and 7.6% of them were postgraduate level of education. As for respondents' income profile, 31.6% of them were with monthly income of less than RM2,000, 23.9% of them were with monthly income of RM2,001 to RM3,000, 22.3% of them were with monthly income of RM3,001 to RM4,000, 13.5% of them were with monthly income of RM4,001 to RM5,000, 4.8% of them were with monthly income of RM5,001 to RM6,000, 1.4% of them were with monthly income of RM6,001 to RM7,000 and 2.6%

of them were with monthly income of more than RM7,000.

Table 1. Respondents' Profile

	Attribute(s)	Number	Percentage
Gender	Female	277	55.1%
	Male	226	44.9%
Marital status	Single	296	58.8%
	Married	194	38.6%
	Divorced	13	2.6%
Age (years)	Under 20	34	6.8%
	20 – 29	235	46.7%
	30 – 39	137	27.2%
	40 – 49	63	12.5%
	50 – 59	29	5.8%
	Over 59	5	1.0%
Race	Malay	110	21.9%
	Chinese	311	61.8%
	Indian	79	15.7%
	Other	3	0.6%
Education	Secondary	64	12.7%
	Diploma	143	28.4%
	Bachelor Degree	258	51.3%
	Post Graduate's Degree	38	7.6%
Income (RM)	Below 2,000	159	31.6%
	2,000 – 3,000	120	23.8%
	3,001 – 4,000	112	22.3%
	4,001 – 5,000	68	13.5%
	5,001 – 6,000	24	4.8%
	6,001 – 7,000	7	1.4%
	More than 7,000	13	2.6%

The factor loadings analysis, composite reliability test and Cronbach Alpha reliability test for all the variables are shown in Table 2. The results indicated that the Cronbach alpha for all the constructs exceeded the recommended value of 0.7 as recommended by Robinson et al. (1991). Cronbach alpha for the constructs ranged from the lowest of 0.817 (perceived value) to 0.906 (intention to stay). In other words, the measurement scales of the constructs were stable and consistent. The composite reliability and factor analysis were used to assess convergence validity. The results indicated that the loadings for all reflective items were well above the recommended value of 0.6 as suggested by Ref. [7]. Composite reliability values is show the degree to which the construct indicators imply the latent construct, ranged from 0.873 to 0.930, which well above the recommended value of 0.7. This indicates that the constructs possess internal consistency (Ref. [7]). In addition, the constructs also show satisfactory convergent validity with average variance extracted (AVE) exceeded the threshold value of 0.5. This implies that the items loaded to the corresponding constructs explain more than 50% of the constructs' variances (Ref. [7]).

Table 2. Factor loadings analysis, Composite reliability test and Cronbach Alpha reliability test

Factor's name	Variable	Factor loading	CRC	CR	AVE
Service quality (SV)	SV1	0.821	0.888	0.918	0.690
	SV2	0.846			
	SV3	0.822			
	SV4	0.816			
	SV5	0.849			
Perceived value (PV)	PV1	0.789	0.817	0.873	0.580
	PV2	0.752			
	PV3	0.832			
	PV4	0.801			
	PV5	0.615			
Brand image (BI)	BI1	0.763	0.833	0.883	0.601
	BI2	0.829			
	BI3	0.801			
	BI4	0.769			
	BI5	0.710			
Online banking quality (OB)	OB1	0.728	0.834	0.882	0.601
	OB2	0.817			
	OB3	0.834			
	OB4	0.724			
	OB5	0.766			
Customer satisfaction (CS)	CS1	0.765	0.875	0.909	0.668
	CS2	0.839			
	CS3	0.847			
	CS4	0.818			
	CS5	0.815			
Intention to stay (IS)	IS1	0.853	0.906	0.930	0.727
	IS2	0.880			
	IS3	0.818			
	IS4	0.861			
	IS5	0.849			

Notes: CRC - Cronbach's reliability coefficients; CR - Composite reliability; AVE - Average variance extracted

Discriminant validity was also assessed to ensure that the concepts are distinctively different (Ref. [21]). The methods used to determine the constructs' discriminant validity are the Henseler's Heterotrait–Monotrait Ration (HTMT) approach which is based on the multitrait-multimethod matrix (Ref. [9]) and the Ref. [5] criterion. The HTMT approach is more likely to indicate a lack of discriminant validity as compared to the Fornell and Larcker approach and cross loadings approach (Ref. [9]). Table 3 shows the results of Fornell and Lacker criterion, it is found that the square root of AVE for each of the constructs is greater than the correlation estimate of the constructs which indicates that the constructs are distinctively different from one another. Likewise, Table 4 indicated none of the HTMT values exceed the recommended threshold of 0.9 as recommended by Ref. [9] suggests the presence of discriminant validity in this study.

