CHAPTER 5
DISCUSSION, SUGGESTION AND CONCLUSION

The World Health Organization (WHO) reports that India owns around 30 per cent of the world’s blind population which accounts to more than 20 million visually impaired people (WHO, 2012). Modern technology has made the visually impaired people highly competitive and their competence levels are improving as they are able to access computers and Mobile phones at ease (Williamson et al. 2001). The Reserve Bank of India (RBI) responded to the developments and demands of visually impaired people by offering special suggestions and guidelines to banks to make banking facilities easily accessible to visually impaired customers (VICs) (RBI, 2008). In spite of all technological developments, special guidelines for inclusive banking and banking transformations, the dream of VICs to enjoy easily accessible and independent banking remains a huge challenge (Kumar, Anandkumar & Maniraja, 2012). Past studies on VICs noted an unfavourable perception towards the existing inclusive banking initiatives and the banking practices (Kumar & Anandkumar, 2012).

Research scope exists to assess VICs’ acceptance of a technology-based tool for inclusive banking in India. Therefore, this research was undertaken to study VICs’ acceptance of Mobile banking channel as an inclusive banking tool. This study critically evaluated the banking pattern or behaviour of VICs, apart from assessing their acceptance of Mobile phone for banking. It also determined VICs’ preference on the form of Mobile banking and the level to which they prefer using Mobile banking.

This chapter concentrates on discussing the findings and inferences reported in the previous chapter on data analysis and also make suitable suggestions for the stakeholders. The discussion presented here covers findings pertaining to the established research objectives and answers to the framed research questions of this study. It is followed by a discussion on research implications, limitations, suggestions to the stakeholders and conclusion.
5.1. BANKING PATTERN OF VISUALLY IMPAIRED CUSTOMERS (VICs)

Studying the banking pattern of VICs was one of the research objectives. It included understanding their banking behaviour and pattern of consumption of banking services. Information on the banking pattern of VICs will provide insight into their banking potential, the extent to which they are banked at present and the opportunity to bank with them. Number of bank accounts operated by visually impaired people, the nature of operating their account, mode of authorization, average number of transactions done by them, facilities received (that is, facilities offered by banks) from bank, retail credits and deposits made by them were the components studied to understand the banking pattern of VICs.

5.1.1. Number and type of banks in which accounts are operated

The analysis showed that most of the VICs operate two savings bank accounts. Immaterial to their impairment level, they are inclined to operate more than one savings account. Most of them operate the first account (primary account) with government banks and very few respondents operated primary account in private bank. This is fundamentally attributed to respondents’ employers (which, as per the sample profile, were predominantly educational institutions) who insist on their employees to open a savings account with a government bank for salary credit as government educational institutions bank through government establishments. Most of the respondents with two bank accounts operate their second bank account with the private banks.

VICs operating their primary account with private bank are the same people operating their second account with government bank. The analysis showed that VICs operate with private banks as they receive more facilities like debit cards and cheque book facilities which are not provided by their primary (government) bank where the salary is credited. This clarified that VICs seek to open second account as the first account does not meet all their needs. Meeting all the needs of the VICs by their primary banker would have helped them at large and the need for operating a second account may not have arisen.
5.1.2. Nature of Operation

Most of the VICs (89 percent) operate their first account individually while others operate it as joint account. Similarly, a large number (116 out of 128) of VICs operate their second account jointly. The analysis highlighted that 40 percent of them operate joint account to take help from the family members to operate the account and 35 percent of them, to get the facilities that are denied for a visually impaired person if he/she operated the account individually. RBI (2008) guidelines insist on bankers to offer all the facilities and services to visually impaired people like it is offered to normal people. But the findings depict that VICs operate joint account to avail facilities. This indicates that bankers pose conditions to offer additional facilities and this makes the VICs to operate account jointly. The Pearson’s Chi-square calculation established a significant association between nature of operating the bank account and the impairment level of customers with visual disability. Statistical calculations prove that the customer’s decision to choose to operate a single or joint account also depends on his/her visual impairment level. Data indicates that some of the customers (20 respondents) were insisted upon by the bankers to operate account jointly. The Xavier's Resource Center for the Visually Challenged, (XRCVC, 2013) reported the increasing trend in bankers insisting upon the visually impaired people to operate their account jointly along with a normal person. This report has informed the same to RBI for taking necessary actions to ensure the freedom for VICs to make their own choice regarding operating their own accounts.

