Chapter 4

THE FINDINGS OF THE STUDY
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In the preceding chapter, the researcher made an attempt to discuss the analysis of the primary data collected from the sample respondents. This chapter provides a detail description of the findings from the analysis pertaining to various aspects of internet banking in Kerala. The purpose of the study is to achieve the following objectives.

- To assess the service quality of internet banking and its effect on customer satisfaction.
- To study the various applications of internet banking service provided by select commercial banks in Kerala and to identify the most preferred internet banking application by the bank customers.
- To identify the factors influencing the adoption of internet banking services among the customers of the bank.
- To study the relationship between demographic factors and customer adoption of internet banking.
- To identify the reasons for the non-adoption of internet banking among the customers.

The major findings of the study are classified in to two broad categories which are as follows.

1. Section A: Users of internet banking
2. Section B: Non-users of internet banking
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Section A

- Demographic profile of internet banking users
- Computer and internet usage
- Demographic variables and years of using internet banking services
- Demographic variables and frequency of use of internet banking
- Association between hours spent for internet on a week and frequency of use of internet banking
- Association between regular use of computer/laptop and frequency of use of internet banking
- Association between regular use of computer/laptop and years of using internet banking
- Service quality, customer satisfaction and customer loyalty of internet banking service
- Adoption of internet banking
- Demographic difference in internet banking adoption
- User awareness and extent of use of internet banking applications

Section B

- Demographic profile of non-users of internet banking
- Usage of computer/laptop and internet
- Frequency of visit to bank branch
- Reasons for the non-adoption of internet banking
DEMOGRAPHIC PROFILE OF THE INTERNET BANKING USERS

In this section, the main findings of the study are presented based on the analysis of the primary data collected from the sample respondents. The demographic factors such as age, sex, monthly income, locality, educational qualification and occupation were taken for the purpose. The appropriate statistical tools were employed for analyzing the primary data. The major inferences with respect to the demographic profile of the respondents are presented below.

- **Age**: With respect to age (32.7%) respondents were from 25-35 age group, (26.8%) respondents were below 25 years age. This finding indicates that younger generations show more affinity towards the use of internet banking.

- **Gender**: In the case of gender out of 504 respondents participated in the survey, out of which (54.6%) were males and (45.4%) were females.

- **Locality**: With regard to locality, majority of the respondents (42.5%) belongs to urban population followed by semi-urban population (38.7%).

- **Educational qualification**: As for the educational qualification of the respondents about (93.9%) of the respondents holds either postgraduate/professional qualification.

- **Occupation**: with respect to occupation, majority of the respondents (33.7%) were employed in private sector firms followed by business men (25.4%). It was found that students were also use internet banking facility, it was about (15.9%) of the total respondents. Only (14.1%) respondents from the public sector firms were using internet banking service.
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- Monthly income: With respect to monthly income, majority of the respondents (31.7%) have monthly income between Rs. 30,000-40000 followed by the income group of Rs. 20,000-30,000.

COMPUTER AND INTERNET USAGE

In this section a brief description of the sample respondents based on the use of computer/laptop and internet are presented.

Computer/laptop

The results of the study claimed that majority of the respondents (88.7%) were using computer/laptop on a regular basis. It was also found that about (70.02%) of the respondents have been using computer/laptop for the period of three years and above.

Use of internet

Regarding the use of internet out of 504 sample respondents nearly (94.2%) respondents have internet access on regular basis. It was also noticed that about (72.65%) of the respondents have spent one to twenty hours on a week for browsing internet.

Frequency of bank branch visit

Regarding the frequency of visit to bank branch, most of the respondents (63.10%) used to visit bank branch on a monthly basis followed by those who visit on fortnightly (25%). This finding is consistent with (Niels Peter Mols et al., 1999)\textsuperscript{130}.

The demographic variables and frequency of use of internet banking:

The variables considered for this analysis are; age, gender, educational qualification, locality, monthly income and occupation of the respondents. The result from the hypothesis testing is shown in below table 4.1. The hypotheses are tested and the significance level is .0.05.

