



Why do people move towards Self-Service Technologies? Insights from Banking Sector in Sri Lanka

Badra Sandamali Galdolage^{1*}, Samudrika Rasanjalee, R. M. K.²

¹ Department of Marketing Management, University of Sri Jayewardenepura, Sri Lanka.

² Faculty of Management Studies, Sri Lanka Technological Campus, Sri Lanka.

* Corresponding Author: sandamali@sjp.ac.lk

ABSTRACT

Rapid technological breakthroughs have transformed traditional physical service interactions managed by service professionals into Self Service Technologies (SSTs) controlled by clients. To improve their services and give consumers a unique experience, many service providers increasingly use the current technology to allow consumers to interact with service production processes through technological interfaces. Local and worldwide banks are using self-service channels to correspond with this transformation. Sri Lankan banks firstly deployed SSTs such as Automated Teller Machines (ATMs), and now offer Internet Banking, SMS Banking, different Kiosks such as CDMs, and Telephone Banking. Even if firms introduce SSTs, customers may not use them as intended. Despite their benefits, SSTs have been largely ignored, particularly by developing nations. However, few studies have sought to understand customers' acceptance of SSTs, particularly in developing countries. In light of this, this study's goal is to explore self-service technology's acceptance among Sri Lankan commercial bank customers. To achieve the study's goal, 50 individuals from Sri Lanka's western province were interviewed utilizing a non-probabilistic purposeful sampling method. The interviews were audio-recorded, transcribed, and thematically evaluated. 'Convenience', 'Dynamic Lifestyle', 'Efficiency', 'Ease of Functioning', 'Supportive Technology', 'Credibility', 'On-site banking difficulties', 'Risk', 'Emergent Trends', 'Experience', 'Technology Outlook', 'Social Influence', 'Independence', 'Technological Playfulness' and 'Technology Anxiety' were found to be influential factors for banks to accept SSTs. This study contributes to the theory by identifying factors influencing customer adoption of SSTs in banking. Also, provides insights to practitioners on how to increase SST delivery in commercial banking by improving client acceptability. Customers' actual use of SSTs and their experiences in banking and other service industries can be explored in future research.

Keywords: Banking, Self-service technologies, Customer Acceptance, Adoption.

INTRODUCTION

Advances in information and communication technology (ICT) have changed the way service companies connect with their customers, resulting in higher service standards (Barrett et al., 2015). Service providers implemented technology-enabled mechanisms for services (i.e., Self-Service Technologies (SSTs)) to provide convenience to consumers, resulting in increased productivity and customer satisfaction (Hien,

2014; Tsou & Hsu, 2017). Typically, service interactions occur between front-line staff and clients (Bitner et al., 1990; Czepiel, 1990). Consumers and self-service technology (SST) are surpassing traditional encounters in increasing numbers (Meuter et al., 2000). SSTs are becoming more widespread, from traditional high-contact industries like hotels to low-contact industries like gas filling (Curran et al., 2003; Meuter et al., 2000).

Given the rapid technological advancement, it is expected that SSTs would continue to evolve and play a larger role in service delivery than they do currently (Beatson et al., 2006).

Consumers engage with retail banks via a variety of self-service channels, including ATMs, Automated Telephone Banking (ATB), Web Banking, SMS Banking. Retail banks, in particular, make extensive use of a range of different service channels, playing a vital role in client interactions (Gunawardana et al., 2015). Despite the presence of a few private and foreign banks in Sri Lanka, three state-owned banks dominated the banking market until the late 1980s. Following the 1980s, when the banking industry was heavily influenced by information technology, private sector banks began to emerge (Madhusanka & Pranthaman, 2018). ATMs were introduced in Sri Lanka, followed by mobile and electronic banking (Vivekanandan & Jayasena, 2012; Warf, 2017), and recently introduced the Cash Deposit Machine (CDM) (Jayathilaka et al., 2020). Sri Lanka's 26 commercial banks serve the country's 21.2 million residents making the banking industry extremely competitive (Madushanka & Paranthaman, 2018).

Numerous attempts have been made to evaluate technology adoption behaviors of banking clients in providing a theoretical foundation for the study (Akinci et al., 2004; Sathye, 1999; Walczuch et al., 2007; Yu, 2012). Given that SSTs resemble information-technology innovations in a variety of fields (e.g., online technologies, automated technologies), various attempts have been made, including the technology acceptance model (TAM; Davis et al., 1989), unified theory of acceptance and use of technology (UTAUT; Venkatesh et al., 2003), innovation diffusion theory (IDT; Rogers, 1995), and theory of reasoned action (TRA; Fishbein & Ajzen, 1975) (e.g., Akturan & Tezcan, 2012; Ariff et al., 2012; Giovanis et al., 2012; Pikkarainen et al., 2004). However, Blut et al. (2016) and Galdolage (2018) point out that these general technology adoption models do not adequately explain the SST context.

Consumer adoption of new retail technologies has been studied extensively (Kim & Qu, 2014; Müller-Seitz et al., 2009), primarily using the technology acceptance model (TAM)

(Davis et al., 1989). The TAM focuses on two pragmatic constructs: perceived ease of use and perceived utility, which influence customers' attitudes and intentions toward technology adoption. While the TAM has significant predictive and explanatory value (Blut et al., 2016; Yousafzai et al., 2007), its parsimony limits it. To put it another way, the model is too simplistic to completely describe a phenomenon (Bagozzi, 2007). In a similar spirit, previous TAM-based retail technology research has emphasized pragmatic features of technology (e.g., usefulness, usability), while ignoring hedonic qualities (Yousafzai et al., 2007). As a result, these theories were not created expressly for the study of customer SST usage, and their modifications to the SST context did not result in a complete explanation of customer SST behavior (Lin & Chang, 2011; Baron et al., 2006).

Additionally, despite the benefits provided by SSTs, their growth has been reported as slow in comparison to projected growth rates, particularly in developing countries (Kanal, 2014), with a lack of widespread acceptance of SSTs among customers identified as one of the primary concerns (Pillai & Sreedhar, 2014 as cited in Magotra et al., 2019). Therefore, identifying unique factors impacting SSTs' acceptability in the banking sector in Sri Lanka is worthy to study. Hence, the purpose of this research is to investigate the factors that influence customer adoption of SSTs in Sri Lanka's commercial banking sector.

Thus, the current research contributes to the existing literature with a deeper knowledge of the elements influencing consumer adoption of SSTs in the Sri Lankan Commercial Banking Sector, rather than focusing exclusively on a model or framework. Additionally, with rapid technological improvements and growing concerns about technology use in the banking sector, the authors believe that the study's findings will enable banks to discover the gap between their use of SSTs and client approval assisting them in implementing appropriate measures to increase client use of self-service banking technologies.

The remainder of the paper is organized as follows: The next section contains a literature review elaborating the paper's topic and underlying elements, followed by the

methodology of the study. Following that, the data analysis and discussion of the findings take place. The study will then conclude with a brief discussion of the theoretical and managerial implications, as well as the limitations and prospects for further research.

LITERATURE REVIEW

Self Service Technologies

Due to the competitive nature of today's retail environments, several companies absorb technology into their service process (Elliott & Hall, 2005). Self-Service Technologies allow a customer to perform service transactions independently without the interference of organizations' service staff (Galdolage, 2020). Considering the rapid technological advancements, low hardware costs, and rising labor expenses, SSTs have become increasingly popular among the service sector (Hagen & Sandnes, 2010). They allow customers to produce their service via SSTs (Kim et al., 2012), causing to reduce costs and improve efficiency (Kim & Yang, 2018).

SSTs defined as "technological interfaces that enable customers to provide a service without direct employee engagement" (Meuter et al., 2000, p. 50). Technology interfaces enable firms to instantaneously delight customers by allowing them to use technology to address problems (Bitner et al., 2002 as cited in Cho & Fiorito, 2010). Many digital technologies offer a highly personalized environment to their customers (Parise et al., 2016) with rich information and more interactivity (Galdolage, 2021). With the advent of this new service delivery model, customers' contacts with service providers/staff have migrated to interactions with technology (Kim & Yang, 2018).

However, the introduction of SSTs does not always ensure acceptance by the customer as well as not always enhancing the value to the customer (Galdolage, 2021). It has been found that some customers are indisposed to adopt SSTs and therefore, adding SSTs to service interactions has hindered their adoption in various industries (Wei et al., 2017). Thus, as a double-edged sword SSTs create positive as well as negative experiences for customers (Berry et al., 2002). It was found that some

stores are removing self-service checkout stations to improve customer service (Åkesson et al., 2014).

To effectively benefit from technology services innovation, organizations must overcome customers' aversion to SSTs (Liljander et al., 2006). The biggest hurdle is getting customers to adopt new SSTs, necessitating considerable behavioral adjustments (Meuter et al., 2005). Customers must ensure that the service matches their expectations and firms need to improve customer interactions vis SSTs (Fernando & Dinesha, 2019). Therefore, it is essential to study specific SST settings and ensure the factors which determine the customer acceptance of self-service behaviors at technological interfaces.

