

CHAPTER 5

FINDINGS AND CONCLUSION

This chapter is derived to present (i) the findings of the research study, (ii) contributions of the study – theoretical as well as practical, (iii) limitations of the study ,(iv) conclusions of the study and (v) suggestions for further research.

5.1 Evaluation of results

The evaluation of the results obtained after the analysis of data is discussed in this section. The results are evaluated vis-a- vis the objectives fixed. Therefore the objectives of the study are recounted once again before the discussion of the results. The researcher had framed three objectives for the study. They are:

Objective 1: Identify factors influencing the adoption and usage of Internet banking in India

Objective 2: Examine whether Theory of Planned Behavior (TPB) or Technology Acceptance Model (TAM) can be applied in Internet banking adoption and usage.

Objective 3: Develop a model to explain behavioral intention to use internet banking.

The main objective of the study was to identify the factors that were influencing internet banking adoption among customers in India. The researcher performed both qualitative and quantitative methodology to find the factors responsible for internet acceptance. The qualitative study was conducted in the form of an “elicitation” study among a small group of customers. The results of the study produced the perception of Indian customers about internet banking. The study conducted according the guidelines provided for Theory of Planned Behavior model, gave real insights into the customers minds in the context of internet banking. The results of the elicitation study are provided in Table 5.1.

TPB Model Construct	Questions	Major answers
Attitude	Advantages	Comfort / Convenience 24x7 Access / Accessibility Speedy / Accurate / Easy / Immediate Transaction
	Disadvantages	Security Threats / Concerns Misuse of information or password Lack of personal relations Limited banking facilities (No Deposits/ Withdrawals)
Subjective Norm	Approving group	Colleagues / Family / Friends Persons from Banking / IT field
	Disapproving group	Old aged / Conservative people
Perceived Behavioral Control	Enabling factors	Convenience / Accessibility / Tight work schedule Good Bandwidth / Net Connection / Good Server response Out of town banking / Online shopping possible Better security Ease of use
	Disabling factors	Security threats / concerns Low Bandwidth / Net Connection Bad facilities for accessing site Delayed response from server / Server downtime Theft of identity / password

Table 5.1: Summary of findings of Elicitation Study

The findings of the elicitation study give us indication of the factors which influence internet banking adoption. The main enabler of internet banking is “convenience” or “24x7 accessibility” and issues related to “security concerns” were the main disabler for internet banking. To get an empirical confirmation of the qualitative findings a quantitative study was conducted. Web based survey method was used for identifying factors influencing internet banking. The survey produced empirical confirmation of seven factors which did influence internet banking acceptance. The factors produced by survey were: *perceived usefulness, perceived ease of use, consumer awareness, consumer security concerns, quality of facilities, subjective norms* and *trust and privacy*. Survey instrument was subjected to test of reliability and construct validity to check if the factors identified are scientifically valid. The survey instrument validity test results were satisfactory. Literature review of previous studies also indicated that these factors played significant role in internet banking adoption in other countries as well. Therefore, it could be concluded that the first objective of the study is successfully achieved.

Second objective of the study was to check if theoretical base of internet banking acceptance could be developed. In particular, two

theories in social psychology area were tested for their applicability in this study. One of the models tested was Technology Acceptance Model (TAM) (Davis, 1989), which is a widely used model for predicting technology adoption. Since its inception, the researchers were using TAM to predict technology in various settings across a number of countries. In this study two constructs in TAM namely *perceived usefulness* and *perceived ease of use* are tested in the context of internet banking acceptance. The results gave empirical evidence that the acceptance of internet banking was significantly influenced by the two constructs of the TAM. Results showed that the factors *perceived usefulness* and *perceived ease of use* had positive influence on internet banking acceptance. The variable *perceived ease of use* also had a positive link with the variable *perceived usefulness* indicating that ease of use meant more usefulness. Previous studies' results also supported these findings (Tan & Teo, 2000, Pikkarainen et al., 2004). The results also supported the use of Theory of Planned Behavior (TPB) (Ajzen, 1991) model in this type of study. The results gave support to the constructs attitude, subjective norms and perceived behavioral control described in Theory of Planned Behavior. Therefore it is

concluded that objective of testing applicability of two popular models in this study is also met.