Table 3. Discriminant Validity – Fornell and Larcker Criterion

	BI	CS	IS	OB	PV	SQ
BI	0.775					
CS	0.689	0.817				
IS	0.467	0.563	0.853			
OB	0.384	0.480	0.419	0.775		
PV	0.541	0.630	0.586	0.473	0.762	
SQ	0.630	0.623	0.438	0.320	0.551	0.831

Note: Diagonal elements highlighted in bold represent the square root of AVE. Off diagonal elements are bivariate correlations between the constructs.

Table 4 .Discriminant Validity – HTMT Criterion

	BI	CS	IS	OB	PV	SQ
BI						
CS	0.807					
IS	0.536	0.630				
OB	0.457	0.554	0.476			
PV	0.654	0.733	0.679	0.576		
SQ	0.728	0.702	0.484	0.370	0.641	

The path analysis of Table 5 of the mediation model includes the standardized estimates for the causal paths for the indirect and direct effects. To obtain the results of path coefficient assessment, we applied bias-corrected percentile bootstrap confidence intervals based on a large number of bootstrap samples of 10,000 cases. According to Ref. [20], this procedure offers a powerful approach to test a large variety of hypotheses. The service quality reveals that there exists full mediation effects of service quality on intention to stay with customer satisfaction as mediator ($\gamma_5 = 0.050$, $p < 0.01$) while the estimate of the direct effect from service quality to intention to stay was not significant ($\gamma_1 = 0.032$, $p > 0.05$). This results suggesting that *H1* "service quality has a direct positive relationship on intention to stay" is not supported and *H5* "service quality has an indirect positive relationship on intention to stay supported. Thus, customer satisfaction fully mediates the path between service quality and intention to stay.

Perceived value had a positive, significant direct effect on intention to stay ($\gamma_2 = 0.332$, $p < 0.01$); in support of *H2* "perceived value has a direct positive relationship on intention to stay". In addition, perceived value displays a significant positive indirect mediation effect on intention to stay with customer satisfaction as a moderator predictor ($\gamma_6 = 0.057$, $p < 0.01$). Therefore, potentially, customer satisfaction partially mediates the path between perceived value and intention to stay which is supporting *H6* "perceived value has an indirect positive relationship on intention to stay mediated by customer satisfaction".

With respect to brand image, the direct effect is not significant as brand image is a not significant predictor of intention to stay ($\gamma_3 = 0.06$, $p > 0.05$). From this, we can see that *H3* "brand image has a

direct positive relationship on intention to stay" is not true. However, the indirect mediation effect of brand image on intention to stay with customer satisfaction as mediator is significant ($\gamma_7 = 0.087$, $p < 0.01$). This denotes that brand image is an indirect predictor for intention to stay. From this we can see that *H3* "brand image has a direct positive relationship on intention to stay" is not supported while *H7* "brand image has a direct positive relationship on intention to stay mediated by customer satisfaction" is supported.The bank level of online banking quality reveals that there exists partial mediation effect of online banking quality on intention to stay with customer satisfaction as mediator ($\gamma_8 = 0.037$, $p < 0.01$) while the estimate of the direct effect from online banking quality to intention to stay was also significant ($\gamma_4 = 0.115$, $p < 0.01$). From this, we can see that *H4* "online banking quality has a direct positive relationship on intention to stay" is supported and *H8* "online banking quality has a direct positive relationship on intention to stay mediates by customer satisfaction" is also supported. Thus, customer satisfaction partial mediates the path between online banking quality and intention to stay.

Table 5. Path Coefficients Assessment

	H	SC	SE	t-stat
SQ → IS	H1	0.032	0.049	0.65
PV → IS	H2	0.332**	0.047	7.043
BI → IS	H3	0.06	0.054	1.101
OB → IS	H4	0.115**	0.046	2.515
SQ → CS → IS	H5	0.050**	0.016	3.159
PV → CS → IS	H6	0.057**	0.018	3.199
BI → CS → IS	H7	0.087**	0.025	3.438
OB → CS → IS	H8	0.037**	0.012	3.113
CS → IS		0.238**	0.062	3.853

Notes: H -Hypothesis; SC - Standardized Coefficient; SE - Standard Error, t-stat - t-statistic, The asterisks indicate the following levels of significance: **1% and *5%.

