



Customer Capabilities and Value Co-Creation Practices in Self-service Technologies: Insights from Commercial Banks in Sri Lanka

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ABSTRACT

Many service encounters that service employees previously managed are being transformed into technology-enabled self-service interactions, including those in the banking sector. However, scholarly work has not paid sufficient attention to studying Self-Service Technologies (SSTs) in service encounters. Thus, the purpose of this study is to investigate the practices that customers engage in co-creating value with SSTs in the banking sector, along with prerequisite capabilities that customers must possess to complete successful service transactions. A qualitative approach was used, conducting semi-structured interviews with 50 banking customers who use SSTs in the Western Province, Sri Lanka. The study found seven key-value co-creation practices and five types of capabilities an individual should possess to use banking SSTs. The findings contribute to the existing literature by addressing the prerequisites and practices of customer value co-creation in banking SSTs, which have received sporadic attention.

Keywords: Commercial Banks, Value co-creation, Capabilities, Self-service technologies

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INTRODUCTION

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).

Customers interact with retail banks through several self-service channels, such as Automated Teller Machines (ATMs), Automated Telephone Banking (ATB), SMS Banking, and Web Banking. Retail banks use a variety of service channels extensively, and they play an important role in client relations (Gunawardana et al., 2015). Until the late 1980s, three state-owned banks dominated the banking sector in Sri Lanka, despite a few private and foreign banks. Private sector banks began to emerge after the 1980s, when the banking industry was substantially influenced by information technology (Madhusanka & Pranthaman, 2018). In Sri Lanka, ATMs were first implemented, preceded by mobile and electronic banking (Vivekanandan & Jayasena, 2012; Warf, 2017), and the Cash Deposit Machine (CDM) was recently launched (Jayathilaka et al., 2020). The banking industry in Sri Lanka is highly competitive, with 26 commercial banks serving the country's 21.2 million population (Madhusanka & Pranthaman, 2018).

Many prior researchers have pointed out the lack of existing literature in understanding value co-creation in technological interfaces (Meuter et al., 2000). Moreover, despite the benefits offered by SSTs, their growth has been stated to be sluggish in contrast to projected growth rates, specifically in developing countries (Kanal, 2014), while one of the primary concerns identified is the lack of widespread SST adoption among customers (Pillai & Sreedhar, 2014 as cited in Magotra et al., 2019). Therefore, investigating the customers' practices in co-creating value with the SSTs and the prerequisite capabilities they must possess in succeeding in the transaction is worthy of studying to improve the growth of using SSTs. Hence, the purpose of this research is to investigate the practices that customers engage in co-creating value with self-service technologies in the banking sector, along with prerequisite capabilities that customers must possess to complete successful

service transactions.

Thus, the current research contributes to the existing literature with a deeper knowledge of the practices that the customers use in co-creating value with SSTs and the capabilities an individual should possess to use SSTs in the Sri Lankan commercial banking sector, rather than focusing completely on a particular model. Additionally, with rapid technological improvements and growing concerns about technology use in the banking sector, the authors believe that the study's findings will guide how to optimize the design and delivery of SSTs to provide a superior customer experience in the banking SST solutions. This will be accomplished by understanding how customers collaborate with the banks through SSTs and what skills they require for effective value co-creation.

The remainder of the paper is organized as follows: the subsequent section comprises a literature review explaining the paper's topic and underlying elements, followed by the methodology of the study. Following that, the data analysis and discussion of the findings are explained. The study concludes with a brief discussion of the theoretical and managerial implications, as well as the limitations and prospects for further research areas.

LITERATURE REVIEW

Self-Service Technologies

The competitive nature of today's retail markets has made several businesses to integrate technology into their service processes (Elliott & Hall, 2005). Self-Service Technology enables customers to complete service interactions alone without the involvement of a company's service personnel (Galdolage, 2020). SSTs have grown in popularity among the service sectors because of rapid technical improvements, low hardware prices, and growing labor costs (Hagen & Sandnes, 2010). Customers can use SSTs to generate their services (Kim et al., 2012), lowering costs and increasing efficiency (Kim & Yang, 2018).

