Determinants of Customer Preference for Cardless Technology Over the Card for Cash Withdrawals in Sri Lanka

M. K. S. M. Sathsarani [1], B. L. D. H. V Liyanage [2], H. M. N. P Herath [3]
[1,3] Department of Finance, University of Kelaniya, Dalugama, Kelaniya, Sri Lanka.
[2] Department of Finance. University of Colombo, College House, 94 Cumarathunga Munidasa Mawatha, Colombo 03, Sri Lanka.
Corresponding author: vimarshana@dfn.cmb.ac.lk

OIDA International Journal of Sustainable Development, Ontario International Development Agency, Canada.
ISSN 1923-6654 (print) ISSN 1923-6662 (online) www.oidaijsd.com
Also available at https://www.ssrn.com/index.cfm/en/oida-intl-journal-sustainable-dev/

Abstract: It may seem contradictory that someone who avoids using a debit card still seeks cash withdrawals and prefer to use their mobile device at an ATM. The purpose of this study is to explore the determinants of customer preference for cardless technology over the card for cash withdrawals in Sri Lanka. The study has been conducted using a quantitative-deductive approach and data was collected from 186 cardless technology users through structured questionnaires. Convenience sampling was employed in this research study. The research employs the Technology Acceptance Model (TAM) as a theoretical foundation, evaluating Perceived Ease of Use, Perceived Usefulness, Perceived Security and Customer Trust as independent variables in this study, with Customer Preference as the dependent variable. Reliability, descriptive, correlation, multiple regression analysis and comparative study were used to analyze the data using the SPSS software. According to the study's findings, all four factors significantly affect customer preference, with perceived usefulness and customer trust emerging as the most impactful variables. Independent variables are less correlated with each other, as per the results of the inter correlation matrix, tolerance values, VIF and Cronbach alpha values demonstrate the data are more reliable. The analysis also highlights the comparative adoption rates between two major banks, People's Bank and Sampath Bank, providing insights into their customers' perceptions. The study concluded that cardless technology not only enhances customer perceptions of security and ease of access but also holds the potential to revolutionize cash withdrawal practices by eliminating the need for physical cards. Although banking technology in Sri Lanka is advanced and trust issues appear minimal, banks must continue to communicate and educate customers on the benefits of adopting cardless services. The findings of this study highlight the potential for banks to leverage cardless technology as a secure, convenient and cost-effective solution to meet the evolving needs of customers. This study is subjected to several limitations. First, the sample was limited to a small group of Sri Lankan banks. Second, reliance on self-reported data may have bias responses. For a detailed analysis of the banking sector as a whole, it is essential for future research to focus on receiving money through this cardless technology, which is also provided by other banks. This can be extended to additional markets, i.e., similar consumer preferences in other regions or different countries, especially in developing economies with growing mobile and digital banking services, can be investigated. Furthermore, future studies can include a broader range of banks and examine the potential environmental benefits of reduced plastic card usage, as well as how sustainability factors may influence consumer adoption of such technology.

Keyword: Cardless Cash; Customer Preference; Customer Trust; Perceived Ease of Use; Technology Acceptance Model (TAM)

Introduction

Banking services are currently experiencing major transformations, driven by multiple factors. Mainly, technological advancement in telecommunication and information technology are revolutionizing the banking industry. Nowadays, Automated Self-Personal Banking Services play a significant role in the Sri Lankan banking industry. These automated self-service banking services provide a wide range of services, among which cardless transactions play a significant role (Ranaweera D. , 2022). This cardless technology is called withdrawing or depositing money from ATMs without using a card (Nambiar & Bolar, 2022). Automated Teller Machine (ATM) and Cash Deposit Machine (CDM) can use this cardless technology and most customers use this cardless technology to deposit money through the cash deposit machine and the use of cardless technology for withdrawing cash shows less.

For cardless withdrawals, the mobile app the customer with a numeric authentication code. Upon entering the correct credentials at the ATM, the transaction is authorized, and cash is issued without the need for a debit card (Nambiar & Bolar, 2022). Thus, cardless ATMs allow customers to access cash more quickly and efficiently, while reducing transaction costs while eliminating cash withdrawal fees from bank ATMs. And there is no more worry about losing the card or forgetting the customer's PIN number (Phothikitti, 2020). The majority of financial institutions view Cardless ATMs as a means of using technology to improve customer service, assist customers in withdrawing cash more quickly and effectively, and reduce transaction costs (Shaikh & Karjaluoto, 2015). Customers no longer have to pay a card fee and there is no cost associated with using this function to withdraw cash from the bank's ATM, which results in cost reductions (Bhosale & Sawant, 2012).

