Chapter 8

SUMMARY AND CONCLUSION
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8.1 Findings

The results obtained from analysing demographic variables, testing hypothesis, neural network modeling, structural equation modeling, CHAID and clustering analysis are listed below.

1. The degree or level of experience of customer’s to the internet platform is insignificantly related to the keenness to adopt internet banking. Customers who are using internet services daily or weekly do not have strong attitudes towards internet banking usages. The findings contradict more experience in internet usage will make the customer’s more reliable, secure and at ease in using the internet enabled technologies for the doing their financial transaction on line.

2. ATM followed by the branch counter banking service is the most frequent banking services used by the respondents who are using internet banking in Orissa.

3. Ownership or possession of more than one accounts in different public or private sector banks have no relationship with the adoption of internet banking

4. Adopter’s internet banking experience has a relationship between perceived intention to use internet banking but have no relationship between the attitudes of the adopter.

5. Adopters of internet banking rated account information as the highest or most important product, followed by bill payments, fund transfers, and generation of transaction summary reports.

6. Age, Income, Gender, Marital Status and Occupation are having impact and are acting as predictors of the adoption of Internet Banking.

7. Income of the customer’s is the important parameter or predictors in assessment to all the socio-economic parameters or predictors for adoption of internet banking.

8. Among the customer’s of Orissa, income, gender, age, occupation and marital status were found to be the noteworthy factors in the adoption of internet banking.
9. Education, age and income are having an impact on attitude towards adoption of internet banking among the adopters were statistically significant.

10. In comparison among male and female, male customer’s have high attitude towards adoption of internet banking than female customer’s.

11. Age group plays a vital role and is also a significant factor in the adoption of internet banking among customers. Youth customers are adopting internet banking for their financial transaction and also ready to change their habit of banking traditionally to online in comparison to old people. Younger age group have more positive attitude towards Internet banking than older age group.

12. Economic factor i.e. remittance charges for example charges for draft processing, money transfer charges, cheques processing charges is not significant in encouraging customers to adopt to Internet banking.

13. Those who will find branch access difficult and less comfortable doing banking in the branch may consider for alternative distribution channel methods, but the findings suggest that factors where a lack of satisfaction in branch banking services may significantly influence the decision to adopt or not to adopt internet banking.

14. Availability and reliability factors associated with ATM transaction is positively related to the adoption of internet banking among customers and found to be significant. Customer’s level of confidence in one technology based delivery channel i.e. ATM generates an aspiration for another financial distribution channel i.e. internet banking for conducting their financial transactions online.

15. Perceived ease of use, perceived usefulness and perceived self efficacy factors explain the attitude towards internet banking among the adopters and factors risk and security does not explain to the attitude formation. Typically connecting factors are perceived ease of use and usefulness that lead to attitude formation towards internet banking.

16. There exists a positive relationship between attitude towards internet banking that lead to their decision-making and banking transaction behavior. In this context, people who hold more positive attitudes towards internet banking have high intention or probability to make banking online of high internet banking intention.
17. Perceived usefulness, Perceived ease of Use, Perceived self Efficacy are having impact and are acting as predictors of the construct attitude towards adoption of Internet Banking.

18. Attitude and the perceived intention relationship is very strong and it is found attitude is playing a major role and acting as predictors of the construct perceived intention to use Internet banking.

19. Apart from the perceived ease of use, perceived usefulness (TAM), social (i.e. Image) as well as psychological (i.e. trialability) aspects of technology adoption play significant role in the consumer attitudes towards adoption of internet banking.

20. Relative advantage, Compatibility, and Image has a significant positive relationship between the perceived intentions to use internet banking.

21. Observability attributes have a weak and insignificant correlation between with perceived intention to use. In addition, regression has revealed no predictive power to explain the perceived intention to use with a beta value of (-0.012).

22. The relationship of customer’s demographic characteristics (such as gender, education and marital status) was not confirmed on attitude towards adoption towards internet banking but significant influences have been found relating to age, occupation and income.

23. TAM model considered in the study for customer’s acceptance of technology reveal perceived ease of use is more influential in people’s acceptance of technology than the perceived usefulness is. It was also found that technology acceptance does not differ significantly at the statistical significance level of 0.05 with respect to the participants’ demographic characteristics (age, gender, education level, etc.). In addition, analyses performed to define the relationships between the dimensions of the TAM yielded results that highly supported the TAM2.

