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6.1 Introduction

The chapter starts with overview of the main objectives of this research. It then presents discussion on the key findings of this study: the descriptive statistical findings and the hypothesised relationships. The last section of the chapter presents the conclusions.

6.2 Overview of This Research

The purpose of this research study was to determine factors affecting customer satisfaction on primary and technology banking services. This thesis developed and empirically tested a hypothesised model for understanding the factors that influence customer satisfaction on banking services in a better way. In this background, the main objectives of the research included identifying factors that influence customer satisfaction on banking services, developing a model of factors influencing customers’ satisfaction towards banking services, and testing the hypothesised model for validating it by exploring relationships between studied factors.

As described in chapter 3, the research model in the present study proposed that customer satisfaction on banking services are affected by public sector banks which included deposit and loan service (DLS) from Primary banking services and mobile banking service (MBS), automatic teller machine (ATM), internet banking service (IBS) from technology banking services and bank personnel and system administrator were proposed to mediate the effects of independent and dependent
variables of customer satisfaction. The relative importance of each of these factors in the prediction of the customer satisfaction on banking services were also evaluated.

In order to achieve the above mentioned research objectives, a detailed and organized literature review was conducted, which is already reported in chapter 2.

This study employed a quantitative approach using a cross-sectional field survey for collecting primary data. A questionnaire was developed from the published literature by adapting exiting measurement scales reported by previous research studies. Prior to using questionnaire in the main survey, one pre-test and a pilot study were conducted. The purpose of pre-test and pilot study was to detect any errors and ambiguities in the measurement instrument in order to avoid confusions and misinterpretations (already mentioned in detail in see section 4.9 of Chapter 4). The scales were revised and modified where necessary.

A final sample of 415 responses was used for data analysis. The data collected was then analysed using two statistical software tools i.e. SPSS and AMOS. The SPSS version 20.0 was used for the descriptive analysis, missing value analysis and exploratory factor analysis while the AMOS version 20.0 was used for structural equation modelling (SEM) analysis i.e. confirmatory factor analysis (CFA), testing model fit to the data and hypotheses testing. The descriptive analysis of the survey presented demographic profile of the sample and item analysis. The exploratory factor analysis was performed to extract latent factors (constructs), which were then confirmed by confirmatory factor analysis. Finally, the hypothesised relationships between the constructs were examined by structural equation modelling. A two step-stage approach was adopted in SEM. In the first stage, the measurement model, using CFA method, was tested to examine and assess the reliability and validity of the
constructs used in the model. In the second stage, a hypothesised structural model was assessed using the path analysis technique for testing the hypothesized causal relationships among the constructs proposed in the research model. The proposed research model was found to be valuable in explaining the customer satisfaction on primary and technology banking service (BPTS) by potential customers and adequately fit the data.

The results of this study largely support the hypothesised relationships proposed in the model. In particular, the results suggested that beliefs of primary and technology service jointly influence the customer satisfaction on banking service. The structural model was evaluated and a discussion of the findings is presented in more detail in the next section. It is to be noted that the discussion in this chapter is organised around hypotheses testing results and findings in respect to the proposed hypothesised research model. This is followed by the conclusions of this chapter.

6.3 Discussion

Following sections provide discussion on the response rate, participants’ demographic characteristics, bank details, constructs and items, and hypotheses tested in this study.

6.3.1. Response rate

This field study employed a quantitative approach using a cross-sectional survey for collecting data. Out of 1000 surveys distributed, 451 surveys were returned; however, only 415 responses were included in the data analysis while the remaining 36 surveys were incomplete; hence, they were discarded. Thus, the final response rate in this study was 41.5%. The overall useable response rate in this
study seems relatively low but it was higher than the researcher’s initial anticipation drawn from the response rate reported in previous studies in the same domain. The response rate achieved in this study is reasonably higher than that of in earlier studies on customer satisfaction on banking service. For instance, the response rate reported in the study by Cheng et al. (2006) was 20.3 per cent, Wu (2003) received 10.5 per cent, Laitinen (2002) reported 10.8 per cent, and Podder (2005) had 15.7 per cent of usable responses. Yousafzai (2005) in her research survey of Internet banking acceptance in the United Kingdom received 21.8 per cent usable responses.

Therefore, the final response rate in this study can be considered relatively better than the previous studies mentioned above.

6.3.2. Participants’ demographic characteristics

The results of participants’ demographic characteristics revealed that the majority of the respondent’s age of about 64.6 per cent in this survey was between 20 – 40 years. This finding suggests that the majority (about 64.6 per cent) of the banking users in Tamil Nadu are adult of working age, who might be using the banking service mostly at their workplace. This is evident from the results of the respondents’ graduate, which showed 74 per cent of the respondents were working as private sector employees (58.6 per cent), businessperson (12.5 per cent) and other employment (20.7 per cent).