5.1.3. Mode of Authorization

The data analysis indicated that 90 percent of the VICs use LTI (Left Thumb impression) as their mode of authorizing their bank account. Most of VICs using LTI as mode of authorisation are fully impaired. The statistical test in the analysis established significant association between visual impairment level of customers and their mode of authorization, which showed that VICs’ choice of mode of authorization depends on their visual impairment level. Therefore it can be perceived that the partially impaired customers might want to use signature while the fully impaired customers prefer using LTI for authorizing.
Around 50 percent of the VICs reported that they choose LTI only because the banks insisted them to do so, while rest of the VICs use LTI as they cannot sign. In spite of VICs’ ability to use signature, the bankers have forced (insisted) them to use LTI to authorise their banking transactions. This is a real concern and issue over the VICs’ freedom to bank. Similar thoughts of concern have been expressed in an earlier study report (XRCVC, 2013). The bankers insisting the VICs to use LTI is against the will and freedom of the customers, but keeping in mind, the ability of the customers to use consistent style and pattern of the signature, the banks can still suggest or request them to use LTI if any inconsistency in signature is noticed over a period of time. However, bankers insistence on the VICs (especially the customers with partial visual impairment) to use LTI right from the beginning of opening up of the account was cited in this report and it concluded that this practice will not support the inclusive banking initiatives. Therefore the bankers can discuss and assess the ability and willingness of VICs to use signature to authorize their banking operations at the initial stage, and in case of any inconsistency observed or traced in the signature, they can be counselled on using LTI by helping them understand the benefits in doing so. It is important to make VICs understand the nuances of different authorization modes and clarify on the most suitable mode based on their interest, attitude and their ability.

5.1.4. Additional facilities offered to VICs

The banks extend additional facilities that include cheque books, online banking, debit/ATM cards, Mobile banking and so on to ensure higher accessibility. The findings of this study note that more than half of the respondents covered in this study (54 percent) have been offered SMS facility by the bankers on their first account and 21 percent have not received any such facility. Only 17 percent of them have been offered with ATM, cheque book and SMS facilities for their first account. But 65 percent of the VICs received facilities that include SMS, cheque book and ATM card for their second account and 30 percent of them have received ATM card and SMS facilities. Most of the VICs operate their primary accounts in government banks and operating them individually might have resulted in the receipt of fewer facilities when compared to their second account. It is observed that they have received more facilities for their second account when compared to the facilities
received for the primary account. The statistical estimation found that there is a significant association between facilities provided by the banks and the mode of authorization used by the customers. It highlights the importance of mode of authorization on the facilities provided by the banks. Most of the customers who received more than one facility are those who authorize using their signature. This shows that banks offer more facilities to VICs who are able to sign for authorizing their transactions and do not offer higher facilities or offers only basic facility for VICs who authorize using LTI. Similarly, the Chi-square calculations helped in understanding the role of disability level of VICs in facilities offered by the banks to them. Higher numbers of facilities were offered to customers with partial visual impairment when compared to the facilities offered to customers with full visual impairment (blind). It shows that VICs received fewer facilities from the banks for their primary account and this can be attributed to both visual impairment level and mode of authorization used.

In spite of several guidelines and suggestions offered by RBI (2008, 2009 and 2012) to the bankers on offering all the facilities to VICs without any discrimination, the study shows that VICs have not received all the facilities and have received fewer facilities which prove that banks are not strictly adhering to RBI guidelines. “Despite these rules, regulations and guidelines, the ground level reality for blind and low vision customers of various banks in India continues to remain abysmal. Such persons are constantly refused access to banking services. In exceptional cases where they are given access, they experience extremely discriminatory procedures, which contradict the essential spirit of the RBI and Indian Banks’ Association (IBA) rules and guidelines”, according to the report XRCVC(2013) based on the observation made on the bankers and the circulars issued by the RBI for including VICs. The fundamental aim of the additional facilities is to aid higher access to the banking services. As a customer with visually disability, one faces higher challenges on accessibility when compared to normal customers, therefore extending additional facilities to these special customers is important and it will help them with a chance of higher accessibility. The bankers need to realize the importance of offering higher additional facilities to ‘include’ VICs. RBI also needs to have a strict system and regulatory mechanism to monitor
and ensure that bankers’ initiatives and actions include the visually impaired people in the banking system.

5.1.5. Number of transactions done by VICs

The average number of transactions done by VICs was also studied in this research as a variable to understand their banking pattern. It was found out that VICs transact less with their primary account (first account) and transact more with the second account. The comparison showed that more than 50 percent of them transact 6-9 times with their second account and 80 percent of them transact less than six times with the primary account. Therefore it can be inferred that the VICs prefer transacting with their second account than the first account.

