

# An Analysis of Factors Affecting the Adoption of E-Banking Services in Small Finance Banks in Karnataka



Aparna J. Varma, Ashwini J., Ranjith P. V., Jayan V. K.

**Abstract:** Nowadays Banks are quite important in the overall development of a country. The banking sector in India has gone through a tremendous technological change during 1990s. Banks have begun to use technology as a medium to serve its customers in a better and fast way. Electronic banking is very important development which has happened recently. E banking provide an opportunity for its customers to carry out any kind of banking activities with the access of internet. The recent trends show that the banks are shifting their focus from product centric model to customer centric model by means of developing new e-banking services. This holds good for small financial banks (SFBs) as well. However the SFBs are on its nascent stage, but it is on a technology adoption spree to efficiently manage their overall cost of operation. The main objective of this paper is to find out various components that have influence on the consumers who adopt electronic banking services purpose of this paper is to identify the various factors that affect the customers to adopt e-banking services with special reference to small finance banks in Karnataka.

**Key words :** E-banking ,Adoption, Perceived ease of use, Security ,Employee Support, Social Influence

## I. INTRODUCTION

The e-commerce driven revolution is changing the way industries operate and the way consumers are benefitted. The advancement in ICT has brought a sea change in the banking industry as well. The term “Internet banking” talks about a lot of banking services which can be availed using the web revolution [1]. E-banking, also known as online banking, Internet banking can be used by the consumers of a financial organisation to have a lot of transactions using the internet and the web media of the company [2]-[3].

Manuscript received on February 10, 2020.

Revised Manuscript received on February 20, 2020.

Manuscript published on March 30, 2020.

\* Correspondence Author

**Dr. Aparna J Varma\***, Associate Professor, Department of MBA, GSSSIETW, Mysore, India. E-mail: aparnajvarma@gmail.com/aparna.varma@gsss.edu.in

**Dr. Ashwini J**, Freelance Consultant, Department of Human Recourse Management and Sociology, University of Mysore, India. E-mail: ajg3523@gmail.com

**Dr. Ranjith P V**, Associate Professor, Department of MBA, CMS Business School, Jain deemed to be university, Bangalore E-mail: dr.ranjith@cms.ac.in

**Dr. Jayan V K**, Associate Professor, Department of MBA, GSSSIETW, Mysore, India. E-mail: jayanvk@gsss.edu.in

© The Authors. Published by Blue Eyes Intelligence Engineering and Sciences Publication (BEIESP). This is an [open access](http://creativecommons.org/licenses/by-nc-nd/4.0/) article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

The recent trends show that the banks are shifting their focus from product centric model to customer centric model by means of developing new e-banking services[4]. This holds good for small financial banks as well. However the Small financial banks are on its nascent stage, but it is on a technology adoption spree to efficiently manage their overall cost of operation.

The main objective of the small finance banks in India is to cater the diverse needs of the low income population of the country. With a need of financial inclusion in the country RBI has issued licence to 10 small finance banks. The Ujjivan financial services Pvt Ltd and Jana Lakshmi Financial Services Pvt Ltd are the two SFBs with Karnataka origin. Most of the banks have spent a lot of money on various platforms to make the transactions more easy, faster and more secure for the consumers . The whole host of benefits offered by the banks include internet banking, mobile banking, SMS and missed call banking and biometric enabled ATMs.

## II. REVIEW OF LITERATURE

Electronic banking contains different areas that help consumers of banks to do business or to get different pieces of information on the different products and services through a public or private network including the websites [5]. Studies have revealed that perceived relative advantage is positively related to adoption of an innovation[6] –[8]. TAM model proposes that an individual’s intention to adopt a technology is influenced by perceived ease of use and usefulness [9]. Baabdulla M et al did a study to find out and analyse the most relevant components that could say the Saudi customer’s continued intention towards adoption of mobile banking [10]. The findings which was done using structural equation modelling analysis talked about the effect of perceived privacy, perceived safety, and Task Technology Fit (TTF) model on the customers’ continued thinking to use banking using mobile. Adekannbi Jo and Aje Mo studied the impact of electronic service quality (E-Squal) on consumer happiness and loyalty intentions in the undergraduate age group in Nigeria [11]. The different dimensions considered for the study are efficacy, timely availability, fulfilment etc. The study observed that only efficacy and the quick response have significantly influenced the customer happiness, whereas fulfilment was the only dimension that significantly influenced loyalty intentions. Moreover, the study found that there is a positive and reasonably powerful significant correlation between consumer happiness and how much they are loyal.