<table>
<thead>
<tr>
<th>Variables identified</th>
<th>Hypotheses of the study</th>
<th>Frequency of use of internet banking</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₀₁ Age</td>
<td>There is no significant difference between age of the respondents and frequency of use of internet banking.</td>
<td>.087 Accepted</td>
</tr>
<tr>
<td>H₀₂ Gender</td>
<td>There is no significant difference between gender of the respondents and frequency of use of internet banking.</td>
<td>.086 Accepted</td>
</tr>
<tr>
<td>H₀₃ Locality</td>
<td>There is no significant difference between locality of the respondents and frequency of use of internet banking.</td>
<td>.038 Rejected</td>
</tr>
<tr>
<td>H₀₄ Educational qualification</td>
<td>There is no significant difference between educational qualification of the respondents and frequency of use of internet banking.</td>
<td>.004 Rejected</td>
</tr>
<tr>
<td>H₀₅ Occupation</td>
<td>There is no significant difference between occupation of the respondents and frequency of use of internet banking.</td>
<td>.037 Rejected</td>
</tr>
<tr>
<td>H₀₆ Monthly income</td>
<td>There is no significant difference between monthly income of the respondents and frequency of use of internet banking.</td>
<td>.001 Rejected</td>
</tr>
</tbody>
</table>
Source: compiled by researcher

It is evident from the above table 4.1 all the null hypotheses mentioned are rejected except \(H_0\) 1 and \(H_0\) 2. In the case of educational qualification, occupation, monthly income and locality of the respondent the researcher has accept the null hypotheses that means there exists significant relationship with frequency of use of internet banking.

Demographic variable and years of using internet banking service

The demographic variables considered for this analysis are; age, gender, educational qualification, locality, monthly income and occupation of the respondents. The summary of major findings from the hypotheses testing is presented in the below table 4.2. The hypotheses are tested and in the significance level is .0.05.

**Table 4.2**

**Summary of results of Hypotheses testing**

<table>
<thead>
<tr>
<th>Variables identified</th>
<th>Hypotheses of the study</th>
<th>Frequency of use of internet banking</th>
</tr>
</thead>
<tbody>
<tr>
<td>(H_0) 1 Age</td>
<td>There is no significant difference between age of the respondents and years of using internet banking</td>
<td>.018</td>
</tr>
<tr>
<td>(H_0) 2 Gender</td>
<td>There is no significant difference between gender of the respondents and years of using internet banking</td>
<td>.199</td>
</tr>
<tr>
<td>(H_0) 3 Locality</td>
<td>There is no significant difference between locality of the respondents and years of using internet banking</td>
<td>.229</td>
</tr>
<tr>
<td>(H_0) 4 Educational qualification</td>
<td>There is no significant difference between educational qualification of</td>
<td>.116</td>
</tr>
</tbody>
</table>
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The Findings of the Study

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>( H_0 )</td>
<td>Occupation</td>
<td>There is no significant difference between occupation of the respondents and years of using internet banking</td>
</tr>
<tr>
<td>( H_0 )</td>
<td>Monthly income</td>
<td>There is no significant difference between monthly income of the respondents and years of using internet banking</td>
</tr>
</tbody>
</table>

Source: compiled by researcher

It is evident from the above table 4.2 all the null hypotheses mentioned are rejected except \( H_0 \) 1 and \( H_0 \) 2. In the case of educational qualification, occupation, monthly income and locality of the respondent the researcher has accept the null hypotheses that means there exists significant relationship with frequency of use of internet banking.

**Association between weekly hours spent for internet banking and frequency of use of internet banking**

The results of chi-square analysis revealed that there is no significant association between hours spent for internet on a week and frequency of use of internet banking. This might be the reason that, the respondents were browsing internet for some other purpose.

