# Users' Perceptions on the Effectiveness of e-banking: A reference to the State Banks in Batticaloa, Sri Lanka

Mohamed Hussain Thowfeek and Navaneetha Veerapathiran

Faculty of Management and Commerce,
South Eastern University of Sri Lanka (SEUSL)
Oluvil. Sri Lanka.
thowfeek@seu.ac.lk, navaneetha13@yahoo.com

**Abstract.** The electronic banking system has become more prevalent in all commercial banks in Sri Lanka. The primary goal of the introduction of e-banking is to reduce costs, increase efficiency and profitability and fulfil the banking needs of customers who want ubiquitous banking services. The research was undertaken to study the perceptions of the customers of state banks about the factors influencing the effective use of e-bank. The analysis of primary data collected through a questionnaire survey from e-banking customers showed that e-banking was mostly used to check account details, pay utility bills and transfer funds. Although the six factors such as accessibility, convenience, reliability, security, design and charges were found to have a significant impact on the effective use of e-banking, the e-banking users perceived three factors, such as security, accessibility and reliability, as vital to their effective use of e-banking. This study is beneficial to bankers in understanding customers ' perception of e-banking effectiveness since the research predicted factors that have a greater impact on the use of e-banking facilities.

**Keywords**: E-banking, effectiveness of e-banking, innovative technology, state banks

## 1 Introduction

The banking industry of the 21$^{st}$ century operates in a complex and competitive environment characterized by changing conditions and highly unexpected economic climate. E-banking evolved as the result of innovative technology has provided banking customers with new and more convenient ways to fulfil their banking needs. Initially, e-banking was merely used for the purpose of disseminating information and knowledge [1]. But later, its application was widened as they used it for many other purposes such as online access to customer accounts to view account balances and account history; to transfer funds between accounts and schedule fund transfer for future dates; make payment of utility bills, and so on. Customers prefer to use it due to its convenience, speed, efficiency, effectiveness, and ubiquity.

Following the overwhelming integration of innovative technology by banks all over the world, Sri Lankan Bankers have also marched forward to embrace the worldwide trends of introducing electronic banking [2]. E-banking was first introduced by Sampath Bank PLC in 1988 [3]. From then on, the e-banking system has become more prevalent in both private and State-owned banks in Sri Lanka. There are three state banks in Sri Lanka, namely Bank of Ceylon, People's Bank, and National Savings Bank. These banks have more customers than private banks. It could be observed that while customers of state banks can withdraw up to Rs.40,000/- per day via ATM, most of them still present themselves physically for depositing and withdrawing money or paying utility bills. But the majority of the private banks' customers are aware of the e-banking facilities, and they tend to make use of the

facilities. It was found that the usage of e-banking differs widely between these two types of banks, the state-owned and privately owned [3]. Further, the findings indicate that only 40 per cent of the customers of People's Bank and 68 per cent of the customers of Bank of Ceylon are aware of the e-banking facilities. Still, only a small per cent of the States banks customers use e-banking facilities, which is a very low rate of usage compared with private banks [3]. Therefore, this research attempts to identify the determinants of effective use of e-banking.

## 2 Literature Review

Internet technology has enabled banks to conduct and process their banking transactions electronically. The four major banks in New York, such as Citibank, Chase Manhattan, Chemical, and Manufacturers Hanover started the e-banking with the delivery of home banking services to their customers in 1981 [4].

Electronic banking is a service that enables customers to access bank information, carry out financial transactions, make deposits, withdrawals and pay bills via the Internet without physically visiting their banks. It provides the convenience of accessing banking facilities from a place that is convenient for the customers.

Several terms appeared to describe the concept of electronic banking, such as e-banking, virtual banking, online banking, and so on, and these terms are being used interchangeably. E-banking is accessed through different delivery platforms and devices such as a personal computer and a mobile phone with a browser, telephone, or digital television [5]. E-banking, other than the withdrawal of cash, allows customers to access any type of banking transaction at the click of a mouse [6].

