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Drivers of Intention to Use Internet Banking: Unified Theory of Acceptance and Use of Technology Perspective

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Abstract

Most of the financial institutions in Sri Lankan context invest substantially on Internet Banking to provide efficient service to customers while achieving competitive edge in the industry. However, use of online banking remains low in comparison to certain emerging and developed nations. Thus, the purpose of this study is to investigate the factors that influence consumers' intentions to use Internet Banking using the Unified Theory of Acceptance and Use of Technology model (UTAUT-2). This study used a survey technique to collect data from 272 clients of National Savings Bank (NSB). The hypotheses were tested using multiple regression analysis. Six variables out of eight, performance expectancy, facilitating conditions, social influence, price value, habit, and trust, were shown to be relevant in influencing intention to use IB services. It also shown that the UTAUT-2 paradigm can be adapted to developing countries with various degrees of explaining power. An understanding of the determinants of Internet Baking use is important for managers of the financial firms as they can pursue strategic intervention to enhance the level of IB adoption. Further, the firms intending to launch IB services would be benefited with the precise understanding of the significant drivers determining the IB adoption behavior. This paper adds to the empirical literature on consumer IB adoption behavior, particularly in a developing nation like Sri Lanka.

***Keywords*:** Internet Banking, Technology acceptance, UTAUT, Intention to use

1. INTRODUCTION

Financial Services Industry (FSI) has played a pivotal role in contributing to the growth and prosperity of the modern economies as the stability and integrity of the FSI has been one of the key factors of the stable national economic growth (Sethi, Chakrabarti, & Bhattacharjee, 2020). Disruptive technologies play significant role in shaping the sustainable growth in the Financial Services Industry (Bhuvana, 2020). With the developments of the internet technology, the landscape of the FSI has been dramatically changed as the firms in the FSI started establishing foothold into the areas once ignored by

traditional players (Del Gaudio, Porzio, Sampagnaro, & Verdoliva, 2021). Financial services firms are classified as those that primarily engage in retail banking, commercial lending, and insurance (other than health, credit cards, mortgage banking, investment advisory, and asset management).

The technological developments pertaining to FSI include internet banking, Crypto currencies, and mobile wallets, peer to peer (P2P) lending and cross boarder payment services etc (Auer, & Böhme, 2020). Among these Intent Banking (IB), is a system that allows consumers, people, or enterprises to access accounts, do business, or acquire information on financial goods and services through the Internet (Rahmath & Hema (2011) has become focal concern among the academics and practitioners during the recent past. The diffusion/acceptance/adoption of new technology across the economy, rather than the development of new technology, influences macroeconomic productivity growth. (Malhotra, & Singh, 2007). Thus, the acceptance of the IB services by the potential customers is an important concern to ensure the growth of the industry and economy. However, the low adoption/acceptance rate of the IB services becomes one of the serious challenge confronted by the firms operating in the FSI (Camilleri, & Grech, 2017).

Prior research have analyzed determinants of IB adoption with the consideration to the organizational, technological, individual and environmental factors, though they come up with the inconsistent results (Aboobucker, & Bao, 2018; Alalwan, Dwivedi, Rana, & Algharabat, 2018; Zahir, & Gharleghi, 2015). Determinants of IB acceptance have been identified using different theoretical models including Technology Acceptance Model, Diffusion of Innovation Theory, Theory of Planed behavior, Theory of Acceptance and Use of Technology model (Alwan et al. 2016, Boateng et al. 2016, Yuan et al., 2014, Cudjoe et al., 2016). The majority of studies on the factors of IB adoption are focused on developed markets, such as the United States or Europe, and this gap in the literature in other contexts must be addressed. As a result, this research aims to contribute to the empirical literature on the uptake of IB services, particularly in a developing nation like Sri Lanka.

During last couple of years there has been significant emphasis placed on launching IB services by majorities of banks in Sri Lanka (Central Bank of Sri Lanka, 2018). As a result of this trend the consumer adoption and usage may be drastically transformed, and however only a handful of studies looked specifically on this phenomenon in Sri Lankan context (Kariyawasam, & Jayasiri, 2016;

Nayanajith, Damunupola, & Ventayen, 2019). In comparison to both industrialized and developing nations in the area, the amount of IB usage in Sri Lanka remains low (Kariyawasam and Jayasiri, 2016 Priyangika, Perera, & Rajapakshe, 2017). Moreover, IB adoption levels in Sri Lanka is relatively low despite high adoption level of general technological advancements such as mobile usage, internet usage (Premarathne and Gunathilake 2016).

The low IB service adoption rate is troublesome for banking institutions as they are unable to realize the expected outcomes of launching IB interventions (Alwan & Al-Zu bi, 2016). Managers at financial businesses are likely to continue flailing, squandering time and resources on IB services until they understand the fundamental causes contributing to this low adoption rate (Roy, Balaji, Kesharwani, & Sekhon, 2017). Though many empirical studies were conducted in the developed context on this phenomenon it is rather challenging to generalize those findings to the Sri Lankan context due to the notable differences pertain to the education level (Grimm et al., 2010), cultural beliefs and values (Samarasinghe, 2012) and economic conditions (Popkova, 2014) between the developing and developed country two contexts. As a result, this research aims to contribute to the empirical literature on IB adoption behavior of consumers, particularly in a developing nation like Sri Lanka. Thus, the research question addressed in this study is, "What variables influence customers' propensity to employ IB services in Sri Lanka?" The purpose of this research is to determine the factors that influence consumers' intentions to use Internet banking in Sri Lanka, with a focus on National Saving Bank. The study is positioned with the Unified Theory of Acceptance and Use of Technology theory to fulfill the purpose.

The structure of the paper is as follows. The study's second portion discusses previous research on Internet banking, online banking use, and determinants of desire to utilize internet banking, as well as associated technology adoption/acceptance theories. The second part concludes by giving the current study's research model, followed by the hypothesis formulation. The third portion describes the technique used to perform the study, and the fourth section gives the findings, followed by a discussion of the important findings. Last section of the paper discusses the theoretical and practical implication of the findings, limitation and directions of the future research.

2. LITERATURE

2.1. Internet banking

Internet banking mainly allows a user to conduct financial transactions via the Internet. Based on this functionality of internet banking several authors provided definitions on IB. Few of the definitions on IB is given in Table 1. When comparing all definitions, it is very much like each other as most authors discussed about change of delivery channel for banks. IB is defined as the use of internet technology to allow customers, individuals, or businesses of financial institutions to access accounts, transact business, or obtain information on financial products and services via a public or private network, including the internet, for the purposes of this study.