The findings also revealed that the level of education of the most (about 74 per cent) of the participants was a bachelor / master’s degree, which was higher compared to an average citizen in Indian where the literacy rate is low i.e. 54 per cent, (World Bank, 2008). These findings suggest that the banking service users in India generally have higher education level. It can possibly be explained that educated respondents
have benefited from more awareness and greater exposure to information technology as a part of their education. Therefore, they are better able to use banking service and the Internet.

This is evident from the respondents’ level of education, which was higher as mentioned above. Consequently, they had better chances of being in the employment mainly in the private and public sectors. In addition, income distribution of the respondents (see table 5.2, chapter 5) revealed that about 49.9 per cent participants had monthly income between Rs.10,000 to Rs.20,000, which is considered moderate income in Tamil Nadu where the average monthly salary of the population is low (World Bank, 2008). This finding suggests that the technology banking service usage in Tamil Nadu is skewed in favour of people with moderate income and that in employment and in business. However, these study findings also suggest that people with these characteristics are the people who are more likely to use the primary and technology banking services. Here the customer satisfaction on primary and technology services was studied using a hypothesised model, which comprised a number of constructs and hypotheses about relationships between the constructs.

6.3.3 Participants’ banking details

The consequences of participants’ banking details revealed that the majority of the respondent’s bank location about 65.8 per cent in this survey was Chennai and others bank location was Kancheepuram (34.2%). This finding suggests that the minimum balance (about 55.2 per cent) of the bank users in Tamil Nadu are between Rs.1, 000 to Rs.2, 000. The findings also revealed that the period for customer in particular bank (about 43.9 per cent) was 1 to 3 years. These findings suggest that the
frequency of banking visits (45.1%) was once in a month, the purpose of visits was to operate deposit account (47.5%) and known to the balance of account (32%). The most of the respondents had bank accounts in two banks (79.5%). The next section therefore presents discussion about the study constructs and their items.

6.3.4 Constructs and items

This section provides discussion on the ratings of construct items obtained through exploratory factor analysis (EFA)

Deposit and loan service

The findings revealed that the mean scores for seven measured items for this scale were between 4.93 (±1.562) and 5.17 (±1.555), which reflected participants’ strong satisfaction towards use of primary service of deposit and loan service. Item DL6 stating ‘Procedure for overdue’ was rated highly, while item DL3 related to the ‘Withdrawal process’ was rated low (see Table 5.4 of Chapter 5). Nevertheless, the average mean score of these items was above the neutral point. The high ratings of the items of DL6 construct may suggest that respondents were highly interested in new process for withdrawal services. In addition, Cronbach’s Alpha coefficient for this constructs was 0.926 (as shown in Table 5.16a). This finding suggests strong internal consistency of the measurement items of DL construct.

Mobile banking service

For this construct, mobile banking service of the study participants were measured by five items. The item ‘Account balance enquiry’ (MB2), was rated highly among the respondents, with mean score 5.19, as shown in Table 5.5 of chapter 5. On the other hand, the item ‘Time required to get response’ was rated low by the
participants of the survey (MB1). However, overall, the findings revealed that all items relating to this construct were rated high by the respondents and the mean score for all five items was between 4.89 (±1.599) and 5.19 (±1.795), which suggested that the sample agreed with the satisfaction of mobile banking service on technology banking system. The participants might have compared the mobile banking service of the technology banking with primary methods of banking. Thus, their higher ratings of it suggest that they mobile banking service of technology banking systems more efficient and useful than the primary banking methods. Furthermore, the Cronbach’s alpha estimate value of mobile banking service construct was .846 (see Table 5.17a), which indicated that this construct had strong reliability of the measurement item.

**ATM service**

Five items were used to measure the ATM service construct and their mean ratings were between 5.39 (±1.49) and 4.85 (±1.582), which are greater than the neutral scale point (i.e. 4), and thus reveals that individual respondents agreed with the construct items. The item (ATM2) with wording ‘Availability of cash’ had high ratings than other measurements in the construct, with the mean score 5.39, as shown in Table 5.6 of Chapter 5. This finding indicated that respondents were satisfied with availability of cash in ATM centre, and thus rated it highly. The item code named ATM5 with wording ‘Variety of transaction’ was rated very low. This finding indicated that respondents believe it would not be easy to operate with ATM; this might be due to the complex nature of BTTS, as it involves financial transactions. However, the overall mean score of the items of this construct was 5.092, which suggested that the sample agreed that satisfaction on technology banking services.
Additionally, the reliability of measurement items of used in this construct was high with the .844 Cronbach’s alpha value.