SSTs in Banking Sector: Global and Local Contexts

Banks have jumped on the SST bandwagon to improve service delivery, increase transaction volume, and keep up with the technology while widening client alternatives including ATMs, mobile and internet banking. There is no denying that the global retail banking sector has improved service performance in recent years (Ndubisi et al., 2007). Banks are pushed to find new ways to improve customization giving an experience that is not unique but also unmatched (Pine & Gilmore, 2017 as cited in Ugwuanyi et al., 2021).

ATM and a debit card launched this technological revolution, with core banking soon following suit (customer becoming a customer of the entire bank instead of the branch with the branches being interlinked). Though traditional banks have limited banking hours whereas SSTs are available outside of these hours, meeting the needs of customers (Marr & Prendergast, 1993 as cited in Fernando & Dinesha, 2019). Internet banking, another SST is available 24 hours a day, 7 days a week initially gave information about the bank's products and services, while now it allows monetary transactions. Mobile banking is another SST that banks actively promote (Kumar & Bose, 2013). According to Bitner et al. (2002) and Lee et al. (2003) interactive kiosks (e.g., ATMs), internet-based interfaces (e.g., online shopping and Internet banking),

and telephone/interactive voice response (IVR) interfaces (e.g., telebanking) are widely used in the service context (Baabdullah et al., 2019). Customers becoming more familiar, makes it critical for banks in understanding to handle SSTs better. SSTs can also save a lot of money if widely deployed though not installed and maintained properly, can be very costly.

However, compared to developed countries, the banking industry in developing countries appears to be weaker in SST acceptance, resulting in lower utilization (Sukkar & Hasan, 2005; Migdadi, 2012; Sharma et al., 2017). This explains why there is little scholarly work in underdeveloped nations on the subject (Baabdullah et al., 2019). Companies must understand the consumer's decision to use an SST before investing time and money to design, implement, and manage these SSTs.

The use of self-service banking is growing as more people do daily financial transactions without the assistance of branch personnel (Augustine, 2013). The widespread usage of ICT in Sri Lankan banking began in the late 1980s (Jayamaha, 2008). Self-banking and internet banking are the current distribution techniques in Sri Lanka. A major transformation in Sri Lankan banking has resulted from the automated machines being available 24 hours a day, 7 days a week. Despite the numerous advantages of the new services, most Sri Lankan bank clients have yet to adopt them (Salgado et al., 2020).

Customer adoption to SSTs

The existing SST literature focuses on the elements that influence client acceptance or rejection of technology. Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology Model (UTAUT) have been extensively used to study customer acceptance of technologies. Pointing out the inappropriateness of these general models to understand SST context (Blut et al., 2016), scholars focused on different variables to better understand how consumers adopt SSTs. Aside from perceived usefulness, perceived ease of use, perceived playfulness, and perceived accessibility, the original TAM and its extensions have consistently emerged as crucial predictors across a wide range of

situations (Jeong & Lambert, 2001; Chung & Law, 2003).

Customers' role to be performed (Galdolage, 2021a) and fluctuation of their interest and skill (Davis, 1989; Bitner et al., 2002; Meuter et al., 2003; Salomann et al., 2006), become matters for enterprises wanting to expand SST usage. Users continually value speed, control, reliability, and simplicity (Meuter et al., 2000; Dabholkar et al., 2003; Shamdasani et al., 2008). The word "fun" is frequently used in literature about how people utilize interfaces (Dabholkar et al., 2003; Curran & Meuter, 2007). Also, readiness to adopt SST changes based on perceived benefits (Bitner et al., 2002) where you can perform a task fast, at any time of day or week (Meuter et al., 2000) saving time or money (Ding et al., 2007 as cited in Hilton et al., 2013). Customers were more willing to try SSTs if they liked them. It was then up to the trial's outcome (Bitner et al., 2002 as cited in Kelly et al., 2010).

However, inexperience with technology (Gilbert et al., 2004), lack of functional abilities (Jayasimha & Nargundkar, 2007), and preference for human connections will limit customers' usage of SSTs (Simon & Usunier, 2007). Technology acceptance is frequently linked to gender and age (Elliott & Hall, 2005). Self-control (Hilton et al., 2013) and social anxieties are some other important social and psychological elements (Dabholkar & Bagozzi, 2002 as cited in Hilton et al., 2013). Some SSTs fail to gain traction because service providers fail to grasp that they demand high levels of customer participation, and the consumer is sometimes not reimbursed for his contributions (Anitsal & Schumann, 2007). Thus, understanding the consumer's perspective is crucial to SST awareness, uptake, use, and commitment (Kelly et al., 2010).

METHODOLOGY

The present study undertook the approach of interpretivism to explore consumer adoption of SSTs in the banking sector in Sri Lanka, an exploratory research design with qualitative inquiries was used (Sekaran & Bougie, 2015, Malhotra & Birks, 2007). Quantitative surveys' limits in offering fresh insights about customer use of SSTs have been recognized by

researchers (Wang et al., 2012; Baron et al., 2006). SST adoption study has primarily focused on the elements that may affect customers' decisions to try an SST, but more research is needed to better understand the SST usage interaction (Hilton et al., 2013). This provides the underlying rationale for a qualitative inquiry being conducted in the present study to gain an in-depth understanding on the use of SSTs.

The research was conducted in Western province in Sri Lanka. Semi-structured interviews were conducted with fifty SST users, who were selected using non-probabilistic purposeful sampling technique (Abrams, 2010; Patton, 2002; Palinkas et al., 2015). Western province was chosen since many banks are concentrated (Thilakaweera et al., 2016) and having the greatest number of bank branches in the commercial banking industry (CBSL, 2020).

The interviews began with a brief introduction and description of the research, emphasizing the value and use of respondents' input. A formal consent sheet was produced before the interview to obtain the respondent's voluntary participation in the research. A request was made to record the interviews to help with transcription. An interview guide was created to make the interviewing process simple, seamless, and focused. Interviews lasting for 30 to 45 minutes for each subject. Thematic analysis was used to uncover, analyze, and summarize patterns (themes) within the data in this phase of the study (Braun & Clarke, 2006). The interview recordings were transcribed and summarized based on the interview guide questions. Thereafter, under each of the interview question patterns were recognized. The identified patterns were then analyzed with the respective quotes from the interviews held and were reclassified into fifteen themes. As the final step is to read related literature to construct a valid justification for choosing the themes (Aronson, 1995).

FINDINGS

The study found several critical parameters influencing customer acceptability of SSTs which were reclassified into fifteen themes as Convenience, Dynamic Lifestyle, Efficiency, Ease of Functioning, Supportive Technology,

Credibility, On-site banking difficulties, Risk, Emergent Trends, Experience, Technology Outlook, Social Influence, Independence, Technological Playfulness, and Technology Anxiety as elaborated below.

Convenience: Many SSTs in the banking sector are recognized as convenient for customers' daily banking needs. Respondents stated that most SSTs are available 24 hours without restricting to working hours. Furthermore, the availability of ATMs across the country provides locational convenience, while mobile banking and other online banking facilities via portable devices (mobility) allow customers to complete transactions while staying at home. The availability of multiple transactions through banking SSTs increases the convenience. Similarly, during the ongoing pandemic situation, respondents have felt convenient in using the SSTs with the availability of the mobile app during the country's lockdown period.

Following includes an example provided by the participants.

"In the current situation, with the pandemic still ongoing, people don't even know when banks open and close for business. However, ATMs and CDMs are always available. Even mobile applications are available 24 hours a day, seven days a week. So, it is very convenient for me because ATMs and CDMs are almost everywhere, and I can do anything at home using the mobile app whenever I want." (30 years old, female, Health Department Manager)

Dynamic lifestyle: The study's findings reveal, SSTs used in banking operations serve as a solution to the problems individuals face in their busy lifestyles. As stated by the participants, hectic work schedules, make them unable to visit banks during working hours; thus, SSTs are extremely beneficial. Furthermore, changes in people's lifestyles and working environments have led individuals to seek facilities reflecting their status and image. Some respondents stated that staying inside the bank for long hours makes it a boring activity, while others stated that they prefer less to keep cash in hand.

"See, it matches my day-to-day activities, and as a working woman, I have a very busy life. Because of my hectic work schedule, it is difficult for me to visit the bank during normal business hours; therefore, online banking, ATMs, and mobile applications assist me greatly in my day-to-day transactions. Simultaneously, all of these new technologies are a good addition to my status and image rather than waiting in long lines (Female, 31 years old, Interior Designer)

Efficiency: This indicates the possibility of banking operations with the least amount of time and effort. Respondents stated that they spend less time using SST facilities than visiting the bank. Furthermore, with no third party involved, banking activities are much faster when processed through SST facilities. Respondents also highlighted SSTs reduce crowding inside the bank's premises, producing cost savings allowing the bank to provide a more efficient service. The following reflects a respondent's example.

"When you use these ATMs, CDMs, and Internet banking services, you don't have to spend as much time as you would if you went to the bank. It is extremely fast. Because there is no other party involved with the machine or mobile, it is quick." (27 years old, male, IT Security Analyst)

Ease of functioning: SSTs being easy to use was recognized by many aspects by the respondents. Most recognized SST facilities allow customers to operate them using a username and password or a unique PIN, allowing easy access. Furthermore, when compared to physically visiting the bank, respondents highlighted that they could complete the same transaction using the SSTs through few simple steps. Similarly, simple steps allow customers to easily adapt and learn, making SSTs easy to operate. Furthermore, respondents stated that with the steps being not significantly different from bank to bank, the compatibility is higher. The following is a participant's example supporting the stated facts.