2.2. Intention to use Internet Banking

This part examines the existing literature on the phenomena of interest in the current investigation, namely the desire to use IB. Existing literature on innovation adoption, IT adoption, and IB adoption is studied in order to fully comprehend the IB adoption framework. Within IT and innovation adoption literature, the term "adoption" is defined as whether a person or organization uses a particular innovation, system, or practice (Jeyaraj et al., 2006). However, the term has been subject to debate among scholars, particularly in the fields of IS, technology, and innovation. Consequently, authors have used various terms, such as "acceptance" and "implementation," to designate the adoption of an innovation, system, or practice. Table 2 shows the various terms and definitions used in IT and innovation adoption literature to denote adoption. As illustrated in the Table 2 previous studies have also used different means for operationalizing the adoption construct. Some authors have operationalized adoption using frequency of use by the individual or organization, while others have used a binary variable (adopted or not adopted) based on self-assessment. This review shows that there is no universally accepted definition and means of operationalizing the adoption construct.

In order to conceptualize the "intention to use IB" constructs, extant literature on IB adoption was reviewed and consistent with IT and innovation adoption literature, scholars and practitioners of IB adoption studies have utilized various terms to denote IB adoption. Among them, the most widely used constructs are IB adoption, extent of IB usage, IB acceptance, Diffusion of IB and Intention to use IB. Several authors (Firdous, & Farooqi, 2017; Nasri, 2011; Polasik, & Wisniewski, 2009) have used a dichotomous measure to measure IB adoption, while others (Yaseen, & El Qirem, 2017; Safeena, Date, & Kammani, 2011; Abbasi, Kamran, & Akhtar,

2017; Lee, 2009) have used continuous variables. However, use of dichotomous variables as a measure of IT and innovation adoption has been criticized as it does not capture variance in the intention/extent of adoption. Thus, the present study operationalizes the intention to use IB construct as a continuous variable.

2.3. Theories of Technology (IB) Adoption

A variety of models and frameworks have been created to explain user adoption of new technologies and the elements that influence user acceptability. As IB is treated as a technological innovation, and present study is aim at exploring determinants of intention to use IB services reviewing such theories are important. Most widely tested technology adoption theories includes: Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 1980), Theory of Planned Behaviour (TPB) (Ajzen, 1991), Decomposed Theory of Planned Behaviour (DTPB) (Taylor & Todd, 1995); the Technology Acceptance Model (TAM) (Davis, 1989), TAM2 (Venkatesh & Davis, 2000) and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al. 2003), the Diffusion Innovation Theory (DIT) (Rogers, 1985).

These models have changed throughout time as a consequence of academics' ongoing efforts to validate and extend them. In this technology adoption literature, the most extensively tested models are TRA, TPB, and TAM. However, all three models have been critiqued for having a low explanatory power in terms of behavioral intentions, which varied between 30 and 40%. (Jeyaraj *et al*, 2006).

In answer to the aforementioned criticisms, Venkatesh et al. (2012) created the UTAUT2 model, which provides new insights into the elements influencing technology adoption as well as how social and organizational culture impacts individual usage behavior. Despite the fact that the UTAUT2 model is relatively young, having emerged in 2012, researchers in the field of information systems are progressively investigating its applicability, validity, and reliability to explain technology adoption in many scenarios. When compared to previous models, UTAUT2 generated a significant improvement in the variance explained in technology usage, i.e., 40% to 52% in UTAUT and 56% to 74% in UTAUT2 (Venkatesh et al. 2012). Furthermore, since it focuses on consumer usage context, UTAUT2 is more suitable to this study. Other technology acceptance and use models, such as the original UTAUT, are more suitable in the context of employee use (Rogers, 2003). Based on above discussion, it is expected that

UTAUT2 is a preferable model in this study. Because there have been no previous studies assessing the UTAUT2 model in the context of IB acceptance in Sri Lanka, the current study established the research model depicted in Figure 1.

2.4. Hypothesis

PE is described as "the degree to which an individual feels that employing the system will assist him/her in achieving increases in work performance" (Venkatesh et al. (2003). It is apparent that once an individual perceive that IB services offers them ample opportunities to perform their tasks more efficiently and effectively they are more likely to use it. On the other hand, if they believe that IB services are not useful and does not provide them with expected performance they intend to use traditional method over IB service. Several scholars have discussed the significance of the association between PE and intention to use IB (Foon, & Fah, 2011; AbuShanab, & Pearson, 2007; Rahi, Ghani, Alnaser, & Ngah, 2018; Martins, Oliveira, & Popovic, 2014). As a result, it is expected that PE will have a large favorable impact on customers' intent to use IB.

H1:Performance expectancy is positively related to customers' intention to use IB services

Effort expectancy (EE) is defined as "the degree of ease associated with use of the system" (Venkatesh et al., 2003). When customers perceive that it is cumbersome to access and navigates the IB services they are reluctant to use IB services vice versa. Previous research studies on UTAUT model, found that EE is a significant factor affects behavioral intention to usage IB (Rahi, & Ghani, 2019; Martins, Oliveira, & Popovic 2014). Further it has been found that EE has positive effect on behavioral intention to usage IB (Khater, 2016; Martins, Oliveira, & Popovic 2014). Thus, it is hypothesized that EE has positive influence on intention to use IB.

H2: Effort expectancy is positively related to customers' intention to use IB services

Social influence (SI) is defined as "the degree to which an individual perceives that important others believe he/she should use the new system" (Venkatesh et al., 2003). Once an individual's network of influential people pushes them to utilize IB services, they are more likely to embrace IB. In contrast, such significant individuals who will impact individual decisions do not support IB adoption and do not intend to use IB services. SI is a significant factor in determining behavioral intent to use IS, and it has been established that SI has a positive effect on behavioral intent to use IS (Venkatesh et al., 2003). Furthermore, other studies found that SI has a significant positive effect on behavioral intention to usage IS (AbuShanab, & Pearson, 2007; Martins, Oliveira, &

Popovic 2014). Thus, consistent with UTAUT, this study hypothesized that SI has an influence on behavioral intention to usage IBS.

H3: Social influence is positively related to customers' intention to use IB services

The Facilitating conditions (FC) provided to each consumer can vary Graphical User Interface, application vender, Personal computers (PC) or Mobile operating system, technology generation, mobile device and so on. A customer with access to a favorable set of FCs is more likely to want to use a technology (Venkatesh et al., 2012). From the IB perspective, access of information and other resources may vary with consumers that facilitate their use, such as videos & FAQs. It is generally expected that, all variables remain constant; a consumer having lower level of access to FCs will have lower level of intention to use IB (Venkatesh et al. 2012). Thus, following hypothesis was postulated.