SSTs are characterized as “technological interfaces that enable customers to provide a service without direct employee engagement” (Meuter et al., 2000, p. 50). Technology interfaces empower businesses to delight customers instantly by allowing them to use technology to solve problems (Bitner et al., 2002 as cited in Cho & Fiorito, 2010). Most digital technologies

provide clients with a highly individualized environment (Parise et al., 2016) that includes rich information and increased interactivity (Galdolage, 2021c). Customers' interactions with service providers/staff have shifted to interactions with technology since the introduction of this new service delivery model (Kim & Yang, 2018).

Nevertheless, the value to the customer is not always enhanced to the customer as expected (Udunuwara & Wilkin, 2021), while it does not always ensure customer acceptance when the SSTs are introduced (Galdolage, 2021a). The addition of SSTs to service interactions has hindered the adoption of customers into various industries since some customers are indisposed in the acceptance of SSTs (Wei et al., 2017) proved by the evidence such as some stores removing self-service checkout facilities with the aim of improving the service rendered to the customers (Åkesson et al., 2014).

To reap the full benefits of technological service innovation, businesses must work towards reducing the customers' aversion to SSTs (Liljander et al., 2006). The most difficult challenge is convincing customers to adopt new SSTs, which will necessitate significant behavioral changes (Meuter et al., 2005). The firms should make the necessary improvements in the customer interactions via SSTs while customers should ensure that their expectations are met by the services (Fernando & Dinesha, 2019). Hence, it is essential to study the specific context of SSTs investigating the practices customers need to undertake in using the SSTs and the capabilities they should possess to succeed in the completion of the transactions.

Global and Local Contexts of SSTs in the Banking Sector

The banks have joined the SST trend to enhance service delivery, grow the volume of transactions and preserve tempo with technology while increasing consumer alternatives including ATMs, mobile and internet banking. The overall service performance of the worldwide retail banking industry has stepped forward in current years (Ndubisi et al., 2007). Banks are being pressured to discover new approaches to enhance customization to offer an experience that is not unique but also unparalleled (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 which 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). Automated teller machines and debit cards triggered this technological revolution, and the core banking services quickly followed up. Although traditional banks have restricted banking hours, SST can be used outside of these hours, but they are based on customer preferences matching their needs (Marr & Prendergast, 1993 as cited in Fernando & Dinesha, 2019). Internet banking and some other SSTs are available 24 hours a day, 7 days a week, initially which provided information concerning the products and services of the banks, while financial transactions are allowed at present. Mobile banking is another facility of SSTs being promoted by the banks (Kumar & Bose, 2013). According to Bitner et al. (2002) and Lee et al. (2003) the Interactive kiosks (such as ATM), Internet-based interfaces (such as online banking and online shopping), and telephone/interactive voice response (IVR) interfaces (such as telephone banking) are common in-service environments (Baabdullah et al., 2019). Customer familiarity makes it essential for banks to better handle SST. If it is widely used, SST can also save a lot of money, but if it is installed and maintained improperly, the cost will be very high.

However, in comparison with developed nations, the banking industry in developing nations appears to have a decreased popularity of SSTs, which results in decreased utilization rates (Sukkar & Hasan, 2005; Migdadi, 2012; Sharma et al., 2017). This explains why there is little scholarly work in addressing the subject in underdeveloped nations (Baabdullah et al., 2019). Before making an investment and time to design, implement, and manage SSTs, companies need to recognize the consumer's use of SSTs.

As more people complete daily financial transactions without the assistance of branch staff, the use of self-service banking is increasing (Augustine, 2013). It is in the late 1980s the widespread use of ICT in the banking industry in Sri Lanka began (Jayamaha, 2008). Self-service banking and online banking are the current sales methods in Sri Lanka. A major change in the banking industry in Sri Lanka resulted from the availability of automated machines 24 hours a day, 7 days a week. Despite the many benefits of the new

services, most Sri Lankan bank customers are yet to use the SSTs (Salgado et al., 2020).