"Obviously, these are simple to use and gain access to. We only need a PIN or a username and password. When it comes to doing an activity inside the bank, there are several staff members involved and lengthy procedures, but most transactions can be processed using a simple process with few steps in the ATM and online banking. Once you get used to it, it is very simple to use, and most banks follow similar procedures, so it is simple to adopt for banking apps in other banks as well." (24 years old, female, undergrad)

Supportive technology: This is the assistance provided by SSTs in facilitating banking activities conducted by customers themselves. While most provide instructions for first-time users, clearly guiding them through the transactions, the prompt information indicating the alerts of completed transactions improves information quality. Furthermore, the use of multiple languages in ATMs and CDMs have made respondents feel supported when conducting banking transactions. Respondents also mentioned that instead of physically visiting banks, multiple transactions available in one application are another great opportunity for SST's high interactivity. Similarly, the navigations and directions provided by the aesthetics in the websites for online banking were highlighted as support received by customers.

"In these applications and online banking, we receive prompt but clear information reflecting what amount, to whom we made the transaction, and the date and time, which can be saved for future reference. When it comes to ATMs and CDMs, different languages are available, which is beneficial to us because we can use them even if we do not speak English, and in internet banking, one-time passwords and security measures are available. So, there's nothing to be concerned about." (Male, 32 years old, Software Engineer)

Credibility: This reflects the respondents' perception that banking operations are conducted securely, thereby reassuring

payments. Respondents emphasized the unique usernames, passwords, and one-time passwords for each user make transactions more secure while increasing integrity. Hence, trustworthiness is enabled by SSTs through email and SMS confirmations of completed transactions. In comparison to traditional banking activities, such real-time updates increase credibility, reflecting accuracy. Furthermore, respondents stated that most SSTs are free of human errors with the involvement of one person at a time (user) as opposed to physical banking activities, where errors may occur from banking employees. The following is an example provided by a participant.

"I have two accounts that I manage through internet banking and the mobile app. OTPs are required when conducting online transactions via mobile apps and online banking. We receive an email or text message confirming the transaction, which is why I trust the mobile app and online banking. Even ATMs have a PIN that is unique to each user. As a result, we have complete security." (30-year-old man, male, cyber security analyst)

Aside from the above, the online applications' usernames and passwords are unique to individuals, limiting access to unauthorized persons improving privacy and confidentiality when performing transactions using SSTs.

"I suppose because I have the mobile app on my phone, we have complete privacy; no one can access it. Everyone has a unique username and password. No two people are assigned the same username for the mobile app. As a result, I believe the mobile application is extremely safe to use." (Female, 28 years old, Lecturer)

On-site banking difficulties: This reflects the difficulties customers have in attending banking activities physically, which leads them to use SSTs. Respondents stated that when they go to the bank, they have to wait in long queues, which takes a long time. Other difficulties identified by customers included a preference for less documentation and filling

slips. Hence, performing transactions using SSTs allows them to avoid difficulties, as depicted below.

"If we go to a bank or any places like electricity board to pay bills we have to stay in long queues and waste time. But now it's not like before, so convenient that we can go anytime and withdraw money and pay bills. I normally don't like being in queues and getting signs and slips and if the mood of the cashier is off our mood also goes off. So, I like using the mobile app too because it is just matter of a click on the phone or laptop" (35 years, Female, Government worker)

Risk: This refers to the risks that customers may face in keeping cash in hand. Respondents noted that carrying large sums of money when physically visiting the bank could pose a risk of having it stolen or misplaced, which is avoided by using SSTs such as ATMs and online banking.

"I don't think there is any need to be afraid of using money because there is no need of taking a huge amount of money at a time and be scared of it falling or being stolen. From the ATM we can take money when we want and deposit it with the CDM machine whenever we want to. The mobile app I haven't use yet, but still, I have heard it is also easy to handle cash" (49 years, Female, Housewife)

Emergent trends: Individuals have begun to use SSTs with the world's dynamic changes. Hence, in terms of banking operations, respondents have recognized that, with the fast-moving developing world, it is a necessity that they engage in new trends and technologies provided by SSTs in performing their banking transactions. Furthermore, with the evolution of sustainable practices, people are now more concerned in terms of paperless banking and reduced travel, which reduces pollution.

"I actually didn't know about these earlier, but my friends were using the apps and they are very trendy these days, so I started using them as well and I think we have to go along with

these new technologies too.” (23 years, Male, Auditor)

“I am a person who is more into green banking activities, so I prefer paperless banking, so I usually don’t like to go to the bank and use hell a lot of papers to fill forms and stuff. I do most of the transactions through the app.” (26 years, Female, Brand Executive)

Experience: According to the findings, SST use is enhanced by the experience customers gain during their encounters. Respondents stated that they are more comfortable using SSTs again for their banking activities with their prior experience. They tend to remember the steps and instructions with the practice gained from previous use of SSTs for banking activities on multiple occasions. Furthermore, respondents stated that trials to use SSTs in the banking sector, allowed them to understand how they work before using them regularly, which encouraged them. Some customers have also made it a habit to use SSTs instead of physically visiting the bank increasing their tendency to use them regularly.

“I started using the mobile app from one bank when I opened the account, then since I felt very convenient, I started using them for other banks as well. In the beginning, I was scared if something would go wrong, but with time and use, I got used to it and now I use it without fear. I was only using the ATM earlier in other bank accounts. Those also I practice with my daughter few times and got used to it” (48 years, Female, Housewife)

Technology outlook: This describes the technical knowledge that individuals should possess in using SSTs in the banking sector. According to the respondents, it was recognized that an understanding of how to operate the machines, including the instructions and steps to be followed, is required, indicating knowledge of SSTs. Similarly, despite owning a mobile phone or a computer device, the individual should have at least a basic understanding of the technical interfaces used for SST facilities. Furthermore, respondents stated that, aside

from the use of ATMs and CDMs, individuals must have knowledge on how to use the internet because most applications rely on it. The following is one of the participant’s examples reflecting stated facts.

“You know, most of these applications can be accessed through a mobile phone or computer. But even if you have a mobile phone or a laptop you cannot use these applications if you don’t know how the technical interfaces are working. As most of these technologies are operated online than the ATM and CDM, I think we should know how to use the internet in using these” (34 years, Male, Graphic designer)

Social influence: The social influence declares the possibility of an individual using SSTs when influenced by the parties with whom they are involved. According to the respondents, peers and family members who were already using SSTs encouraged them to use them by explaining the features, applications, and benefits. Furthermore, technical assistance and encouragement from bank employees during regular visits to the bank have led respondents to use SSTs for banking activities. External influences such as business remittances and salaries being transferred to bank accounts were also stated by few respondents as the reasons for using online banking activities, in getting the money into their hands. The declarations made by respondents are listed below;

“My friends were using the mobile app, and they encouraged me to use it without going to the bank as it is easy. Even the bank employees did ask me to use the app when I went to the bank.” (25 years, Female, Undergraduate)

“Most importantly I receive my salary to my account since it is easy when I am using the mobile app to check the salary and other transactions, I am using it.” (34 years, Male, Graphic designer)

Independence: This implies the freedom an individual feels when using SSTs for banking activities. According to the respondents, SSTs

enable customers to use them whenever they want to perform banking transactions independently. Furthermore, respondents acknowledged that with minimal involvement of banking employees in the use of SSTs, they feel independent and free from external influences.

"I am not at all going to the bank after I started using the mobile app. As I can remember now it is being over three to five months now that I didn't visit the bank for anything. I can do it alone, I don't want to depend on them" (28 years, Female, Finance officer)

Technological playfulness: According to the respondents, the integrated innovative features in SSTs and applications have the potential to create fun and enjoyment. The respondents revealed that the appealing innovative features embedded in the SSTs provided for banking activities are fun to use bringing entertainment, making them pleasurable to use.

The respondents also stated that, in comparison to waiting in long lines in completing banking activities, it is more pleasurable to complete transactions through the creative applications provided as SSTs. The following example demonstrates the aforementioned assertions;

"You know that today everything is about these new tech facilities. I like to use these new apps and try them out because I enjoy new technology. It is fun using these innovative mobile apps, some have different features which are very interactive. In one of the banks, I have the account with has a super creative website with proper navigations to guide us." (28 years, Female, Accounts Manager)

Technology anxiety: This reflects people's skepticism about using SSTs for banking, leading to a decrease in customer acceptance. Customers, as acknowledged by the participants, are concerned whether the transactions occur, even if they do receive a message after the transaction revealing the doubt on transactions. Similarly, anxiety is observed to be higher in the elderly generation due to elders' difficulties in using SSTs and

operating the interfaces. Furthermore, customers have doubts about transaction verifications since they receive it on their mobile phone, which could be accessed by another person at times, as well as delays caused by internet connections. Doubts about security, as mobile devices and the internet continue to be hacked both globally and locally, are another impediment to SST acceptance. Aside from the above, variability of internet connection charges makes customers believe that internet connections are expensive reducing their use of internet-based SSTs.