**Association between regular use of computer/laptop and frequency of use of internet banking**

The chi-square analysis was performed to assess the association between regular uses of computer/laptop with respect to frequency of use of internet banking. The finding suggests that there is no significant association between regular use of computer/laptop and frequency of use of internet banking.
Relationship between regular use of computer/laptop and years of using internet banking facility

The inference from the chi-square analysis indicates that there is no significant association between regular uses of computer/laptop with years of using internet banking.

Service quality, customer satisfaction and customer loyalty

The variables used in this analysis are reliability, responsiveness, fulfillment, efficiency, website design, and privacy/security with customer satisfaction. The correlation analysis was used to examine the relationship between the variables. The result of the correlation shows that there is significant positive correlation between various service quality dimensions with customer satisfaction. It was also observed that there is a positive relationship between customer satisfaction and customer loyalty. The logistic regression analysis was used to measure the significant predictors of customer satisfaction. The results of logistic regression analysis indicates that the service quality dimensions such as reliability, responsiveness, fulfillment, efficiency, website design and privacy/security are found to be significant predictors of customer satisfaction.

The inferences from the hypotheses testing are shown in below table 4.3
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Table 4.3  
Summary of findings from the Hypotheses testing

<table>
<thead>
<tr>
<th>Variables identified</th>
<th>Hypotheses of the study</th>
<th>P value</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₀₁</td>
<td>Reliability There is no significant relationship between reliability and customer satisfaction</td>
<td>.018</td>
<td>Rejected</td>
</tr>
<tr>
<td>H₀₂</td>
<td>Responsiveness There is no significant relationship between responsiveness and customer satisfaction</td>
<td>.043</td>
<td>Rejected</td>
</tr>
<tr>
<td>H₀₃</td>
<td>Fulfillment There is no significant relationship between fulfillment and customer satisfaction</td>
<td>.000</td>
<td>Rejected</td>
</tr>
<tr>
<td>H₀₄</td>
<td>Efficiency There is no significant relationship between efficiency and customer satisfaction</td>
<td>.044</td>
<td>Rejected</td>
</tr>
<tr>
<td>H₀₅</td>
<td>Privacy/security There is no significant relationship between privacy/security and customer satisfaction</td>
<td>.000</td>
<td>Rejected</td>
</tr>
<tr>
<td>H₀₆</td>
<td>Website design There is no significant relationship between website design and customer satisfaction</td>
<td>.000</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Source: compiled by researcher

The hypotheses are tested in the Sig. level less than 0.05

The above table 4.3 clearly shows that all the null hypotheses are rejected and alternative hypotheses are accepted. This result indicates that all the independent variables like, reliability, responsiveness, efficiency, fulfillment, privacy/security and website design are very essential in order to increase the level of customer satisfaction.
The findings of the study also corroborates with the result of previous studies done in the same area such as service quality and customer satisfaction. The summary of the findings are presented in the below table 4.4.

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Variables identified</th>
<th>Supported studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Reliability</td>
<td>Zeng, Hu, Chen, &amp; Yang,( 2009)(^{131})</td>
</tr>
<tr>
<td>2</td>
<td>Responsiveness</td>
<td>Jun &amp; Shaohan Cai, (2001)(^{132})</td>
</tr>
<tr>
<td>3</td>
<td>Fulfillment</td>
<td>Zeng, Hu, Chen, &amp; Yang,( 2009)(^{133})</td>
</tr>
<tr>
<td>4</td>
<td>Efficiency</td>
<td>Fatemeh et al., (2014)(^{134})</td>
</tr>
<tr>
<td>5</td>
<td>Privacy/security</td>
<td>George &amp; Kumar, (2014)(^{135})</td>
</tr>
<tr>
<td>6</td>
<td>Website design</td>
<td>Fatemeh et al., (2014)(^{136})</td>
</tr>
</tbody>
</table>

Source: Compiled by the researcher

**ADOPTION OF INTERNET BANKING**

The variables considered for this analysis was based on the results of exploratory factor analysis. The result indicates that there are five important factors which influence the adoption of internet banking among the customers of the bank. These are bank trust worthiness and prompt service, importance of internet banking


needs, perceived usefulness, perceived ease of use and self-efficacy. The theoretical framework behind this analysis was based on extended technology acceptance model (TAM).