Pearson’s Chi-square investigation statistically established the importance of operational characteristics like nature of operation and the authorisation mode on the average number of transactions done by VICs. Therefore the average number of transactions done by the VICs may vary depending on the nature of operations or mode of authorisation as inferred from the findings. The reason behind VICs transacting less with the primary account is the less facility offered for primary account. The previous section showed VICs receiving fewer facilities to first account and more facilities to second account, which highlights the importance of offering higher facilities to aid accessibility. In order to provide higher accessibility which will help the VICs in transacting more, the bankers need to offer/extend facilities like debit card facilities, online banking, and Mobile banking and so on. As per the findings, the banks also need to allow the VICs to authorise using signature which will help them to transact freely by their own choice.

5.3.6. Retail deposits made and credits consumed by VICs

VICs display very good savings habit as the findings of the study indicate that most of them (92 percent) have made deposits in banks. A higher number of them have made recurring deposits when compared to other forms of deposits. Only eight respondents have technically availed loan if jewel loan maybe excluded (since jewel loan is offered based on jewels pledged and there is no risk for the banker). It
is clear that only four percent of them have availed loan or were offered loan by banks, and this is very low. It was also found that only VICs who use signature as their mode of authorization have been offered retail credits, and none of them with LTI as authorization have been offered credit by the banks. The findings highlight the bankers’ hesitation to offer loans to VICs since they were offered loans based on the jewels pledged only and not extended with other forms of retail credits.

VICs with LTI having poor count of retail credit is a major concern and may create large impact on the banking pattern of the VICs. Findings suggest that 34 percent report that they did not avail loan because of ‘bad word of mouth’ refers to the negative opinion/feedback from others customers regarding the support and services extended by the banks for offering loan. Another 34 percent of the respondents were not even allowed by the bank to apply for a loan and 18 percent of them applied but were subsequently declined by the bank. The closer look at data analysis suggests that banks are directly or indirectly responsible for most of the respondents (about 86 percent of the VICs) not getting loan (retail credit). In spite of the salary credit with the banks and having a good credit record, the bankers have not extended retail credit to visually impaired people. Availing a bank loan is an unfilled need of the VICs, and the banks have always discriminated against these customers when it comes to loans, but always targeted for sourcing deposits. It can be inferred that offering retail loans to visually impaired customers as it is offered to the normal customers need not be a problem/risk for the banker since these customers’ salary is getting credited with banks. Yet the bankers have displayed aversion towards this customer segment which paves way for higher dissatisfaction towards the banks. This also notes that the banks are not following the suggestions made by RBI (2009) that insists on offering non-discriminatory banking services, which is also pointed out by the guideline for inclusive banking published by XRCVVC (2013).

5.2. PERCEPTION TOWARDS INCLUSIVE BANKING INITIATIVES

RBI’s (2009, 2012) guidelines reiterate bankers to take special initiatives to help customers with disability and aid them in accessing the banking service components. This study examined the VICs’ perception towards the current
inclusive banking initiatives in order to understand the gap between the expectation of the customers and the current service experiences. The analysis reported negative perception that reflected the VICs’ unfavourable response towards the existing inclusive banking initiatives. However the components assessing the inclusive banking initiatives were categorized based on their mean score that reflect favourable, moderate and unfavourable responses of the respondents.

The findings indicate that the customers feel good about the bankers’ effort in offering them special provisions (such as special lines) to ensure reduced banking time which is very critical for a customer with visual impairment. Similarly, the VICs’ response on the bankers’ support in opening the account is also positive (favourable). Many banks across the country have a customer service desk that works exclusively on the opening up of an account. The personal attention offered by the banks, support offered to opening account and the support rendered to VICs in filling up the forms are the three moderately rated inclusive banking initiatives.

The variables which were perceived unfavourably are of more concern for banks. The data analysis specifies five banking initiatives that were perceived negatively as the VICs are not happy with the bankers on these inclusive efforts. The respondents shared unfavourable perception on the bankers extending full range of facilities available in their banks to VICs. This response clearly suggests that banks are reluctant in offering facilities like ATM card, cheque book, fund transfer, online banking, SMS banking and so on to VICs.

The analysis shows that VICs are not happy with the bank’s commitment on offering information and transaction details at regular intervals to their residence or mail box. The reason behind this may be due to bank’s modern practice to send the statement through email and the respondents being visually impaired, most of them are unfamiliar with Internet and this could have led to an unfavourable response. Perception towards bankers’ special efforts to equip and clarify customers on the terms and conditions is also unsatisfactory. Similarly the customers share unfavourable response on the banks’ effort to provide full explanation on the bank charges, interest rates and other related information to VICs. Maheshwari (2012) noted VICs being unaware of the terms and conditions that include bank charges and
rates, as a major concern. Maheshwari (2012) also indicated that the bankers lack special process or mechanism that focuses on equipping VICs with information on terms and conditions.