"We have not been brought up with computers like you do nowadays. So, it is not very easy for older people to get used to these new apps and other facilities with technology. I did install the mobile app with my son to mobile phone. But there were several times I got the OTPs delayed and the message of confirmation after a transaction. So, I am always scared whether the transaction happened when I use these apps." (52 years, Female, Teacher)

In summary, this study identified fifteen factors that account for client acceptance of SST in Sri Lanka's commercial banking sector, as represented in Figure 01.

Figure 1: Influencing factors on customer acceptance of banking SSTs

Source: Author

DISCUSSION

The findings of this study are resonating with some of the available scholarly work while adding new knowledge. Similar to this study, Jayawardhena and Foley, 2000 found time and cost convenience increases the customer preferences for internet banking while Galdolage (2021b) recognized convenience and performance as the strongest predictors of SSTs. The present study complements the fact that the self-service facilities should be in visible places to increase the convenience to customers (Cho & Fiorito, 2010) highlighting the importance of locational convenience. As we acknowledge the significance of 24 hours availability as a factor influencing the adoption of SSTs, operating hours have been

recognized as crucial in assessing SST encounters (Lin & Hsieh, 2011). Prior literature reflects that increased compatibility with lifestyles increases the tendency of SST use (Moore & Benbasat, 1991). In support, demography has also been recognized as a popular way of segmenting customers in the use of SSTs since consuming such services easily fits the lifestyle they possess (Kaur & Malik, 2019). Similarly, the present study reveals the busy lifestyles and hectic schedules make individuals more likely to use SSTs for their banking activities. Further, the adoption of western lifestyles has enhanced the desire for new technology adoption (Halepete & Iyer, 2008).

Efficiency has been recognized to resemble the customer perceptions on electronic service quality (Sohail & Shaikh, 2008; George & Kumar, 2014). The speed of e-banking sites is an area the banks should focus upon (Kaur & Malik, 2019) in providing an opportunity for the consumers to get their transactions completed fast. Liljander et al. (2006) and Kaur and Malik (2019) have also recognized efficiency as a stronger predictor of SST adoption behavior. Similarly, ease of use has been identified as one of the benefits the customers receive from the use of SSTs (Meuter et al., 2000). Similar to the findings of the present study, ease of use in operating the system has been recognized to have a strong relationship with the use of such technologies (Gu et al., 2009; Riquelme & Rios, 2010). In support Lin (2011) has identified ease of use as a key driver of the attitudes an individual may possess towards the use of mobile banking. Further, both direct (Safeena, 2011) and indirect (Maditinos et al., 2013) impact from the ease of use on SSTs in different contexts supports the findings.

The information richness reflecting the quality of the information and instructions provided are identified as an important predictor in the decision of selecting SSTs (Galdolage, 2021b) supporting the findings of the present study. Further, the aesthetics of the website and the guided instructions have been recognized as important in the intention to adopt internet banking (Kaur & Malik, 2019). The interactivity can offer a crucial value in the two-way communication offered in the SSTs

(Abdullah et al., 2016). In support studies highlighted that, for desirable outcomes, stimulating features such as interactive windows should be enabled in SSTs in enhancing adoption. In addition, the user responses are stated to be favorable when the aesthetic qualities of the interfaces of SST designs are more pronounced (Park et al., 2021) complementing the findings of the present study recognizing the importance of supportive technology.

Rexha et al. (2003) argue that security and information updates as key variables which influence the decision of the customer in banking technologies. In addition, Lee et al. (2003) highlighted the importance of security in the adoption of ATMs. This is supported by another study on the adoption of internet banking recognizing security as a crucial factor (Siu & Mou, 2005). According to Alalwan et al. (2017), these channels should be secure for the customers to conduct financial transactions. Therefore, it is suggested for the banks to create awareness among the customers on the security of mobile banking (Sahu & Deshmukh, 2020) in enhancing SST use. Complementing the findings of the present study, Alalwan et al., (2017). Note that banks should focus their attention on trust in motivating the customers to use mobile banking. Apart from the above, personal judgments and emotional reactions of individuals were also recognized as important in supporting the decision of customer adoption of SSTs (Galdolage, 2021b).

Privacy and confidentiality have been proposed as two main concerns in SST adoption in prior studies (Bitner et al., 2000) while privacy has been considered as a major risk factor in relevance to financial transactions over the internet (Liebermann & Stashevsky, 2002). Further, the studies reveal the consumer is likely to use SSTs if they receive privacy as a benefit (Liu et al., 2020). Prior literature complements the study highlighting that consumers would be inclined towards SST adoption if there is sufficient privacy (Oh et al., 2013). Koo et al. (2013) agree in their argument stating privacy as a significant predictor of technology adoption decisions. Further, a potential risk is involved in using SSTs due to the human and technical

errors which could occur (Curran & Meuter, 2005). Hence, the present study reveals that error recognition and prevention may improve SST use.

Prior literature recognizes that SSTs allow the customers to avoid waiting in long queues and offer easy interfaces through which tasks can be performed by themselves which ease their transition from traditional services (Lin & Hsieh, 2006). Hence, the traditional banking services referred to as on-site banking facilities comprising of several tasks including filling slips and documentation is preferred less which enhances SST use. Similarly, the banks would be able to do more with less through SST adoption (Hilton et al., 2013). In the present context of the banking industry, SSTs have enabled the mobile phone and other related devices to store money in the form of information and to be transferred virtually when required from one person to another (Hamdi, 2011). Further, cards used in the banking industry allow customers to carry large amounts of money without any fear of theft. Apart from being relaxed against the fear of theft, the personalized PINs enabling safety cannot be compared to cash get stolen by keeping in hand and is impossible to be either recovered or traced (Walker & Johnson, 2006) which supports the findings of the present study revealing the consumers' risk of keeping cash in hand improves the tendency towards SST adoption (Kumar & Bose, 2013).

Prior literature states that the adoption of technologies and use of SSTs is highlighted as a social trend that requires to be followed (Galdolage, 2020) complementing the present study revealing the developing world necessitates the use of SSTs. Further, with the growing trend in the protection of the environment, internet banking is an approach through which the use of paper is eliminated, promoting green banking (Kumar & Bose, 2013) making consumers more inclined towards SSTs. The above-mentioned literature complies with the findings of the study highlighting that the consumers' concern regarding sustainable and green banking practices leads to SST adoption for banking activities. Similarly, prior experience an individual possesses in relevance to the computers and related technologies influence

their attitude towards online banking (Karjaluoto et al., 2002). This is supported through the argument that customers are willing to use SSTs accepting the process which takes a little time for which the prior experience is recognized as valuable (Blut et al., 2016). Shove and Pantzar (2005) have stated that a product is with no value unless it is integrated into practice. Hence, even in the context of SSTs, the study supports that it is the practice of the customers that brings more value to the use of it. Thus, the experience the customers gain in the self-service encounter may have a strong influence on the likelihood of using them.

Consumer knowledge and skills have been recognized as important in the choice of SSTs suggesting the crucialness of focusing on it in designing technologies (Hilton et al., 2013) complementing the findings of the study. Supporting the view of the current study on it has been stated in prior literature that the nature of mobile banking facilities requires the customers to possess a certain extent of knowledge and skill on the interface to be used (Alalwan et al., 2017). Jubair (2014) has revealed that these technologies are not being used by the customers due to the lack of knowledge they possess. Aligning to this study, Curran and Meuter (2007) have explained social acceptance as an influential factor on the intention to use SSTs. In contrast, in a recent study, Alalwan et al. (2017) stated that in the adoption of mobile banking facilities customers seem to be less interested in the recommendations of their reference groups. However, supporting the findings of the present study it has been disclosed that, the tendency to accept SSTs is affected by the recommendations and information provided by their family members, friends, and colleagues (Abdulla et al., 2016). Le et al. (2020) further argued through the findings of their study that social influence has more impact on the customer decision to chooses mobile banking which supports the current study.

Meuter et al. (2003) have found that SSTs provide the customers the benefit of feeling independent. The customers desire to feel independent or autonomous in using SSTs (Oh & Jeong, 2009). Female respondents have

been found to desire more independence in using SSTs (Kim et al., 2013). Hence, prior literature supports the views of the current study which reveals that the more the customer is feeling independent higher the tendency of SST acceptance (Meuter et al., 2005). As suggested by Laukkanen et al. (2008) innovative features could reduce customer fears and concerns against the use of SSTs. Further, these are considered as a more innovative technology in the satisfaction of consumers in relevance to banking activities (Jayathilaka et al., 2020) supporting the findings of the study revealing innovative features improve the tendency of SST use. Davis et al. (1992) found that the acceptance of technology is influenced by the increased enjoyment of the customers in the use of it. In support, Dabholkar et al. (2003) have stated that SST interactions bring enjoyment to the customers. Further, the findings of the present study complement the reveal of mobile banking being able to reach higher levels of use with the customers who perceive entertainment, pleasure, and enjoyment in using novel channels (Alalwan et al., 2017).