24. The forerunner variables like technology anxiety, compatibility, trialability and image come into view to be the most reliable predictor in this study.

25. Customers using internet banking is populated mostly on professionals and business class.
26. The bankers found mostly the middle age group are using internet banking now days.

27. Bankers are believing on relationship banking where strong relationship with the customers have also increased due to adoption of internet banking which in turn as influenced the overall performance of the bank.

28. Print media is the popular media for the promotional activities as viewed by the bankers.

29. Normative and coercive pressures significantly influence the attitude and intention of adopting internet banking. Customer’s attitude plays a mediating role between institutional pressures and internet banking adoption. The result revealed institutional forces influence the formation of customers’ attitudes towards using internet banking, which in turn determine the intention of using internet banking and also an institutional analysis at the individual level within the internet banking perspective.

30. Age plays a major role among the demographic variables and is significantly contributing to normative forces which influence the formation of attitude and which in turn the perceived intention to use internet banking.

31. The reasons for preferring branch banking have been endorsed to usage convenience, personnel comfort, technology and inertia for change and channel financial security as respondent by maximum number of customers among the user of internet banking.

32. The different motivational factor which force an attitude towards internet banking are demographic motivations (i.e. age, gender, income), social motivations (i.e. friends, relatives and group), exogenous motivation (internet experience), economic motivation (i.e.), pragmatic motivation (i.e. ease of use), situational motivations (i.e.) and hedonic motivations (i.e. impulse tendency).

33. The CHAID tree model specifies income is the paramount forward planner among adopters and non-adopters of internet banking.
34. CHAID approaches have classified the customer profile as per their adoption or non-adoption of internet banking on the basis of their demographic profile with the help of decision trees.

35. CHAID explained the significance of customer demographic segmentation and concept of database or target marketing in banking sector. Demographic characteristics are properly outlined with the help of decision trees. Using the CHAID segmentation of customer profile was attempted to explain the characteristics of the potential high adopters of internet banking.

36. The network has been constructed using the Multilayer Perceptron techniques, for predicting the likelihood that a given customer will adopt internet banking or not.

37. Male found to have higher mean attitude than female. There is significant difference between gender & attitude towards Internet banking. Therefore we could conclude that Male have higher attitude towards Internet banking than female.

38. Younger customers between the age group of 24-35 years old have higher attitude towards Internet banking than older people.

39. Marital status does not play a role in the favorable attitude towards internet banking adoption.

40. There is negative relationship between the customers’ attitude for adoption of internet banking and internet usage experience and also it is statistically significant. It cannot be predicted that those who are having internet usage experience may have a positive attitude towards internet banking.

41. Among adopters of internet banking, email, social networking sites and banking websites are the popular internet services used by the adopters. This concludes that there is a need for internet based financial services distribution.

42. The popular banking services used by the adopters of internet banking are ATM service, branch banking and then followed by the internet banking.

43. From the study, it was found there is no relationship between possessions of more than one account in different banks with the attitudes towards adoption of internet banking.
44. The internet experiences of adopters have a positive correlation between the perceived intentions to use internet banking whereas the customer’s attitudes play a mediating role which has positive relation with the intention to use.

45. Most respondents rated Account information as the highest or most important product, followed by bill payments, fund transfers, and generation of transaction summary reports.

46. It was found among the demographic variables, ‘Age’, ‘Income’, ‘Gender’, ‘Marital Status’ and ‘Occupation’ are having impact and are acting as predictors of the adoption of Internet Banking among adopters and non-adopters.

47. Income of the customers is the important variable among the adopters of internet banking.

48. Age, education and occupation are having impact and are acting as predictors of the customer’s attitudes towards using internet banking among the adopters.

49. Among the users of internet banking, reputation of the bank is the main criteria while selecting an Internet banking service.

50. Among the user and non-user of internet banking, reputation of the bank has no impact on the use of internet banking.

51. Variety of services offered by bank has an impact on the use of internet banking among the adopters as well as non-adopters and also it is statistically significant.

52. Familiarity with bank attribute has an impact on the adoption of internet banking.

53. From the study it was also found size of the bank and the ownership of the bank (national/overseas) plays a significant role in the adoption of the internet banking among the customers.

54. From the factor analysis, the factors for the customers adoption of internet banking among adopters are perceived ease of use, perceived usefulness, perceived risk and security, perceived self efficacy, relative advantage, compatibility, traiblity, observability and image.
55. Factors for explaining attitude towards internet banking among adopters, which are perceived ease of use, perceived usefulness and perceived self efficacy. The excluded factors are perceived risk and security.