Difficulty in accessing the regular sources due to visual impairment is the main concern for receiving information on the banking services. This highlights that VICs are not noticed and are treated like normal customers who can read information posters and brochures to learn about charges, interest rates and so on, and verify passbooks. The bankers need to take special efforts to help VICs overcome these limitations. The bankers’ responsiveness to queries of VICs is not up to the mark as VICs express dissatisfaction. Bank’s responsiveness does not match VICs’ expectation.

5.3. VICs’ ACCEPTANCE OF MOBILE BANKING

This study aimed at developing a technology acceptance model exclusively for assessing a special group’s (that is, visually impaired persons) acceptance of new technology (that is, Mobile banking). The model was developed by identifying suitable constructs through a review of extant literature and focus group interview with visually impaired respondents, and was used for assessing the significance of the structural paths among the constructs and the strength of their inter-relationships.

5.3.1 Development of a model for assessing VICs

Extended Model of Technology Acceptance for Visually Impaired People (EMTA-VIP)is a model developed through this study by extending the technology acceptance model proposed by Davis (1985). EMTA-VIP is a model constructed based on the constructs identified from the relevant literature on technology acceptance and through a focus group interview for assessing the Mobile banking acceptance of the visually impaired. This model comprises of seven constructs, including six screened from a list of 21 factors identified through a comprehensive review of literature.
Besides these six constructs, namely perceived behavioural control, perceived ease of use, perceived usefulness, anxiety, attitude and intention-to-use, a new construct - perception towards existing system was also included in the model as suggested by the visually impaired focus group participants. This variable has not been used before in any of the technology acceptance models, but its attribute finds roots in another construct called relative advantage used by Rogers (1995). Though both these variables relate to the comparison of old system with new system, the participants argued that the relative advantage of a new system can be recognized only if the users share a negative or an unfavourable perception towards the existing channel. Using relative advantage as a construct to VICs was ruled out in the discussion as the participants felt that Mobile banking is a relatively new system to VICs and most of them have not used it so far; therefore it will be difficult for them to clearly outline the advantage of Mobile banking when compared to the existing banking channel. Hence the VICs’ perception towards the existing banking channel was included in the model. This extended model of technology acceptance considered perceived behavioural control, perceived usefulness, perceived ease of use, attitude and intention-to-use as factors influencing the VICs’ acceptance of Mobile banking while perception towards existing banking channel and anxiety as the factors hindering the acceptance. This model is a useful addition to the body of knowledge since it will aid more studies on visually impaired people in the future.

5.3.2. VICs’ acceptance of Mobile banking

The findings highlighted that all the five positive constructs used in this study have gained favourable response from VICs. The mean score suggested VICs believe that they can control the Mobile phone operations to conduct banking tasks. The findings also note that VICs perceive Mobile banking as both easy to use and useful. The analysis indicated that the VICs do not feel anxious to use Mobile phone for banking and they are not content with the existing channel used for banking. Finally VICs’ share a positive attitude towards Mobile banking and also share positive intention to use Mobile banking. Therefore the findings indicate that VICs share a positive response towards acceptance of Mobile banking as the mean scores of all the constructs support their inclination and interest towards adoption of Mobile phone for consuming banking services.
5.3.3. Key factors influencing the acceptance of Mobile banking

Mobile banking acceptance of VICs was assessed using EMTA-VIP, a model developed in this study for assessing visually impaired respondents. The reliability and validity of Partial Least Square Structural Equation Modelling (PLS-SEM) was established using the guidelines highlighted by Kwong & Wong (2013). The PLS-SEM output of EMTA-VIP is considered reliable as the ‘indicator reliability’ and ‘internal consistency reliability’ of the latent variables used in the model were meeting the expected level. EMTA-VIP model also achieved validity through examination of ‘convergent validity’ and ‘Discriminant validity’ of the factors.

The output of the model established that perceived behavioural control over Mobile phones (PBCMB) is a determinant of anxiety over using Mobile phones for banking (ANXMB) as well as perceived ease of using Mobile banking (PEUMB) and it is also noted that PBCMB establishes stronger relationship with PEUMB than the ANXMB. The higher the VICs can control their Mobile phone operations; the lower is their anxiety towards Mobile banking. The lower control can create fear or apprehension about using Mobile banking.