Complementing the findings of the current study the existence of technology-based services has been stated to cause anxiety and stress to the customers who are not comfortable using them (Mick & Fournier, 1998). Research studies have shown that technology anxiety reduces the likelihood of SST use (Meuter et al., 2000). It has been revealed that customers with higher levels of technology anxiety are less likely to opt for the use of SSTs (Oyedele & Simpson, 2007). Older people have shown more technology anxiety while consumers with a higher income have shown less anxiety in the prior studies in the context of SSTs (Lee et al., 2010). The introduction of new user-friendly kiosks in which the user's effort is minimal is suggested to reduce the technology anxiety (Kim et al., 2013).

THEORETICAL CONTRIBUTIONS

This study uncovers customer acceptance of SSTs in the commercial banking sector of Sri Lanka recognizing the influencing factors. Though previous scholars have focused on this context of the study, limited research work is available in relevance to the developing

countries like Sri Lanka while broadly used models including the TAM and UTAUT have been favored though they are not particularly resembling the context of SSTs. Hence, the present study explored the factors which determine the customer acceptance of SSTs in the commercial banking sector of Sri Lanka in understanding the real underlying reasons. Comparing with the broadly used technology acceptance models, this study reveals the importance of 'Convenience', 'Dynamic Lifestyle', 'Efficiency', 'Ease of Functioning', 'Supportive Technology', 'Credibility', 'On-site banking difficulties', 'Risk', 'Emergent Trends', 'Experience', 'Technology Outlook', 'Social Influence', 'Independence', 'Technological Playfulness' and 'Technology Anxiety' in the customer acceptance of SSTs in the banking sector.

MANAGERIAL IMPLICATIONS

Overall, the study provides a broad understanding to the commercial banking sector of Sri Lanka on the factors influencing the customer acceptance of available SSTs in the banking sector. The banking sector could take steps in improving the convenience to the customers by enhancing the availability of kiosks including ATMs and CDMs at locations apart from the branches. Further, the dynamic lifestyles of customers have made their day-to-day transactions with the bank getting a smaller proportion of time from their busy schedules. In addition, the customers are appreciative of the SSTs due to the speed, cost, and time-saving features. Therefore, the banks could plan to keep their systems up to date and performing without delays making customers comfortable in their busy life.

This study reveals the ease of functionality the motivates the customers in using them instead of going to a staffed counter. Hence, the banks may undertake steps in improving the information quality and accuracy of the information delivered to the customers after a transaction simplifying the process, they have to undertake in using the SSTs. Further as provided in the ATMs and CDM machines, if multiple languages could be provided it would reduce the language barriers. Credibility is another major factor recognized which aligns with the confidentiality expected by the customers while preventing errors. Therefore,

the banks would get the opportunity of making customers feel more assured on transactions conducted using the SSTs by improving the security measures undertaken (use biological identification such as the fingerprints) and working towards the reduction of delays updating verifications in real-time. Further, the more the error detectability of the SSTs the more assured will be the customers feeling trustworthy towards the SSTs being error-free. According to the study, the customers are reluctant to physically attend the banking transactions inside the bank due to the reasons of long queues and various documentation requirements. Hence, the bank could capitalize on this opportunity in promoting the advantages of SSTs for the customers focusing on these factors that encourage SST use than physically visiting the banks which would benefit both the bank and the customers in return. The risk of keeping cash in hand is another factor recognized as a hindering factor against the physical use of banking facilities in comparison to SSTs. Therefore, the banks could use the fear appeal in promoting the SSTs highlighting its advantages in reducing the risk of keeping cash in hand.

Emergent trends, including green thinking, have changed the mentality of customers in seeking environmentally friendly options in their consumption practices. Further, individuals are now recognizing SST use as a necessity in the developing world. Therefore, introducing a sustainability theme in promoting the SSTs may drive customer acceptance.

The experience is another factor recognized as having an influence on the customer movement towards the acceptance of SSTs in the banking sector as per the current study. Therefore, the banks could provide the customers with trials and educating programs on how to use the SSTs encouraging the use highlighting the ease of use with the practice they gain over time. An employee or set of employees could be assigned for a while until the customers are comfortable with the use of SSTs which would gradually increase the acceptance.

The technology know-how comprises of the knowledge the customer possesses in the use

of SSTs, the devices, and the internet use along with the fun, enjoyment, innovativeness, and interactive features resembling the technology playfulness of the SST applications have also been recognized as important. The banks could arrange awareness programs enhancing the knowledge the individuals need in using SSTs while improving the interactivity of the applications updating them with innovative features attracting the customers to use them. Similarly, while improving such features, the banks should try to reduce the anxiety in the use of SSTs by closely working with them assuring the doubts they have at the initial stage leading them to continue the use. The SST use of a customer is further influenced by the individuals around including the family, peers, and the bank staff. Therefore, the banks must undertake steps to improve the satisfaction of the current users of SSTs with the fact that they would encourage their peers and family members to use SSTs which ultimately enhances customer acceptance. In support, friendly employees with good knowledge and competencies should be employed in rendering the required need of customers in the use of SSTs which would ensure the continued use of them.

Finally, the independence the customer feels in using SSTs further improves the acceptance. Therefore, if proper marketing campaigns could be established highlighting the features of these applications being operated with the minimal involvement of third parties, the customers would be reassured. However, this could be different based on generational differences. The younger people may seek more independence while the elderly may require support in the use of these facilities. Hence, the banks should be careful in the process of carefully targeting the right facility to the right target audience in improving customer acceptance.

LIMITATIONS AND FUTURE DIRECTIONS

The limitation of the study includes the coverage of only the western province as the geographical area and restricting to semi-structured interviews. Hence, the study suggests the empirical validation of the findings of the present study incorporating a field survey. Further, the exploration of the

capabilities the customers should possess in the enhancement of customer acceptance of SSTs in the banking sector can be proposed for future studies.

ACKNOWLEDGMENT

The financial assistance received by a research grant from the University of Sri Jayewardenepura is gratefully acknowledged by the authors. Further, the authors would like to thank the anonymous reviewers for their excellent reviewer suggestions in completing this study.

COMPETING INTERESTS

The author has declared that no competing interests exist.

ACKNOWLEDGMENT

The financial assistance received by a research grant ASP/01/RE/MGT/2021/46 from the University of Sri Jayewardenepura is gratefully acknowledged by the authors. Further, the authors would like to thank the anonymous reviewers for their excellent reviewer suggestions in completing this study.

REFERENCES

- Abdullah, D., Jayaraman, K., & Kamal, S. B. M. (2016). A conceptual model of interactive hotel website: The role of perceived website interactivity and customer perceived value toward website revisit intention. *Procedia Economics and Finance*, 37(16), 170–175. [https://doi.org/10.1016/s2212-5671\(16\)30109-5](https://doi.org/10.1016/s2212-5671(16)30109-5)
- Abrams, L. S. (2010). Sampling “hard to reach” populations in qualitative research: The case of incarcerated youth. *Qualitative Social Work*, 9(4), 536–550. <https://doi.org/10.1177/1473325010367821>
- Åkesson, M., Edvardsson, B., & Tronvoll, B. (2014). Regular issue paper: Customer experience from a self-service system

- perspective. *Journal of Service Management*, 25(5), 677–698. <https://doi.org/10.1108/JOSM-01-2013-0016>
- Akinci, S., Aksoy, Ş., & Atilgan, E. (2004). Adoption of Internet banking among sophisticated consumer segments in an advanced developing country. *International Journal of Bank Marketing*, 22(3), 212–232. <https://doi.org/10.1108/02652320410530322>
- Akturan, U., & Tezcan, N. (2012). Mobile banking adoption of the youth market: Perceptions and intentions. *Marketing Intelligence and Planning*, 30(4), 444–459. <https://doi.org/10.1108/02634501211231928>
- Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. *International Journal of Information Management*, 37(3), 99–110. <https://doi.org/10.1016/j.ijinfomgt.2017.01.002>
- Anitsal, I., & Schumann, D. W. (2007). Toward a conceptualization of customer productivity: The customer's perspective on transforming customer labor into customer outcomes using technology-based self-service options. *Journal of Marketing Theory and Practice*, 15(4), 349–363. <https://doi.org/10.2753/MTP1069-6679150405>
- Ariff, M. S. M., Yeow, S. M., Zakuan, N., Jusoh, A., & Bahari, A. Z. (2012). The effects of computer self-efficacy and technology acceptance model on behavioral intention in internet banking systems. *Procedia - Social and Behavioral Sciences*, 57, 448–452. <https://doi.org/10.1016/j.sbspro.2012.09.1210>
- Aronson, J. (1995). A pragmatic view of thematic analysis. *The Qualitative Report*, 2(1), 1–3. <https://doi.org/10.46743/2160-3715/1995.2069>
- Augustine, K. (2013). Self-Service, ATM, and other omnichannel banking: Omnichannel experience needed.
- Baabdullah, A. M., Rana, N. P., Alalwan, A. A., Islam, R., Patil, P., & Dwivedi, Y. K. (2019). Consumer adoption of self-service technologies in the context of the Jordanian banking industry: Examining the moderating role of channel types. *Information Systems Management*, 36(4), 286–305. <https://doi.org/10.1080/10580530.2019.1651107>
- Bagozzi, R. P. (2007). The legacy of the technology acceptance model and a proposal for a paradigm shift. *Journal of the Association for Information Systems*, 8(4), 244–254. <https://doi.org/10.17705/1jais.00122>
- Baron, S., Patterson, A., & Harris, K. (2006). Beyond technology acceptance: Understanding consumer practice. *International Journal of Service Industry Management*, 17(2), 111–135. <https://doi.org/10.1108/09564230610656962>
- Barrett, M., Davidson, E., Prabhu, J., & Vargo, S. L. (2015). Service Innovation in the Digital Age. *MIS Quarterly*, 39(1), 135–154. https://www.researchgate.net/publication/221599153_Metamodel_for_Service_Design_and_Service_Innovation_Integrating_Service_Activities_Service_Systems_and_Value_Constellations%0Ahttps://aisel.aisnet.org/icis2011/proceedings/servicescience/8/
- Beatson, A., Coote, L. V., & Rudd, J. M. (2006). Determining consumer satisfaction and commitment through self-service technology and personal service usage. *Journal of Marketing Management*, 22(7–8), 853–882. <https://doi.org/10.1362/026725706778612121>