56. Mostly concerning factors are ease of use and usefulness that lead to attitude formation towards internet banking.

57. Attitude and the perceived intention relationship is very strong and it is found attitude is playing a major role and acting as predictors of the construct perceived intention to use Internet banking.

58. The use of framework clearly indicates that apart from the perceived ease of use, perceived usefulness (TAM), social (i.e. Image) as well as psychological (i.e. trialability as a consumer risk relieving strategy) aspects of technology adoption play significant role in the consumer attitudes towards adoption of internet banking.

59. ATM factor concerned with availability and reliability is positively related to the adoption of internet banking and is also significant. Confidence in one distribution i.e. ATM generates a desire for adoption of another distribution channel i.e. internet banking.

60. The reasons for preferring branch banking have been attributed to usage convenience, personnel comfort and channel financial security as respondent by maximum number of customers among the user of internet banking.

61. The reasons for preferring internet banking have been attributed to usage convenience, technology and inertia for change as viewed by maximum number of customers among the user of internet banking.

62. Convenience and 24*7 access factors is encouraging the customers towards the adoption of internet banking.

63. Respondents’ perceive that their friends’ opinions have influence on their willingness to adopt internet banking.

64. Opinion of reference group i.e. friends is more influenced factor in the adoption of inter banking.

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Findings based on bankers view about internet banking users:

1. Customers using internet banking is populated mostly on professionals and business class as per bankers perspective analysis.

2. The bankers found mostly the middle age group are using internet banking now days.

3. Bankers are convinced the relationship with the customers increased due to the adoption of internet banking by customers and which will bring improvement in the overall performance of the banks.

4. Print media is the popular media for the promotional activities as viewed by the bankers.

Findings based on internet banking non-users:

1. Perceived usefulness, Perceived ease of Use, Perceived self Efficacy are having impact education, age and marital status) was not confirmed on attitude towards adoption towards internet banking but significant influences have been found relating to occupation.

2. Anxiety, Voluntary and Impulse tendency plays a significant role in the customers attitudes towards using internet banking.

3. Security, awareness and computer skill are prime factors for not adopting internet banking among the non-adopters and are acting as predictors of the construct attitude towards adoption of Internet Banking as viewed by the non-user of internet banking.

4. Compatibility has a significant positive relationship between the customer attitudes towards using internet bank ing among non-adopters.

5. Observability, Traibility, relative advantage, Image attributes revealed no predictive power to explain the customer attitude towards internet banking among the non-adopters.

6. Users and non-users both disagreed that their parents’ opinions affect their choices regarding internet banking.
7. Both users and non-users regard the influence of friends but do not regard the influence of parents and colleagues as being significant in their choices about accepting internet banking.

8. Voluntary, perceived usefulness, image, anxiety, perceived ease of use have the greatest effect on how the model classifies the customers as per their attitudes towards internet banking among non-users.

**Findings based on Structural equation modeling and path analysis**

The research contributes to our knowledge by providing support for the contention that customer attitude performs a mediating role in the link between perceived usefulness, perceived, perceived security and risk, perceived self efficacy, relative advantage, compatibility, trialability, observability, image, voluntaries, anxiety, impulse tendency and customer perceived intention to use. However, the main focus of management attention should be on customer attitude, of which perceived usefulness, ease of use, relative advantage, traibility and compatibility are very important antecedents.

**8.2 Practical Implication of the Research**

The implication of the findings and conclusions are that, banks need to play a vital foremost role in influencing the current and potential customer’s attitudes and behavior towards internet banking adoption. The outcome of this study has two practical implications one for banks and second for financial services organization conducting B2C e-commerce transactions. The study has provided a general guide on customer’s attitude for adoption of internet banking. Factors considered for adoption of internet banking by customers’ and their attitude towards the self service technology adoption in present and in near future. It has taken into the factor of innovation and technology acceptance. It has produced validated instrument in measuring the adoption of internet banking by customers.

**8.3 Academic Contribution of the Study**

This study makes remarkable effort across the adoption of internet banking and usage by customers’. The contribution is:

1. The development of conceptual model that explains and predicts the factors that influence the adoption and usage acceptance of internet banking among the
customers’ and its application regarding the adoption of techno innovative financial services distribution channel.