H4: Facilitating conditions is positively related to customers' intention to use IB services

Hedonic motivation refers to fun or pleasure derived from using a technology, and it has been showed to play an important role in determining technology acceptance and use (Venkatesh et al. 2012). Once individuals are pleased with using IB services, they tend to continuously use it for day today banking purposes. Conversely, when customers are not enjoying with using IB services they are more likely to shift again for the traditional Banking services. Thus, hedonic motivation will have positive correlation in determining technology use. This leads to following hypothesis.

H5: Hedonic motivation is positively related to customers' intention to use IB services

Price values refer to consumers' cognitive trade-off between the perceived benefits of the application and the monetary cost for using them (Venkatesh et al. 2012). Some people are independent and competitive, making decisions based on selected information and heuristics, whereas others are more interdependent, cooperative, and consider more details. As a result, in the context of IB, certain people are more inclined than others to pay attention to the pricing of IB services. This also implies that when individuals are compelled to pay a reduced cost to get IB services, they are more inclined to use them. Customers, on the other hand, are more hesitant to employ IB services when the costs are expected to be rather high. This leads to following hypothesis.

H6: Price value on will have a significant negative effect on intention to use IB services.

Habit refers to the extent to which people tend to perform behaviors automatically because

of learning (Venkatesh et al. 2012). Habits, such as belief creation or retrieval, will automatically influence an individual's conduct without conscious mental effort (Gardner, 2015). For instance, after an extended period of repeated interaction with IB on working hours, a consumer may have developed a positive view toward IB and an associated behavioral intention (Venkatesh et al. 2012). This habit can be spontaneously triggering the positive intention to use behavior. As a result, stronger habit will result in a stored intention, which will impact behavior. The following hypothesis was developed as a response to the previous argument.

H7: Habit will have a significant positive effect on intention to use IB services.

Trust is the defining attribute of a relationship and determining its very existence and nature is necessary even beyond economic factors (Baptista, & Oliveira, 2015). Researchers have confirmed this when an activity entails social uncertainty and risk (Kuisma, Laukkanen, & Hiltunen, 2007). Social uncertainty and risk factors with an IB related transaction is typically high because of the behavior of the system performance is intangible. Similarly, trust is a reducer of risk in the eyes of inexperienced online customers and act as social uncertainty reducer (Gefen 2000), on seals of approval or privacy policy statements (Weir, Douglas, Carruthers, & Jack, 2009), and on affiliations with respectable companies (Reis, Gulsecen, & Bayrakdar,2011). With IB's limited Web interface, does not allow customers to identify whether a Bank is trustworthy as in a typical face-to-face interaction. Further, trust important aspect where vendors can easily take advantage of online customer (Hutchinson, & Warren, 2003). Therefore, this study hypothesized that Trust has an influence on intention to use IBS. Thus, following hypothesis was postulated.

H8: Trust will have a significant positive effect on intention to use IB services.

3. METHODS

The purpose of this research is to discover the key factors that explain why people want to utilize IB services. The current study is classified as a descriptive research design since the goal is to characterize the causes of IB usage intention (Zikmund et al, 2010). The current study's research objective aims to determine the primary determinants influencing the intention to utilize IB services in Sri Lanka, with a focus on NSB consumers. As a result, the survey respondents would preferably be NSB customers. As a consequence, the current study's unit of analysis is "individual."

Among the leading financial institutes of Sri Lanka, NSB has

been selected as it is the largest licensed specialized bank in the country. NSB was established in 1971 and presently operate with more than 255 branch network and 282 ATM machines covering Entire Island (NSB Annual Report 2018). NSB has been slow to adopt technology in past. However recent years they have turn their focus on innovation to improve their financial solutions to meet the customer expectations. To conduct this research the sample was narrowed down to customers of NSB in Colombo District as Colombo is identified as commercial hub and highly populated city in Sri Lanka.

As indicated in the Table 4, the target population (N= 16.089) consists with NSB customers in Colombo District who are using banking services provided by the National Savings Bank. As shown in Table 4, the sample of the respondents drawn for the study was 450. Assuming a very conservative response rate, a printed version of questionnaire distributed to in person, while online version distributed via email. List of customer base maintained at the head office of Bank was used as the sample frame and every 10^{th} customer in the list was taken to the sample when drawing the sample for online survey. Every fifth customer visited the branch on the certain date were taken in to consideration for drawing the sample for in person data collection.

Out of the 450 questionnaires distributed, only 338 were returned. The branch wise response rate varied from one to another (see Table 4) and the overall response rate was 75.1%. However, 66 responses were disqualified due to various reasons. 52 questioners were incomplete due to significant number of questions were not answered by the respondents, 14 questioners were answered abnormally since there was same answer for all Likert scale questions. After accounting for incomplete responses 272 were proceed to the further analysis.

Validated questions from prior relevant research were used to assess the theoretical constructs. The modified questions were verified, and language modifications were made to match the instrument to the needs of this study. Table 3 depicts the operationalization of variables. The questionnaires were written in both English and Sinhala. A professional translator completed the back translation of the current study's questionnaire. Pre study was conducted in order to ensure face validity of the study variables of the present study. Pre study was executed by selecting 12 respondents and survey questionnaire was shared among them. After one week the completed questionnaire were collected back and discussed with them the clarity and understandability of the question items. Minor changes were made

to the original questionnaire based on the feedback given by the respondents.

4. RESULTS

Demographic factors were first analyzed and results are illustrated in Table 5. Majority of the respondents were male with 52.6% while 47.4% responds were female. Most of the respondents were from the age group of age 21 to 30 year with 42.6% of the total respondents. It was followed by 31 to 40 year group with representing 38.8% of the participants. Therefore, most of the participants are either represents Generation Y and generation X (Kotler & Keller, 2016). Further, in Sri Lanka perspective those age groups represent income earners with technological knowhow. Most of the participants i.e. 37.1% are having diploma as their education qualification. Further, more than 67% of the participants are having education of diploma or degree. As indicated in the table 7, 42% of the participants are having previous IB experience of more than 2 years. Further, it can be identified that clear majority of participants i.e. 69.1% is use smart phones as the preferred devise to enter the IB services.

The measures' convergent and discriminant validity were statistically verified using factor analysis. Hair et al. proposed three criteria for determining data adequacy for factor analysis (2010). First, a visual examination of the correlation matrix indicated that a significant percentage of correlations were more than 0.30. Second, Barlett's Test of Sphericity provided statistically significant results (190pprox.. chi-square 10794, df 340, sig.000) indicating that correlations among the variables were sufficient to proceed with factor analysis. Third, for both the overall test and each variable, the measure of sample adequacy in terms of Kaiser-Meyer-Olkin (KMO) values were observed. The entire KMO value was 0.643, which is more than the threshold value of 0.50. (Hair et al., 2010). KMO values larger than 0.5 were also found in each variable. Finally, all three requirements were satisfied.