Though e-banking offers many advantages to customers such as accessibility, convenience, faster delivery of information, services at minimal cost, and so on., customers are still reluctant to do monetary transactions via electronic devices [7]. The usage of e-banking facilities among the customers in Sri Lankan is at a minimal level [8]. Still, when comparing the use of e-banking facility between the customers of private banks and state banks, the state bank customers use it at a relatively very low rate [3]. Even the customers who are well aware of the available e-banking facilities have not tried to use them [9]. Still, banks are taking measures to promote e-banking in Sri Lanka. This contradictory condition indicates that the effectiveness of the e-banking system is not known well received by the customers. In the context of e-banking, the effectiveness is defined as the degree to which an e-banking application or e-banking activities are successful in achieving its specific goals [10]. The significant factors that contribute to the effective use of e-banking identified through a literature review have been explained below and shown in the conceptual framework, figure 1.

### 2.1 Accessibility

Accessibility is an important factor that enables users to perceive technology more favourably to adopt Internet banking. It is defined as the ease with which individual computer systems (such as e-banking services) can be located [11]. The accessibility provides meaningful customer experience regarding access to their funds, access to banking facilities and services, and feedback. The accessibility was found to have a relationship with the use of technology and information [12].

Accessibility depends on several factors, such as the content format, user's hardware, software and settings, internet connections, environment, and user's abilities and disabilities [13]. Prompt responses, attentiveness, and ease of use have significant impacts on both customers' expected overall quality and satisfaction, which suggests that there is a substantial positive relationship between the overall level of service and satisfaction [14]. Therefore, it has been hypothesized ($H_1$) that accessibility positively influences the use of e-banking.

## 2.2 Convenience

Many studies have identified convenience as an important factor that impacts internet banking. As internet banking provides 24/7 access and time savings, convenience was found to be the main motivator for customers to use internet banking [15]. Because convenience and flexibility are yielded at a lower cost than conventional banking methods [16]. Therefore, customer preferences for e-banking have increasingly been related to convenience [17].

Providing customer interactivity is another important criterion that attracts users towards e-banking facilities [18] and the success of e-banking also depends on the ability of an innovation to meet the customers' needs through different features available on the web site [19]. E-banking offers a higher degree of convenience, allowing consumers to access internet banking at any time and anywhere [20]. Hence, e-banking provides a higher degree of convenience, allowing customers to access internet banking at all times and all locations. Therefore, it has been hypothesized ($H_2$) that convenience positively influences the use of e-banking.

## 2.3 Reliability

Reliability in the online business is about delivering the product in good condition, on time, and exactly as it was displayed on the web site. Reliability has been identified as one of the very important dimensions of service quality for e-banking services [21] and it is also one of the major sources of dissatisfaction, and improving the reliability of equipment and system will diminish dissatisfaction [22]. Reliability is defined as receiving the required service within a reasonable period and providing accurate information for website services in a manner that meets the expectations of the customers [23]. Reliability is also described as the ability to deliver the promised service reliably and accurately [24]. In a nutshell, reliability ensures the correct service is offered at the right time. Customers tend to use e-banking services when they trust that using e-banking services would fulfil their banking expectations. Hence, it has been hypothesized ($H_3$) that reliability positively influences the use of e-banking.

## 2.4 Security

In the online transaction, security concerns are of paramount importance, especially in the e-banking transaction, and it is commonly seen as one of the most daunting factors to e-banking adoption. Security is defined as the degree to which an individual believes in the protection from threats that come in the form of destruction, disclosure, data alteration, fraud, and abuse [25]. The security assurance refers to the extent to which the e-banking

websites guarantee the security of the financial and personal information of the customers [26].