The logistic regression analysis was used to identify the important predictors of internet banking adoption among the bank customers. The outcome of this analysis suggest that all independent variables such as bank trustworthiness and prompt services, importance of internet banking needs, perceived usefulness, perceived ease of use and self-efficacy have a significant influence on internet banking adoption.

The summary of the findings from the hypothesis testing are presented in the below table 4.5

<table>
<thead>
<tr>
<th>Hypotheses of the study</th>
<th>P value</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_{01}$ There is no significant relationship between bank trustworthiness and prompt service and the adoption of internet banking.</td>
<td>.034</td>
<td>Rejected</td>
</tr>
<tr>
<td>$H_{02}$ There is no significant relationship between importance of internet banking needs and the adoption of internet banking.</td>
<td>.022</td>
<td>Rejected</td>
</tr>
<tr>
<td>$H_{03}$ There is no significant relationship between self-efficacy and the adoption of internet banking.</td>
<td>.000</td>
<td>Rejected</td>
</tr>
<tr>
<td>$H_{04}$ There is no significant relationship between perceived usefulness and the adoption of internet banking.</td>
<td>.013</td>
<td>Rejected</td>
</tr>
<tr>
<td>$H_{05}$ There is no significant relationship between perceived ease of use and the adoption of internet banking.</td>
<td>.015</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Source: Compiled by the researcher
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The hypotheses are supported in the Sig. level less than 0.05

The above table 4.5 indicates that all the null hypotheses stated are rejected hence alternative hypotheses are accepted. That means independent variables like, bank trustworthiness and prompts service, perceived usefulness, perceived ease of use, self-efficacy and importance of internet banking needs are indispensable for the adoption of internet banking among the customers.

DEMOGRAPHIC DIFFERENCES IN INTERNET BANKING ADOPTION

The one-way analysis of variance was applied to assess the difference in the adoption of internet banking in terms of various demographic variables such as age, gender, educational qualification, monthly income, locality and occupation. The scheffe multiple comparisons test was used as a post hoc for one-way Anova. The major findings are presented in the below sections.

Age

The respondents in the age group of below 25 years to 35 years are (59.5%). Hence, it is clear that the typical internet banking users are young as the literature says. This result corroborates with the findings of Padachi et al., (2008)\textsuperscript{137}, Sylvie et al., (2005).\textsuperscript{138}

It might be the reason that in this age group people are more engaged with banking activities as compared to other age groups and they have the ability to handle new technologies like internet banking, mobile banking etc.


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The result of one-way Anova indicates that there is a significant difference in the adoption of internet banking with respect to respondents’ age group. The post hoc test revealed that there is statistical difference in the adoption of internet banking for the age group of below 25 years and with other groups like, 25-35 years, 35-45 years and above 45 years.

Gender

The primary data were collected from both male and female. The study shows that there are 54.6% of the male respondents and 45.4% of the females. The result is in tune with the findings of earlier studies on internet banking by Huam et al., (2008)\textsuperscript{139}, Mirza et al., (2009)\textsuperscript{140}.

Income

It was observed that the adoption of internet banking is high for the customers whose income ranges between rupees 30,000 to rupees 40,000. These results coincide with the finding of Choudrie & Dwivedi (2005)\textsuperscript{141} and Lu (Nancy) Zheng (2010)\textsuperscript{142}. It might be the reason that income of an individual influences his ability to own and use a technology.

Educational qualification

It was inferred from the analysis that majority of the respondents (93.9%) possess high qualification (either post-graduation or professional qualification). The


study found that there is significant difference in the adoption of internet banking among the customers with respect to their educational qualification. These results concur with those of Huam et al., (2008)\textsuperscript{143}, & Kolodinsky et al., (2004)\textsuperscript{144}.

