AN ANALYSIS OF GROWTH IN START UP OF INNOVATIVE BUSINESS INCUBATION THROUGH MOBILE APPLICATION SYSTEM IN BANKING SECTOR

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ABSTRACT

The research paper aims to empirically examine the factors which are responsible to enhance the promotion of mobile banking services among public and private sector banks. The researcher collected the data through structured questionnaire from customers availing e banking services of public and private sector banks in jaipur city of Rajasthan state. The research analysis helps to identify and correlate various dimension responsible to retain and attract the new customer for innovative e banking services . A structured questionnaire was distributed to 400 respondents .Data had been analyzed through multiple Pearson correlation and multiple regression analysis.

An analysis has been commenced from formulating the hypotheses to identify the impact of mobile -banking services on incubation of public and private sector banks. The results show that there is a positive relationship exists between technology innovation in mobile banking services and customer satisfaction. The results helps to reveal that there is a significant relationship between technology innovations in e banking services in both public and private sector banks. The exploratory research design has been implemented. A research also focused on the key dimensions of promotion of start up services for customers of both public and private sector banks. The result showed that online banking benefits, business support services, security were positively associated with start up in banks. This research had been conducted in Jaipur city of Rajasthan state and future research can use this to evaluate customer satisfaction in other countries. Current research result becomes helpful for the bank's policy makers to develop an effective promotion for mobile banking services and to make available the competent services to the users in recent scenario.

Keywords: *Mobile banking, Information Technology, Start up, business, Incubation.*

Introduction

E-banking signifies the **Information Technology Based Banking**. Mobile banking services have been delivered through Network - Controlled System. There is a direct interface in customers and banks websites, so **Net Banking** must be user friendly. The customers need not to visit the bank branches any more. Now a day's banking sector in India is moving towards competitive age, it is one of the large sector that indulge with large customers. The traditional banking have been shifted to an alternative delivery channels of ATMs, EFT.

The expansion of IT now offers Tele banking, Direct bill payment, EFT (NEFT/RTGS), Mobile banking. Customers are now able to pay Bills, Deposit and Transfer funds, Request for loan and account statements with secure transactions. IT Act 2010 enacted by GOI provides legal guidelines of e –commerce transactions. RBI as well as GOI also issued the updated regulatory and supervisory functions and guidelines to minimize the risk in internet banking. RBI described three types of e banking services based on the levels of access granted. **Information Only System, E- Information Transfer System and Fully E Transactional System.** Successful implementation of E-banking system depends upon data security in network and online control measures. Today Indian banking sector offers an information technology enabled banking services to their customers to provide them vital, accurate and 24* 7 online banking services. Yet banks have been shifts their focus to customer retention, creditability through customer satisfaction.

The specific research aims to find out impact of start up of mobile banking services on customer satisfaction in leading banks. Innovative information technology tools have been offered by the banks to increase the satisfaction among customers and to retain more customers with bank.

LITERATURE REVIEW –

Shows Dimension on Literatured Reviewed

.NO.	Table 1.1 Dimensions on Literature Reviewed	
	Dimensions	No. of Review Literature
1	Review on Banks	9
2	Review on Customers	5
3	Review on Information Technology	9

Dimensions of Review Literature

39% Review on Banks
22% Review on Customers
39% Review on Information Technology
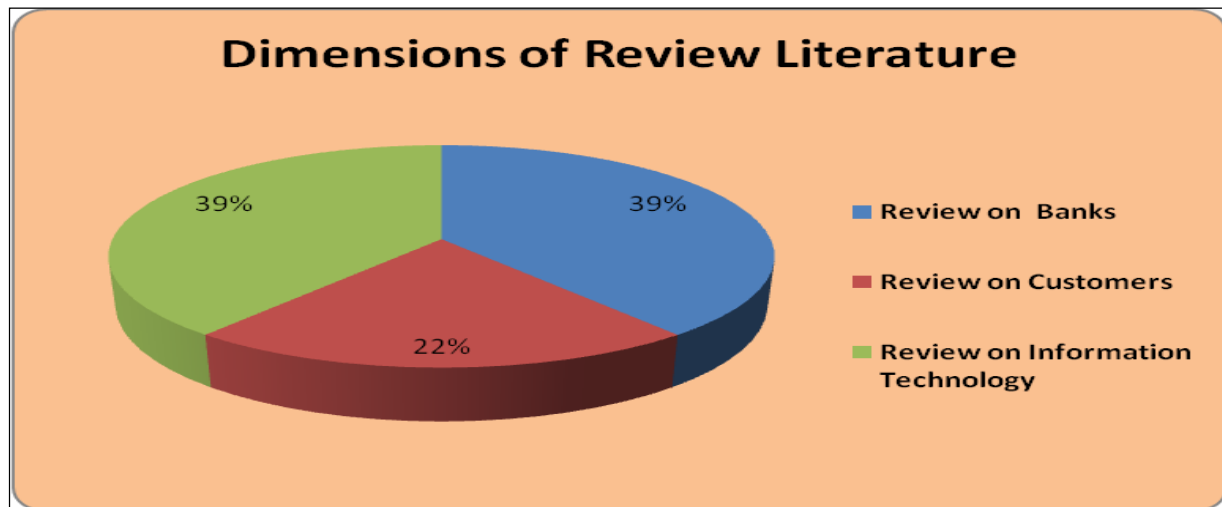
Source : Literatured Reviewed   Source : Literatured Reviewed

Review on Banks

Technology in banking & Customer Perception

Komal & Vandna (2017) in their research paper examined various ways of online banking services with the evolution of e-banking in India. The e-banking growth scenario with **ATM, Mobile banking in India with** their impact on customer satisfaction and the problems faced in e banking had been analyzed by the researcher. This research focused on the comparative study of PSIB banks **and foreign banks in India.** The study concluded an enormous opportunities in online -banking yet there is a requirement to explore them.