According to the literature, sufficient encryption, digital signatures, and firewalls will guarantee protection [27]. But usually, the security is assured to customers by providing a privacy statement, information related security mechanism, and displaying trusted third party logos. The display of a trusted third-party logo, for example, guarantees a certain level of safety protection and has been shown to have a significant influence on how consumers view trustworthiness [28]. Banks have taken great measures to ensure that they transact with a lawful customer by implementing a "double lock" system that asks for a pin, followed by a password [29]. Therefore, it has been hypothesized ($H_4$) that security positively influences the use of e-banking.

## 2.5 Design

E-banking systems are used by customers as web-based user interfaces to control their bank accounts and transactions via remote access. Website design is defined as having the attributes of visually pleasing design that is innovative, creative, competitive, and appropriate to site type and bank image [30]. The design of user interfaces can influence the interaction between customers and the e-banking platform. Therefore the user interface is designed visually appealing and enjoyable. The design of the website should be very simple and should improve customer clarity, visibility, and navigability so they can operate easily [31]. The design of a website has a significant role to play in attracting, maintaining, and preserving the interest of the consumer on the site [32]. A variety of experiments have already empirically tested that the design of a website affects the satisfaction of consumers [33]. Hence, it has been hypothesized ($H_5$) that design positively influences the use of e-banking.
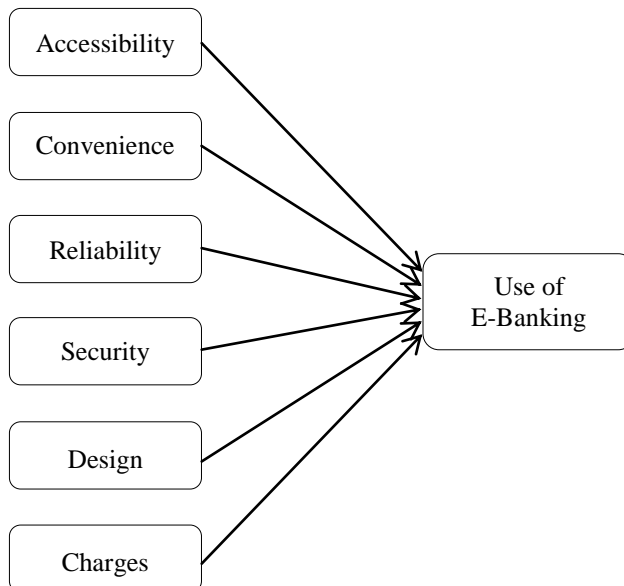


**Fig.** Conceptual framework

### 2.5 Charges

E-banking provides many advantages; one of them is cost reduction. E-banking offers convenience and flexibility for customers at lower costs than conventional banking services [16]. Compared with conventional banking, e-banking can be a low-cost option for customers [34] due to the reduction in banking services charges. The main competitive benefit of e-banking is that it provides high-quality services to meet customer needs at a lower cost. Some studies show that e-bank has successfully lowered operational and administrative costs [35]. Poon [20] finds that one of the criteria for customers to decide to use the e-banking system is fees and charges. Therefore, it has been hypothesized ($H_6$) that charges positively influence the use of e-banking.

## 3   Research Methodology

This research attempts to identify the determinants of effective e-banking and to know the effectiveness of e-banking facilities in the State banks in Batticaloa. Therefore, primary data were collected using a survey questionnaire from e-banking customers of the State banks. The purposive sampling technique was chosen to collect data from respondents who are representative or informative on the topic. Because, purposive sampling is suitable for certain research where, as the name suggests, people or other units are selected for a specific purpose [36], i.e., to identify the determinants of effective e-banking of state banks.

The questionnaire was structured to collect data on (a) customer demographic information and e-banking details such as the name of the bank, e-banking services used, types of channels used and (b) customer perspective on e-banking effectiveness. All the statements in the questionnaire are measured by 5 point Likert's scale.