According to Bartel and Sicherman (1998)\textsuperscript{145} educated individuals show quick response than less educated individuals and will adopt internet banking relatively fast.

**Occupation**

Regarding the occupation, (33.7 %) of the total respondents, employed in the private sector are likely to adopt internet banking; the respondents who are engaged in business make only (25.4 %) of the total respondents. Respondents who are working in the public sector who are likely to adopt internet banking are just (14.1%). The reason for this might be that they have less chance to use computers or the internet from their workplace, so their capability to handle computers /laptop and the internet might be relatively weaker than those employed in private sector jobs.

**Locality of the respondents**

It is found that respondents (42.5%) who are living in urban areas show more affinity towards the adoption of internet banking followed by the respondents (38.7%) from the semi-urban areas. The result of the study also indicates that the adoption of internet banking is relatively very less for the people who are living in rural areas. The reason might be that they are unaware or not capable to handle such


technologies. The result from the ANOVA test indicates that there is no significant relationship between locality of the respondents and the adoption of internet banking. The result of the One-way Anova test revealed that there is no significant relationship between monthly income of the respondents and the adoption of internet banking.

The summary of the findings are presented in the below table

<table>
<thead>
<tr>
<th>Hypotheses of the study</th>
<th>P-value</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₀₁ There is no significant relationship between age of the respondents and the adoption of internet banking.</td>
<td>.000</td>
<td>Rejected</td>
</tr>
<tr>
<td>H₀₂ There is no significant relationship between gender of the respondents and the adoption of internet banking.</td>
<td>.010</td>
<td>Rejected</td>
</tr>
<tr>
<td>H₀₃ There is no significant relationship between educational qualification of the respondents and the adoption of internet banking.</td>
<td>.000</td>
<td>Rejected</td>
</tr>
<tr>
<td>H₀₄ There is no significant relationship between occupation of the respondents and the adoption of internet banking.</td>
<td>.012</td>
<td>Rejected</td>
</tr>
<tr>
<td>H₀₅ There is no significant relationship between monthly income of the respondents and the adoption of internet banking.</td>
<td>.092</td>
<td>Accepted</td>
</tr>
<tr>
<td>H₀₆ There is no significant relationship between locality of the respondents and the adoption of internet banking.</td>
<td>.771</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Source: Compiled by the researcher

The hypotheses are tested in the Sig. level less than 0.05
User awareness and extent of use of internet banking applications

This section provides a detail explanation of the various internet banking applications offered by the commercial banks in Kerala.

At very first, a comprehensive list of various internet banking applications provided by the selected banks in Kerala has been identified. In the next level, the ranking has been made for each of the application on the basis of extent of use of such services. A total 15 important applications of internet banking were considered for final framework in order to identify the most preferred or widely used application of internet banking. The analysis revealed that mobile recharging is the most widely used or preferred application of internet banking among the bank customers followed by viewing account balance, payment of utility bills, view or download account statement, fund transfer etc. This finding is consistent with the result of Thulani Dube (2004)\textsuperscript{146}. According to the author, internet banking is mainly used for checking account balance, pay utility bills and fund transfer etc., It was also noticed that the least preferred application of internet banking is settlement of demat account, request for account opening and application for online loan/credit card. Joshua (2009)\textsuperscript{147} in his study found that the customer’s preference was relatively low for the services like loan applications and demand draft request. Further, it was observed that, still there are some customers who are not aware about internet banking applications offered by the bank.


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The summary of findings based on the unawareness of customers about various internet banking applications are provided in the below table.