The PLS-SEM showed that the perceived usefulness of Mobile banking is determined by VICs’ perception towards existing banking channel (EXBKCH) and the perceived ease of using Mobile banking channel (PEUMB). Both PEUMB and EXBKCH are factors of PUMB, but PEUMB acts as an influencing factor while EXBKCH is considered to be a hindrance to the acceptance of Mobile banking. The higher favourability of the perception towards the existing channel for banking can lower the perceived usefulness of Mobile banking; similarly the unfavourable response towards the existing banking channel can influence VICs to perceive higher usefulness of Mobile banking channel. Though perception towards the existing channel used for banking (EXBKCH) is a new construct identified through focus group interview, as discussed before, it shares certain similarities with an old construct - relative advantage. Research conducted by Mattila (2003) established relative advantage as one of the attributes of innovation that determine the Mobile banking adoption. This study highlights EXBKCH as a key factor impacting the perceived usefulness of Mobile banking. The study concentrates on the perception
about the old system to assess if an unfavourable response towards the old system can influence VICs to perceive higher usefulness of the new system. But Mattila’s (2003) research discusses the relative advantage of a new system as a factor since it talks about the advantages offered by a new system when compared to the old system. This study marks the importance of studying the old (existing) system to determine the acceptance of new system instead of directly measuring the advantage offered by new system, which is a robust approach to be used with respondent groups that are not familiar with the new system.

PEUMB and VICs’ perception towards existing banking channel (EXBKCH) together explain 60 percent of perceived usefulness of Mobile banking amongst which PEUMB establishes higher significance with PUMB than EXBKCH. This proves PEUMB has a larger impact and establishes a stronger relationship with perceived usefulness of Mobile banking.

The findings of the study marked that VICs’ anxiety towards Mobile (ANXMB), PEUMB and PUMB are predictors of VICs’ attitude towards Mobile banking (ATTMB). While anxiety is understood as the hindering factor of VICs’ attitude, the perceived usefulness of Mobile banking (PUMB) and perceived ease of using Mobile banking channel (PEUMB) are the factors those influence the attitude towards Mobile banking. It shows that lower anxiety will increase VICs’ attitude towards Mobile banking usage. The higher apprehensions of VICs will hinder their attitude towards Mobile banking. All the three determinants (ANXMB, PEUMB and PUMB) together explain 85 percent of VICs’ attitude towards Mobile banking (ATTMB). PEUMB establishes stronger relationship (influence) with ATTMB when compared to ANXMB and PUMB. Therefore EMTA-VIP highlights higher significance of the perceived ease of using Mobile phone in determining VICs’ attitude towards Mobile banking.

Prior studies on Mobile banking acceptance researched with extended technology acceptance models clearly highlight that perceived usefulness carries higher significance to attitude or intention-to-use Mobile banking when compared to significance of perceived ease of use on the attitude (Lisa & Judy, 2010; Koenig-Lewis et al., 2010; Akturan & Tezcan, 2012; Amin et al., 2012; Tobbin, 2012;
Jeong & Yoon, 2013; Witeepanich et al., 2013). But the findings of this study report perceived ease of use holding higher significance or stronger relationship to attitude when compared to the relationship between perceived usefulness and attitude. It is unusual to see ease of use gaining more importance than perceived usefulness from the previous research point of view. The critical aspect to be drawn for discussion is the type of respondents being studied in this research in comparison with previous research. As the main concern of the visually impaired customers’ in the rural parts of India is accessibility, the findings of this study witnesses that the ease of using a new system or technology for banking can be of paramount importance when compared to perceived usefulness. The ease of using Mobile banking addresses the accessibility concern of the VICs; therefore the results show that PUEMB carry stronger significance in building attitude towards Mobile banking when compared to PUMB.