After the underlying assumptions of factor analysis were established, all variables were factored using principal component analysis. Since the current investigation employed previously validated instruments, with the exception of one variable, an a priori criteria in which the researcher stated how many factors to extract (Hair et al., 2010) was used to determine the number of components to be extracted. The rotated factor matrix was obtained using Varimax rotation. Because the majority of the constructions had a well-established theoretical foundation, items with a factor loading of +/-0.5 and above were chosen as significant loadings (Hair et al., 2010). Table 6 displays the final factor structure.

Cronbach Alpha values were assessed to determine the reliability of the constructs, and the findings are reported in Table 8. All of the variables met the 0.6 criteria, indicating the measurements' internal consistency. As a consequence, correlations between variables were investigated using person correlation, and the findings are displayed in Table 7.

4.1. Hypothesis testing

Hypothesis testing is based on regression analysis using SPSS. Table 9 provides the results of hypothesis testing with R2, standard coefficient, and significance. The Adjusted R Square value amounts to .429 (Table 10). Thus, the regression model explains 43% of the variance in the Internet banking adoption among respondents with the 8 independent variables specified the research model. As indicated in the ANOVA table the regression model is statistically significant (F = 29.329, P= 0.000).

In sum, this study confirms the results of UTAUT. Supporting H1, performance expectancy (PE) had significant effects on behavioral intention to use (b= .141, p = 0.023). Social influence had a significant positive impact on IB adoption, supporting H3 (b = .114, p = 0.037). Facilitating condition had a significant positive impact on IB adoption supporting H4 (b = 0.124, p = 0.019). Price value was found to have a significant effect on IB Adoption, supporting H6 (b = .148, p = 0.004). Habit had a significant positive impact on IB adoption, supporting H6 (b = .392, p = 0. 000). Supporting H7 while trust was found to have a significant effect on IB Adoption, supporting H8 (b = .120, p = 0.029). Effort expectancy and hedonic motivation were not found to have a significant effect on user's IB Adoption, not supporting H2 and H5.

5. DISCUSSION

The findings revealed that performance expectancy, habit, price value, facilitating condition, trust, and social influence all had a significant impact on IB adoption. IB adoption was favorably affected by habit. The association between habit and IB adoption has been studied, and the findings verified the significance of the link. This study found that over a long time of recurrent encounter with IB during working hours, a consumer may have established a favorable opinion of IB and a related behavioral intention. This is consistent with the findings of the Alalwan, Dwivedi, Rana, Lal, & Williams, (2018).

The findings also suggested that facilitating condition has a significant positive effect on IB adoption. As suggested by previous studies of Foon, & Fah, (2011), this implies that once an individual perceive that IB services offers them ample

opportunities to perform their tasks more efficiently and effectively they are more likely to use it. Moreover, consistent with previous findings (Roy, Kesharwani, & Bisht, 2012), this study found that trust has a significant effect on IB adoption. This finding means that when employees confident on using IB service over their security the level of usage is increased. This study also confirms the importance of social influence and price value in predicting customers' IB adoption and confirm the validity of UTAUT model in the context of Internet banking adoption. These findings are consistent with previous studies of Chaouali, Yahia, & Souiden, (2016). This study also found empirical support for the relationship between performance expectancy and IB adoption. This means that once an individual perceive that IB services offers them ample opportunities to perform their tasks more efficiently and effectively they are more likely to use it. This confirms the similar results of the previous studies (Foon, & Fah, 2011; Zhou, Lu, & Wang, 2010).

However this study did not find statistically significant relationship for the effort expectancy, hedonic motivation with IB adoption. This result is not consistent with theory proposed in UTAUT. This may imply that customer' perceptions about effort effectiveness and hedonic motivation will not play a more influential factor than the other factors in determining IB adoption. Possible reason for this inconsistent finding would be related with the demographic profiles of the respondents. More than 82 percent of the participants are millennial born after 1981 having basic technical knowledge to operate internet banking which clearly indicate that effort expectancy will not significant as they may possess necessary technical skills as well as the present day technology provide greater user interface support to the users. Further, most of the participants i.e. 37.1% are having diploma as their education qualification and more than 67% of the participants are having education of diploma or degree. This indicates the level of awareness of using such technological applications with minimum effort among the respondents. Moreover, this study was based on the customers who were visiting the Colombo branches and the possibility of having great deal of exposure on using technological applications is much higher among them as they reside in metropolitan arrears in the country. The possible reason for not supporting the relationship between hedonic motivation and intention to use IB services could be explained with respects to nature of the services provided with IB services. Hedonic motivation refers to fun or pleasure derived from using a technology, (Venkatesh et al. 2012). Involving with the IB services are mostly routine where no diversity

is associated with. Thus, when someone use the routine feature provided by the IB services several time marginal utility is diminishing.

6. CONCLUSION

6.1. Implications

This research study is conducted based on UTAUT2 model proposed by Venkatesh et al. (2012) integrating Trust as an independent variable. This model was not previously tested in developing economy setting i.e. Sri Lankan context in general as well as area of internet banking acceptance. As a consequence, this research study contributes to bridging the theoretical gap between developed and developing settings, and the research findings contribute to the present literature by providing insights into the factors influencing Internet banking usage.

This study offered a model for assessing IB service intention, which may also be used to explain other e-banking usage behavior studies, such as mobile banking or other e-banking services. The study further contributes to the discovery that, among the identified independent factors, habit is the most important factor determining intention to use internet banking. Overall, this study has added to the body of knowledge in the subject of technology acceptance literature for a developing country like Sri Lanka. Financial institutions are experiencing a significant difficulty due to low utilization of their IB services. According to Curran and Meuter (2007), as clients become more aware and comfortable with banking technology, organizations must learn how to manage Self-Service Technologies effectively. As a result, it is critical to assist financial institutions in developing an appropriate marketing plan that would increase the acceptable level of IB acceptance among their consumers. These findings will assist financial institutions in determining the most appropriate marketing strategy. Such findings will enable financial institutions to determine the most effective marketing plan for encouraging clients to adopt Internet banking as a more convenient and innovative channel.

In the Performance Expectancy aspect, it can identify that online users are highly concern about the effectiveness of what they performed using IB. Therefore, it is necessary to create marketing campaign on awareness of IB services of firms among the customers about the benefits of IB specially focusing on convenience and availability.

