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# **THE IMPACT OF E-ENABLED BANKING SERVICES ON CUSTOMER LOYALTY: EVIDENCE FROM THE SRI LANKAN CONTEXT**

**Konalingam Kajenthiran<sup>1</sup>**

<sup>1</sup>Lecturer, Department of Marketing, University of Jaffna, Sri Lanka.

**Sivarajah Rajumesh<sup>2</sup>**

<sup>2</sup>Senior Lecturer, Department of Marketing, University of Jaffna, Sri Lanka.

**Ratnam Umanakenan<sup>3</sup>**

<sup>3</sup>Lecturer, Department of Commerce, University of Jaffna, Sri Lanka.

## **ABSTRACT**

*The new information technology is becoming an important factor which determine the development and the success of financial services industry, and especially banking industry. Therefore, the realm of telecommunication and information technology streamline the banks to build loyalty among their customers. The purpose of this work is to empirically investigate comprehensive mechanism of an earlier study by Gunaratnam, Kajenthiran, Ratnam, and Sivapalan (2017). A questionnaire with seven-point Likert scale is applied to 388 usable responses. Multiple regression analysis was performed to test hypotheses. The results indicated that customer loyalty was influenced by privacy & convenience, content & website layout, speed of delivery, and accessibility.*

**KEYWORDS:** *Privacy & convenience; Content & website layout; Speed of delivery; Accessibility; Customer loyalty*

## **INTRODUCTION**

Today, several financial institutions are endeavoring to emphasize customer oriented services via internet. Because the useage of Internet or e-based services has a remarkable impact upon service providing organization (Hussien & Aziz, 2017). Besides, the Internet is now considered a strategic tool to satisfy the ever-changing customers' requirements (Alhinai, Albadi, Alshihhi, & Al-Gharbi, 2013). In this juncture, it is crucial to implement new banking services in order to develop and keep better relationships with customers. Considering the competitive environment of the industry, banks aims to design and develop its e-banking facilities to be a dynamic marketing tool to influence customers' decision making (Poon, 2007).

There are several studies focusing on the relationships among customer satisfaction, customer

loyalty and e-banking practices over the internet in the western perspective (Adapa & Cooksey, 2013; Casaló, Flavián, & Guinalú, 2008; Gorgani, 2016; Petzer et al., 2017; Thakur, 2014). But in a developing country like Sri Lanka, there is still a lack of studies that analyse the formation of above concepts. Whilst, there is a huge need for this kind of study in the northern part of Sri Lanka in the post war context, the aim of this study is to examine the influence of e- banking practices on customer loyalty. Moreover, the finding of this study helps the banks and financial institutions which are operating in this region to formulate the appropriate strategies to build customer loyalty in the context of electronic banking.

## LITERATURE REVIEW

### **e-Banking**

Increased usage of digital technologies and real-time ICT capabilities already have changed the platform for customers to adopt the e-banking practices (Nudurupati, Tebboune, & Hardman, 2016). Therefore, most of the banks and financial intermediaries are adopting e-banking practices to enable a superior banking services to their customers. In line with above fact, internet banking delivers the customers to carry out a range of banking activities electronically at any time and place with low handling cost (Amin, 2016; Angelakopoulos & Mihiotis, 2011; Narayanasamy, Rasiah, & Tan, 2011; Yoon & Steege, 2013). To be precise, the usage of internet banking has become one of the most important element in e-commerce environment (Wang, Wang, Lin, & Tang, 2003). As a result, previous researchers have empirically found that e-banking practices has an influence on customers to access internet banking with a higher degree of convenience which offers 24/7 services. (Amin, 2016; Floh & Treiblmaier, 2006; Johnson & Marakas, 2000; Karjaluo, Mattila, & Pentto, 2002; Lassar, Manolis, & Lassar, 2005; Mukherjee & Nath, 2003; Pikkarainen, Pikkarainen, Karjaluo, & Pahnla, 2004; Poon, 2007; Rotchanakitumnuai & Speece, 2004; Tan & Teo, 2000; Venkatesh & Davis, 1996). Therefore, today, several financial institutions are endeavoring to emphasize customer-oriented services via internet. In this juncture, it is crucial to implement new banking services in order to develop and keep better relationships with customers