Finally the structural path modelling indicated that VICs’ attitude towards Mobile banking (ATTMB) has significant impact on the intention-to-use Mobile banking as an inclusive banking channel (INTUSEMB). The role of VICs’ attitude towards Mobile banking (ATTMB) was tested significant in determining VICs’ intention-to-use Mobile banking (INTUSEMB). While numerous studies have been conducted across the world to assess the acceptance of Mobile banking by extending TAM, it is noticed that it is not a common practice to use attitude as many researchers have ignored or not included in this as a construct in their TAM-based models (Koenig-Lewis et al., 2010; Amin et al., 2012; Tobbin, 2012; Jeong & Yoon, 2013; Witeepanich et al., 2013). Though the first version of TAM (Davis et al., 1989) gave importance to attitude and stated that the behavioural intention is determined by attitude, the later versions of TAM (Venkatesh & Davis, 1996, 2000; Venkatesh et al., 2003; Venkatesh & Bala, 2008) did not consider attitude and always outlined a direct relationship between other factors and behavioural intention instead of using attitude as a construct connecting other sub-factors and behavioural intention. But this research found relevance in using attitude as a determinant of behavioural intention. This PLS-SEM structural path clarifies that building attitude towards Mobile banking is important to create intention-to-use Mobile banking. Besides, the studies conducted by Lisa & Judy (2010) and Akturan & Tezcan (2012) prove that attitude can be considered as a key factor influencing behavioural intention as they
used in their model for assessing Mobile banking acceptance. Unless VICs feel positive about Mobile banking, they cannot adapt to Mobile banking channel; therefore attitude is an important factor that needs to be considered for assessing technology acceptance of visually impaired customers as the findings suggest.

5.4. PREFERRED LEVEL AND FORM OF MOBILE BANKING

The findings of the study indicate that most (78 percent) of the VICs prefer SMS-based Mobile banking, few (28 percent) prefer App-based form and only 3% preferred Web-based Mobile banking form. Most of the VICs prefer performing interactive level of Mobile banking where they can place queries and requests to banks and receive appropriate responses from banks at any place, anytime and without any help. It was encouraging to note that around 13 percent of the respondents preferred transaction level which is a higher level of operation that includes Mobile payments, fund transfer and so on. The statistical testing showed that there is a significant difference in the preferred form of Mobile banking based on respondents’ age as well as their occupation and no significant difference existed between the preferred form of Mobile banking and respondent’s education level. Similarly, significant difference existed in the level of Mobile banking preferred by VICs’ based on their age and occupation; and no significant difference existed between the level of Mobile banking preferred and respondent’s education level.

These findings show that education does not play a role in the VICs’ preference of the form and level of Mobile banking. Overall, the findings suggest that VICs share a positive response on using Mobile phone for banking. The banks in India should consider SMS-based Mobile banking as a banking option for VICs as the findings favour SMS-based form when compared to the other two forms.

5.5. RESEARCH QUESTIONS ANSWERED

This study was specifically designed to address five research questions. Those questions are addressed as follows, based on the findings from this research.
5.5.1. **What is the banking pattern of visually impaired customers?**

The findings of this study showed that most of the VICs operate two bank accounts. While their primary account is operated with Government banks for salary credits, most of them operate a second account in private banks to get more facilities as the primary bankers offer only fundamental services and deny access to additional banking features. It was also noticed that VICs transact less on their first account and transact more than six times that with their second account. VICs maintain significant level of deposits with the banks and have consumed both recurring deposit and fixed deposits, but only four percent of them have consumed retailed credit in the form of housing loan. In spite of their ability to sign, most of them authorize through LTI (left thumb impression). As Banks insist VICs to operate joint account, most of them do. They operate a joint account to receive additional facilities like cheque book, ATM cards and so on. Their banking pattern reveals that this segment shares higher potential to bank but is currently hindered due to limited accessibility. The findings on banking pattern suggest less independence for VICs in their banking aspects such as mode of authorization, nature of operation and availing additional facilities. Retail credit is another area of concern for VICs as the banks have shown less interest on offering credit but more interest on sourcing deposits from them.

5.5.2. **Are the VICs happy with the existing inclusive banking initiatives practiced at branches?**

Though the VICs feel positive about the bankers’ efforts to offer them special provisions (such as separate lines) to ensure reduced banking time and support in opening the account, they are not happy with five specific banking practices. The findings suggest that VICs are not happy with the range of facilities offered to them, bank’s commitment to offer information about transactions; bankers’ efforts to provide and clarify them on the terms and conditions; information provided by banks on charges, interest rates and so on; and finally the bankers’ responsiveness to customer queries. The last factor, ‘responsiveness to queries’ by banks does not match the customer expectations.
Overall the results show that VICs are not happy with the existing banking initiatives that are practiced for inclusion of the visually impaired. This marks a concern for both VICs and the bankers as the perception of banking practices does not match the customer expectations. There is a demand for practices that are VIC-friendly and cater to the special needs of this segment.

5.5.3. Are the VICs willing to accept Mobile phone for banking?

The analysis indicates that VICs share a positive attitude about Mobile banking and also express intent to use Mobile banking. The results were indicative of favourable behavioural intentions to use Mobile banking. Overall, the findings showed that the VICs share positive response towards Mobile banking acceptance as the mean scores of all the constructs are supporting their inclination and interest towards adoption of Mobile phone for consuming banking services. Therefore, it is concluded that the VICs are willing to accept Mobile banking.