**Internet banking service**

The internet banking service construct was measured by ten items on a seven point Likert scale. The overall mean score of all items of this construct was between 4.89 (±1.599) and 5.19 (±1.689), which suggested that some respondents had satisfied about their internet banking service in technology banking systems. This was evident from the low mean rating 4.89 (±1.599) for item IB4 i.e. the online banking system offers secure personal privacy, which might suggest that respondents were concerned about the security of the technology banking systems. This finding is not surprising because the security and privacy are the two major issues that have been found to greatly influence satisfaction of online technologies especially in the financial and business sectors. In addition, the reliability statistics of the internet banking service (as shown Table 5.19a) indicated .865 Cronbach’s alpha reliability for this construct, which shows strong internal consistency of measurement items of this construct.

**Bank personnel and system administrator services**

This construct was measured through three items and the results showed that the mean rating for the items of this construct were between 5.12 (±1.646) and 5.00 (±1.710). The measurement item (BPSA2) ‘Bank personnel use appropriate terms when addressing customers’ was rated highly by the respondents, whereas, the item (BPSA3) worded as’ Information provided by bank personnel is always correct’ had low ratings among respondents. The average mean score of three items was 5.06, which was greater than the neutral point, reflected that respondents were agreeable to
the measured items and they had the Bank personnel and system administrator services were important on primary and technology banking systems. In addition, the construct also showed strong internal consistency of measurement items with .824 reliability statistics, as shown in Table 5.20 (chapter 5).

**Problem faced by customer**

Three items measurement tool was used to measure the accessibility construct and the mean ratings for both the items were between 5.18 (±1.349) and 5.02 (±1.438), which suggested that the participants agreed with these items. Overall, ratings of measured items of this construct suggested that this sample did not agree that there was any problem faced by customer while use to the primary and technology service. However, these findings might not be true representation of access of every bank account holder, where large number of the people has a low level of education (World Bank, 2008) and the availability of computers, mobile phone and access to the technology banking services, which is due to a number of reasons but mainly due to economic reasons. Therefore, the government of India has reduced custom tariffs and duties on IT equipment and related items to encourage IT use in the country (Kundi and Shah, 2009). Cronbach’s alpha coefficient value for accessibility was .895. Although this value was above the strict cut off point of this research (i.e. >=.7), however, it was lower compared to other constructs. This might be because of the three items used to measure this construct.

**Customer satisfaction**

This construct was also measured by thirteen items and the results revealed that the mean ratings of individual items of this construct were higher than the neutral point (i.e. 4), which confirmed participants’ satisfaction of measured items. In short,
the average mean score of all measurement items of this construct were between 5.26
(±1.548) and 4.98 (±1.527) that might suggest that the participants agreed that there
was satisfy of terms used in technology banking systems; however, the ratings were
not very high. This finding therefore might suggest using of primary and technology
banking services in native language rather than in any international language such as
the English, which might be a main barrier for the majority of population in
developing countries to avail technology banking facilities. In addition, the reliability
statistics of customer satisfaction construct (as shown Table 5.25a) revealed that
Cronbach’s alpha reliability was .944, which suggested adequate reliability of this
construct’s items.

6.3.5 Hypotheses Testing

Customer satisfaction on Banking primary and technology services and
dependent variable

Customer satisfaction is a key variable in most of the theoretical frameworks
in marketing research literature focusing on technology acceptance by individual
users. Self-reported usage measures have often been used in research to operationalize
system usage, particularly when objective usage metrics are not available. With
regard to the research predicting new usage is often measured by customer
satisfaction (CS) (Mathieson, 2001). Thus, this research considered ‘customer
satisfaction’ as the dependent variable, This is also consistent with the findings of a
number of previous research studies (Davis, 1991; Gefen and Straub, 2000; Jarvenpaa
et al., 2000; Shih, 2004). The model proposed in this study helped to explain the
overall relationships among the predictor variables and the outcome variable i.e.
satisfaction on banking service. A total 45.7 per cent of the variance in the CS to use
was explained by three direct predictor variables, which included the trust (TR = 0.279), perceived usefulness (PU: 0.397), and perceived ease of use (PEOU: 0.288). Among these direct predictors of BI, the PU was found most significant determinant followed by the PEOU and then the trust. A total of 28.1 per cent of the variance in the PU construct was predicted by the trust (0.453) and the technological self-efficacy (0.194). However, contrary to the hypothesised relationships between perceived usefulness and it predictors (i.e. ease of use, output quality, and response time) found insignificant. In the PEOU factor, a total of 21.8 per cent of the variance was predicted by the technological self-efficacy (0.373), accessibility (0.243), and terminology clarity (0.139). Technological self-efficacy (TSE) also was found to be more influential determinant of the PEOU than perceived usefulness. The next section presents a detailed discussion about hypotheses testing.