### **Customer Loyalty**

Customer loyalty as a core consequence to gain competitive advantage over its rivals. Therefore, a loyal customer is considered as a valuable competitive asset for any organizations in the globalized level (Dekimpe, Steenkamp, Mellens, & Abeele, 1997; Flavián, Guinaliu, & Gurrea, 2006; Keating, Rugimbana, & Quazi, 2003). In this supportive way, Kotler and Armstrong (2013) suggest that the cost of attracting a new customer may be five times the cost of keeping a current customer delighted. Moreover, It is very critical to create loyalty among customers of the service providing organizations like banking and financial institutions (Casaló et al., 2008; Kheng, Mahamad, Ramayah, & Mosahab, 2010). Banks and other financial intermediaries recognize that, the information technology has already become an important pillar to create loyalty among customers (Bukhari & Kazi, 2016; Chen, 2015). Therefore, the banks introduced, E-banking as the newest delivery channel for banking services to create customer loyalty (Mobarek, 2007).

### **Theoretical Support**

The Theory of Technology Acceptance Model (TAM) is a widely accepted model in the realm of Information Technology. TAM was developed by Davis (1989) to theorize the usage

behavior of computer technology. The TAM indicates that, user acceptance can be explained by two beliefs as perceived usefulness and perceived ease of use (Chuttur, 2009; Dwivedi, Rana, Jeyaraj, Clement, & Williams, 2017). Within the last two decades, the TAM has been tested, refined, and extended to better understand the intention to use technology. Therefore, researchers have predominantly used the TAM to understand the e-banking practices (Al-Qeisi, Dennis, Alamanos, & Jayawardhena, 2014; Diatmika, Irianto, & Baridwan, 2016; Martins, Oliveira, & Popovič, 2014; Park, Baek, Ohm, & Chang, 2014; Pikkarainen et al., 2004). Konalingam, Ratnam, Sivapalan, and Naveen (2017), used the TAM theory to recommend a relationship between e-banking and customer responses, in the services banking context. The preceding theoretical standpoints indicate a relationship between e-banking and customer loyalty in retail banking settings.

### **The influence of e-banking practices on customer loyalty**

Loyal customers are now viewed as the source for company's profit, growth and market share (Ariff, Yun, Zakuan, & Jusoh, 2012; Yuen & Chan, 2010). Banking industry has moved instantly to deploy and offer new banking services via e-channels for customers and in consequence the e-banking practices have boomed promptly (Kaur & Kiran, 2015). Interestingly, researchers focus on the concept of loyalty within the context of electronic commerce, or e-loyalty. (Toufaily, Ricard, & Perrien, 2013). Today, several financial institutions are endeavouring to emphasize customer-oriented services. At this juncture, it is crucial to implement new banking services in order to develop and keep better relationships with customers. However Luarn and Lin (2003) endorse that the loyalty is almost identical to those of traditional loyalty from an online service provider. In support of this view, Ariff et al. (2012) suggest building loyalty in internet banking is prominent for banks to ensure high rate of customer retention. Further, it is recognized that e-banking services aligned with higher customer satisfaction, which directs to relationship an association with greater revenues, increased cross-sell ratios, higher customer loyalty, retention and bigger market share (Amin, 2016). E-banking system is one of best examples of innovative technologies that have a great potential to create a win-win scenario for both customers and businesses (Alhinai et al., 2013). From the foregoing discussion, the following hypothesis is formulated:

**H1:** There is a significant impact of e-banking service on customer Loyalty

### **The dimensions of e-banking practices and their influences on customer loyalty**

Gunaratnam et al. (2017) conceptualized e-banking services as a multidimensional construct consisting of four dimensions: Privacy & convenience, content &

website layout, speed of delivery, and accessibility. A brief discussion of each of these dimensions and their influences on customer loyalty to banking as follows.