Customer Value Co-Creation in SSTs

Customer collaboration is a core construct in the service literature (Zeithaml et al., 2006, as cited in Etgar, 2008), so customers always play an active role in service provision. Here, consumers participate in the execution of various activities carried out in one or more of the stages of completing the transactions (Etgar, 2008). The emerging Service-Dominant Logic (SDL) (Vargo et al., 2004) provided a new perspective for customer collaboration in service production and quickly became established in the marketing literature. It proposes a new framework in which services are at the forefront of the economic exchange system in a country. Management theory and business practice have long focused on goods-dominant logic, but this may no longer be in harmony with the modern economy in its basic role of services (Ordanini & Pasini, 2008).

According to SDL, a service provides the application of knowledge and skills for the benefit of another unit, making it the basis of any economic or social exchange. Services and goods are simple devices for performing a service and can be seen as direct and indirect means of transferring knowledge and skills during service delivery (Vargo et al., 2004). In addition, the customer is considered at the center of the stage according to the SDL, while the company delivers value propositions not just value making the customer always a co-producer (Ordanini & Pasini, 2008). Co-production makes it possible for you to fragment your market offers and support one-to-one marketing operations. In addition, when the customer is involved in the production process, it frees up costs for labor and allows a company to market an offer at a lower monetary price, resulting in a win-win situation in the relationship between buyers and sellers (Fitzsimmons, 1985, as cited in Bendapudi et al., 2003).

Moving towards co-production to increase the perception of value seems quite logical, especially since the notion of customers creating value for the company as opposed to the company creating value for customers (LengnickHall 1996; Prahalad & Ramaswamy 2004; Vargo et al. 2004, as cited in Auh et al., 2007) seems suitable for a market-oriented organization. Organizations may perceive that they have no other choice but to accept co-production in organizing their service delivery process. Customers are

increasingly empowered to choose what and how many services they want to produce for themselves, which means that the divide between producer and customer has become much more blurred. Thus, it seems that one of the hallmarks of the postmodern marketing era is that “the product is likely to become less and less a ‘finished’ object and more and more a process into which the ‘customer’ can immerse oneself and can provide inputs” (Firat et al. 1995, p. 51, as cited in Auh et al., 2007).

Practices from the Practice Theory Perspective

Routinized behaviors comprising of mental and physical activities, things and the use of them, and the knowledge and understanding (Reckwitz, 2004). Further, according to (Shove & Pantzar, 2005) practices incorporate the integration of materials, forms of competence, meanings and are made through their active reproduction. Hence, practices can be recognized as the routinized ways of doing performed by the respective actors strengthened by specific capabilities (Cohen, 2007). Capabilities are characterized as a set of “skills and resources which enable the company to achieve superior performance” (Harmsen & Jensen, 2004, p.535).

“Material” is a necessary part of practices under the theory of social practice (SPT). In SPT, “things” are not only symbolic communicators (Warde, 2005, as cited Spotswood et al., 2015), identity or status (Shove & Pantzar, 2005), but often resembled as “directly implicated in the conduct and reproduction of daily life” (Shove & Pantzar, 2005, p. 44). Meanings depend heavily on the concept of habits, which suggests that a group shares understandings of significance and thereby unites the group (Spotswood et al., 2015). “Competences” refer to “embodied knowledge”, whose roots derive from the studies of Bourdieu (1986, as cited in Spotswood et al., 2015) and Shilling (1991, as cited in Spotswood et al., 2015).

As of the end of the 1990s, the use of practice theory has been incorporated into conceptual discussions and empirical research on consumption as part of the growth of an everyday life analytical approach to consumption (Groncow & Warde, 2013). As frequently stated, the practice theory is not coherent. Rather, various theoretical readings share a focus on how social action is carried out, as well as the comprising and conditioning of such micro-processes of acting in social life. The most fundamental theoretical assumption is that actions of social life must be performed out and carried

continuously and that this monotonous performativity is organized through a variety of collectively shared practices. Practices are viewed as configurations of several theoretically similar and interconnected dynamics. Each of the three elements that coordinate practices, according to Reckwitz (2004), are understandings, procedures, and engagements. Furthermore, it is the execution of practices that generates consumption activities and consumption moments (Warde, 2005). Therefore, the practice theory would be considered as the theoretical foundation of this study which would reveal the value of co-creation practices in relation to self-service technologies.