A total of 300 customers (120 from Bank of Ceylon, 120 from Peoples Bank and 60 from National Saving Bank) who have e-banking accounts have been identified for data collection with the help of bankers. The questionnaires were sent to respondents by e-mail with a request letter to fill in and return then as soon as possible. Researchers obtained 182 questionnaires from respondents in a usable condition and analyzed the data using SPSS 16.0 software.

## 3   Results and Discussion

### 3.1 Reliability test

A reliability test has been conducted on the variables employing multi items measure. The strength of Cronbach's Alpha provides the most comprehensive analysis of the pattern of internal consistency. The minimum acceptable alpha, according to many researchers, is 0.7. But 0.6 is also an acceptable value [37]. The Alpha values for all the variables shown in table 1 are more than and close to 0.7. Therefore, the alpha values indicate that the survey instrument administered is reliable for measuring the perception of e-banking users in order to achieve the objective of the study.

**Table 1.** Reliability Test

| Variable | Number of items | Cronbach's Alpha |
|---|---|---|
| Accessibility | 4 | 0.710 |
| Convenience | 5 | 0.723 |
| Reliability | 5 | 0.707 |
| Security | 5 | 0.695 |
| Design | 4 | 0.736 |
| Charges | 4 | 0.750 |
| Use of e-banking | 4 | 0.661 |

## 3.2 Demographic information

The demographic profile of respondents has been illustrated in table 2. The survey shows that both male (51.6 per cent) and female (48.4 per cent) use the e-banking more or less equally. The majority of respondents who use e-banking are aged between 20-30 years (35.6 per cent) and 31-40 years (39.4) and only 2.4 per cent of the respondents who are above 51 years use e-banking. The income level of respondents indicates that the majority of e-bank users have adequate income, with more than 50 per cent falling in the income category of Rs. 30,000 - Rs. 39,999, while only 1.1% earn income below Rs. 19,999. The educational background of e-banking users is quite impressive, as most of them are graduates or professionally qualified, while only 18.7 per cent attended secondary school. The analysis shows that 73 per cent of respondents are government employees, including executives and non-executives. The analysis also shows that the majority of e-bank users have recently begun using e-bank facilities, whereas 17.6 per cent have 4-6 years of experience, 9.9 per cent have 7-9 years of experience and only 6.6 per cent have more than 9 years of experience in using e-banking. According to the survey, most of them (43.7 per cent) perceive that using e-banking is essential, where 29.7 per cent see it as vital and 17.7 per cent see it as desirable. To the request to rank respondents' order of preference for what purpose they use e-banking, their first preference was 'check account balance or bank statement' and the second and third ranks were 'paying utility bills' and 'fund transfer,' respectively.

**Table 2.** Demographic profile of respondents

| Item | Categories | Responses | % |
|---|---|---|---|
| Gender | Male | 94 | 51.6 |
| | Female | 88 | 48.4 |
| Age | 20-30 | 65 | 35.6 |
| | 31-40 | 72 | 39.4 |
| | 41-50 | 41 | 22.6 |
| | Above 50 | 4 | 2.4 |
| Income level | Below Rs.19,999 | 2 | 1.1 |
| | Rs.20,000 - Rs.29,999 | 17 | 9.3 |
| | Rs.30,000 - Rs.39,999 | 86 | 50.5 |
| | Rs.40,000 - Rs.49,999 | 57 | 28.0 |
| | Rs.50,000 and above | 20 | 11.0 |
| Education background | Secondary School | 34 | 18.7 |
| | Undergraduate | 15 | 8.3 |
| | Graduate | 86 | 47.3 |
| | Post Graduate | 34 | 18.7 |
| | Professionally Qualified | 13 | 7.0 |