Hammoud et al have investigated the correlation between the different components of electronic banking quality of service and consumer in the banking sector in Lebanon [12]. The study finds out that how the services are reliable and efficient have influence on consumer happiness. The study also shows that easiness of the procedure, the response nature of employees and the communication given are also important components.

Along with this safety and privacy factors also important with respect to consumer happiness. Reliability had the most important effect on consumer happiness. Xiao et al have considered a simplified version of TAM model to unveil the factors influencing the customer intention to adopt E-banking services in Shandong province, China [13]. A linear model of regression was used by taking 4 independent variables: Perceived usefulness, perceived ease of use, perceived credibility and perceived cost and dependent variable as behavioral intention. Perception of the service and how credible the service is have contributed to and have a positive influence on consumer intentions to adopt E-banking in Shandong Province. Beh Yin Yee and T.M. Faziharudean have talked about a study to find out about dimensions that will help in creating loyal consumers who use internet banking websites [14]. The various factors considered for the study are quality of service, perceived value, trust, habit and reputation of the bank. The survey was done using a sample having internet banking users in Malaysia. The result revealed that quality of service and perceived value are not having any significant influence in creating customer loyalty. The most essential factors that influence the retention of the customer was found to be reputation of the bank. Polasik & Wisniewski investigated the internet adoption factor with the help of a binomial logistic regression model [15]. Perceived level of security, familiarity with the internet and demographic variable: educated male living in urban area are important indicators of the internet adoption status. Tao and Teo have proposed a research framework to find out the social and other behaviour factors that would influence the adoption of

internet banking and identified that the former has less significant influence on the adoption status than the other two variables taken into consideration [16]. Nisbet investigated the role of employees as change agent for the successful customer adoption of technology and it was identified that employees have to be involved in the diffusion process which will in turn fasten the technological adoption of the customers [17].

**III. OBJECTIVE OF THE STUDY**

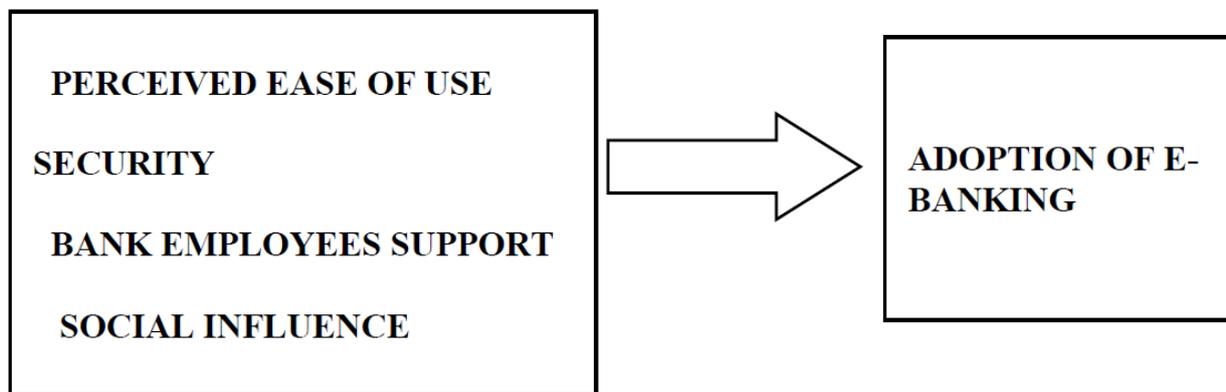
The main objective of the study is to identify the different components that influence the adoption of electronic banking services and examine the effect of select variables on the way people accept electronic banking service at small finance banks in Karnataka.

**IV. SCOPE OF THE STUDY**

The paper will provide an empirical implication for the marketers and small finance banking service providers to focus on the main areas that are important for the bank customers with respect to E-banking. The paper shall be replicated for similar services which will be using internet as a medium of distribution.

**V. METHODOLOGY**

The whole study is qualitative and descriptive in the nature with the use of data collected from journals and at source. The data was collected by using questionnaire method and other data were obtained from various research articles and books. The questionnaire used was divided into two parts with first part consists of data of the respondents and the second part consists of questions on the 5 variables selected for the study. The researchers have used sampling based on convenience with a sample size of 100 customers of small finance banks with Karnataka origin. Correlation and multiple regression analysis were done to test the correlation between the statements.