5.5.4. What are the key factors influencing the VICs’ acceptance of Mobile banking?

The findings reported that all the seven factors used in the model are validated as the inter-relationships are established. It showed five key factors influencing the Mobile banking acceptance and two variables that hinder the acceptance. Perceived usefulness, perceived ease of use, perceived behavioural control, attitude towards Mobile banking and intention to use are the factors influencing the Mobile banking acceptance. Anxiety towards Mobile phone and perception towards the existing channel would limit the acceptance. VICs’ perception towards existing channel and perceived ease of use are determinants of perceived usefulness of Mobile banking, but perceived ease of use marks a higher impact. Perceived ease of using Mobile banking and perceived usefulness of Mobile banking are the factors determining the VICs’ attitude towards Mobile banking. But the findings suggest that perceived ease of using Mobile has stronger impact on attitude when compared to anxiety and perceived usefulness. Though attitude is not commonly used in TAM-based models for assessment, this research establishes attitude as one of the key factors influencing VICs’ acceptance of Mobile banking.
5.6. OPPORTUNITY THROUGH MOBILE BANKING TO INCLUDE VICs

The competence levels of visually impaired persons are improving as they are able to access computers and Mobile phones (Williamson et al. 2001). But they share a negative attitude towards computer-based electronic banking and are also not willing to use computer-based channel as an inclusive banking tool (Kumar & Anandkumar, 2013). But interestingly, they display a higher comfort level while using Mobile phones than the computers (Kumar & Anandkumar, 2012). The findings from this study show that VICs share a positive behavioural intention to use Mobile banking, which denotes their willingness to accept Mobile banking. Considering their unfavourable response towards the existing banking channels (Kumar, 2013), the Mobile banking channel is considered as a tool for inclusion and its acceptance is assessed and validated accordingly. As VICs indicate a preference for SMS-based Mobile banking form, it can be summed up through this study that SMS-based Mobile banking channel can be an effective tool to include visually impaired people as it can offer greater accessibility to banking services.

5.7. IMPLICATIONS OF THE STUDY

The various implications of the research findings are explained in the following sections.

5.7.1. Theoretical implications of the study

Assessment of a special group’s (such as visually impaired persons) acceptance of new technology is a significant contribution to the existing body of knowledge. It contributes in the following manner. The topic of inclusive banking and the assessment of technology adoption for visually impaired customers has not been researched before. Researching the possibility of using technology for including visually impaired customers remains unstudied so far in the Indian context. This research assessed the acceptance of technology in inclusive banking for visually impaired. Therefore this study will set a platform for future research in this area.
A technology acceptance model for assessing the visually impaired persons’ acceptance of technology was not available. This study has developed EMTA-VIP, an extended technology acceptance model, which is specifically used for assessing VICS’ acceptance of Mobile banking. This may be considered a significant contribution since it offers a technology acceptance model for a special group. While previous studies have highlighted perceived usefulness as a critical factor when compared to ease of use in determining behavioural intention, this study identified higher importance attributed to perceived ease of use which adds a new dimension to the existing TAM models. This study identified a new construct ‘perception towards the existing system’ that influenced the perceived usefulness of the new system. This is a useful addition to the existing constructs used in assessing new technology acceptance.

5.7.2. Policy-Level implications

The banking pattern of VICS identified in this research will help the RBI in understanding the banking characteristics of VICS and their level of banking. This will, in turn, enable RBI to offer specific guidelines and suggestions to the bankers. The findings suggest that VICS share a positive intent to use Mobile banking, therefore it provides an impulse to RBI to consider Mobile banking -based inclusive banking tools. Besides, the findings also indicate that VICS are not happy with certain aspects of the existing banking practices. This will help RBI to offer directions to the banks on the practices that need more attention while dealing with VICS. Based on the VICS’ response, the findings pointed out that the bankers are not adhering to all the guidelines and suggestions offered by the RBI (2008, 2009 & 2012). Thus non-compliances by banks are brought into light for RBI to note and act. Overall, the findings will also aid RBI as a policy maker to provide policy directions and regulations to the member banks on inclusive banking practices to ‘include’ the visually impaired.