| Profession | Non-executive Govt staff | 92 | 50.5 |
|---|---|---|---|
| | Executive Govt staff | 41 | 22.5 |
| | Non-executive private staff | 5 | 2.7 |
| | Executive Private staff | 2 | 1.1 |
| | Self-employed | 20 | 11.0 |
| | Others | 22 | 12.1 |
| Length of usage of e-banking | Less than 1 year | 33 | 18.1 |
| | 1 - 3 years | 87 | 47.8 |
| | 4 - 6 years | 32 | 17.6 |
| | 7 - 9 years | 18 | 9.9 |
| | More than 9 years | 12 | 6.6 |
| Perception on the significance of E-banking | Vital | 54 | 29.7 |
| | Essential | 79 | 43.7 |
| | Desirable | 32 | 17.7 |
| | Can't say exactly | 16 | 9.0 |
| Usage of Internet banking | Check account balance/ bank statement | 83 | 45.6 |
| | Paying utility bills | 52 | 28.6 |
| | Transfer of funds | 25 | 13.7 |
| | Know bank products advertised | 11 | 6.0 |
| | Purchase bank products | 4 | 2.2 |
| | Order cheque books | 3 | 1.6 |
| | Account opening | 0 | 1.1 |
| | Any other | 0 | 1.1 |

## 3.2 Descriptive statistics

Univariate analysis performed on individual variables illustrates the descriptive measures of mean, standard deviation, number of samples, etc. (see table 4) and it is considered for assessing the level of independent variables that are measured using a 5 point likert scale. The scale '1' corresponds to 'strongly disagree' and scale '5' relates to 'strongly agree. The 'mean score' can be considered as '3'. The evaluation criteria for assessing the levels of variables are given below:

**Table 3**. Decision criteria

| Range for Decision Criteria | Decision Criteria | Decision Attribute |
|---|---|---|
| $X_i < (3-Z\ \sigma_x)$ | $X_i < 3$ | Low Level |
| $(3-Z\ \sigma_x) \leq X_i \leq (3+Z\ \sigma_x)$ | $X_i = 3$ | Moderate Level |
| $X_i > (3+Z\ \sigma_x)$ | $X_i > 3$ | High Level |

Where;
$X_i$ = mean value of a dimension/variable,
$\sigma$ = standard deviation,
$Z$ = 95% confidence limit and
$\sigma_x$ = standard error of the mean

**Table 4.** Descriptive statistics of e-banking effectiveness

| Variable | N | Min | Max | Mean | Std. Error | Std. Dev. | Var. | Lower Limit of Mean (3-1.96σₓ) | Upper Limit of Mean (3+1.96σₓ) |
|---|---|---|---|---|---|---|---|---|---|
| Accessibility | 182 | 2.00 | 4.50 | 3.842 | .042 | .570 | .325 | 2.918 | 3.082 |
| Convenience | 182 | 2.25 | 4.80 | 3.746 | .051 | .689 | .475 | 2.900 | 3.100 |
| Reliability | 182 | 2.40 | 4.80 | 3.757 | .039 | .521 | .271 | 2.924 | 3.076 |
| Security | 182 | 2.60 | 5.00 | 3.930 | .044 | .592 | .350 | 2.914 | 3.086 |
| Design | 182 | 2.00 | 4.75 | 3.567 | .062 | .841 | .706 | 2.878 | 3.122 |
| Charges | 182 | 2.25 | 4.75 | 3.742 | .047 | .628 | .394 | 2.908 | 3.092 |
| Overall score | 182 | 2.83 | 4.67 | 3.756 | .025 | .336 | .113 | 2.951 | 3.049 |

Table 4 illustrates the descriptive statistics of the variables that influence the effectiveness of e-banking. The mean values for variables such as accessibility, convenience, reliability, security, design and charges are 3.84, 3.75, 3.76, 3.93, 3.57 and 3.74 respectively. All the mean values are above the upper mean limit, which indicates that all variables are presumed to have an impact on e-banking effectiveness. The average mean value of the overall score is 3.76 and the standard deviation is .34 shows that 97.25 per cent of the respondent falls within the high level, 1.10 per cent fall within the moderate level and 1.65 per cent fall within low lower. This indicates that a vast majority of the respondents perceive that these variables have a significant impact on the effective use of e-banking.