**FIG 1: CONCEPTUAL MODEL**

The following figure shows the proposed research framework used for the study.

**VI. RESEARCH HYPOTHESES**

- H1: There is a significant relationship between perceived ease of use and adoption of e-banking services
- H2: There is a significant relationship between security and adoption of e-banking services.

H3: There is a significant relationship between social influence and adoption of e-banking services.

H4: There is a significant relationship between bank employees support and adoption of e-banking services.

**VII. DATA ANALYSIS AND INTERPRETATION**

**Table – I. Demographic Details of the respondents**

|                |                |    |
|----------------|----------------|----|
| Gender         |                |    |
|                | Male           | 43 |
|                | Female         | 57 |
| Age            |                |    |
|                | 21-30          | 72 |
|                | 31-40          | 11 |
|                | 41-50          | 14 |
|                | Above 51       | 3  |
| Marital Status |                |    |
|                | Single         | 57 |
|                | Married        | 43 |
| Occupation     |                |    |
|                | Govt Sector    | 38 |
|                | Private Sector | 32 |
|                | Self Employed  | 14 |
|                | Student        | 8  |
|                | Home maker     | 8  |
| Annual Income  |                |    |
|                | < 5Lakhs       | 72 |
|                | 5-10 Lakhs     | 23 |

|           |                     |    |
|-----------|---------------------|----|
|           | Above 10 Lakhs      | 5  |
| Education |                     |    |
|           | PUC                 | 10 |
|           | Graduate            | 33 |
|           | Post Graduate       | 44 |
|           | Professional Degree | 13 |

**Table-II. Reliability Test**

| Reliability Statistics |            |
|------------------------|------------|
| Cronbach's Alpha       | N of Items |
| .910                   | 21         |

**Table –III**

| Case Processing Summary                                       |          |     |     |
|---|----------|-----|-----|
|   |          | N   | %   |
| Cases   | Valid    | 100 | 100 |
|   | Excluded | 0   | 0   |
|   | Total    | 100 | 100 |
| a. Listwise deletion based on all variables in the procedure. |          |     |     |

**Table -IV**

| Item-Total Statistics          |                            |                                |                                  |                                  |              |
|--------------------------------|----------------------------|--------------------------------|----------------------------------|----------------------------------|--------------|
|                                | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted | No. of Items |
| Perceived Ease of use          | 15.0267                    | 10.666                         | .791                             | .886                             | 5            |
| Security                       | 15.2372                    | 11.326                         | .812                             | .883                             | 4            |
| Social Influence               | 15.4280                    | 11.324                         | .702                             | .904                             | 3            |
| Employee support               | 15.3647                    | 11.252                         | .770                             | .890                             | 5            |
| Adoption of E-Banking Services | 15.0822                    | 10.144                         | .800                             | .885                             | 4            |

Reliability test has been used to test the reliability of the scale used for data collection. Cronbach's Alpha index was calculated to evaluate the reliability of the research instrument. The items having a coefficient value of 0.70 and

more are considered as adequate [18]. In this study 21 items are considered for the study with the help of SPSS 21. The overall reliability of all variables is 0.910 which means the result of all variables are reliable for further study.

**Table-V. orrelation Table**

|                       |                       |          |                  |                  |          |
|-----------------------|-----------------------|----------|------------------|------------------|----------|
|                       | Perceived Ease of use | Security | Social Influence | Employee Support | Adoption |
| Perceived Ease of use | <b>1</b>              |          |                  |                  |          |
| Security              | .745**                | <b>1</b> |                  |                  |          |
| Social Influence      | .578**                | .656**   | <b>1</b>         |                  |          |
| Employee Support      | .603**                | .703**   | .678**           | <b>1</b>         |          |
| Adoption              | .780**                | .696**   | .586**           | .699**           | <b>1</b> |

The above table shows the correlation between the variables and it is evident that perceived ease of use has a high correlation (0.780) with adoption as compared to other variables.

**Table –VI. Regression Analysis**  
**Variables Entered/ Removed <sup>a</sup>**

| Model | Variables Entered   | Variables Removed | Method |
|-------|---|-------------------|--------|
| 1     | Employee Support, Perceived Ease of use, Social Influence, Security | .                 | Enter  |

a. Dependent Variable: Adoption of E Banking Services

b. All requested variables entered.