**Privacy & convenience**

Privacy & convenience is one of the most beneficial features of e-banking (Gorgani, 2016; Kazi, 2013; Liao & Cheung, 2002; Usman & Usman, 2012). Privacy denote the proper authorization and confidentiality of customer’s information and transactions in a bank (Katsikas, Lopez, & Pernul, 2005; Kolsaker & Payne, 2002; Liao & Cheung, 2002) whilst convenience enables customers to access e-banking services at all times that is 24/7 access (Lichtenstein & Williamson, 2006) and any places it could never be in traditional banking (Wan, Luk, & Chow, 2005). This indicates a possible association between Privacy & convenience and customer loyalty.

**Content & website layout**

Diniz (1998) argues that banks use websites to provide information, to conduct transactions and to improve customer relationships. Therefore, content & website layout refers to the fluency or ease with which a user is able to interact with an information system (Hillier, 2003; Nantel & Glaser, 2008). In this way, firms can gain abundant benefits from well-designed websites (Al-Qeisi et al., 2014). Generally, proper navigational attributes and search facilities in website contents lead to higher level of interaction, which tap the customers mind favourably to use the system (Pikkarainen et al., 2004; Sohail & Shanmugham, 2003) and will gradually build customer loyalty.

**Speed of delivery**

Customers are particularly interested in the speed with which a service is offered or delivered because speed of e-transactions flow is critical to user satisfaction of using e-banking services (Liao & Cheung, 2002; Poon, 2007). Besides that, Johnston (2011) illustrates that certain actions, such as increasing the speed of processing information and customers, are likely to have an effect on customer satisfaction and loyalty.

**Accessibility**

Accessibility defines as the ability of users to access information and services from the web site (Ahmad & Al-Zu’bi, 2011). The pass researchers suggested that, accessibility is the one of the major driver in commercial use of the web which allows to access

the information more easily (Rotchanakitumnuai & Speece, 2004). Furthermore, easy access encourages the customers to engage in e- banking services without frequent delay and frustration (Rotchanakitumnuai & Speece, 2004). As a consequence, customers will continue to access and engage in e-banking service, which indicates accessibility hold influence over customer loyalty.

The preceding discussion indicates a strong connection between e-banking dimensions and customer loyalty to retail banking. This discussion also suggests the dimensions of e-banking have unique effects on customer loyalty. Therefore, the following hypotheses have been derived:

*H<sub>1a</sub>*: Privacy & convenience significantly influences on customer loyalty.

*H<sub>1b</sub>*: Content & website layout significantly influences on customer loyalty.

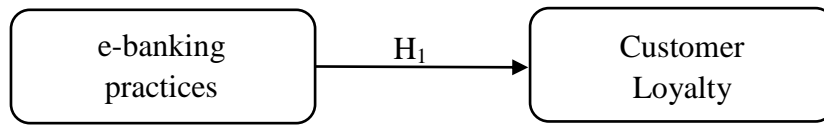
*H<sub>1c</sub>*: Speed of delivery significantly influences on customer loyalty.

*H<sub>1d</sub>*: Accessibility significantly influences on customer loyalty.