## 4.5 Correlation and Regression Analysis

The correlation analysis is the statistical tool used to study the relationship between two or more variables and used in this research as a part of the testing of the hypotheses developed. The result of the correlation analysis between the use of e-banking and the factors of e-banking effectiveness has been displayed in table 5. The correlation strength is classified as low if the value of the coefficient is below 03; moderate if the value is between 0.3 and 0.5 and high if the value is greater than 0.5 [38].

**Table 5.** Correlations Analysis

| Variables | | Use of E-Banking |
|---|---|---|
| Accessibility | Pearson Correlation | .502[**] |
| | Sig. (2-tailed) | .000 |
| Convenience | Pearson Correlation | .416[**] |
| | Sig. (2-tailed) | .000 |
| Reliability | Pearson Correlation | .457[**] |
| | Sig. (2-tailed) | .000 |
| Security | Pearson Correlation | .534** |
| | Sig. (2-tailed) | .000 |
| Design | Pearson Correlation | .383[**] |
| | Sig. (2-tailed) | .000 |
| Charges | Pearson Correlation | .405[**] |
| | Sig. (2-tailed) | .000 |

** Correlation is significant at the 0.01 level (2-tailed).

According to the result provided in the table, the Pearson correlation coefficient (r) of the variables, Security and Accessibility is above 0.5, indicating a stronger correlation, while the correlation of the other four variables is above 0.3, indicating a moderate correlation. All correlations, however, are statistically significant since p values for all variables are less than 0.05. The findings show that all variables have a significant impact on e-banking effectiveness, with more emphasis on security and accessibility and less important to website design.

**Table 6.** Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .851[a] | .724 | .714 | .32132 |

a. Predictors: (Constant), Charges, Design, Accessibility, Convenience, Reliability, Security

The model summary shown in table 6 indicates that the independent variables such as Charges, Design, Accessibility, Convenience, Reliability, Security account for 72.4 per cent variation in the use of e-banking and the ANOVA result indicates the overall regression model is significant, $F_{(6, 175)}= 76.382$, $P<0.001$, $R^2=0.72$. The coefficient table shows each predictor's result and all predictors are statistically important because the p values are below 0.05.

**Table 6.** ANOVA[a]

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 47.316 | 6 | 7.886 | 76.382 | .000[b] |
| | Residual | 18.068 | 175 | .103 | | |
| | Total | 65.384 | 181 | | | |

a. Dependent Variable: Use of E-Banking
b. Predictors: (Constant), Charges, Design, Accessibility, Convenience, Reliability, Security

**Table 6.** Coefficients[a]

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -2.196 | .279 | | -7.867 | .000 |
| | Security | .244 | .043 | .244 | 5.692 | .000 |
| | Reliability | .278 | .051 | .241 | 5.417 | .000 |
| | Charges | .316 | .046 | .296 | 6.859 | .000 |
| | Accessibility | .278 | .044 | .287 | 6.339 | .000 |
| | Design | .243 | .029 | .340 | 8.377 | .000 |
| | Convenience | .169 | .035 | .210 | 4.906 | .000 |

a. Dependent Variable: Use of E-Banking

# 5 Conclusion

The analysis of the demographic information reveals that young and educated customers use e-banking without significant differences in gender. The findings also indicate the majority

of respondents have recently started to use e-banking. Moreover, most of them use e-banking facilities to check their account details, pay utility bills and transfer funds.

Several factors were identified with the help of literature to determine the perception of the users about the effectiveness of e-banking use. The statistical analyses such as univariate, correlation and regression analysis have revealed that all six factors such as accessibility, convenience, reliability, security, design and charges are more relevant as they have a significant impact on the effective use of e-banking resulting in all the hypotheses being accepted. Of six factors, three such as security, accessibility and reliability showed a stronger correlation with the use of e-banking, i.e. the e-banking users perceived these three factors as vital to their effective use of e-banking. Therefore, the banks that offer e-banking facilities should focus on all these factors, especially the crucial factors.