Facilitating condition is statistically proven that it is an important variable on intention to usage IB. As a result, financial institutions should spend in increasing the operational comfort and simplicity of their IB

platforms in order to make their services more user-friendly. Furthermore, banks should educate their consumers on how to conduct their day-to-day banking operations using IB services and make the services more familiar to them. When customers visit the branch, it is advantageous if the staff members can persuade and educate them on how to utilize IB services (Alalwan et al., 2014). Thereby, the bank will be able to resurrect customer hesitancy toward use Internet banking services due to lack of knowledge on how it works.

Price value of IB services is affecting intention to use IB services. To have rapid IB usage penetration levels among customers, financial institutes should devise an effective pricing strategy on their products. For example, the bank should promote discounts or waive off service charges to online utility bill payments. Thereby, the bank will be able to increase customer on-boarding to the IB services.

According to the survey findings, habit has been the most important factor of determining Intention to use IB services. To increase the repetition of the user behavior bank should be constantly reminded to online user via regular SMS or email messages. Thereby, bank will be able to be in the mind of the user and will be able to increase frequency of use of them.

Finally, trust has been playing pivotal role affecting on intention to use IB services. Therefore, it is necessity to persuade customers that using IB is trustworthy and less risky. Presently, most banks obtain necessary security certificates on its website and guarantee to provide a safe and secure internet banking experience. However, this may be addressed by offering adequate education and information on how to use IB correctly and safely, as well as enhancing the appearance of their websites (Gefen et al., 2003). Furthermore, structural assurances such as legal and regulatory compliance, warranty certificates, and so on must be made easier. As a result, it will alleviate customers' concerns about the possibility of fraud, hacking, and other risks associated with Internet banking.

6.2. Limitations and Future Research

This study was conducted in the context of Sri Lanka targeting subset of IB users of Colombo City from the NSB which will hinder the generalizability. Colombo city is the technologically most advance area of the country. Further, by narrow downing the sample, the sample size was limited to 272 individual respondents without considering business entities. Hence, the findings may not apply to entirety of the NSB nor financial sector of Sri Lanka, as there is vast disparity in technological advancement when

compare to Colombo city to other areas of the country.

Further, the usage of IB in Sri Lanka is showing exponential growth over the last few years, hence it may be too early to conclude in this regard. Thus, a longitudinal study could circumvent this problem and the extent how much the effect of the proposed factors could be stable or change over time.

Finally, this report doesn't consider the regulatory and security aspect of the IB which create a significant impact on customer perception. In terms of security, it is critical to recognize important issues provided by the proliferation of information and communication technologies, as well as new opportunities created by the consequent digital transformation. In terms of regulation, it will be useful to establish which government policies and public investments are required to bridge the different digital gaps and reap digital profits.

With the constraints stated above, various promising topics for future study remain to be investigated, some of which are as follows. This research might be applied or replicated in other electronic banking services such as mobile banking, ATMs, telephone banking, and credit cards in the future. This would be useful in determining the model's external validity. Further, this study is about human behavior, which is subject to change as the time passed by. Also, this data collection in this study was carried out by using closed ended questions which may not be able to capture the full respond of the participant. Therefore, it will be beneficial to conduct longitudinal study to gain valuable inside into the behavioural intention of the online users.

This research conducted using the UTAUT model which is one of the technology acceptance models. Therefore, it will be interesting for future research to test and explore different constructs from other technology acceptance models to test in the Sri Lankan context. = Future study might also be undertaken to broaden the research model by including additional issues such as regulatory and security concerns. Finally, the sample size could be made greater by covering a substantial area of Sri Lanka will help to generalize the research findings.

APPENDIX

Table 1: Conceptualization of Internet Banking

Author and Year	Definition
Berger (2003)	"An alternative delivery channel through which banking services are performed."

Liao, Shao, Wang & Chen (1999)	"The provision of operations such as opening an account, money transfer, finding out the bill details and paying off the bill"
Reis, Gulsecen & Bayrakdar (2011)	"Banking services which eliminate the obligation of having to go to the bank branch during the working hours of the bank and having to wait in the queue, which can be accessed from everywhere where internet is available, through which all operations can be carried out except physical money operations."
Rahmath & Hema (2011)	"Internet banking acts as a kind of financial intermediation which makes transaction through the Internet."
Gopalakrishnan, Wischnevsky & Damanpour (2003)	"Internet banking is defined as a bank that offers (web-based) transactional services."
Bradley & Stewart (2002)	"Internet banking represents an electronic and remote distribution channel for delivering financial services on a virtual level."

Table 2: Terms used in IT and Innovation Adoption Literature

Variable	**Definition**
Perceived system use	"The amount of use of an innovation by a person or organization. This is a self-report of the frequency of use by the individual or organization."
Intent to use	"A person's or organization's intention to use or adopt an innovation in the future. This is usually measured using forward-looking statements that capture the intent of the person or organization."
Adoption	"Whether a person or an organization is an adopter or a non-adopter of an innovation. This is usually measured as a binary variable based on self-assessment."
Diffusion	"The extent to which a person or an organization exploits an innovation. This is usually measured as a percentage of available features used, possible sites adopted, or possible applications."
Rate of adoption	"The diffusion curve over time. This is usually measured as the percentage of adopters in a population."
Actual system use	"The amount of actual use of an innovation by an individual or organization. This is an objective measure typically obtained from logs."
Time of adoption	"A person's or organization's time of adoption. This is typically measured by an absolute (such as "2017") or relative ("two years ago") year of adoption."