METHODOLOGY

To explore the practices that customers engage in co-creating value with SSTs in the banking sector, along with prerequisite capabilities that customers must possess to complete successful service transactions, qualitative inquiries were conducted using an exploratory research design (Sekaran & Bougie, 2015; Malhotra & Birks, 2007). The study was conducted in the Western Province in Sri Lanka via semi-structured interviews with fifty users of SSTs using a non-probabilistic purposeful sampling technique (Abrams, 2010; Patton, 2002; Palinkas et al., 2015) in selecting the respondents. A brief introduction and description of the study were provided at the beginning of the interview, improving the use and value of the respondents. The respondents were provided with a formal consent sheet to obtain the respondent's voluntary participation in the research before the interview. In order to support the transcription, a request was made to record the interviews. An interview guide was developed and used to make the process of interviewing seamless, focused, and simple. 30 to 45 minutes were spent for each respondent's interview. The patterns (themes) were uncovered, analyzed, and summarized with the use of thematic analysis (Braun & Clarke, 2006). In providing a valid justification in choosing the respective themes reading related literature is the final step to be conducted (Aronson, 1995).

FINDINGS

Value Co-Creation Practices in the Banking Sector

The study found several parameters reclassifying the practices that the customer engages in the use of SSTs into eight themes as “fulfilling the prerequisites”, “gathering knowledge”, “collecting information”, “cooperating

with service providers”, “following instructions”, “tolerating process failures” and “confirming transaction”, “fulfilling the formalities and ending the process”. Further, “language knowledge”, “computer knowledge”, “internet knowledge”, “device knowledge”, and “interface knowledge” were recognized as the capabilities an individual should possess in using SSTs. Above mentioned themes of practices and capabilities are elaborated as below.

Fulfilling the Prerequisites: Many of the SSTs in the banking sector including the Automated Teller Machine, Online, Mobile, and Internet Banking require a particular set of prerequisites to be fulfilled before their initial use. The respondents stated that to use the ATM, they require a debit card provided with a PIN that is unique to each customer. Further, in online and internet banking the registration process should be completed at the initial stage for them to use it when they want. Similarly, while internet banking can be browsed from a search engine using the internet browser, mobile banking is enabled once the respective application is installed on the phone as mentioned by the respondents. Following includes an example provided by a participant;

Usually before using the ATM, I had to get the card and pin number to enter from the bank. They ask from us when we open an account whether we need a card or not. It is required when we use the ATM. Also, I was introduced with mobile app when I visited the bank for one of the transactions. There I had to fill a form for the registration, and they gave me a username and a password to be used in logging to the mobile app and internet banking as well.

(31 years, Female, Interior Designer)

Gathering Knowledge: This indicates the stage in which the customer of SST banking facilities tries to gain a particular idea on how to use the facilities in conducting their banking operations. As mentioned by the respondents, they seek support from the bank staff to understand how to operate the interfaces of the mobile application once they get registered at the bank. Further, at the ATM, if they have no prior experience, they ask the available bank personnel how to use it or get the support of another customer or a family member. Furthermore, during this pandemic period, the respondents also mentioned they received/gained knowledge on the banking websites as well. The following reflects examples provided by the respondents.

I was introduced with the facility of the mobile application by the bank when I got registered to the facility. They clearly explained me on how to operate it. But later, I again got the support from my son in using it for few time in understanding how to use it. Also, at the ATM it was him who helped to start using it for the first time.

(45 years, Female, Government Worker)

Collecting Information: Most of the SSTs require specific transaction information when using them. The respondents mentioned that, in doing money transfers or bill payments via mobile applications, you are required to have the respective account numbers, the branch and bank details of the recipient, and the existing amount before the transaction being conducted. Furthermore, in the Cash Deposit Machines, usually they enter the mobile number of the recipient so that they are informed once the cash is deposited. In addition, to operate the ATM the respondent should remember the type of account they are using such as savings or current account. Hence, it is another information the respondent should possess in doing a transaction using CDMs. The following reflects an example provided by a participant.