Third objective of the study was to develop a model that could explain behavioral intention of internet banking adoption. The researcher developed a model for predicting internet banking adoption and framed eight hypotheses vis-a-vis with that model. The model developed for the study was extended from Technology Acceptance Model. The hypotheses framed along with results of their empirical testing are given in Table 5.2.

Research Construct	Hypotheses	Result of test
Perceived Usefulness (PU)	H1: <i>Perceived Usefulness (PU) has a positive effect on the customer acceptance of online banking</i>	Accepted
Perceived Ease of Use (PEOU)	H2a: <i>Perceived Ease of Use (PEOU) has a positive effect on the customer acceptance of online banking</i> H2b: <i>Perceived Ease of Use (PEOU) has a positive effect on the perceived usefulness of online banking</i>	Accepted

Consumer Awareness (CA)	H3: <i>Perceived consumer awareness (CA) has a positive effect on the customer acceptance of online banking</i>	Accepted
Consumer Security Concerns (SC)	H4: <i>Perceived consumer security concerns (SC) has a negative effect on the customer acceptance of online banking</i>	Accepted
Quality of Facilities (QF)	H5: <i>Perceived quality of facilities for accessing bank site has a positive effect on the customer acceptance of online banking.</i>	Accepted
Subjective Norms (SN)	H6: <i>The beliefs associated with subjective norms are significantly related to an individual's intention to adopt Internet banking.</i>	Accepted
Trust and Privacy (TP)	H7: <i>Perceived trust and privacy on the bank has a positive effect on the customer acceptance of online banking</i>	Accepted

Table 5.2: Results of Hypotheses testing

As seen from Table 5.2 the entire hypotheses framed for the study were found to be empirically accepted. Finally, result of the multiple regression analysis performed on the research model

found the overall model to be statistically significant. Though only statistical significance for only two constructs *perceived usefulness* and *consumer security concerns* were obtained in the multiple regression testing, the research model's ability to predict behavioral intention of Indian banking customers in accepting internet banking could be accepted. Thus it could be concluded that the third objective of the study has also been successfully achieved.

5.2 Theoretical Contribution

The most important theoretical contribution of this study is the development of a model predicting the internet banking adoption among Indian customers. Internet banking is a relatively new delivery channel offered by Indian banks and not many studies have been conducted in this line in the Indian context. The research model developed is an extension of the parsimonious and validated Technology Acceptance Model, making the model more scientifically proven. Another contribution of this study is the testing of Technology Acceptance Model's applicability in the Indian environment. For nearly last two decades, researchers from all over the world have been testing TAM in various contexts. No previous studies were found in testing TAM in the Indian context. In this

study, TAM's constructs were found to be applicable in the Indian context too. From a methodological point also this study has made a significant contribution, by resorting to a web based survey to collect data for the study. Internet is gaining popularity as a medium for conducting customer surveys and in this study the response rate confirmed the choice of Internet as a medium for conducting survey.

5.3 Practical Contribution

Results of this study provide banking decision makers an insight into the perception about internet banking among Indian customers and that is the most important practical contribution of this study. Internet banking is gaining popularity in India and finding of this study allow banks to fine tune their internet banking product. Based on the findings of this study the following suggestions could be arrived at:

1. Banks could increase internet banking adoption by making their customer awareness about the usefulness of the service. It seen that from the study that the variable *perceived usefulness* has a positive influence on internet banking use, therefore internet banking acceptance would increase when

- customers find it more usefulness. Banks should plan their marketing campaigns taking into consideration this factor. Proper marketing communications which would increase consumer awareness would result in better acceptance of internet banking.
2. The variable *perceived ease of use* had a positive influence on internet banking use. That means customers would increase internet banking usage when they find it easier to use. Banks should therefore try to develop their internet banking site and interface easier to use. Banks could also consider providing practical training sessions for customers at their branches on usage of internet banking interface.
 3. The variable *consumer security concerns* had a negative influence on internet banking use. Banks should try to mitigate concerns of their customers in terms of internet banking technology to increase customer acceptance. Banks should also take measure the trust and privacy of its internet banking infrastructure and procedures.

5.4 Limitations

Any research work would have its on inherent limitations. Although the finding can be statistically significant in most parts, the researcher has identified the following limitations in the present study.