This cardless technology was introduced to Sri Lanka in 2013 and has spread rapidly at present (Sampath Bank Plc, 2023). Many financial institutions see this cardless transaction system as a way to improve customer service through this technology and to allow customers to get money faster and more efficiently as well as a way to save transaction costs (Bhosale & Sawant, 2012). But cash counters are still used for small withdrawals/deposits. Overall, apart from ATMs, IT-based banking services are relatively low in Sri Lanka.

Therefore, the purpose of this study is to examine the determinants of customer preference for cardless technology over card for cash withdrawals in the Sri Lankan banking sector. This study will help the banking industry to know and understand more about the factors affecting customer preference for cardless cash withdrawals technology in Sri Lanka.

Literature Review

Nowadays, Automated Self-Personal Banking Services play a significant role in the Sri Lankan banking industry. These automated self-service banking services provide a wide range of services, among which cardless transactions play a significant role (Ranaweera D. , 2022). This cardless technology is called withdrawing or depositing money from ATMs without using a card (Nambiar & Bolar, 2022). Automated Teller Machine (ATM) and Cash Deposit Machine (CDM) can use this cardless technology and most customers use this cardless technology to deposit money through the cash deposit machine and the use of cardless technology for withdrawing cash shows less.

Davis (1989) developed the Technology Acceptance Model (TAM), and has since been extensively used to gauge the adoption of different technologies and technology-enabled services. Multiple factors influence a customer's decision to accept or reject technology, according to Davis (1989). And the existing system provide clear evidence of the feasibility and robustness of TAM in context of technology adoption (Poong, Yamaguchi, & Takada, 2016). Furthermore, the existing studies on technology adoption in banking largely draw upon on TAM and its related modifications (Shaikh & Karjaluoto, 2015). The TAM has been modified and extended to improve its predictive and explanatory power in the area of technology acceptance.

Customer preference can be defined as the predisposition of customers to choose (Howard & Sheth, 1969) and Customers are inclined to use more if they believe that certain offerings are tailored to meet their preferences. Customers in Banking today pay for transactions using a wider range of payment options. However, although traditional cash-based and card-based transactions continue to exist, the use of cash-based payments are not significant in physical form and quantity. This suggest that customers demonstrate differing behaviors and responses towards cash-based and card-based payment mechanisms.

As mentioned by Davis (1989), one of the factors that lead to system acceptance can be called "perceived ease of use". This means the user's confidence that they can use cardless ATMs without any effort. Ease of use, if the system is convenient and user friendly, then customers intend to use it (Davis, 1989). The easier the system is for the customer to use, the higher the customer's intention to use cardless ATMs (Kesharwani & Bisht , 2012). Previous studies have found that perceived ease of use and intention to adopt mobile banking are positively related (Alalwan , Dwivedi , &

Rana, 2017). Moreover, prior studies has indicated that ease of use of technology significantly influences its percieved usefulness (Davis, 1989).

"Perceive usefulness "is introduced as one of the TAM components (Davis, 1989). The importance of perceived usefulness was commonly known in the area of E Banking (Guriting & Ndubisi, 2006). Perceived usefulness is thus the subjective likelihood that the use of technology will improve the user's way of completing a particular task. Discovered a positive correlation between behavioral intention to use mobile banking and perceived utility of the technology, suggesting that users will have the intention to utilize mobile banking once they see its value (Venkatesh, 2000). Realizing usefulness confirms that technology-driven banking is significantly affected (Amin, 2008). Therefore, if customers believe there is a valid purpose for cardless ATMs, then their chances of continuing to do so will improve (Al-Fahim, 2012).

Security is the ability to protect information against potential threats (Hua, 2009) or assure that a system is able to prevent attacks which can endanger data and services (Damghanian, Zarei , & Siah, 2016). Privacy and security are cited as the main barriers to online shopping and this concern has permeated the online banking sector as well (Godwin , 2001).Worrying about safety and privacy has been known as one of the main barriers of electronic banking acceptance. The current study uses the three criteria of credit, dependability, and privacy to determine perceived safety (Damghanian, Zarei , & Siah, 2016). The privacy issue is important because customers submit their personal and financial information in online exchanges, and such an issue can be considered a risk in customers' viewpoint (Akhter , 2014).