**Table-VII**

**Model Summary**

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .832 <sup>a</sup> | .693     | .680              | 2.40342                    |

a. Predictors: (Constant), Employee Support, Perceived Ease of use, Social Influence, Security

From the above table it can be observed that the R Square score is 0.693 and adjusted R Square score is 0.680. These scores tell that the variables used to identify the electronic service adoption can explain the 68% of the equation.

**Table -VIII**

**ANOVA <sup>a</sup>**

| Model |            | Sum of Squares | df  | Mean Square | F      | Sig.              |
|-------|------------|----------------|-----|-------------|--------|-------------------|
| 1     | Regression | 1265.028       | 4   | 316.257     | 54.749 | .000 <sup>b</sup> |
|       | Residual   | 560.315        | 97  | 5.776       |        |                   |
|       | Total      | 1825.343       | 101 |             |        |                   |

a. Dependent Variable: Adoption of E-Banking Services

b. Predictors: (Constant), Employee Support, Perceived Ease of use, Social Influence, Security

From the above table it is evident that the regression model is significant since  $p < 0.05$

**Table -IX**

**Coefficients <sup>a</sup>**

| Model                 | Unstandardized Coefficients |            | Standardized Coefficients | t     | Sig. |
|-----------------------|-----------------------------|------------|---------------------------|-------|------|
|                       | B                           | Std. Error | Beta                      |       |      |
| (Constant)            | -.451                       | 1.173      |                           | -.385 | .701 |
| Perceived Ease of use | .457                        | .075       | .527                      | 6.115 | .000 |
| Security              | .358                        | .149       | .228                      | 2.681 | .002 |
| Social Influence      | .033                        | .123       | .022                      | .265  | .792 |
| Employee Support      | .305                        | .082       | .324                      | 3.724 | .000 |

**Dependent Variable: Adoption of E-Banking Services**

From the above table it can be observed that , the relationship between 3 variables perceived ease of use, safety and security and employee support with E-banking adoption are significant since the  $p < 0.05$ . Whereas the relationship between social influence and adoption of e-banking services are not significant since  $p > 0.05$ . Therefore it can be stated that H1,H2 & H4 are accepted.

In accordance with the coefficient value presented in the above table, the regression equation can be established as Adoption of E-Banking Services =  $-0.451 + 0.457(\text{Perceived Ease of Use}) + 0.358(\text{Security}) + 0.033(\text{Social Influence}) + 0.305(\text{Employee Support})$ .

**Table X- Hypotheses Testing – Conclusion**

| Sl.No | Hypotheses   | Result   |
|-------|--|----------|
| 1     | H <sub>1</sub> : There is a significant relationship between perceived ease of use and adoption of e- banking services.  | Accepted |
| 2     | H <sub>2</sub> : There is a significant relationship between security and adoption of e-banking services.                | Accepted |
| 3     | H <sub>3</sub> : There is a significant relationship between social influence and adoption of e- banking services.       | Rejected |
| 4     | H <sub>4</sub> : There is a significant relationship between bank employees support and adoption of e- banking services. | Accepted |

**VIII. CONCLUSION**

The banking sector in India is going through a massive change with the advancement of technology. Technology advancement and growing competition have made the banking industry to come up with self-service technologies for its customers. Such services have made its customers as well as the bank employees life much easier. The study was an effort to recognize the influence of select factors like perceived ease of use, security, social influence and employee support in adoption of E-services from small finance banks customers in Karnataka. Banks can gain competitive advantage in the industry only if they keep upgrading their e-services for the customers. The findings will shed lights to the future researchers in the area of technological adoption. The result will also help the bankers to redesign its services so as to meet the customer expectations and thereby increasing the profitability.

**REFERENCES**

- Polasik, M., & Wisniewski, T. P. (2009). Empirical analysis of internet banking adoption in Poland. *International Journal of bank marketing*.
- Daniel, E. (1999). Provision of electronic banking in the UK and Republic of Ireland, *International Journal of Bank Marketing*, 17(2), 72-82.
- Sathye, M. (1999). Adoption of Internet banking by Australian consumers: An empirical investigation. *International Journal of Bank Marketing*, 17(7), 324-334.
- Singh, B., Malhotra, P. (2004) Adoption of internet banking: An empirical investigation of Indian banking sector, *Journal of Internet Banking and Commerce*, 9 (2)
- Suki, N. M. (2010). An empirical study of factors affecting the internet banking adoption among Malaysian consumers?. *The Journal of Internet Banking and Commerce*, 15(2), 1-11.
- Tornatzky, L.G., & Klein, K.J. (1982). Innovation characteristics and innovation adoption implementation: A meta-analysis of findings, *IEEE Transactions on Engineering Management*, 29(1), 28-44.
- Rogers E. (1983). *Diffusion of innovations*. New York: Free Press.
- Agarwal, R., & Prasad, J. (1998). A conceptual and operational definition of personal innovativeness in the domain of information technology. *Information Systems Research*, 9(2), 204-215.
- Davis, F. D. (1985). A technology acceptance model for empirically testing new end-user information systems: Theory and results (Doctoral dissertation, Massachusetts Institute of Technology).