Actually, I use the mobile application to make most of my bill payments and money transfers. For them, I need to have the correct account details including the account number, branch, and bank name to whom I am making the payment to. Also, for the ATM machine I must keep in mind it is my Savings account I am having the card for, because I have to select that before doing a transaction

(27 years, Male, IT Security Analyst)

Cooperating with Service Providers: This implies situations where the customers of SSTs in the banking sector have to be cooperative in the use of such facilities. Due to this reason, most of the SST facilities are automated leading to having issues in their operations as well. As mentioned by the respondents, most of the time the customers have to wait in a queue until it is their turn to conduct their transaction at the ATM. On the other hand, the respondents revealed when using the mobile application and internet banking, there are minor delays in loading the website and receiving the one-time password required to complete the transactions due to poor internet connections. Following is an elaboration made by one of the participants.

I usually do not keep cash in hand. Either I use the ATM or else the mobile app if I want to make any transfers or bill payments. Sometime to get cash from the ATM, I had to wait in queues for long when there are slow customers. But if I want to get cash, I must stay right? Because staying there is much better than going inside the bank. Also, when it comes to the mobile app, it is quite convenient. But sometimes there is a delay in getting the OTPs.

(32 years, Male, Software Engineer)

Following Instructions: This indicates the instructions the customers must follow in using the SST facilities provided by the banking sector. The respondents mentioned that in the use of an ATM, they need to select the language, insert the card, enter the PIN, select the type of the account, select the type of the transaction and the amount, and finally confirm it following the sequence of instructions the screen shows to them as reflected below.

It is the ATM I use the most in when it comes to these facilities. So there, I have to properly follow the instructions given on the screen in selecting the language, insert the card, enter the pin number, select the type of the account, select the type of the transaction and the amount of the transaction in order correctly perform my banking activity. Otherwise, the transaction will not get completed.

(43 years, Male, Auditor)

Furthermore, when the mobile application and internet banking facilities are used for banking transactions, the username and password should be entered as instructed and the one-time password received to the email address, or the mobile phone number should be entered correctly to complete the transaction as mentioned by the respondent elaborated as below.

I use the mobile app when I do money transfers and bill payments. So there, as instructed I first have to enter the password and the username properly and then follow the instructions properly entering the details, and finally enter the OTP to complete the transaction. Otherwise, the transaction will not get successful.

(26 years, Female, Brand Executive)

Tolerating process failures: SST facilities are operating through an automated system in most of the banks. Therefore, there can be instances where the systems will have failures and the customers have to face issues. The respondents revealed that there are situations where they could not complete the transactions at the ATM due to the machine being out of cash and closed for maintenance. Consequently, there are situations where there are system updates for the mobile applications and internet banking facilities that are informed by the bank. According to the respondents, customers will not be able to use such facilities during the process. Hence, the customers have to tolerate such failures when using the SSTs in the banking sector. Following is an example provided by a participant.

Once I went to the ATM to get cash for one of my emergencies the screen reflected that the machine is out of cash and there are even days when notices are placed for machine maintenance, and I could not attend my transaction and had to visit the bank. When it comes to the mobile app there are time when the app cannot be used during system updates. But usually, the banks send a text message informing them.

(34 years, Male, Graphic designer)

Confirming Transaction: This indicated the stage in which the consumer has to confirm the transaction conducted using the SST facilities for a banking transaction. As mentioned by the respondents, once you enter all the details and enter the amount, the transaction needs to be confirmed through the screen to complete the transaction. In contrast to the ATM, a window appears in the mobile app, and internet banking once you enter the details and the one-time password where the respondent has to confirm whether the details are correct and confirm the transaction. The following reflects an example provided by the participant.

Actually, in the ATM even after you enter all the details and the amount finally, we need to confirm the transaction for it to proceed. Even in mobile app, usually after the account details and everything is entered for the transaction, we are again asked to confirm the details in confirming the transaction where we can recheck what we have entered.

(28 years, Female, Finance officer)

Fulfilling formalities and ending the process: This reflects the customers using the SST facilities for banking activities are at the end of the process, they undergo in completing the transaction by fulfilling the formalities. The respondents mentioned that the ATMs will reflect whether the consumer needs a receipt after the transaction or whether you need to perform an additional transaction once you complete the transaction. Thereafter, the card and the cash should be taken out by the machine with the receipt if the customer has requested. Moreover, in the mobile app and internet banking, the consumer receives the confirmation of the transaction through an email or a text message to the mobile phone. In addition, the respondents revealed that in using the CDMs the respondent is allowed to take a receipt if requested at the end of the process. Following is an example provided by a participant of the study.