Trust defined as an individual's general expectation that the word or promise of another can be relied upon (Rotter, 1967). For business transactions to be successful, trust is necessary. All social relationships would either fail or operate irregularly in the absence of trust. Customer trust refers to the thoughts, feelings, emotions, or behaviors that arise when customers believe a service provider can be relied upon to act in their best interest, particularly when they relinquish direct control (Patrick, 2002). Since it is very common for electronic transactions to take place between two unfamiliar parties (Halliburton & Poenaru, 2010). A customer's loyalty is strengthened by the trust established between the customer and the service provider. Essentially, when a customer demonstrates loyalty to a product or service, it reflects their underlying trust in it. Because there is no face-to-face connection between the consumer and the banker while using internet banking, trust is more important (Yap, Wong , & Bak, 2009). The creation of goodness or profit depends on trust. As technology is used by banks more and more, a high degree of confidence in their security and privacy is necessary.

Hence, the following hypothesis is proposed,
H1*:* Perceived usefulness has a significant positive influence on the preference of cardless cash technology over the card to withdraw cash.
H2: Perceived ease of use has a significant positive influence on the preference of cardless cash technology over the card to withdraw cash.
H3: Perceived security has a significant positive influence on the preference of cardless cash technology over the card to withdraw cash.
H4: Perceived trust has a significant positive influence on the preference of cardless cash technology over the card to withdraw cash.
H5: There is a significant difference in Perceived Ease of use, Perceived Usefulness, Perceived Security and Customer Trust between People's Bank and Sampath Bank in Sri Lanka.

Methodology

This research mainly consists of five variables, namely Perceived Ese of Use, Perceived Usefulness, Perceived Security, Customer Trust, and Customer Preference as determinants of customer preference for cardless technology over the card for cash withdrawals in Sri Lanka. Fig. 1 illustrates the conceptual framework of the study

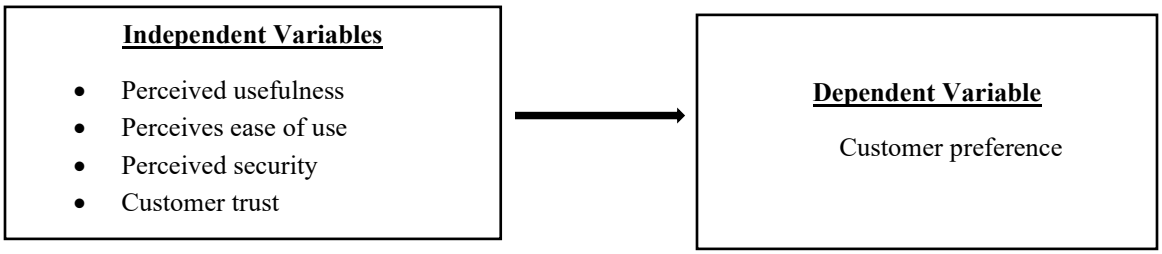

Figure 1: Conceptual Framework

Sample Selection

In this study, customers' preference for cardless cash technology over cards is considered as the research data unit. Accordingly, the sample for this study was People's Bank which is a major state bank and Sampath Bank which is a major private bank. The reason for taking these two banks is because they are two banks in Sri Lanka that mainly have a group of customers who use cardless technology. This study is based on primary data collected from People's bank and Sampath bank customers responding to the questionnaire. A population is a complete set of individuals with a specific set of characteristics and possess the information of interest of the researcher (Banerjee & Chaudhury, 2010). Customers using cardless technology in Sri Lanka will serve as the research population of the study. Two of the leading banks in Sri Lanka, the People's bank, and Sampath bank, use cardless technology to a high extent. Also, convenience sampling is chosen in this research study since it is thought to be the most suitable method.

Data Collection Method

Data for this research was collected using a standard structured questionnaire. Primary sources of information were used in the study. The questionnaire is designed using relevant research and scales currently used to assess customer preference for using cardless technology over card. Before asking customers using cardless technology to fill out the questionnaire, their informed consent will be obtained. The questionnaire consists of scale items adapted for the constructs, namely perceived usefulness, ease of use, customer trust, and perceived security. The final section includes questions to measure the preference of cardless cash transactions over cards. In addition, each component in this questionnaire will be measured using a 5-point Likert Scale (1=Strongly Disagree to 5=Strongly Agree). The type of data for this research was primary data.