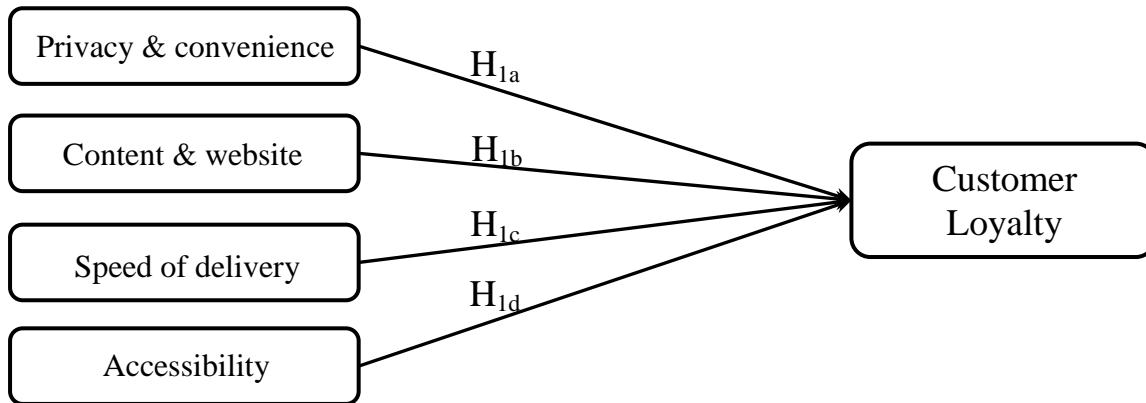
**THE PROPOSED CONCEPTUAL MODELS**

The aforementioned hypothesized relationships are depicted in Figures 1 and 2. Figure 1 shows hypotheses relating to e-banking excluding its dimensions whereas Figure 2 shows hypotheses at e-banking practices dimensions level.

**Figure 1: Conceptual model I (without the dimensions of e-banking practices)**



**Figure 2: Conceptual model II (including the dimensions of e-banking practices)**



**METHOD**

**Sample and survey administration**

The sample for this study comprised 550 customers of state and private commercial banks which are operating in Northern part of Sri Lanka. There are several studies focusing on the relationships among customer satisfaction, customer loyalty and e-banking practices over the internet in the western perspective (Adapa & Cooksey, 2013; Casaló et al., 2008; Gorgani, 2016; Petzer et al., 2017; Thakur, 2014). But in an emerging nation like Sri Lanka, there is still a lack of studies that analyse the formation of above concepts. The retail banking sector is viewed as the largest sub-category of the service sector in the Sri Lankan economy (Konalingam et al., 2017). Hence, Sri Lankan retail banks seem an ideal model setting for investigating e-banking practices and its customers an excellent choice to survey. In addition to that, there is a huge need for this kind of study in the northern part of Sri Lanka in the post war context, the aim of this study is to examine the influence of e-banking practices on customer loyalty. Moreover, the finding of this study helps the banks and financial institutions which are operating in this region to formulate the appropriate strategies to build customer loyalty in the context of electronic banking.

A paper-based survey questionnaire was used to collect the data from sample respondents. Participants were the customers of state and private commercial banks in Sri Lanka. E-banking service in Sri Lanka is presently being offered to two sets of clients, namely, individual customers and business clients. This research mainly focused on Commercial banks’ individual customers as the target population in Northern part of Sri Lanka. Therefore, the sample for this study comprised customers who have an

account at Commercial banks in this region. Participants were students, Government and private sector employers and businessman. Systematic quasi-random sampling was adopted to recruit participants for this research. Whilst, causal research approach under the conclusive research design was used in this study by the quantitative way to find out the impact of e-banking practices on customer loyalty. For that purpose, the paper-based surveys were distributed to 550 customers, from which 472 were completed and returned. Of these, 84 surveys had missing data, so they were discarded.

The respondents hold 74 percent saving account and 26 percent current account. Further they comprised 55.7 percent male and 44.3 percent female. Regarding their age, 4.1 percent were below aged 20 years, 71.4 percent were aged between 21 and 30 years, 15.7 percent were aged between 31 and 40 years, 6.4 percent were aged between 41 and 50, and the rest were above 50 years. Approximately 21 percent of the respondents are students, 35 percent are businessman, and 44 percent are employee in private/government sectors. Finally, in regards to their monthly individual income, 25 percent had an income of less than LKR. 25,000, around 53 percent had an income between LKR. 25,000 – LKR. 50,000 and the rest had income above LKR 50,000.

**Measures and instrument development**

A paper based survey instrument was developed from previous validated scales that were adapted for the purpose of this study. The scales of e-banking practices included 17 items under the four dimensions: Privacy & convenience, content & website layout, speed of delivery, and accessibility. This means that, Privacy & convenience, was operationalized using seven items; content & website

layout, using three items; speed of delivery, using three items, and accessibility, using four items. So these 17 items are adopted from Gunaratnam et al. (2017) and customer loyalty was measured with six items, of which the first two were adopted from Lin and Wang (2006) and other four taken from Casaló et al. (2008). The questionnaire has been slightly modified without changing the original contents as it translated into local language to ensure suitability for the research context and it mainly consisted two sections. Section A consists of personal demographic profile of the respondents and section B consists of 23 statements relating to the dimensions of e-banking practices and customer loyalty. A seven-point Likert type scale anchored at one for “strongly disagree”

and seven for “strongly agree” was used for items operationalizing all the constructs.