So, when using the ATM actually we will be asked whether we need a receipt. I usually don't take it. Then I say no to the receipt, take the card and cash out to end the transaction. When it comes to the mobile App I get a text message as the confirmation of the transaction. I am not using the CDM much, but there also as I can remember we can get a receipt if we request at the end of the transaction.

(28 years, Female, Accounts Manager)

The following figure (Figure 1) summarizes the customer value co-creation practices in banking self-service technologies.

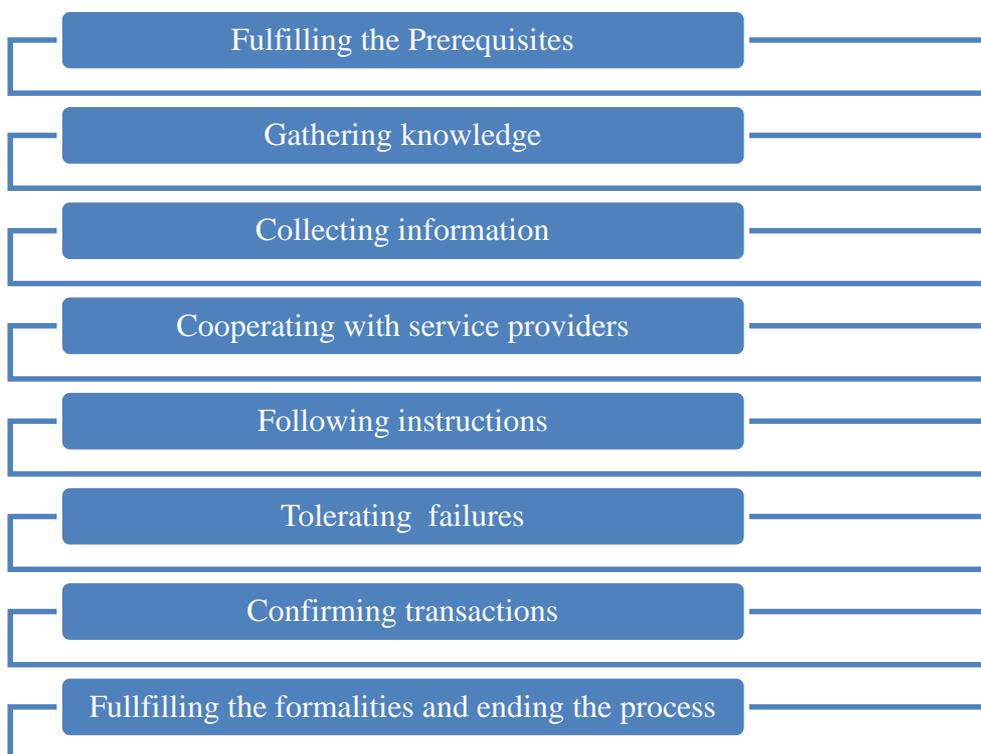


Figure 1: Customer value co-creation practices with banking SSTs

Customer Capabilities in Value Co-Creation with SSTs in the Banking Sector

Language Knowledge: The SSTs require the consumers to possess a certain extent of literacy in use of them in their banking activities. Hence, as the respondents revealed it is quite convenient as the ATM provides three languages including, Sinhala, Tamil, and English from which you can choose before you perform the transaction. However, mobile application and internet banking, requires the users to possess knowledge of the English language to operate the interface as mentioned by the respondents. The following reflects an example from a participant.

When it comes to the ATM, it is quite convenient for all, because it gives us the three options of Sinhala, English, and Tamil as the languages representing our nationalities. However, as I think since the mobile app

and internet banking facilities are in English language you need to possess some knowledge to use them.

(34 years, Male, Graphic Designer)

Computer Knowledge: This is mostly applicable to the SST facilities provided by the banking sector for internet and online banking operations. The respondents mentioned that for the use of internet banking, at least they need to possess a basic understanding of using the computer to operate it and use such facilities through the internet browser. The following reflects an example of a participant revealing the above facts.