Results and Discussion

Reliability Analysis of Pilot Survey

The questionnaire's internal consistency showed encouraging findings from the pilot test. Each variable's unique Cronbach's Alpha score above 0.7 denotes high instrument coherence and reliability. These results imply that the questionnaire measures the intended constructs, perceived ease of use, perceived usefulness, perceived security, customer trust, and customer preference effectively. To further mitigate internal biases that may arise in the collection of verbal, textual, and visual data, the study ensured that all questions were neutrally worded, pre-tested, and statistically validated. The pilot testing process helped identify and revise ambiguous items, while the high Cronbach's Alpha and KMO values (all above 0.7) confirmed that responses were consistent and free from measurement distortion, ensuring that the collected data were unbiased and reliable.

Table 1: Reliability Analysis of Pilot Survey

Variable	No of Questions	Cronbach's Alpha
Perceived Ease of Use	4	0.886
Perceived Usefulness	4	0.801
Perceived Security	4	0.851
Customer Trust	4	0.749
Customer Preference	7	0.921

Source: Survey data,2024

Correlation Analysis

The Pearson correlation coefficients between five variables are displayed in the correlation matrix Table 2. All of these connections reach the statistical significance level of 0.01. Causation and correlation are not the same thing. Although these factors have a positive association with one another, this does not necessarily mean that raising one would raise the other. More research would be necessary to establish causality. The Pearson correlation coefficients show substantial positive relationships between PE, PU, PS and CT.

Next page

Table 2: Pearson Correlation

		SUMPE	SUMPU	SUMPS	SUMCT	SUMCP
SUMPE	Pearson Correlation	1	.785**	.695**	.679**	.781**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	186	186	186	186	186
SUMPU	Pearson Correlation	.785**	1	.624**	.676**	.765**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	186	186	186	186	186
SUMPS	Pearson Correlation	.695**	.624**	1	.675**	.703**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	186	186	186	186	186
SUMCT	Pearson Correlation	.679**	.676**	.675**	1	.760**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	186	186	186	186	186
SUMCP	Pearson Correlation	.781**	.765**	.703**	.760**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	186	186	186	186	186

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

Source: Survey data,2024

Regression Analysis

The regression analysis's coefficients table provides an explanation of the relationship between independent and dependent variables. Assuming all other variables remain constant, the unstandardized coefficients, or B values (0.461), show how the Customers prefer to use cardless cash technology change in response to a one-unit change in the predictor. For instance, Customers prefer to use cardless cash technology grows by 0.232 units for every unit increase in PE. Also, Customers prefer to use cardless cash technology grows by 0.216, 0.181 and 0.273 units for every unit increase in PU, PS and CT respectively. To compare how much each variable impacts the Customers prefer to use cardless cash technology, one may use the standardized coefficients, often known as beta values.

Table 3: Coefficient Table

		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	Model	B	Std. Error	Beta	T	Sig.	Tolerance	VIF
1	(Constant)	.461	.190		2.429	.016		
	SUMPE	.232	.059	.271	3.963	.000	.306	3.273
	SUMPU	.216	.055	.251	3.903	.000	.344	2.910
	SUMPS	.181	.066	.155	2.721	.007	.439	2.277
	SUMCT	.273	.052	.302	5.216	.000	.426	2.350

Note: Dependent Variable: SUMCP

Source: Survey data,2024

Based on the analysis, it is concluded that the Perceived Ease of Use, Perceived Usefulness, Perceived Security, and Customer Trust significantly impact the Customer Preference for using cardless Cash Technology. According to the coefficient result, the regression model can be expressed as follows,

Y = .461 + .232 (X1) + .216 (X2) + .181 (X3) + .273 (X4)

Comparative Study (Independent Two Sample T test)

The specific research effort examines two major banks in Sri Lanka, namely, People's Bank and Sampath Bank with the aim of analyzing the determinants of customer preference to use cardless technology over cards for withdrawals. When researchers want to compare two different groups to see if there is a statistically significant difference, they use the independent sample T-test (Kim, 2019). This study used the T-test to determine whether any apparent differences in means could be the result of real differences between the two groups.