Table 4.7
Unawareness of customers about internet banking applications

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Internet banking application</th>
<th>% of customers unaware</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pay Utility Bills</td>
<td>6.0 %</td>
</tr>
<tr>
<td>2</td>
<td>View account balance</td>
<td>4.0 %</td>
</tr>
<tr>
<td>3</td>
<td>View or download account statement</td>
<td>3.8 %</td>
</tr>
<tr>
<td>4</td>
<td>E-ticketing</td>
<td>3.8 %</td>
</tr>
<tr>
<td>5</td>
<td>Mobile recharging</td>
<td>3.0 %</td>
</tr>
<tr>
<td>6</td>
<td>Pay taxes online</td>
<td>7.7 %</td>
</tr>
<tr>
<td>7</td>
<td>Apply for online loan/Credit card</td>
<td>8.5 %</td>
</tr>
<tr>
<td>8</td>
<td>Request for cheque book and pass book</td>
<td>7.7 %</td>
</tr>
<tr>
<td>9</td>
<td>Payment for online shopping</td>
<td>2.6 %</td>
</tr>
<tr>
<td>10</td>
<td>Cheque Status enquiry</td>
<td>7.5 %</td>
</tr>
<tr>
<td>11</td>
<td>Request for demand draft</td>
<td>9.9 %</td>
</tr>
<tr>
<td>12</td>
<td>Request for stop payment of a cheque</td>
<td>11.7 %</td>
</tr>
<tr>
<td>13</td>
<td>Request for account opening</td>
<td>8.7 %</td>
</tr>
<tr>
<td>14</td>
<td>Fund transfer</td>
<td>2.2 %</td>
</tr>
<tr>
<td>15</td>
<td>Settlement of demat accounts</td>
<td>11.3 %</td>
</tr>
</tbody>
</table>

Source: Compiled by the researcher

SECTION – B: DEMOGRAPHIC PROFILE OF THE NON-USERS OF INTERNET BANKING

The major findings based on the respondent’s demographic profile of respondents are presented in following section.
Age

With regard to age, more than (50 %) of the respondents fall under the age category of 35-45 years and above 45 years.

Gender

The gender-wise comparisons of the respondent’s show that majority of the respondents (56.3 %) were female.

Locality

With respect to the locality, nearly (49.5 %) of the respondents belongs to rural population followed by semi-urban population (31.7%).

Educational qualification

Regarding the educational qualification, more than half of the respondents possess only basic level of education i.e., primary and secondary school.

Occupation

As for the occupational status, about (25.8 %) of the respondents were employees of public sector organizations.

Monthly income

Regarding the monthly income, majority of the respondents (31.7%) have monthly income up to rupees 20,000.

Usage of computer/laptop and internet

The result shows that most of the respondents (63.5 %) were regular users of computer/laptop. It was noticed that majority of the respondents (30.0 %) were using computer/laptop for less than one year and only (10.3 %) of the respondents were using computer/laptop for more than 10 years. Further, the study observed that
regarding the usage of internet, majority of the respondents (73.2 %) were browsing internet on a regular basis.

**Frequency of visit to bank branch**

With regard to respondents’ visit to bank branch, majority of the respondents (38.89 %) make a visit to the branch on a weekly basis followed by those visited on a daily basis.

**Reasons for non-adoption of internet banking**

The exploratory factor analysis technique was used to identify the reasons for the non-adoption of internet banking among the customers of the bank. This resulted in several reasons for the non-adoption of internet banking among the customers who never used such service before. Based on the mean ranking of each variable, it was found that the most significant factor which hinders the use of internet banking is the “fear of usage and use of other delivery channels”. It may be the reason that customers are reluctant to shift from brick and motor system of banking to modern kind of banking. They may not be ready to adopt new technologies like internet banking, mobile banking etc. Another key reason for the non-usage of internet banking is “Risk”. This might be the reason that customers are afraid about various risks associated with internet banking such as loss of money, attack of hackers, stealing of account information etc. The other vital reasons for the non-usage of internet banking includes, lack of training and accessibility, lack of trust, lack of bank response and slow internet connection, lack of clarity in procedures and reluctance to change, lack of knowledge about technology and its use, lack of training and accessibility and complexity.