Actually, I use internet banking more than the mobile app, as I use my laptop for most of my work. So, it is easy for me to use that facility for the banking transactions. However, even if it is familiar to me, I think if you are to use it you need to have a basic understanding on how to operate a computer.

(28 years, Female, Finance officer)

Internet Knowledge: Apart from ATM and CDM, the mobile application and internet banking facilities coming under the SSTs provided by the banking sector works with the application of internet facilities. Hence, the respondents mentioned that in using such facilities, they should possess knowledge on how to get an internet connection to use them, what costs would incur for the internet packages, and how to operate them via an internet browser and the mobile application. The following is an example provided by a participant.

I do use the ATM machine at time but rarely the CDM. It is the mobile app and internet banking I use the most for my banking transactions when it comes to these facilities. So according to my opinion, as these are operated through internet, for one to use them, we should know how to get internet, how to use the internet browser, search for the banking site and so on. So yes, you need to have some knowledge on the internet as well.

(32 years, Male, Software Engineer)

Device Knowledge: The SST facilities are provided either through a bank-maintained machine or a computer or a mobile phone of the customers. Therefore, all these facilities are integrated into a device on which the consumers must have particular knowledge about using them as revealed by the respondents. They elaborated for the use of ATM and CDM, they need to know to operate the technical interfaces while for the mobile app, the knowledge to use a mobile phone and the basic computer skills are required. The following reflects an example provided by a respondent.

I use all these types of SSTs in my banking activities as I mentioned. So, when it comes to ATM and CDM, they are machines at the banking facility. Therefore, I should know how to operate them. When it comes to the mobile app, obviously you should know how to operate it through your phone. Internet banking can be done from your computer using an internet browser, so for that too you need to have that device knowledge in operating the computer.

(27 years, Male, IT Security Analyst)

Interface Knowledge: SST facilities have a particular interface on which the customers have to do their banking transactions. The respondents revealed the interfaces of ATM and CDM are much similar in the device screen and the buttons provided to operate. Similarly, the mobile application and internet banking interfaces are similar in operating as mentioned by the respondents. However, it was further revealed that, to use the SSTs in the banking sector, it is important that the customers should possess some knowledge on how to use the navigations and tabs to operate the technical interfaces as illustrated by the following example provided.

When it comes to all these ATMs, CDMs, mobile app, and internet banking everything has a particular technical interface. They are similar from bank to bank. Yes, it is. But still, without knowing how to navigate in those interfaces and open tabs and stuff like that, I don't think you can use them.

(34 years, Male, Graphic Designer)

The following figure (Figure 2) summarizes the prerequisite customer capabilities for the successful completion of SST banking transactions.

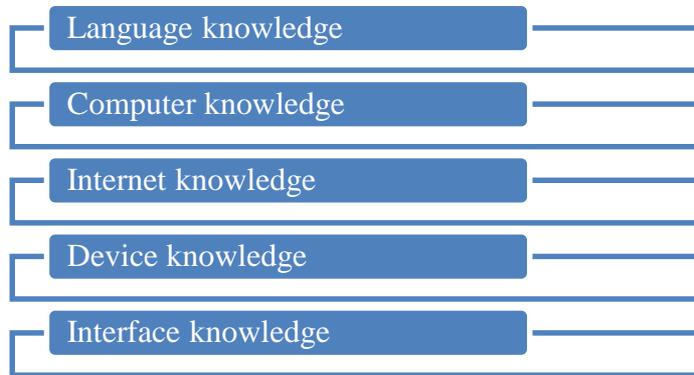


Figure 2: Customer capabilities in co-creating value with banking SSTs

DISCUSSION, RECOMMENDATIONS, AND FUTURE RESEARCH DIRECTIONS

This study found eight practices that customers engage in co-creating value with the SSTs while five prerequisite capabilities that customers must possess in succeeding the transactions concerning Sri Lanka's commercial banking sector.