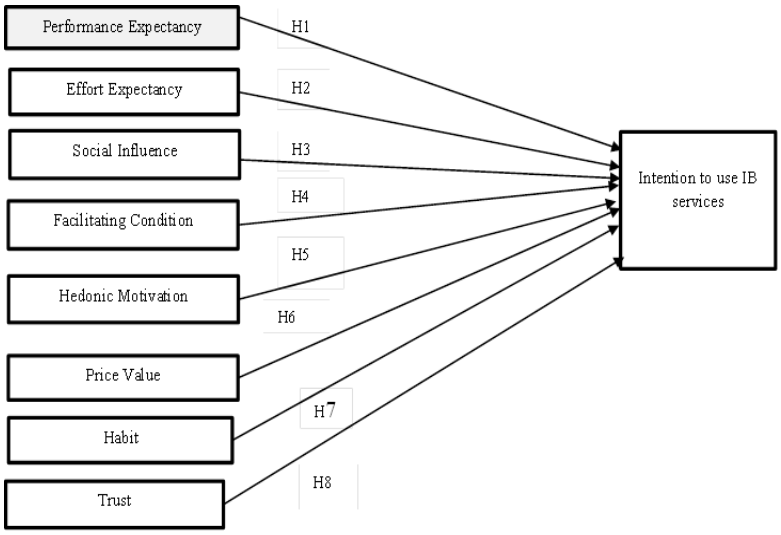

Figure 1: Research Model

Table 3: Operationalization of variables

Code	Item Description	Source
Performance Expectancy		
PE 1	I find Internet Banking useful in my daily financial activities.	Venkatesh et al. (2012)
PE 2	Using Internet Banking increase my chances of achieving financial freedom that are important to me.	
PE 3	Using Internet Banking helps me accomplish things more quickly.	
PE 4	Using Internet Banking increase my productivity.	
PE 5	Overall, I would find Internet Banking to be advantageous.	Leong et al. (2013)
Effort Expectancy		
EE 1	Learning how to use Internet Banking is easy for me.	Venkatesh et al. (2012)
EE 2	My interaction with Internet Banking is clear and understandable.	
EE 3	I find Internet Banking easy to use.	
EE 4	It is easy for me to become skilful at using Internet Banking.	
Social Influence		
SI 1	People who are important to me think that I should use Internet Banking.	Venkatesh et al. (2012)
SI 2	People who influence my behaviour think that I should use Internet Banking.	
SI 3	People whose opinions that I value prefer that I use Internet Banking.	

Facilitating Condition		
FC 1	I have the resources necessary to use Internet Banking.	Venkatesh et al. (2012)
FC 2	I have the knowledge necessary to use Internet Banking.	
FC 3	Internet Banking is compatible with other technologies I use.	
FC 4	I can get help from others when I have difficulties using Internet Banking.	
Hedonic Motivation		
HM 1	Using Internet Banking is fun.	Venkatesh et al. (2012)
HM 2	Using Internet Banking is enjoyable.	
HM 3	Using Internet Banking is entertaining.	
HM 4	Using Internet Banking gives me pleasure.	Yang (2013)
Price Value		
PV 1	Internet Banking is Reasonably priced.	Venkatesh et al. (2012)
PV 2	Internet Banking is good value for the money.	
PV 3	At the current price, Internet Banking provides good value.	
Habit		
HT 1	The use of Internet Banking has become a habit for me.	Venkatesh et al. (2012)
HT 2	Using Internet Banking has become natural to me.	
HT 3	I am addicted to using Internet Banking.	
Trust		
TR 1	I believe that Internet Banking is trustworthy.	Gefen et al. (2003)
TR 2	I trust in Internet Banking.	
TR 3	I don't doubt the honesty of Internet Banking.	
TR 4	I feel assured that legal and technological structures adequately protect me from problems on Internet Banking.	
TR 5	Internet Banking has the ability to fulfil its task.	
Behavioural Intention		
BI 1	I intended to use Internet Banking in the future.	Venkatesh et al. (2012)
BI 2	I will always try to use Internet Banking to meet my daily financial needs.	
BI 3	I plan to use Internet Banking in the future.	
BI 4	I will recommend others to use internet Banking.	Akour (2010)

Table 4: Questionnaire Distribution and Response Rate

Name of the Branch	Population	Questionnaire distributed	Questionnaire returned	Response rate %
Head Office	4375	125	105	84.0
City	1985	55	37	67.3
City Plus	537	15	14	93.3
Borella	1876	50	37	74.0
Maligawatta	766	20	16	80.0
Wellawatta	1866	50	43	86.0
Bambalapitiya	1987	55	38	69.1
World Trade Centre	998	30	18	60.0
Pettah	769	20	9	45.0
Kotahena	675	20	13	65.0
Kollupitiya	255	10	8	80.0
Total	**16089**	**450**	**338**	**75.1**

Table 5: Demographic profile of the respondents

Variable	Frequency	Percent
Gender		
Female	129	47.4
Male	143	52.6
Age category		
20 Years or Less	11	4.0
21 to 30 years	116	42.6
31 to 40 years	100	36.8
41 years or above	45	16.5
Education Level		
G.C.E. O/L or below	8	2.9
G.C.E. A/L	80	29.4
Diploma	101	37.1
Degree or higher education	83	30.5
Experience with Internet Banking		
Less than 6 months	51	18.8
6-12 Months	47	17.3
1-2 Years	59	21.7
More than 2 Years	115	42.3
Preferred devise of use		
Smart Phone	188	69.1
PC/ Laptop – Office	36	13.2
P/C Laptop – Personal	48	17.6

Source: Survey Data, 2019

Table 6: Factor Analysis

Items	Factors								
	Perfor mance	Effort Expect	Social influe	Facilit ating	Hedoni c	Price Value	Habit	Trust	Inten tion

	Expectancy	ancy	nce	condition	Motivation				to use
PE 1	.641								
PE 2	.676								
PE 3	.645								
PE 4	.722								
PE 5	.631								
EE 1		.682							
EE 2		.652							
EE 3		.751							
EE 4		.728							
EE 5		.614							
SI 1			.581						
SI 2			.651						
SI 3			.675						
FC 1				.654					
FC 2				.715					
FC 3				.674					
FC 4				.712					
HM 1					.781				
HM 2					.526				
HM 3					.658				
HM 4					.742				
PV 1						.642			
PV 2						.514			
PV 3						.582			
HT 1							.524		
HT 2							.641		
HT 3							.652		
TR 1								.687	
TR 2								.742	
TR 3								.651	
TR 4								.587	
TR 5								.492	
BI 1									.587
BI 2									.625
BI 3									.712
BI 4									.673

Source: Survey Data, 2019

Table 7: Reliability of the Measures

Variable	Cronbach's Alpha	No. of Items
Performance Expectancy	.665	5
Effort Expectancy	.759	4
Social Influence	.905	3
Facilitating Condition	.644	3
Hedonic Motivation	.703	4
Perceived Value	.767	3
Trust	.649	5
Behavioral Intention	.782	4

Source: Survey Data, 2019

Table 8: Correlations

	PE	EE	SI	FC	HM	PV	HB	BI
PE								
EE	.441**							
SI	.186**	.314**						
FC	.349**	.377**	.116					
HM	.494**	.563**	.498**	.224**				
PV	.381**	.295**	.123*	.229**	.287**			
HB	.539**	.263**	.090	.346**	.448**	.221**		
BI	.489**	.252**	.039	.359**	.357**	.342**	.590**	
TR	.374**	.451**	.302**	.309**	.393**	.291**	.287**	.335**

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 9: Coefficients

Variables	**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
	B	**Std. Error**	**Beta**		
(Constant)	1.130	.304		3.717	.000
Performance Expectancy	.163	.071	.141	2.279	.023
Effort Expectancy	-.079	.065	-.075	-1.221	.223
Social Influence	.078	.037	.114	2.096	.037
Facilitating Condition	.138	.059	.124	2.354	.019
Hedonic Motivation	.089	.065	.094	1.368	.173
Perceived Value	.129	.044	.148	2.906	.004
Habit	.283	.042	.392	6.664	.000
Trust	.176	.080	.120	2.195	.029
Adjusted R2	.429				
ANOVA	F = 29.329, P= 0.000				

Source: Survey Data, 2019

REFERENCES

Abbasi, S., Kamran, S., and Akhtar, C. (2017). Factors Affecting Customers' Adoption of

Internet Banking in Pakistan, *Pakistan Administrative Review*, *1(2)*, 115-129.