**ANALYSIS AND RESULTS**  
**Reliability and Validity Test**

All items shows strong internal consistency its constructs indicated by values of Cronbach’s alpha higher than 0.70 as suggested by Hair Jr, Black, Babin, Anderson, and Tatham (2010). This suggests that the items concerned adequately measure a single construct for each tested variable (privacy & convenience, content & website layout, speed of delivery, accessibility, and customer loyalty). Reliability measurements for each construct are shown in Table I.

**Table I: Reliability Measurement**

Variables	Number of Items (N)	Cronbach's Alpha
Privacy & convenience	07	0.726
Content & website layout	03	0.724
Speed of delivery	03	0.710
Accessibility	04	0.798
Customer Loyalty	06	0.714

For construct validity in term of the discriminant validity test, correlation analysis between the variables was performed. The result shows that correlations are low, with values no higher than 0.8, as proposed by Bagozzi (1994). This indicates that the constructs are distinct from one another and is deemed to be at an acceptable level of discrimination. Consequently, content validity is also established. Table II shows the analysis of correlation between the variables.

Besides, researchers performed KMO and Bartlett’s test to accurately assess the construct validity for each measurement item. Based on Table III, the KMO measure of sampling adequacy is more than 0.6 (0.800), which indicates sufficient inter-correlations (Pallant, 2007), whereas the Bartlett’s Test of Sphericity is significant at level 0.01 (Chi-square = 528.858). Both results indicating that the constructs are in validity (Heppner & Heppner, 2004; Sanzo, Santos, Vázquez, & Alvarez, 2003).

**Table II: Pearson’s Correlation Coefficient between the Research Variables**

Variables	1	2	3	4	5	6
1. Privacy & convenience	1					
2. Content & website layout	.431**	1				
3. Speed of delivery	.484**	.649**	1			
4. Accessibility	.236**	.207**	.231**	1		
5. E-banking Practices	.728**	.760**	.771**	.587**	1	
6. Customer Loyalty	.508**	.556**	.567**	.385**	.710**	1

Note: \*\*. Correlation is significant at the 0.01 level

**Table III: KMO and Bartlett’s Test of Sphericity of Research Variables**

<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</b>	<b>0.800</b>
Approx. Chi-Square	528.858
<b>Bartlett's Test of Sphericity</b>	10
Sig.	.000

**Descriptive Analysis of Research Variables**

Table IV shows some descriptive results for the research variables used in this study. The table shows minimum, maximum, mean and standard deviation

for the research variables of Privacy & convenience, content & website layout, speed of delivery, accessibility, e-banking practices, and customer loyalty.



**Table IV: Descriptive Analysis of Research Variables**

Variables	Min	Max	Mean	Std. Deviation
Privacy & convenience	3.00	7.00	5.9293	.61512
Content & website layout	2.33	7.00	5.8333	.78109
Speed of delivery	2.33	7.00	5.7998	.73059
Accessibility	3.25	7.00	5.5122	.70985
E-banking Practices	4.00	7.00	5.7687	.50535
Customer Loyalty	3.17	7.00	5.8247	.66586

Base on the above table, all of the items had mean values between five and six. Almost items in the dimensions of the study had mean values more than 5.5. This one indicates that, respondents in this study have perceived e-banking practices and customer loyalty favourably.

**Test of Multi-Collinearity**

Test of normality of the data, and non-existence of Multi-Collinearity is an important assumption, generally which is done before

conducting the correlation and regression (Santhapparaj & Alam, 2005). As stated by Ahsan, Abdullah, Fie, and Alam (2009), there are two major methods were employed in order to determine the presence of multi-collinearity among independent variables. These methodologies involved calculation of both a Tolerance test and Variance Inflation Factor (VIF) (Ahsan et al., 2009; Kleinbaum, Kupper, & Muller, 1988).