- Baabdullah, A. M., Alalwan, A. A., Rana, N. P., Patil, P., & Dwivedi, Y. K. (2019). An integrated model for m-banking adoption in Saudi Arabia.
- Jo, A., & MO, A. (2018). Factors Influencing Customer Satisfaction and Loyalty to Internet Banking Services among Undergraduates of a Nigerian University. *Journal of Internet Banking and Commerce*, 23(1), 1-21.
- Hammoud, J., Bizri, R. M., & El Baba, I. (2018). The impact of e-banking service quality on customer satisfaction: Evidence from the Lebanese banking sector. *SAGE Open*, 8(3), 2158244018790633
- Tipi, L., Xiao, Y., Sukunar, A., & Edgar, D. (2017). Factors influencing people’s intention to adopt e-banking: an empirical study of consumers in Shandong Province, China. *Asian Journal of Computer and Information Systems*, 5(3), 26-43.
- Yee, B. Y., & Faziharudean, T. M. (2010). Factors affecting customer loyalty of using Internet banking in Malaysia. *Journal of Electronic Banking Systems*, 2010(2010), 21.
- Polasik, M., & Wisniewski, T. P. (2009). Empirical analysis of internet banking adoption in Poland. *International Journal of bank marketing*.
- Tan, M., & Teo, T. S. (2000). Factors influencing the adoption of Internet banking. *Journal of the Association for information Systems*, 1(1), 5.
- Nisbet, S. (2009). The role of employees in encouraging customer adoption of new gaming machine payment technologies. *International Journal of Contemporary Hospitality Management*.
- Nunnally, J. C. *Psychometric Theory*, New York: McGraw-Hill, 1967

**AUTHORS PROFILE**



**Dr. Aparna J Varma**, Associate Professor, Dept of MBA, GSSSIETW, Mysore is an academician in the area management from the past one decade. Her area of teaching is in Marketing, Human Resources and Quantitative Techniques. Her area of research interest include Services Marketing, Retail Management Consumer Behaviour and Learning and Development. She has done her Ph.D in the area of Retail Management from the University of Mysore. Mail ID : [aparnajvarma@gmail.com](mailto:aparnajvarma@gmail.com)/ [aparna.varma@gsss.edu.in](mailto:aparna.varma@gsss.edu.in)





**Dr. Ashwini J**, is a freelance consultant, trainer and faculty in the area of management. Her area of expertise is in the field of Information Technology, Human Resource Management and Sociology. Her research areas include Organization Behaviour, Organization Development and Digital marketing. She has done her Ph.D in the area of Quality of Work Life from the University of Mysore. Mail. ID: [ajg3523@gmail.com](mailto:ajg3523@gmail.com)



**Dr. Ranjith P V**, Associate Professor, CMS Business School, Jain deemed to be university, Bangalore is an academician in the field of management for the last 2 decades. His areas of teaching include Quantitative Techniques and Research Applications in the field of management. His research areas include Service Quality, Consumer Behaviour and Operations Effectiveness. He has worked in reputed management colleges in Mumbai and presently he is working as associate professor at CMS Business school, JAIN Deemed to be University, Bengaluru. He has published in peer reviewed journals on various areas in management and has won academic awards also for the various contributions in teaching fields. Mail. ID: [dr.ranjith@cms.ac.in](mailto:dr.ranjith@cms.ac.in)



**Dr. Jayan V K**, Associate Professor, Dept of MBA, GSSSIETW, Mysore is an academician in the field of management for the last 2 decades. His areas of teaching are Finance and Economics. His area of research include Working Capital Management and Entrepreneurship. He has done his Ph.D in working capital management of Micro Industries from Bharathiar University, Coimbatore. Mail. ID: [jayanvk@gsss.edu.in](mailto:jayanvk@gsss.edu.in)