Aboobucker, I., and Bao, Y. (2018). What obstruct customer acceptance of internet banking? Security and privacy, risk, turst and website usability and the role of moderators, *The Journal of High Technology Management Research*, *29*(1), 109-123.

AbuShanab, E., and Pearson, J. M. (2007). Internet banking in Jordan: The unified theory of acceptance and use of technology (UTAUT) perspective, Journal of Systems and information Technology, 9(1), 78-97.

Ajzen, I. (1991). The theory of planned behaviour, *Organizational Behaviour and Human Decision Processes*, *50*(2), 179-211.

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behaviour*, Prentice-Hall.

Alwan, H. A., and Al-Zu bi, A. I. (2016). Determinants of Internet Banking Adoption Among Customers of Commercial Banks; An Empirical Study in th Jordanina Bankin Sector, *International Journal of Business Management, 11(3)*, 95-104.

Alalwan, A. A., Dwivedi, Y. K., Rana, N. P., and Algharabat, R. (2018). Examining factors influencing Jordanian customers' intentions and adoption of internet banking: Extending UTAUT2 with risk, *Journal of Retailing and Consumer Services*, *40*, 125-138.

Auer, R., and Böhme, R. (2020). The technology of retail central bank digital currency, *BIS Quarterly Review*.

Baptista, G., and Oliveira, T. (2015). Understanding mobile banking: The unified theory of acceptance and use of technology combined with cultural moderators, *Computers in Human Behavior*, *50*, 418-430.

Berger, A. (2003). The Economic Effects of Techonological Progress: Evidence from the Banking Industry, *Journal of Money, Credit and Banking*, *35*(2), 141-176.

Boateng, H., Dorson, T. A., Adam, D. R., and Okoe, A. F. (2016). Assessing the determinants of internet banking adoption intentions: A social cognitive theory perspective. *Computer in Human Behavior*, *65*, 468-478.

Bhuvana, R. (2020). Blockchain as a disruptive

technology in healthcare and financial services-a review based analysis on current implementations, *International Journal of Applied Engineering and Management Letters, 4(1)*, 142-155.

Bradley, L., and Steward, K. (2002). A Delphi study of the drivers and inhibitors of Internet Banking, *International Journal of Bank Marketing, 20*(6), 250-260.

Camilleri, S. J., and Grech, G. (2017). The relevance of age categories in explaining internet banking adoption rates and customers' attitudes towards the service. Camilleri, 29-47.

Central Bank of Sri Lanka. (2018). Annual Report. Colombo.

Chaouali, W., Yahia, I. B., and Souiden, N. (2016). The interplay of counter-conformity motivation, social influence, and trust in customers' intention to adopt Internet banking services: The case of an emerging country, *Journal of Retailing and Consumer Services, 28*, 209-218.

Cudjoe, A. G., Anim, P. A., and Nyanyofio, J. G. (2015). Determinants of Mobile Banking Adoptionin the Ghanaian Banking Industry: A Case of Access Bank Ghana Limited, *Journal of Computer and Communications*, 1-19.

Curran, J. M., and Meuter, M. L. (2007). Encouraging Existing Customers to Switch to Self-Service Technologies: Put a Little Fun in their lives, *Journal of Marketing Theory and Practice, 15*(4), 283-298.

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology, *MIS Quarterly, 13*(3), 319-340.

Davis, F. D., Bagozzi, P. R., and Warshaw, P. R. (1992). Extrinsic and Intrinsic Motivation to Usec Computers in the Workplace, *Journal of Applied Social Psychology, 22(14)*, 1111-1132.

Del Gaudio, B. L., Porzio, C., Sampagnaro, G., and Verdoliva, V. (2021). How do mobile, internet and ICT diffusion affect the banking industry? An empirical analysis, *European Management Journal, 39(3)*, 327-332.

Foon, Y. S., and Fah, B. C. Y. (2011). Internet banking adoption in Kuala Lumpur: an application of UTAUT model, *International Journal of Business and Management, 6(4)*, 161.

Firdous, S., and Farooqi, R. (2017). Impact of internet

banking service quality on customer satisfaction, *Journal of Internet Banking and Commerce, 22(1).*

Gardner, B. (2015). A review and analysis of the use of 'habit'in understanding, predicting and influencing health-related behaviour, *Health psychology review, 9(3),* 277-295.

Gefen, D., Karahanna, E., and Straub, D. W. (2003). Trust and TAM in Online Shopping: An Integrated Model, *MIS Quarterly, 27*(1), 51-90.

Gopalakrishnan, S., Wischnevsky, J. D., & Damanpour, F. (2003). A multilevel analysis of factors influencing the adoption of internet banking, *IEEE Transactions on Engineering Management, 50(4),* 413-426.

Grimm, M., Harttgen, K., Klasen, S., and Misselhorn, M. (2010). Inequality in Human Development: An Empirical Assessment of 32 Countries, *Social Indicator Research, 97(2),* 191-211.

Hamadi, C. (2010). The Impact of Quality of Online Banking on Customer Commitment. *CIBIMA.*

Jeyaraj, A., Rottman, J. W., and Lacity, M. C. (2006). A review of the predictors, linkages, and biases in IT innovation adoption research, *Journal of Information Technology, 21(1),* 1-23.

Kariyawasam, N. J., and Jayasiri, N. K. (2016). Awareness and usage of internet banking facilities in Sri Lanka, *International Journal of Scientific and Innovative Technology, 6(6),* 173-190.

Hutchinson, D., and Warren, M. (2003). Security for internet banking: a framework, *Logistics information management, 16(1),* 64-73.

Khater, A. H. O. (2016). Customers' Acceptance of Internet Banking Service in Sudan by Using Unified Theory of Acceptance and Use of Technology (UTAUT) model, *Doctoral dissertation, Sudan University of Science and Technology*.