According to PE, PU, and CT metric independent sample T-test, Sampath Bank always score better than the People's Bank with their customer preference. But according to the Ps metric independent sample T-test, there is no significant difference between Sampath Bank and People's Bank. Sampath Bank have significantly higher mean scores than People's Bank for each parameter, with mean differences statistically significant at the 000 level. These findings suggest that Sampath Bank in the Sri Lanka generally possess superior Perceived Ease of Use, Perceived Usefulness, and Customer Trust compared to People's Bank. Furthermore, these findings show that there is generally no difference between Perceived Security in both banks, People's Bank and Sampath Bank.

Conclusion

This study aims to examine the determinants of customer preference for cardless technology over card for cash withdrawals in the Sri Lankan banking sector. The results of this study show that all the examined variables have a significant positive relationship and impact on customer preference for using cardless technology. To mitigate internal biases in the data-derived conclusions, all interpretations were firmly grounded in statistically validated evidence rather than subjective judgment. The conclusions were drawn based on correlation, regression, and reliability analyses, where Cronbach's Alpha values ranging from 0.749 to 0.921 and KMO measures exceeding 0.7 confirmed data reliability and sampling adequacy. The absence of missing values across all variables further ensured that the final interpretations were not distorted by incomplete or biased data. Accordingly, the conclusions presented in this study reflect an objective, data-driven understanding of the factors influencing customer preference, ensuring the integrity and neutrality of the research outcomes.

Based on this study we can speculate that the ability to use cardless technology could revolutionize the way consumers access money. And there is no need for a physical card here. Although automated teller machines have significantly enhanced customer engagement by facilitating access to cash and in-bank payments, their frequent use has also rendered them susceptible to network failures. This situation has affected customer expectations of banking in terms of customer security and trust, and ATMs with cardless cash technology have created a customer-facing cash dispenser and card removal to ensure simple access to an account, reducing the risk of the user. It is possible to provide a more robust process. Therefore, consumers consider using cardless technology to be safer compared to using a physical card. A very interesting finding from this study is that the implications of this study are that the influence of usability on the likelihood of preferring cardless money technology over card is significant to some extent within the banking sector.

The technology in Sri Lanka's banking system is very well developed nowadays and customers are rarely suspicious of the products provided by banking institutions. This phenomenon can make the concerns of trust and security seem insignificant. Accordingly, banks should incorporate how they communicate and educate customers about the benefits of cardless technology to their customers.

These results suggest for future research, in this study, the primary focus is on the cardless technology service provided by only two banks in Sri Lanka, it is essential for future research to focus on receiving money through this cardless technology, which is also provided by other banks. In the study of environmental impacts that occur today with modern technology, it is possible to research the potential environmental benefits of cardless technology, such as reducing the use of plastic from physical cards and how the demand for such technology can be influenced by environmentally friendly consumption.

References

Akhter , S. (2014, May 6). Privacy concern and online transactions: the impact of internet self-efficacy and internet involvement. *Journal of Consumer Marketing, 31*(2), 118-125.

Alalwan , A. A., Dwivedi , Y., & Rana, N. (2017, June). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. *International Journal of Information Management, 37*(3), 99-110.

Bhosale, S., & Sawant, B. (2012, July 4). Security in e-banking via cardless biometric ATMs. *International Journal of Advanced Technology & Engineering Research (IJATER), 2*(4), 9-12. Retrieved from https://www.researchgate.net/profile/Satish-Bhosale-2/publication/260982820_SECURITY_IN_E-BANKING_VIA_CARD_LESS_BIOMETRIC_ATMS/links/00b7d532d7f6589912000000/SECURITY-IN-E-BANKING-VIA-CARD-LESS-BIOMETRIC-ATMS.pdf

Damghanian, H., Zarei , A., & Siah, M. (2016, September 27). Impact of Perceived Security on Trust, Perceived Risk, and Acceptance of Online Banking in Iran. *Journal of Internet Commerce, 16*(3), 214-238.

Guriting, P., & Ndubisi, N. O. (2006, January 1). Borneo online banking: evaluating customer perceptions and behavioural intention. *Management Research News*, 6-15.

Howard, J., & Sheth, J. (1969, January). The Theory of Buyer Behavior. *Journal of the American Statistical Association*.

Hua, G. (2009). An Experimental Investigation of Online Banking Adoption in China. *Journal of Internet Banking and Commerce, 14*(1), 1-12.

Kesharwani, A., & Bisht , S. (2012, June 8). The impact of trust and perceived risk on internet banking adoption in India: An extension of technology acceptance model. *International Journal of Bank Marketing, 30*(4), 303-322.