Table 6 summarized the collinearity assessment results. It shows that all Variance Inflation Factor (VIF) values are lower than five, indicating that there is no indicative of collinearity between each set of predictor variables (Ref. [7]). Table 7 shows the results of coefficient of determination (R^2), the effect size (f^2) and the predictive relevance (Q^2) of independent variables on dependent variable in this paper. The R^2 value for customer satisfaction is 0.609. This indicates that service quality, perceived value, brand image and online banking quality explain 60.9% of variance in customer satisfaction. Likewise, the value of R^2 for intention to stay is 0.418, indicating that customer satisfaction; service quality, perceived value, brand image and online banking quality explain 41.8% of intention to stay. Particularly, the predictive relevance (Q^2) value of 0.403 for customer satisfaction, which is greater than zero, indicates that service quality, perceived

value, brand image and online banking quality factors have predictive capacity over customer satisfaction (Hair et al., 2014). Similarly, the Q^2 value of 0.301 for intention to stay indicates that customer satisfaction has predictive capacity over intention to stay. In addition, customer satisfaction (effect size (f^2) = 0.038) and online banking quality ($f^2 = 0.099$) show to possess larger effect size on intention to stay than brand image, perceived value and service quality factors. This implies that customer satisfaction and online banking quality factors are more essential than the other factors in explaining and predicting intention to stay.

Table 6. Collinearity Assessment

Independent Variable	Dependent Variable	
	CS	IS
BI	1.866	2.21
CS		2.558
OB	1.331	1.394
PV	1.766	1.914
SQ	1.846	1.958

Table 7. Determination of Coefficient (R^2), Effect size (f^2) and Predictive Relevance (Q^2)

	R^2	Q^2	IS (f^2)	Effect size
CS	0.609	0.403	0.038	Large
IS	0.418	0.301		
BI			0.016	Medium
OB			0.099	Large
PV			0.001	Small
SQ			0.006	Small

Note: f^2 values of 0.005, 0.01, and 0.025 are for *small*, *medium*, and *large effect size*, respectively.

5. Discussion and Conclusion

This study attempts to explore the drivers of customer intention to stay in the Malaysian banking sector. The results disclose that perceived value and online banking quality have a direct and indirect effect on intention to stay, while service quality and brand image have only an indirect effect on intention to stay.

The significant of perceived value and online banking quality on both customer satisfaction and intention to stay are consistent with the previous studies. Previous studies reveal that perceived value has a direct effect on intention to stay (e.g. Ref. [13]; Ref. [18]) and an indirect effect on intention to stay through customer satisfaction (e.g. Ref. [11]; Ref. [22]). Similarly, online banking quality is consistent with the previous studies (Ref. [1]; Ref. [12]) whereby it has a direct and an indirect relationship on both customer satisfaction and intention to stay.

Since customers are moving toward online and mobile transactions, use of physical transaction becomes lesser. Thus, the assessment of services is merely geared toward the value that is created from convenience and efficiency offered by virtual

service. In line with advancement of technology, innovative banking format such as Fintech will dominate part of this sector in the near future. As the banking sector is increasingly competitive, consumers are looking for a bundle of benefits. Therefore, banks have to offer value added products and innovative services that have a cutting edge in obtaining higher customer satisfaction.

On the other hand, the previous studies (e.g. Ref. [11]; Ref. [22]; Ref. [23]) consistently recognized that service quality and brand image have a direct and an indirect effect on both customer satisfaction and intention to stay. However, the findings of this study found an indirect relationship with intention to stay. This indicates that both service quality and brand image are insufficient to retain customers. It is not able to gain customers loyalty because it provides certain degree of satisfaction as the banking sector is in maturity stage. Moreover, the evaluation of service is based on a total service experience that consists of pre-purchase, purchase and post-purchase. It is between cognitive and emotional levels.

As a result, the customer experience level has to be in an emotional level instead of cognitive level. Cognitive is the information base where consumers look for costs, benefits, and quality during the transaction. It is based on the value proposition. Likewise, emotional is experiencing satisfaction. The result of satisfaction and dissatisfaction has a direct influence on purchase attitude. Hence, banks should cultivate emotional attachment. The emotional attachment is derived from synergies of both value added products and innovative services. By doing so, it would result in higher customer retention.

6. Theoretical and managerial implications, and direction for future research

This study provides two important theoretical implications on customer loyalty topic. First, the study discloses that the virtual service as one of the important elements that influence the intention to stay in banking sector. It derives from the value creation through innovation. Second, the study reveals that cognitive level of service has no retention power. Hence, it has to be at emotional level that cultivates sense of belongings.

As for managerial implications, the results of this study provide a direction for strategy formulation. In order to retain customer in a highly competitive business environment, this study suggest to use blending strategy to create higher value for customers by synergizing both values from online service and offline service.

Future research can look into the impact of customer demographic factors on customer intention to stay particularly on generation aspect (Senior, Baby boomer, generation Y, generation X, and generation Z). As the general perception on online banking is geared toward younger generations, it is interesting to find out whether any different in consumer behavior among generations. Another important element that may influence the result of customer intention to stay with banks is switching cost. The understanding of switching cost from moderation perspective is important as it may influence consumer on intention to stay.

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