- Berry, L. L., Carbone, L. P., & Haeckel, S. H. (2002). Managing the total customer experience. *MIT Sloan Management Review*, 43(3), 85–89.
- Bitner, M. J., Booms, B. H., & Tetreault, M. S. (1990). The service encounter: Diagnosing favorable and unfavorable incidents. *Journal of Marketing*, 54(1), 71. <https://doi.org/10.2307/1252174>
- Blut, M., Wang, C., & Schoefer, K. (2016). Factors influencing the acceptance of self-service technologies: A meta-analysis. *Journal of Service Research*, 19(4), 396–416. <https://doi.org/10.1177/1094670516662352>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 2(3), 77–101. <https://doi.org/10.1191/1478088706qp0630a>
- CBSL. (2020). Economic and Social Statistics of Sri Lanka.
- Cho, H., & Fiorito, S. S. (2010). Self-service technology in retailing: The case of retail kiosks. *Symphonya. Emerging Issues in Management*, 1, 43–55. <https://doi.org/10.4468/2010.1.05cho.fiorito>
- Chung, T., & Law, R. (2003). Developing a performance indicator for hotel websites. *International Journal of Hospitality Management*, 22(1), 119–125. [https://doi.org/10.1016/S0278-4319\(02\)00076-2](https://doi.org/10.1016/S0278-4319(02)00076-2)
- Curran, J. M., & Meuter, M. L. (2005). Self-service technology adoption: Comparing three technologies. *Journal of Services Marketing*, 19(2), 103–113. <https://doi.org/10.1108/08876040510591411>
- Curran, J. M., & 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. <https://doi.org/10.2753/MTP1069-6679150401>
- Curran, J. M., Meuter, M. L., & Surprenant, C. F. (2003). Intentions to use self-service technologies: A confluence of multiple attitudes. *Journal of Service Research*, 5(3), 209–224. <https://doi.org/10.1177/1094670502238916>
- Czepiel, J. A. (1990). Service encounters and service relationships: Implications for research. *Journal of Business Research*, 20(1), 13–21. [https://doi.org/10.1016/0148-2963\(90\)90038-F](https://doi.org/10.1016/0148-2963(90)90038-F)
- Dabholkar, P. A., Bobbitt, L. M., & Lee, E. J. (2003). Understanding consumer motivation and behavior related to self-scanning in retailing implications for strategy and research on technology-based self-service. *International Journal of Service Industry Management*, 14(1), 59–95. <https://doi.org/10.1108/09564230310465994>
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management Science*, 35(8), 982–1003. <https://doi.org/10.1287/mnsc.35.8.982>
- Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *Journal of Applied Social Psychology*, 22(14), 1111–1132. <https://doi.org/10.1111/j.1559-1816.1992.tb00945.x>
- Elliott, K., & Hall, M. (2005). Assessing consumers' propensity to embrace self-service technologies: are there gender differences? *Marketing Management Journal*, 15(2), 98–107. <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Assessing+Consumers'+Propensity+to+Embrace+Self-Service+Technologies:+Are+there+Gend>

- Fernando, A. D. ., & Dinesha, P. K. C. (2019). The influence of technology anxiety on consumer use of self-service technologies in Sri Lankan banking industry: Moderating role of demographics. 8th International Conference on Management and Economics, 121–136. <http://ir.lib.ruh.ac.lk/xmlui/handle/iruor/189>
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior*. Addison-Wesley.
- Galdolage, B. S. (2020). Do it yourself: Customer self-directed learning in self-service technologies. *Sri Lanka Journal of Management Studies*, 2(Ii), 51–66. <http://repository.ou.ac.lk/handle/94ousl/1955>
- Galdolage, B. S. (2021a). Customers' role in co-creating value at self-service technologies: from role theory perspective. *Sri Lanka Journal of Marketing*, 7(1), 70. <https://doi.org/10.4038/sljmuok.v7i1.57>
- Galdolage, B. S. (2021b). Personal Judgments and emotional reactions towards online based self-service technologies. *Asian Journal of Management Studies*, 1(2), 1. <https://doi.org/10.4038/ajms.v1i2.33>
- Galdolage, B. S. (2021c). Prominence of information richness in accepting online based self-service technologies. *Archives of Current Research International*, 21(2), 31–42. <https://doi.org/10.9734/acri/2021/v21i230231>
- Galdolage, Badra Sandamali. (2018). *Value co-creation intention, practices and experience in self-service technologies*. University of Hull.
- Galdolage, Badra Sandamali. (2021a). Barriers for entering the digital world: exploring customer value co-destruction in self-service technologies. *FIIB Business Review*.
- Galdolage, Badra Sandamali. (2021b). Customer value co-creation intention, practices and experience in self-service technologies. *Journal of Scientific Research and Reports*, 27(4), 12–26. <https://doi.org/10.9734/jsrr/2021/v27i430375>
- Galdolage, Badra Sandamali. (2021c). Interplay between performance and convenience in customer choice of self-service technologies. *Current Journal of Applied Science and Technology*, 40(10), 80–91. <https://doi.org/10.9734/cjast/2021/v40i1031361>
- Galdolage, S. (2020). Customer choice of self-service kiosks in service transactions. *South Asian Journal of Marketing*, 1(2), 98–137.
- George, A., & Kumar, G. S. G. (2014). Impact of service quality dimensions in internet banking on customer satisfaction. *Decision*, 41(1), 73–85. <https://doi.org/10.1007/s40622-014-0028-2>
- Gilbert, D., Balestrini, P., & Littleboy, D. (2004). Barriers and benefits in the adoption of e-government. *International Journal of Public Sector Management*, 17(4), 286–301. <https://doi.org/10.1108/09513550410539794>
- Giovanis, A. N., Binioris, S., & Polychronopoulos, G. (2012). An extension of TAM model with IDT and security/privacy risk in the adoption of internet banking services in Greece. *EuroMed Journal of Business*, 7(1), 24–53. <https://doi.org/10.1108/14502191211225365>
- Gu, J. C., Lee, S. C., & Suh, Y. H. (2009). Determinants of behavioral intention to mobile banking. *Expert Systems with Applications*, 36(9), 11605–11616.

- <https://doi.org/10.1016/j.eswa.2009.03.024>
- Gunawardana, H. M. R. S. S., Kulathunga, D., & Perera, W. L. M. V. (2015). Impact of self service technology quality on customer satisfaction: A case of retail banks in Western Province in Sri Lanka. *Gadjah Mada International Journal of Business*, 17(1), 1–24. <https://doi.org/10.22146/gamaijb.6147>
- Hagen, S., & Sandnes, F. E. (2010). Toward accessible self-service kiosks through intelligent user interfaces. *Personal and Ubiquitous Computing*, 14(8), 715–721. <https://doi.org/10.1007/s00779-010-0286-8>
- Halepete, J., & Iyer, K. V. S. (2008). Multidimensional investigation of apparel retailing in India. *International Journal of Retail & Distribution Management*, 36(9), 676–688. <https://doi.org/10.1108/09590550810890920>
- Hamdi, H. (2011). Can e-payment systems revolutionize finance of the less developed countries? The case of mobile payment technology. *International Journal of Economics and Financial Issues*, 1(2), 46–53.
- Hien, N. M. (2014). A Study on Evaluation of E-Government Service Quality. *International Journal of Humanities and Social Sciences*, 8(1), 16–19.
- Hilton, T., Hughes, T., Little, E., & Marandi, E. (2013). Adopting self-service technology to do more with less. *Journal of Services Marketing*, 27(1), 3–12. <https://doi.org/10.1108/08876041311296338>
- Jayamaha, R. (2008). Impact of IT in the banking sector. *BIS Review*.
- Jayasimha, K. R., & Nargundkar, R. (2007). Adoption of self service bill payment technologies (SSBPTS): A conceptual model. *Journal of Services Research*, 6(2), 2007.
- Jayathilaka, R., Pathiratne, H., Jayanath, C., Perera, H., Wickremasinghe, S., & Dharmasena, T. (2020). The usage of cash deposit machines: An empirical analysis of identifying determinant factors. *Sri Lankan Journal of Banking and Finance*, 3(01), 1–17.
- Jayawardhena, C., & Foley, P. (2000). Changes in the banking sector - The case of Internet banking in the UK. *Internet Research*, 10(1), 19–30. <https://doi.org/10.1108/10662240010312048>
- Jeong, M., & Lambert, C. U. (2001). Adaptation of an information quality framework to measure customers' behavioral intentions to use lodging Web sites. *International Journal of Hospitality Management*, 20(2), 129–146. [https://doi.org/10.1016/S0278-4319\(00\)00041-4](https://doi.org/10.1016/S0278-4319(00)00041-4)
- Jubair, T. (2014). Financial Kiosks & Self Service Banking machines in india: A critical evaluation of the present scenario. *Sai Om Journal of Commerce & Management: A Peer Reviewed International Journal*, 1(7), 1–7.
- Kanal, N. (2014). Growth of mobile banking in India "Below Expectations":RBI. PTI. <https://www.firstpost.com/tech/news-analysis/growth-of-mobile-banking-in-india-below-expectations-rbi-3644293.html>
- Karjaluoto, H., Mattila, M., & Pento, T. (2002). Factors underlying attitude formation towards online banking in Finland. *International Journal of Bank Marketing*, 20(6), 261–272. <https://doi.org/10.1108/02652320210446724>
- Kaur, A., & Malik, G. (2019). Examining factors influencing Indian customers' intentions and adoption of internet banking: Extending TAM with electronic service quality. *Innovative Marketing*, 15(2), 42–57. [https://doi.org/10.21511/im.15\(2\).2019.04](https://doi.org/10.21511/im.15(2).2019.04)