Even though previous literature does not offer direct evidence on value co-creation practices with SSTs in the banking sector, there were few similar findings. Value co-creation practices have been recognized to resemble a strong positive impact on the customer's functional experiences in relation to SSTs (Galdolage, 2021b). The customers engage in co-production in SSTs with the integration of resources (Hilton et al., 2013). According to Yi and Gong (2013), value co-creation takes place via activities of information seeking and knowing (Neghina et al., 2015). This is similar to the findings of the present study in gathering knowledge and collecting the respective information.

McColl-Kennedy et al. (2012) have highlighted the fact that the creation of value being cooperative with the SSTs is also important which complements the findings of the study. Connecting with the organization when necessary (Randall et al., 2011) is also recognized as important in getting recovery actions (Heidenreich et al., 2015) which are similar to tolerating the process failure informed by the bank through text messages to the mobile phone or via notices at the bank.

Similar to the findings of the present study, the importance of consumer knowledge and skills has been recognized in prior literature (Hilton et al., 2013) pointing out the need of focusing on them in the designing stage of technologies. Aligning with the study's findings, Liljander et al. (2006) and Meuter et al. (2003) have recognized the importance of identifying the state of mind of customers and their ability in the evaluation of SSTs. Hence, the computer, internet, device, interface, and language knowledge are important to be considered by the banks in promoting SST facilities.

Further, it has been highlighted that it is important to assess the abilities of the consumers in the SST trials (Meuter et al., 2005). Thus, when the customer co-creates value through technological interfaces (Grönroos & Ravald, 2011), the customers are required to acquire new capabilities and knowledge on using them (Payne et al., 2008). Therefore, it has been recognized as the responsibility of the respective organization to instruct the customers (Zhao et al., 2008) making them comfortable to use them alone.

Theoretical Contributions

Though previous scholars have focused on service encounter research, there is a lack of existent literature in understanding value co-creation and technological interfaces. Despite the benefits of SSTs, the growth rate is stated to be lower in developing countries. In such a backdrop, this study enriches the literature surrounding value co-creation and self-service technologies. It uncovers eight customer value co-creation practices with SSTs in banking: “fulfilling the prerequisites”, “gathering knowledge”, “collecting information”, “cooperating with service providers”, “following instructions”, “tolerating process failures” and “confirming transaction”, “fulfilling the formalities and ending the process”. Additionally, the study found prerequisite capabilities that customers must possess in succeeding the SST transactions: ‘language knowledge, ‘computer knowledge’, internet knowledge’, ‘device knowledge, ‘interface knowledge’.

Managerial Implications

Overall, the study provides a broad understanding of the practices the customers engage in using the available SSTs in the commercial banking sector and the capabilities they should possess in using them. Banks can use these insights to make SST-based banking transactions more comfortable for the

customers initiating through the registration process and issue of cards in fulfilling the prerequisites which would encourage them to use and recommend the facilities to others. In supporting the knowledge gathering by the customers in using the SST facilities, the banks could educate the potential customers using displays at the Kiosks with instructions and also use leaflets to advertise. Moreover, when it comes to the collection of information, the banks can make the facilities more convenient by making them save the favorite transfers and the bill payment which would improve the efficiency in the transactions. The cooperation of the customers is rendered since they tend to use the SST facilities. Hence, to encourage the customers further, the banks can increase the availability of ATMs and CDM kiosks to reduce the waiting in queues. In addition, appropriate actions must be taken to prevent the process failures such as system updates and machine maintenance during working hours which would discourage the use of SSTs.

With reference to the capabilities, the customers should possess the use of SST facilities in the commercial banking sector in Sri Lanka. The banks can take several actions to improve the use by working against the barriers of knowledge. To cater the language knowledge, it would be convenient if the translation could be occupied on the internet and mobile banking applications similar to the ATM and CDM machines. In addition, conducting demonstrations at the registration process and displaying displays within the bank premises catering to the required device and interface knowledge in the use of such SSTs would encourage the customers to use them.

Limitations and Future Research Directions

The limitation of the study comprises coverage of the western province only in Sri Lanka as the geographical area while restricting the data collection to semi-structured interviews. Therefore, empirical validation of the findings of the present study is suggested as a future research direction incorporating a field survey. Further, the study can be extended to understand customers' functional as well as emotional experiences of using SSTs in banking transactions.

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CONFLICTS OF INTERESTS

The authors declare no conflicts of interest

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