The findings on the banking pattern of VICS will throw light on the banking potential of VICS and the opportunity available for bankers. The findings highlighted that VICS showed interest in utilizing credit and other banking facilities like cheque book, debit card and so on. These findings can help the banks to realize the potential
and competence of VICs to utilize the banking features and facilities like normal persons do. The findings also help the Bankers in determining the effective banking practices that are helpful in offering VICs with an independent banking environment. Through this study, the bankers can understand the potential use of Mobile phones for banking by the VICs; especially for SMS-based banking as the findings indicate SMS-based Mobile banking as the most preferred form. The research outcome provides inputs to the bankers to decide on the implementation of visually impaired-friendly inclusive banking tools.

5.7.3. Marketing implications

During this study, VICs (who participated as respondents) were briefed on the various inclusive banking policies of RBI, existing banking tools available for including them and various banking channel options available for them during the pre-data collection process. This aided in creating awareness among the visually impaired customers about Mobile banking channel options, availability of various forms of Mobile banking and inclusive banking policies. They were also informed about the various initiatives of RBI and its guidelines to banks to improve the accessibility of banking services to VICs. One of most important contributions is the associations for the visually impaired persons and their members getting informed by the researcher about RBI’s banking guidelines and suggestion to the Banks. This will help the associations and the individual members to be aware of their rights and the banking services they are entitled for.

5.8. LIMITATIONS OF THE STUDY

The study involves assessing respondents (visually impaired customers of banks) who are relatively new to Mobile banking concepts and customers with no or less exposure to Mobile banking. Previous research highlights change in the factors of behavioural intention based on the level of experience (McKnight et al., 1988). Therefore it is important to conduct further studies with the visually impaired segment over a period of time to understand the changes in the key determinants impacting its Mobile banking acceptance. The findings of this study account to a particular region at a specific period of time. The findings of this study are limited to
visually impaired customers from rural areas and not from urban or semi-urban areas, and hence they may not be technology savvy or exposed to recent advances in assistive technologies.

5.9. SUGGESTIONS FOR FUTURE RESEARCH

In the past, studies on VICs have been conducted only to know the general perception on banking services and banks’ Customer Relationship Management (CRM) initiatives, and there was no model to test the visually impaired persons’ acceptance of new technology for banking. EMTA-VIP, a model developed exclusively for assessing visually impaired persons on their new technology adoption, has been developed through this study. It can be used for assessing visually impaired respondents’ acceptance or adoption of Mobile devices in various fields, such as electronic commerce.

Since the study concentrates on VICs from rural areas whose perceptions or opinions might differ from urban population, there is a potential for studying VICs in an urban context wherein they may be more exposed to assistive technologies for the visually impaired. Besides, a comparative study may be undertaken to understand the rural-urban divide in the inclusive banking potential of the Mobile channel. Mobile banking is in the introduction stage in rural areas in India. Also, the study dealt with VICs who had less exposure and expertise in Mobile banking. Considering this, future research may consider studying the same rural segment to understand the changes in key factors of technology acceptance and the banking behaviour of VICs as a result of high familiarity with Mobile banking channel with the passing of time. Technology acceptance of the visually impaired may be compared with that of normal persons in order to study the need for a tailored Mobile banking solution to cater to the visually impaired segment.

5.12. CONCLUSION

Including the excluded segments such as the marginalized and the differently-abled people into mainstream banking has been of prime importance to the Government of India and RBI. The RBI has offered numerous suggestions and
guidelines to banks to ensure higher accessibility to their visually impaired customers. Amidst all technological interventions and emergence of electronic channels, VICs still face accessibility issues when it comes to accessing and consuming banking services. This highlighted the scope to conduct research on understanding the banking potential and demand of VICs in order to design an effective inclusive banking tool to provide better accessibility.

This study on inclusive banking opportunity for VICs through Mobile banking provided insights about their banking pattern and acceptance of Mobile banking channel. It also found out their preference for the level and form of Mobile banking. Since the findings indicate banks’ reluctance to offer retail credit and also note that VICs were not allowed to make their own choice of banking components such as mode of authorization and nature of operation, RBI needs to develop an effective mechanism that ensures strict adherence to guidelines and suggestions offered to bankers to ensure an independent banking environment to the visually impaired. As the study indicates a favourable attitude towards and intent of VICs to use Mobile banking and preference for SMS-based Mobile banking, the RBI and banks need to concentrate on educating the VICs and also promote Mobile banking option to amongst them. This will motivate this special segment to access banking through Mobile phone. The banks can also make SMS-based Mobile banking, an integral part of the bank account for VICs, at free of cost to motivate and ensure successful adoption of Mobile banking channel. The VICs’ adoption of the Mobile banking channel through effective promotions by banks will not only address the accessibility concern to a large extent, but also lead to successful inclusion of the visually impaired segment.