- Kelly, P., Lawlor, J., & Mulvey, M. (2010). A Review of key factors affecting the adoption of self-service technologies in tourism. *Tourism and Hospitality Research in Ireland Conference*, 1–21. <https://doi.org/https://doi.org/10.21427/D7GF5X>
- Kim, E. Y., & Yang, K. (2018). Self-service technologies (SSTs) streamlining consumer experience in the fashion retail stores: The role of perceived interactivity. *Journal of Global Fashion Marketing*, 9(4), 287–304. <https://doi.org/10.1080/20932685.2018.1503558>
- Kim, J., Christodoulidou, N., & Brewer, P. (2012). Impact of individual differences and consumers' readiness on likelihood of using self-service technologies at hospitality settings. *Journal of Hospitality and Tourism Research*, 36(1), 85–114. <https://doi.org/10.1177/1096348011407311>
- Kim, J. S., Christodoulidou, N., & Choo, Y. C. (2013). Factors influencing customer acceptance of kiosks at quick service restaurants. *Journal of Hospitality and Tourism Technology*, 4(1), 40–63. <https://doi.org/10.1108/17579881311302347>
- Kim, M., & Qu, H. (2014). Travelers' behavioral intention toward hotel self-service kiosks usage. *International Journal of Contemporary Hospitality Management*, 26(2), 225–245. <https://doi.org/10.1108/IJCHM-09-2012-0165>
- Koo, C., Wati, Y., & Chung, N. (2013). A study of mobile and internet banking service: Applying for IS Success Model. *Asia Pacific Journal of Information Systems*, 23(1), 65–86. <http://apjis.or.kr/pdf/MIS023-001-4.pdf>
- Kumar, V., & Bose, S. (2013). Adoption of Self Service Technologies (SST)-A study on the intention of Management students to use Internet Banking Services. *Journal of Contemporary Research in Management*, 8(1), 47–58. <http://search.ebscohost.com/login.aspx?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=09739785&AN=89923007&h=JC3h6Kq56o6ovJwQVAIjboM1FBvCKQQBFbKrtGxdRvxH1rMvkNFNjvDv3uTtcvsL69m%2Bcz%2FVY60yLyP6LnSMAA%3D%3D&crl=c>
- Laukkanen, P., Sinkkonen, S., & Laukkanen, T. (2008). Consumer resistance to internet banking: Postponers, opponents and rejectors. *International Journal of Bank Marketing*, 26(6), 440–455. <https://doi.org/10.1108/02652320810902451>
- Le, H. B. H., Ngo, C. T., Trinh, T. T. H., & Nguyen, T. T. P. (2020). Factor affecting customers' decision to use mobile banking service: A case of thanh hoa province, Vietnam. *Journal of Asian Finance, Economics and Business*, 7(2), 205–212. <https://doi.org/10.13106/jafeb.2020.vol7.no2.205>
- Lee, E.-J., Lee, J., & Eastwood, D. (2003). A two-step estimation of consumer adoption of technology-based service innovations. *The Journal of Consumer Affairs*, 37(2), 256–282. <https://doi.org/10.1111/j.1745-6606.2003.tb00453.x>
- Lee, H. J., Cho, H. J., Xu, W., & Fairhurst, A. (2010). The influence of consumer traits and demographics on intention to use retail self-service checkouts. *Marketing Intelligence and Planning*, 28(1), 46–58. <https://doi.org/10.1108/02634501011014606>
- Liebermann, Y., & Stashevsky, S. (2002). Perceived risks as barriers to Internet and e-commerce usage. *Qualitative Market Research: An International Journal*, 5(4), 291–300. <https://doi.org/10.1108/13522750210443245>
- Liljander, V., Gillberg, F., Gummerus, J., & van Riel, A. (2006). Technology readiness and the evaluation and adoption of self-service technologies. *Journal of Retailing and Consumer Services*, 13(3), 177–191.

- <https://doi.org/10.1016/j.jretconser.2005.08.004>
- Lin, H. F. (2011). An empirical investigation of mobile banking adoption: The effect of innovation attributes and knowledge-based trust. *International Journal of Information Management*, 31(3), 252–260.
<https://doi.org/10.1016/j.ijinfomgt.2010.07.006>
- Lin, J. S. C., & Hsieh, P. L. (2006). The role of technology readiness in customers' perception and adoption of self-service technologies. *International Journal of Service Industry Management*, 17(5), 497–517.
<https://doi.org/10.1108/09564230610689795>
- Lin, J. S. C., & Chang, H. C. (2011). The role of technology readiness in self-service technology acceptance. *Managing Service Quality*, 21(4), 424–444.
- Lin, J. S. C., & Hsieh, P. L. (2011). Assessing the self-service technology encounters: Development and validation of sstqual scale. *Journal of Retailing*, 87(2), 194–206.
<https://doi.org/10.1016/j.jretai.2011.02.006>
- Liu, C., Hung, K., Wang, D., & Wang, S. (2020). Determinants of self-service technology adoption and implementation in hotels: The case of China. *Journal of Hospitality Marketing and Management*, 29(6), 636–661.
<https://doi.org/10.1080/19368623.2020.1689216>
- Madhusanka, J. M. ., & Pranthaman, T. (2018). A comparative analysis of customer satisfaction on self-service technology channels between state and private banks. *The Journal of Business Studies*, 2(1), 50–61.
<http://www.digital.lib.esn.ac.lk/handle/123456789/3707>
- Maditinos, D., Chatzoudes, D., & Sarigiannidis, L. (2013). An examination of the critical factors affecting consumer acceptance of online banking: A focus on the dimensions of risk. *Journal of Systems and Information Technology*, 15(1), 97–116.
<https://doi.org/10.1108/13287261311322602>
- Magotra, I., Sharma, J., & Sharma, S. K. (2019). Adoption of self-service technologies among banking customers: A revisit. *International Journal of Applied Management and Technology*, 18(1), 67–72.
<https://doi.org/10.5590/ijamt.2019.18.1.05>
- Malhotra, N., & Birks, D. (2007). *Marketing Research: An Applied Approach*. Prentice Hall.
- Meuter, M. L., Bitner, M. J., Ostrom, A. L., & Brown, S. W. (2005). Choosing among alternative service delivery modes: An investigation of customer trial of self-service technologies. *Journal of Marketing*, 69(2), 61–83.
<https://doi.org/10.1509/jmkg.69.2.61.60759>
- Meuter, M. L., Ostrom, A. L., Bitner, M. J., & Roundtree, R. (2003). The influence of technology anxiety on consumer use and experiences with self-service technologies. *Journal of Business Research*, 56(11), 899–906.
[https://doi.org/10.1016/S0148-2963\(01\)00276-4](https://doi.org/10.1016/S0148-2963(01)00276-4)
- Meuter, M. L., Ostrom, A. L., Roundtree, R. I., & Bitner, M. J. (2000). Self-service technologies: Understanding customer satisfaction with technology-based service encounters. *Journal of Marketing*, 64(3), 50–64.
<https://doi.org/10.1509/jmkg.64.3.50.18024>
- Mick, D. G., & Fournier, S. (1998). Paradoxes of technology: Consumer cognizance, emotions, and coping strategies. *Journal of Consumer Research*, 25(2), 123–143.
<https://doi.org/10.1086/209531>