- Internet banking is a relatively new concept in an Indian context. The researcher found lack of relevant information regarding internet banking acceptance or adoption among Indian customers during the collection of literature. The researcher had to rely on studies conducted in various other nations while constructing the research model. Although the impact of the above lacunae was minimized by conducting a qualitative study before framing the research model, the limitation of lack previous empirical studies cannot be neglected.
- The researcher has used a non-probabilistic technique for collecting the sample for the survey. Ideally, probabilistic sampling technique would have improved the validity of the survey findings. The research did try to contact few financial institutions in Kerala for getting list of their internet banking

customers. But the financial institutions cited confidentiality for not providing their customer details, therefore the researcher had to opt for a convenience/judgment sampling technique.

- The same survey instrument was administered to both users and non-users of internet banking service. The opinions/perceptions of users and non-users could differ considerably and this limitation could have affected the survey results.

5.5 Recommendations for future studies

The issues discussed in the limitations section could be taken as a pointer for continuing research in this area. Research on customer acceptance of internet banking in India is still in a nascent stage, there is lot more to be studied and analyzed. Some avenues for continuing study in this exciting field is discussed below:

- The research model developed in this study gave sufficiently acceptable results on empirical testing. Still, there is scope for modifying the model. The factors identified by the researcher could be validated further and more factors could be

considered for better prediction level of the model. Also, it is seen that multiple regression analysis of the model gave only statistically significant results for only two of the seven construct developed in the research model. Therefore, future studies could look into this and come up alternate models which would be more statistically fit.

- The researcher tried to find solution for the research problem by using theoretical base from social psychology. The research model was developed by extending Technology Acceptance Model and also utilizing the framework provided by Theory of Planned Behavior. Although both these models very widely used for studies in technology adoption or prediction of consumer behavior intentions, there are other theories or framework that could be used for studying this research problem. Future studies could look into this angle of research. The researcher proposes considering alternate theories like Innovation Diffusion Theory (Rogers, 1983), Social Cognitive Theory-Self-efficacy (Bandura, 1997), Extension of Technology Acceptance Model (TAM2) (Venkatesh & Davis, 2000) and Extended model of Innovation

Diffusion Theory(Moore & Benbasat,1991) for updating the current research model.

- Internet banking acceptance among Indian customers is very less and due to this the researcher had faced problem in getting suitable respondents. As acceptance of internet banking is expected to improve in the coming years, future studies could be conducted using better sampling technique. Using a probabilistic sampling technique would definitely improve the acceptability of study results. The researcher also proposes conducting surveys in different parts of the country to improve the generalizability of the findings. This is not a constraint if web based survey is conducted as respondents could participant in such a survey from any part of the world. Future studies could also investigate the customer perception between “users” and “non-users” of internet banking by conducting separate surveys among both these categories of users.

5.6 Conclusion

Indian economy is witnessing stellar growth over the last few years. There have been rapid developments in infrastructural and business front during the growth period. Internet adoption among Indians has been increasing over the last one decade. Indian banks have also risen to the occasion by offering new channels of delivery to their customers. Internet banking is one such new channel which has become available to Indian customers. Customer acceptance for internet banking has been good so far. In this study the researcher tried to conduct a qualitative and quantitative investigation of internet banking customer acceptance among Indians. The researcher tried to identify important factors that affect customer's behavioral intention for internet banking. The researcher also proposes a research model which was extended from Technology Acceptance Model for predicting internet banking acceptance. The quantitative analysis of the model confirmed that the factors identified by the researcher viz. *perceived usefulness, perceived ease of use, consumer awareness, consumer security concerns, quality of facilities, subjective norms* and *trust and privacy* did influence customer behavioral intentions towards internet banking. The results showed that five variables *Perceived*

Usefulness, Perceived Ease of Use, Consumer Awareness, Quality of Facilities and Subjective Norms had positive influence on internet banking use. Similarly, results showed that two variables *Consumer Security Concerns* and *Trust and Privacy* are negative influence on internet banking use. It was observed that effect of only *Perceived Usefulness* and *Consumer Security Concerns* variables in acceptance of internet banking could be statistically proved. The findings of the study would be useful for Indian banks in planning and upgrading their internet banking service.