2. The empirical support for proposed hypotheses based on the research framework and the literature are expected to provide both theoretical and practical contributions in the area of internet banking and understanding customers’ attitude in the present turbulent banking and financial services industry.

3. It’s prospective to be universal to a nation wide universal organization study.

4. The benefits combining the exploratory approach followed by an empirical confirmatory analysis is a rigorous research methodology for internet banking adoption and usage.

**8.4 Future Research**

With regard to the subject of this research for future research will be as per the following:

One direction for supplementary research would be to expand the model to include other variables. The variables included in this model were those found in the literature. An interesting extension of this study would be to determine how this research could be adapted to include attitudes of non-users. A comparison of user and non user’s attitude about internet banking would provide a better insight to the application of model of technology and the operational model used in this study. Other behavioral constructs may also be useful in further research like customer loyalty, brand image of banks, role of media culture, quality of service, promotional measures, risk perception and trust were not included in this model. Further research can be done to improve the validity of SEM model by taking large samples from different region of the country. The B2B and B2C research could be followed as future researches that include constructs which are considered important for the adoption behaviour. Some B2C models depict the effect of social and technical dispositions on the relationship; these could be added to the model and tested to reduce the unexplained variance in the internet banking adoption. The ANN model considered can further classify the customers on their pattern of financial services adopted. Experimental or longitudinal studies should be carried so that the causal inferences could be made more confidently and safely. Banks can understand the customer changing needs
and could go for target marketing rather than mass marketing. Prospect research might also look at conducting studies simultaneously in different states, with more concentration given to culture and environmental or external factors. In the future research large sample size from large population, different range of banking services, other predictor variables i.e. personal and technical factors should be taken into consideration and which may provide better illuminating influence for knowing customer behavioral intention to use internet banking.

8.5 Suggestions

It is important to know the attitude and intention of the Orissa people in order to increase the banking transaction volume via internet banking. Therefore, several recommendations can be made for banks who are willing to encourage customers to adoption internet banking for their banking transactions. By making Orissa people feel usefulness and ease of use while making banking over Internet then it directly increase the attitude towards internet banking and internet banking intention. From this research, the attitude towards internet banking has strong positive relationship with internet banking behavioral intention. It explains customer’s having high positive attitude towards internet banking will have high behavioral intention to use internet banking. Therefore, public and private sector banks should try to increase the positive attitude of the consumers in order to increase their banking intention online, which will further lead to increase of banking transactions via Internet or specifically through banks website. Additionally, to gain customer trust banks need to increase brand reputation, as the bank’s reputation is associated with the services banks provide. Study finding shows that for Orissa people another factor of importance are perceived ease of use. Banks website are perceived as more user-friendly and will facilitate online visits and online banking transaction intentions more than other online banking website that are seen as difficult to browse or do banking transaction. So banks should make their website or online transaction medium more interactive by using user friendly client. This way banks can efficiently demonstrate the ease of use of their websites which in turn will positively affect attitude of Orissa people towards internet banking and increased volume of online banking transactions intentions. Banks should take advantage of the internet banking customers because cost occurred in doing online transaction is very less in comparison to the cost occurs in traditional banking branch transaction. As per the study, attitude towards using the Internet banking plays a vital significant factor in inspiring the behavioral intention to adopt the internet banking.

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Study on adoption of internet banking in Orissa from the consumers’ perspective is latest; the IMC (Integrated Marketing Communication) is the mainly appropriate technique to rupture in the market. Moreover, customization of the homepages could be another way for banks to create positive impact on its consumers and in conclusion leading to optimistic customers’ attitude towards using internet banking. Perceived usefulness is another reason which affect in the attitude blueprint of consumers using internet platform for banking. So companies or website vendors should try to raise the usefulness perception of customers. This could be done by providing functional benefit by establishing alliances with other similar companies or related product companies this way customer can get increased information. This will make customer feel usefulness of visiting the company’s website which will drive positive attitude and will lead to online shopping intention. Traditionally, online customers when make bank online like to compare the services offered with service offered by other banks. Keeping this strategy in mind banks websites can provide a function where customers can compare. Banks advertisement should be focusing specific for specific category of users and specifically to target the young customers who will be the future driver or engine of internet banking usage.