- Migdadi, Y. K. A. A. (2012). The developing economies' banks branches operational strategy in the era of e-banking: The case of Jordan. *Journal of Emerging Technologies in Web Intelligence*, 4(2), 189–197.
<https://doi.org/10.4304/jetwi.4.2.189-197>
- Moore, G. C., & Benbasat, I. (1991). Development of an instrument to measure the perceptions of adopting an information technology innovation. *Information Systems Research*, 2(3), 192–222.
<https://doi.org/10.1287/isre.2.3.192>
- Müller-Seitz, G., Dautzenberg, K., Creusen, U., & Stromereder, C. (2009). Customer acceptance of RFID technology: Evidence from the German electronic retail sector. *Journal of Retailing and Consumer Services*, 16(1), 31–39.
<https://doi.org/10.1016/j.jretconser.2008.08.002>
- Ndubisi, N. O., Wah, C. K., & Ndubisi, G. C. (2007). Supplier-customer relationship management and customer loyalty: The banking industry perspective. *Journal of Enterprise Information Management*, 20(2), 222–236.
<https://doi.org/10.1108/17410390710725797>
- Oh, H., & Jeong, M. (2009). A Self-service technology adoption model in the resort hotel environment. *International CHRIE Conference-Refereed Track*.
<http://scholarworks.umass.edu/refereed/Sessions/Friday/27>
- Oh, H., Jeong, M., & Baloglu, S. (2013). Tourists' adoption of self-service technologies at resort hotels. *Journal of Business Research*, 66(6), 692–699.
<https://doi.org/10.1016/j.jbusres.2011.09.005>
- Oyedele, A., & Simpson, P. M. (2007). An empirical investigation of consumer control factors on intention to use selected self-service technologies. *International Journal of Service Industry Management*, 14(2), 287–306.
<https://doi.org/10.1108/09564230710751497>
- Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research*, 42(5), 533–544.
<https://doi.org/10.1007/s10488-013-0528-y>
- Parise, S., Guinan, P. J., & Kafka, R. (2016). Solving the crisis of immediacy: How digital technology can transform the customer experience. *Business Horizons*, 59(4), 411–420.
<https://doi.org/10.1016/j.bushor.2016.03.004>
- Park, J. S., Ha, S., & Jeong, S. W. (2021). Consumer acceptance of self-service technologies in fashion retail stores. *Journal of Fashion Marketing and Management*, 25(2), 371–388.
<https://doi.org/10.1108/JFMM-09-2019-0221>
- Patton, M. Q. (2002). Two decades of developments in qualitative inquiry: A personal, experiential perspective. *Qualitative Social Work*, 1(3), 261–283.
<https://doi.org/10.1177/1473325002001003636>
- Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., & Pahlila, S. (2004). Consumer acceptance of online banking: An extension of the technology acceptance model. *Internet Research*, 14(3), 224–235.
<https://doi.org/10.1108/10662240410542652>
- Rexha, N., Kingshott, R. P. J., & Shang Shang, A. (2003). The impact of the relational plan on adoption of electronic banking. *Journal of Services Marketing*, 17(1), 53–67.
<https://doi.org/10.1108/08876040310461273>
- Riquelme, H. E., & Rios, R. E. (2010). The moderating effect of gender in the

- adoption of mobile banking. *International Journal of Bank Marketing*, 28(5), 328–341.
<https://doi.org/10.1108/02652321011064872>
- Rogers, E. M. (1995). Diffusion of innovations: Modifications of a model for telecommunications. In M. W. Stoetzer & A. Mahler (Eds.), *Die Diffusion von Innovationen in der Telekommunikation* (Vol. 17). Springer, Berlin, Heidelberg.
https://doi.org/10.1007/978-3-642-79868-9_2
- Safeena, R. (2011). Customer's adoption of mobile-commerce a study on emerging economy. *International Journal of E-Education, e-Business, e-Management and e-Learning*, August.
<https://doi.org/10.7763/ijeeee.2011.v1.36>
- Sahu, A., & Deshmukh, G. K. (2020). Mobile banking adoption: Review. *Journal of Critical Reviews*, 7(02), 860–872.
<https://doi.org/10.31838/jcr.07.02.160>
- Salgado, D., Bandara, N., Peiris, T., & Gunathilaka, L. (2020). Consumer Intention towards self-banking services in sri lanka : A study based on peoples' bank. 13th International Research Conference, General Sir John Kotelawala Defence University, Cdm.
<http://ir.kdu.ac.lk/handle/345/2863>
- Salomann, Kolbe, & Brenner. (2006). Self-services in customer relationships: Balancing high-tech and high-touch today and tomorrow. *E-Service Journal*, 4(2), 65.
<https://doi.org/10.2979/esj.2006.4.2.65>
- Sathye, M. (1999). Adoption of internet banking by Australian consumers: An empirical investigation. *International Journal of Bank Marketing*, 17(7), 324–334.
<https://doi.org/10.1108/02652329910305689>
- Sekaran, U., & Bougie, R. (2015). *Research methods for business: A skill building approach*. John Wiley & Sons, Ltd.
- Shamdasani, P., Mukherjee, A., & Malhotra, N. (2008). Antecedents and consequences of service quality in consumer evaluation of self-service internet technologies. *Service Industries Journal*, 28(1), 117–138.
<https://doi.org/10.1080/02642060701725669>
- Sharma, S. K., Govindaluri, S. M., Muharrami, S. M., & Tarhini, A. (2017). A multi-analytical model for mobile banking adoption: a developing country perspective. *Review of International Business and Strategy*, 27(1), 133–148.
<https://doi.org/10.1108/RIBS-11-2016-0074>
- Shove, E., & Pantzar, M. (2005). Consumers, producers and practices: Understanding the invention and reinvention of Nordic walking. *Journal of Consumer Culture*, 5(1), 43–64.
<https://doi.org/10.1177/1469540505049846>
- Simon, F., & Usunier, J. C. (2007). Cognitive, demographic, and situational determinants of service customer preference for personnel-in-contact over self-service technology. *International Journal of Research in Marketing*, 24(2), 163–173.
<https://doi.org/10.1016/j.ijresmar.2006.11.004>
- Siu, N. Y. M., & Mou, J. C. W. (2005). Measuring service quality in internet banking: The case of hong kong. *Journal of International Consumer Marketing*, 17(4), 99–116.
https://doi.org/10.1300/J046v17n04_06
- Sohail, M. S., & Shaikh, N. M. (2008). Internet banking and quality of service: Perspectives from a developing nation in the Middle East. *Online Information Review*, 32(1), 58–72.
<https://doi.org/10.1108/14684520810865985>
- Sukkar, A. Al, & Hasan, H. (2005). Toward a model for the acceptance of internet banking in developing countries.

- Information Technology for Development, 11(4), 381–398. <https://doi.org/10.1002/itdj.20026>
- Thilakaweera, B., Harvie, C., & Arjomandi, A. (2016). Branch expansion and banking efficiency in Sri Lanka's post-conflict era. *Journal of Asian Economics*, 47, 45–57.
- Tsou, H.-T., & Hsu, H.-Y. (2017). Self-Service Technology Investment, Electronic Customer Relationship Management Practices, and Service Innovation Capability: An Extended Abstract. *Marketing at the Confluence between Entertainment and Analytics, Developments in Marketing Science: Proceedings of the Academy of Marketing Science*, 477–481. https://doi.org/10.1007/978-3-319-47331-4_92
- Ugwuanyi, C. C., Uduji, J. I., & Oraedu, C. (2021). Customer experience with self-service technologies in banking sector: Evidence from Nigeria. *International Journal of Business and Systems Research*, 15(1), 1. <https://doi.org/10.1504/ijbsr.2021.10029513>
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425–478. <https://doi.org/10.2307/30036540>
- Vivekanandan, L., & Jayasena, S. (2012). Facilities offered by the banks and expectations of it savvy banking customers. *Procedia - Social and Behavioral Sciences*, 40, 576–583. <https://doi.org/10.1016/j.sbspro.2012.03.233>
- Walczuch, R., Lemmink, J., & Streukens, S. (2007). The effect of service employees' technology readiness on technology acceptance. *Information and Management*, 44(2), 206–215. <https://doi.org/10.1016/j.im.2006.12.005>
- Walker, R. H., & Johnson, L. W. (2006). Why consumers use and do not use technology-enabled services. *Journal of Services Marketing*, 20(2), 125–135. <https://doi.org/10.1108/08876040610657057>
- Wang, C., Harris, J., & Patterson, P. G. (2012). Customer choice of self-service technology: The roles of situational influences and past experience. *Journal of Service Management*, 23(1), 54–78. <https://doi.org/10.1108/09564231211208970>
- Warf, B. (2017). South Asia. In *E-Government in Asia* (pp. 87–115). Chandos Publishing.
- Wei, W., Torres, E. N., & Hua, N. (2017). The power of self-service technologies in creating transcendent service experiences: The paradox of extrinsic attributes. *International Journal of Contemporary Hospitality Management*, 29(6), 1599–1618. <https://doi.org/10.1108/IJCHM-01-2016-0029>
- Yousafzai, S. Y., Foxall, G. R., & Pallister, J. G. (2007). Technology acceptance: a meta-analysis of the TAM: Part 1. In *Journal of Modelling in Management* (Vol. 2, Issue 3). <https://doi.org/10.1108/17465660710834453>
- Yu, C. S. (2012). Factors affecting individuals to adopt mobile banking: Empirical evidence from the utaut model. *Journal of Electronic Commerce Research*, 13, 104–121.