Kuisma, T., Laukkanen, T., and Hiltunen, M. (2007). Mapping the reasons for resistance to Internet Banking; a means-end approach, *International Journal of Infromation Management, 27(2),* 75-85.

Lee, M. C. (2009). Factors influancing the adoption of internet banking: an integration of TAM and TPB with percieved risk and perceived benefit,

Electronic Commerce Research and Application, 8(3), 130-141.

Liao, S., Shao, Y. P., Wang, H., and Chen, A. (1999). The adoption of virtual banking: an emperical study, *International Journal of Infromation Management*, 63-74.

Malhotra, P., and Singh, B. (2007). Determinants of internet banking adoption by banks in India, Internet Research.

Mamode, N., Emmambokus, N., and Khan, N. A. (2011). Customer Adoption of Internet Banking in Mauritius. Global Business and Management Research: *An International Journal, 2(2).*

Martins, C., Oliveira, T., & Popovic, A. (2014). Understanding the Internet banking adoption: A unified theory of acceptance and use of technology and perceived risk application, *International Journal of Information Management, 34*, 1-13.

Nayanajith, G., Damunupola, K. A., and Ventayen, R. J. M. (2019). Website Usability, Perceived Usefulness and Adoption of Internet Banking Services in the Context of Sri Lankan Financial Sector, *Asian Journal of Business and Technology Studies, 2(1),* 28-38.

Nasri, W. (2011). Factors influancing the adoption of internet banking in Tunisia, *International Journal of Information Management, 6(8),* 143-160.

Nor, K. M., and Pearson, J. M. (2015). The influence of trust on internet banking acceptance, *The Journal of Internet Banking and Commerce*, 2007.

Polasik, M., and Wisniewski, T. P. (2009). Empirical analysis of internet banking adoption in Poland, *International Journal of bank marketing*.

Popkova, E. (2014). New Propsects of Economic Growth in Context of Underdevelopment Whirlpools Phenomena, *Applied Econometircs and International Development 14(1),* 5-25.

Premarathne, W., and Gunathilake, M. M. (2016). Consumer Adoption of Internaet Banking in Sri Lanka, *International Jouranl of Advanced Research, 4(11),* 758-765.

Priyangika, R. D., Perera, M. S., and Rajapakshe, D. (2017). An Emperical Investigation on Customer Attitude and Intention Towards Internet Banking: A Case of Licensed Commerical

banks in Colombo District, Sri Lanka, *13th International Conference on Business Management (ICBM) 2016.* Colombo: University of Sri Jayawardenapura.

Rahi, S., and Abd. Ghani, M. (2019). Investigating the role of UTAUT and e-service quality in internet banking adoption setting, *The TQM Journal, 31(3),* 491-506.

Rahi, S., Ghani, M., Alnaser, F., and Ngah, A. (2018). Investigating the role of unified theory of acceptance and use of technology (UTAUT) in internet banking adoption context, *Management Science Letters, 8(3),* 173-186.

Rahmath, S., and Hema, D. (2011). Internet Banking adoption in an emerging economy: *International Arab journal of e. Technology, 2(1),* 250-289.

Reis, Z. A., Gulsecen, S., and Bayrakdar, B. (2011). To develop an eductaion system for secure internet banking: GIBES. *Procedia Computer Science, 3,* 1333-1340.

Rogers, E. M. (1985). The diffusion of home computers among households in Silicon Valley, *Marriage & Family Review, 8(1-2),* 89-101.

Roy, S. K., Kesharwani, A., and Bisht, S. S. (2012). The impact of trust and perceived risk on internet banking adoption in India, *International Journal of Bank Marketing.*

Roy, S. K., Balaji, M. S., Kesharwani, A., and Sekhon, H. (2017). Predicting Internet banking adoption in India: A perceived risk perspective, *Journal of Strategic Marketing, 25(5-6),* 418-438.

Safeena, R., Date, H., and Kammani, A. (2011). Internet Banking Adoption in an Emerging Economy: Indian Consumer's Perspective, *International Arab Journal of e-Techonology, 2(1),* 56-75.

Samarasinghe, R. (2012). The Influence of Cultural Values and Environmental Attitudes on Green Consumer Behaviour, *International Journal of Behavioural Science, 7(1),* 83-98.

Sethi, P., Chakrabarti, D., and Bhattacharjee, S. (2020). Globalization, financial development and economic growth: Perils on the environmental sustainability of an emerging economy, *Journal of Policy Modeling, 42(3),* 520-535.

Singhal, D., and Padhmanabhan, V. (2008). A Study on Customer Perception Towards Internet Banking: Identifying Major Contributing Factors, *The Journal of Nepalese Business Studies, 1,* 101-111.

Taylor, S., and Todd, P. (1995). Decomposition and crossover effects in the theory of planned behavior: A study of consumer adoption intentions. *International Journal of Research in Marketing, 12*(2), 137-155.

Venkatesh, V., and Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies, *Management Science, 46*(2), 186-204.

Venkatesh, V., Morris, M. G., Davis, G. B., and Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View, *MIS Quarterly, 27*(3), 425-478.

Venkatesh, V., Thong, J. Y., and Xin, X. (2012). Consumer Acceptance and Use of Information Technology: Extending The Unifined Theory of Acceptance and Use of Technology, *MIS Quarterly, 36*, 157-178.

Wang, Y. S., Wang, Y. M., Lin, H. H., and Tang, T. I. (2003). Determinants of user acceptance of Internet banking: an empirical study, *International journal of service industry management, 14(5),* 501-519.

Weir, C. S., Douglas, G., Carruthers, M., and Jack, M. (2009). User perceptions of Security, Convenience and usability for ebanking authentication tokens. *Computer & Security, 28(2),* 47-62.

Yaseen, S. G., and El Qirem, I. A. (2018). Intention to use e-banking services in the Jordanian commercial banks, *International Journal of Bank Marketing.*

Yuan, S., Liu, Y., Yao, T., and Liu, J. (2014). An investigation of users' continuance intention towards mobile banking in China, SAGE Journal.

Zahir, M., and Gharleghi, B. (2015). Adoption of internet banking in Maldives, the most important determinants. *Asian Social Science, 11(2),* 181-189.

Zhou, T., Lu, Y., and Wang, B. (2010). Integrating TTF and UTAUT to explain mobile banking user adoption, *Computers in human behavior, 26(4),* 760-767.

Zikmund, W., Babin, B., Carr, J., & Griffin, M. (2010). *Business research methods (8th ed.):* South Western, Cengage Learning.