**Table V: Test of Collinearity**

Variable	Collinearity Statistics		Durbin - Watson Value
	Tolerance	VIF	
Privacy & convenience	.702	1.424	1.798
Content & website layout	.721	1.387	
Speed of delivery	.675	1.482	
Accessibility	.921	1.086	

As can be seen from the Table V, none of the Tolerance levels is < or equal to 1 and VIF values are perfectly below 5. It can be seen clearly that VIF range between 1.086 and 1.482 values which are well-below five. Thus, the measures selected for assessing independent variables in this study do not reach levels indicate of multi-collinearity. Additionally, Durbin-Watson test shows that value 1.798, which is between the acceptable limit which shows that there were no auto correlation problems in the data used in this research.

**Regression Analysis**

After examining the multicollinearity and normality test for each aspect of the e-banking

practices, the multiple regression analysis was performed in order to predict the significant impact of e-banking practices and its dimension on customer loyalty. Generally, regression analysis is used to answer the question as what extent independent variables influence on the dependent variable (Heppner & Heppner, 2004; Oly Ndubisi, 2007).

In this context, research question and hypotheses were tested via multiple regression analysis and the results of the regression analysis and hypotheses testing are summarized in Table VI.

**Table VI: Regression Analysis and Hypotheses Testing**

Variable	Coefficients (β)	t-value	Sig.	Conclusion
(Constant)	0.512	1.812	.071	
Privacy & convenience	.193	4.493	0.000	H <sub>1a</sub> : Accepted
Content & website layout	.295	6.986	0.000	H <sub>1b</sub> : Accepted
Speed of delivery	.286	6.538	0.000	H <sub>1c</sub> : Accepted
Accessibility	.212	5.662	0.000	H <sub>1d</sub> : Accepted

R = 0.711

R<sup>2</sup> = 0.506

Adjusted R<sup>2</sup> = 0.501

F value = 98.044

Sig. F= 0.000

Note: Significant at the 0.05 level

Consistent with above Table VI, the value of adjusted R Square is 0.501. Hence, the result suggested that 50.1 percentage of variance was explained by this model and which is in significant level. Our regression results show that the e-banking practices has a significant positive influence on customer loyalty. Therefore, H1: e-banking practices affect customer loyalty was supported. Furthermore, Privacy & convenience ( $\beta= 0.193$ ,  $P < 0.05$ ), content & website layout ( $\beta= 0.295$ ,  $P < 0.05$ ), Speed of delivery ( $\beta= 0.286$ ,  $P < 0.05$ ), and accessibility ( $\beta= 0.212$ ,  $P < 0.05$ ) had significant positive influence on customer loyalty, hence H1a, H1b, H1c, and H1d were supported.

## CONCLUSION

Our basic assumption is that e-banking practices and its sub dimensions namely; Privacy & convenience, Content & website layout, Speed of delivery, and Accessibility influence the customer loyalty on state and commercial banks in the Northern part of Sri Lanka. A multiple regression modeling approach was proposed as an effective method for studying the impact of e-banking practices on customer loyalty. As displayed in Table VI, the adjusted R2 is 0.501, suggesting that the four e-banking factors explain nearly 50 percent of the variance for the dimension of customer loyalty. Specifically, content & website layout ( $\beta= 0.295$ ) has the greatest positive and significant impact on customer loyalty. This finding suggests that banks having an attractive screen layout and design with clear and simple menus easily make the customers engage in e-banking services. This empirical evidence has provided significant support for the e-banking literature (Al-Qeisi et al., 2014; Casaló et al., 2008; Pikkarainen et al., 2004; Poon, 2007; Sohail & Shanmugham, 2003). Theoretically, the findings of the present study provides empirical evidence for how to build a loyal customer base for a banks via electronic banking facilities. In addition to that, this study and its findings can significantly contribute to the existing literature relating to e-banking practices and customer loyalty. Customer loyalty can be enhanced by developing a habit among the bank consumers to use the e-banking. Therefore, managers should focus on the above mentioned dimensions to enhance the loyalty in the e-banking platform.

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