Deposit & loan service and bank personnel & system administered

In the proposed model, this researcher hypothesized that Deposit and Loan (DL) will have a significant positive effect on the bank personnel and system administered (BPA) to use of BPTS. The parameter estimate results (H1: DL BPA; β = 0.552, t-value =6.667, p = 0.000) for the above hypothesis was found both positive and statistically significant. This suggested existence of a positive effect of the deposit and loan service beliefs on the bank personnel on banking primary and technology service offered by public sector banks. As such, this hypothesis was accepted.

Mobile Banking and the bank personnel and system administered.

Standardized regression weight and critical ratio for MBA to BPA was 0.287 and 3.702 respectively, indicating statistical significance for H2 at p = 0.001. The
results suggested that the mobile banking service has positive strong effect on bank personnel and system administered to use of primary and technology banking service. This implied that as the bank personnel and system administered help the mobile banking system easy to use by customer. In summary, along with MBA, BPA was found to be an important determinant of on customer satisfaction on primary and technology banking service; however, it was found to be relatively less influential than the DL. As such, this hypothesis was accepted.

**Automatic teller machine and the bank personnel and system administered**

The standardized regression weight for the ATMA to the BPA was 0.252 and the critical ratio for the ATMA to the BPA value was 4.007. This suggested that this path was statistically significant at \( p=0.001 \) level; hence, it, showed strong support for the satisfaction of hypothesis H3. These results indicated that ATM has strong significant effect on the bank personnel and system administered to use an ATM service, implying that increase in the ATM would positively influence BPA towards customer satisfaction on primary and technology banking service offered by public sector banks. As such, this hypothesis was accepted.

**Bank personnel and system administered and the customer satisfaction**

The standardized regression weight for the BPA to the CS was 0.856 and critical ratio for the BPA to the CS value was 10.152 (shown in Figure 5.5). These results confirmed strong support for the H5a, which suggested that Bank personnel and system administered (BPA) has strong positive effect on customer satisfaction (CS) on primary and technology banking service offered by public sector banks. It implied that customers highly relate Bank personnel and system administered service with satisfaction on BPTS. In summary, Bank personnel and
system administered was found to be an important factor, which positively influences customer satisfaction, both directly and indirectly. As such, this hypothesis was accepted.

**Bank personnel and system administered and the problem faced by customer.**

The standardized regression weight and critical ratio estimate for the BPA to the PFC were 0.119 and 2.296, respectively, showing support for the acceptance of hypothesis H5b. The results suggested that the bank personnel and system administered service has positive effect on customer faced by problem to use of primary and technology banking service. The results also implied that the customers were likely to perceive the bank personnel and system administered service has to increased. In summary, along with BPA, PFC was found to be an important determinant of on customer satisfaction on primary and technology banking service; however, it was found to be relatively less influential than the CS. As such, this hypothesis was accepted.

**Internet banking and the bank personnel and system administered**

The standardized regression weight and critical ratio estimate for the IBA to the BPA were 0.033 and 0.846, respectively, showing statistically not significant path. These results did not provide support for hypothesis H4. These results indicated that internet banking service do not influence the bank personnel and system administered (BPA) on BPTS. It can be inferred from results that users do not relate internet banking service with bank personnel and system administered (BPA) on BPTS. As such, this hypothesis wasn’t accepted.
6.4 Conclusions

This chapter aimed to discuss the key findings of the research study. It was observed that the response rate (i.e. 41.5 per cent) achieved in this study was higher than the initial expectation of the researcher, and compared reasonably well with earlier studies on primary and technology banking services.

The demographic information suggested that majority of the respondents were male. In addition, the age of about 74 per cent of participants in this survey was between 20 years and 40 years. This finding suggested that the majority of the banking service users in Tamil Nadu were adults of working age. In addition, the findings, regarding education, revealed that the level of education of the most of the participants was minimum bachelor’s and master degree, which was higher compared to the education level of an average citizen in Tamil Nadu where the literacy rate is low.

The model proposed in this study helped to explain the overall relationships among the predictor variables and the outcome variable i.e. customer satisfaction on banking service (CS), the dependent variable. A total 45.7 per cent of the variance in the customers was explained by deposit and loan service (these factors were hypothesised as direct determinants of CS). CS was found most significant determinant followed by the DL. A total of 28.1 per cent of the variance in the technology banking service was predicted by the customer satisfaction (CS).

In addition, in the mobile banking service, a total of 21.8 percent of the variance was predicted by the satisfaction. ATM was found to be more influential determinant of the satisfaction. These findings suggested that increase in satisfaction level. The following chapter will present the conclusions of this thesis.