While there are many more factors that could contribute to the effective use of e-banking, the analysis of regression and the model summary indicate that factors considered and model developed for the study yielded statistically significant results that accounted for 72.4 per cent variation in the use of e-banking, i.e. effectiveness of e-banking use were greatly influenced by these factors. However, the model can be expanded with additional potential variables when conducting a comprehensive study in the near future.

# References

[1] L. D. Mahat, "e-banking," Retrieved October, 2016, from website: http://www.kantipuronline. com/e-banking, 2004.
[2] V. de Silva, "Customer-centric knowledge management in e-Business : A paradigm shift in Sri Lankan banking," presented at 18th Anniversary Convention, Association of Professional Bankers of Sri Lanka, 2006.
[3] N. K. Jayasiri, & Weerathunga. W.A.S.P, "Popularity of E-banking in Sri Lanka," presented at International Research Conference on Management and Finance, University of Colombo. Sri Lanka, 2008.
[4] M. J. Cronin, Banking and Finance on the Internet. New York, NY: John Wiley & Sons., 1998.
[5] E. Daniel, "Provision of electronic banking in the UK and the Republic of Ireland," International Journal of Bank Marketing, vol. 17, pp. 72-82., 1999.
[6] R. DeYoung, "The financial performance of pure play Internet banks," Economic Perspectives, vol. 25, pp. 60-75, 2001.
[7] Basel Committee, "Management and Supervision of Cross-Border Electronic Banking Activities," Electronic Banking Group, 125, Basel, October, 2002.
[8] N. J. Kariyawasam, & Jayasiri, N. K, "Awareness and usage of internet banking facilities in Sri Lanka," International Journal of Scientific Research and Innovative Technology, vol. 3, pp. 173-190., 2016.
[9] H. A. H. Hettiarachchi, "Factors Affecting to Customer Adoption of Internet Banking. Department of Commerce and Financial Management," University of Kelaniya, Sri Lanka. 2012.
[10] A. A. Arulrajah, "An investigation into effectiveness of e-banking in Sri Lanka," (Doctoral dissertation), Department of Mechanical Engineering, University of Moratuwa Sri Lanka, 2006.
[11] R. Kling, & Elliott, M, "Digital library design for organizational usability," *ACM SIGOIS Bulletin*, vol. 15 pp. 59–70, 1994.
[12] F. H. Chandio, "Studying acceptance of online banking information system: A structural equation model," *Brunel Business School*: Brunel University, UK, 2011.
[13] S. Hackett, & Parmanto, B, "Homepage not enough when evaluating web site accessibility," *Internet Research*, vol. 19, pp. 78-87, 2009.
[14] M. Jun, Peterson, R., Zsidisin, G., & Daily, B, "Service quality perceptions in the banking industry: major dimensions," *Journal of Business Strategies*, vol. 16, pp. 170-218, 1999.

[15] Pew, "Convenience is King", Pew Internet and American Life Project, Retrieved from World Wide Web on 15 February 2006 at www.pewInternet.org/reports/reports.as p?Report=77&Section=ReportLevel1&Field=Level1ID&ID=342, 2003.

[16] S. Beer, "Customers Preference on Internet Banking," *Survey*, Retrieved 20 March, 2017, from http://www.itwire.com/content/view/4570/53, 2006.

[17] S. Lichtenstein, & Williamson, K, "Understanding consumer adoption of internet banking: An interpretive study in the Australian banking context," Journal of Electronic Commerce Research, vol. 7, pp. 50-66, 2006.