Nambiar, B., & Bolar, K. (2022, January 27). Factors infuencing customer preference of cardless technology over the card for cash withdrawals: an extended technology acceptance model. *Journal of Financial Services Marketing*, 58-73. doi:doi.org/10.1057/s41264-022-00139-y

Poong, Y. S., Yamaguchi, S., & Takada, J.-i. (2016, July 9). Investigating the drivers of mobile learning acceptance among young adults in the World Heritage town of Luang Prabang, Laos. *Information Development, 33*(1), 57-71.

Venkatesh, V. (2000, December 1). Determinants of Perceived Ease of Use: Integrating Control, Intrinsic Motivation, and Emotion into the Technology Acceptance Model. *Information Systems Research, 11*, 342-365.

Yap, K., Wong , D., & Bak, L. (2009). Building Trust in e-banking: Where is the Line between Online and Offline Banking? *Australian & New Zealand Marketing Academy Conference (ANZMAC)* , 1-9.

Al-Fahim, N. H. (2012, December). Factors Affecting the Adoption of Internet Banking Amongst IIUM' students: A Structural Equation Modeling Approach. *Journal of Internet Banking and Commerce, 17*(3), 1-14.

Amin, H. (2008, June 20). Factors affecting the intentions of customers in Malaysia to use mobile phone credit cards. *Management Research News*, 493-503.

Banerjee, A., & Chaudhury, S. (2010). Statistics without tears Populations and samples. *Industrial Psychiatry Journal, 19*(1), 60-65. doi:DOI: 10.4103/0972-6748.77642

Davis, F. (1989, September). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 319-340.

Godwin , J. (2001, October 1). Privacy and security concerns as major barriers for e-commerce: a survey study. *Information Management & Computer Security, 9*(4), 165-174.

Halliburton, C., & Poenaru, A. (2010). The role of multichannel integration incustomer relationship management. *Industrial Marketing Management*, 527-538.

Kim, H.-Y. (2019, July 17). Statistical notes for clinical researchers: the independent samples t-test. *44(3)*. doi: doi: 10.5395/rde.2019.44.e26

Patrick, A. (2002, December 10). Building trustworthy software agents. *IEEE Internet Computing, 6*(6), 46-53.

Phothikitti, K. (2020). Factors Influencing Intentions to Use Cardless Automatic Teller Machine (ATM). *International Journal of Economics and Business Administration*, 56.

Ranaweera, D. (2022). Factors Influencing on The Usage of Automated Self-Personal Banking Services in The Ratnapura District of Sri Lanka. *1stInternational Research Symposium on Management 2022*, 466-470.

Rotter, J. B. (1967). A new scale for the measurement of interpersonal trust. *Journal of Personality, 35*(4), 651–665.

Sampath Bank Plc. (2023, August 23). *Sampath Bank Introduces Sri Lanka's First Touchless Cash Withdrawals Across Its ATM Network*. Retrieved from Anybanq.lk: https://anybanq.lk/news/categories/Articles/355#:~:text=Colombo%2C%20August%2019th%2C%202021%3A%20Sampath%20Bank%20PLC%20announced,and%20possibly%20the%20first%20time%20in%20the%20region.

Shaikh, A., & Karjaluoto, H. (2015, February). Mobile banking adoption: A literature review. *Telematics and Informatics, 32*(1), 129-142.

About the Authors

1.Name: M. K. S. M. Sathsarani
Affiliation: Graduate, Department of Finance, University of Kelaniya
Mailing address: University of Kelaniya, Dalugama, Kelaniya, Sri Lanka
Tel: +94 77 243 6166
E-mail: Sathsarani19995@gmail.com

2.Name: B. L. D. H. V. Liyanage
Affiliation: Assistant Lecturer, Department of Finance, University of Colombo
Mailing address: University of Colombo, College House, 94 Cumarathunga Munidasa Mawatha, Colombo 03, Sri Lanka
Tel: +94 76 600 2191
E-mail: hashiliyanage1999@gmail.com

3. Name: H. M. N. P. Herath
Affiliation: Senior Lecturer, Department of Finance, University of Kelaniya
Mailing address: University of Kelaniya, Dalugama, Kelaniya, Sri Lanka
Tel: +94 71 260 4228
E-mail: nethmih@kln.ac.lk