**Strategy Adoption for Banks:**

Factors considered by the customers for adoption of internet banking can be categorized into i.e. encouragement factors and barrier factors. Now it is very important for banks to encourage the encouragement factors and at the same time step should be taken in overcoming the barrier factors. Push strategy are adopted by banks with respect to factors encouraged by customers while they should adopt pull strategy for the barrier factors. Push strategies may be in the form awareness of internet banking services as still it is known by customers, banks provides but they are not aware of the benefits customers can derive from the adoption of internet banking. In Orissa the adoption of internet banking services is in the early stage so, advertising both in form of electronic and print media should focus on the information like value for money, time saving 24x7 access, secure to transact etc to motivate the customer for adopting internet banking. Banks internet banking web page should be informative and will be easy for the prospect customer to navigate and use as an effective financial distribution services delivery channel. Customer’s should not find any difficulty in getting the requisite the information and should not spend their valuable time in browsing the website for the required information. Media publicity should be given about the potential benefits and adoption of internet banking which will create concern about internet banking which in turn will create customer confidence. During the time of
economic down turn of the nation banks should encourage the customers in adopting internet banking by paying monetary losses if any type of financial risk the customer is facing due to internet banking. Educating customers and giving information about security features in simple form will create more confidence among the customers for adoption of internet banking. For Internet banking awareness at the branches internet banking kiosk should be implemented where customer’s will have a hand practice on doing their financial services transaction as well as documentation and bank staff assistance will be available. Regular monitoring and feedback system should be done where instant feedback and customer’s queries could be handled in an efficient manner and further enhancement in improvement of internet banking services. For the secure and faster access banks should have a horizontal strategy for co-operating with Internet service provider to provide quality internet access which will be a motivating factor for adoption of internet banking. Security should be enhanced always so that reliability and trustworthiness of the online banking transaction can be ensured which in turn will create customer confidence, belief and loyalty in online transactions

Bank Strategies (Push Strategy):

1. **Exert a pull on Customers to the web site**: Design of user friendly website, ease of navigation, information in local as well as national language should be provided for pulling customers’ towards internet banking. Adoption of feedback mechanism for better improvement of them website.

2. **Attract Customers by ease of access**: Regularly monitoring and controlling, coordinating services with ISP for traffic management.

3. **Building Customers’ Confidence**: Security information in website and FAQ about security should be provided. Demonstration of use of internet banking should be in web site for building the customer confidence for accessing the internet banking web site. **Other strategies**:
   - Incentives like reward schemes ,member rewards, bonus points , frequency of internet usage scheme, etc
   - Offering internet banking usage promotion in ATM counters for trial.

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 The factor trialability could be more important to Orissa customers than the others states in India because the advanced states might be more exposed to similar technologies and will be familiar with the usage of information technology. In this respect, trialability needs to be investigated and could be applied to potential adopters in Orissa.

Bank Strategies (Market Pull Strategy):

(1) **Proactive Approach**: Cyber Law awareness, govt support regarding cyber law and banks should work with financial regulation authority or board.

(2) **Target Market strategy**: Banks should identify customers with high income as the first main concern and effort to transfer them for internet banking transactions. This will involve extensive analysis of customer’s needs and wants and the need for customized internet banking services required for them.

(3) **Social Reengineering Strategy**: Banks should re-evaluate their strategic decisions as well as their campaign regarding their internet banking with respect to consumer adoption of an innovative distribution channel which is affected by perceptions of a useful and easy to use system, its diffusion innovation will be based on the social transformation that will pull consumers into markets such as the perceived impact on social image resulting from the adoption of the technology innovation and the ability to describe the benefit of the innovation to other members of the social system with whom they relate.

(4) **Differentiation Strategy**: Due to changing customer needs, banks should adapt new ground-breaking solutions in banking services with those new customer needs. For enhancing the public and bank image, pioneering internet banking services can be a very important instrument in achieving this target. Banks can use internet banking services as a positive competitive advantage as well as differentiation strategy with other competitors. Banks offering internet banking services may use this service as an attraction tool for prospective customers.

(5) **New Product Development Strategy**: Banking research should concentrate on customer’s attitudes, values and behaviors in the adoption of Internet banking. It will help in understanding and anticipating customer requirements that can be incorporated in product development and banking services differentiation.

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Moderating Factors:

Targeting customers from different income and occupation to adopt internet banking services so that bank can aim at accurate customers. Minisatement analysis of internet banking usage of customers should be monitored in order to provide them with value added services in the future. Database marketing or target marketing should be adopted keeping in view of those customers targeted. Grass root level leadership should be done from the bank side so that technology innovation will be adopted and this technology adoption will have a greater role in the global digital economy through major technological investment in banks.