[18] T. a. L. Ainscough, M.G, "The Internet for the rest of us: marketing on the World Wide Web," *The Journal of Consumer Marketing*, vol. 13 pp. 36-47, 1996.

[19] P. Gerrard, & Cunningham, J. B, "The diffusion of internet banking among Singapore consumers," *International journal of bank marketing*, vol. 21, pp. 16-28, 2003.

[20] W. C. Poon, "Users' adoption of e-banking services: the Malaysian perspective," *Journal of Business & Industrial Marketing*, vol. 23, pp. 59-69, 2008.

[21] S. Kamel, "The Use of Information Technology to Transform the Banking Sector in Developing Nations," *Information Technology for Development*, vol. 11, pp. 305-312, 2005.

[22] A. E. M. K. Ahmad, & Al-Zu'bi, H. A, "E-banking functionality and outcomes of customer satisfaction: an empirical investigation," *International Journal of Marketing Studies*, vol. 3, pp. 50-65, 2011.

[23] M. Wolfinbarger, & Gilly, M. C, "eTailQ: dimensionalizing, measuring and predicting etail quality," *Journal of retailing*, vol. 79, pp. 183-198, 2003.

[24] A. Parasuraman, Zeithaml, V.A. & Berry, L.L, "A conceptual model of service quality and its implications for future research," *Journal of Marketing*, vol. 49, pp. 41-50, 1985.

[25] S. Yousafzai, Pallister, J. & Foxall, G, "Multi-dimensional role of trust in Internet banking adoption," *The Service Industries Journal*, 29(5), 591-605, 2009.

[26] A. D. Miyazaki, & Krishnamurthy, S, "Internet seals of approval: Effects on online privacy policies and consumer perceptions," *Journal of Consumer Affairs*, vol. 36, pp. 28-49, 2002.

[27] A. Bhimani, "Securing the commercial internet," *Communications of the ACM*, vol. 39, pp. 29-35, 1996.

[28] Jiang, P., Jones, D. B., & Javie, S. (2008). How third-party certification programs relate to consumer trust in online transactions: An exploratory study. *Psychology & Marketing*, *25*(9), 839-858.

[29] J. Singh, "Voice, Exit and Negative Word of Mouth Behaviours: An Investigation Across Three Service Categories," *Journal of the Academy of Marketing Science*, vol. 18, pp. 1-15, 1990.

[30] R. R. John, "Review of Literature for Scale Development: E-Service Quality," *CLEAR International Journal of Research in Commerce & Management*, vol. 6, pp. 77-82, 2015.

[31] J. Arenas-Gaitán, Peral-Peral, B., & Ramón-Jerónimo, M.A, "Elderly and internet banking: An application of UTAUT2," *Journal of Internet Banking and Commerce*, pp. 1, 2015.

[32] C. Ranganathan, & Ganapathy, S, "Key dimensions of business-to-consumer web sites," *Information & Management*, vol. 39, pp. 457-465, 2002.

[33] X. Liu, He, M., Gao, F., & Xie, P, "An empirical study of online shopping customer satisfaction in China: A holistic perspective," *International Journal of Retail & Distribution Management*, vol. 36, pp. 919-940, 2008.

[34] N. P. Mols, "The behavioral consequences of PC banking," *International Journal of bank marketing*, vol. 16, pp. 195–201, 1998.

[35] S. Rotchanakitumnuai, & Speece, M, "Barriers to Internet banking adoption: a qualitative study among corporate customers in Thailand," *International Journal of Bank Marketing*, vol. 21, pp. 312-323, 2003.

[36] P. D. Leedy, Ormrod, J.E, *Practical Research: Planning and Design*. New Jersey, NJ: Pearson Prentice Hall, 2005.

[37] J. F. Hair, Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L, *Multivariate data analysis*. Upper Saddle River, NJ: Prentice-Hall, 1998.

[38] J. Cohen, Statistical power analysis for the behavioral sciences. Abingdon. England: Routledge, 1988.