Employee Perceptions

Oladejo & Akanbi (2016) examined bank employees' perceptions in post consolidation era about **e banking in Nigeria** with risks factors .In this study primary data source had been used and data had been analyzed using mean score method. They stated that in Nigeria bankers identify **e- banking as tool to reduce transaction costs**, minimize inconvenience and quick response for customers query. There is a need to study how the customers gets encrypted and firewall protected banks websites with other essential data security in online banking.

Review on Customers

Service Quality & SERVIQUAL Dimensions

Floh & Treiblmaier (2015) surveyed about service quality and significance of reliability, quality of the **banks' Web site,** and customer satisfaction in **an Austrian online bank**. In this research paper they **surveyed more than 2,000 customers of an Austrian online bank** and a structural equation modeling approach was used to gain an insight about the customer retention with banking business.

E-Banking and Customer Satisfaction and CRM

Nupur Jannatul (2014) investigated the **customer satisfaction with the** various dimensions of e-banking **in Bangladesh within the p**eriod of **2006 – November 2009. Researcher studied the SERVQUAL model** with 5 dimensions of service quality as reliability, responsiveness, assurance, empathy and tangibility .The study analyzed the relationship between banks and corporate customers to identify the success factor in financial services.

Research Questions

- ***Research Question 1: W***hether the customer aware about the various E- Banking services provided by their banks in recent scenario?

- ***Research Question 2***: **I**s there any relationship between adoption of mobile Banking Services and start up of business incubation?

- ***Research Question3:* D**oes the customer feel safe about Data Privacy and Security on the bank's website in mobile banking transactions?

- ***Research Question4:* H**ow many customers are satisfied with their banks with online support services in operational problem?

Objectives

- To study the impact of emerging trends in e banking services in banks.

- To investigate the awareness, satisfaction level among customers and belief about mobile banking, EFT, RTGS and Credit cards.

- To identify the problems faced by the customers in e-banking operations offered banks

- To determine the challenges faced in implementation of e banking operations banks.

- To offer suitable suggestions to improve e-banking services and to increase the credibility of start up in banks.

Hypothesis

- **Ho**: There is no significant association of emerging mobile -banking services on customers satisfaction.

- **Ha:** There is a significant association of emerging mobile -banking services on customers satisfaction

RESEARCH METHODOLOGY

Research Design: The exploratory and Descriptive research design

Exploratory research design had been useful for the researcher to decide the flow of research, data collection method and selection of respondents The research design also integrated **B2C E-commerce Model** to measure the impact of promotion of e banking services for customer satisfaction and risk associated in E banking.

Sampling Technique   ---   Stratified Random Sampling

The population has been divided in two strata on the basis of Public and Private sector banks by the researcher.

	Banks	No. of Customers	
Strata1	Public Sector Banks	200	Total Sample size **400**
Strata2	Private Sector Banks	200	
	Total	400	

Source: Primary Data

Sample Size

Exploratory and Descriptive research design has been used to carry out the research on selected public sector as well as private sector banks of **jaipur city** in Rajasthan state.

Banking Sector	Selected Banks	Bank's Branches in Jaipur City Dtd FY 2016-2017	Bank's Customers	Total Respondents
Public Sector Banks	SBI Bank	110	100	100
Public Sector Banks	PNB Bank	95	100	100
Private Sector Banks	Axis Bank	26	100	100
Private Sector Bank	HDFC Bank	36	100	100
Total			400	400

Source: Primary Data & www.rbi.org.in

Data Collection Method ---   Primary Data

The research is based on structured questionnaire administered on customers of Public and Private sector banks in Jaipur city of Rajasthan State. Structured questionnaires are **Quantitative and Qualitative in nature.** Primary Data had been collected using "5 point Likert scale". There were **three Sections of Structured Questionnaire** which are as given : **Section A -** Demographic Profile of Respondents. **Section B** Bank's Name of Respondents. **Section C** -Statements on **various Dimensions**

3.   Mobile Banking Benefits

4.   Reliability

5.   E banking Tools and Customer Satisfaction

6.   Customer Support Services

7.   Data Security

Content and Construct Validity With Measure of Sample Adequacy Using KMO and Bartlett's Test

To ensure the high degree of reliability of the collected data, the researcher thoroughly examined each statement for the study on customer satisfaction with e banking services. Kaiser-Meyer-Olkin (KMO) and Bartlett's test has been applied to measure the sample adequacy and strength of the relationship among factors. The researcher found that each item in both structured questionnaires had a meaning and associated to the objectives of the study.

Table 1.3 Kaiser-Meyer-Olkin (KMO) and Bartlett's Test on Questionnaire Administered to Customers of Public and private sector banks

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Bartlett's Test of Sphericity		
	Approx. Chi-Square	Df	Sig.
0.799	738.318	10	.000

Source: SPSS 22 Result of Primary Data

The KMO ranges from 0 to 1 with an accepted index for further study must be over 0.6. Above table 1 shows the KMO measure is greater than 0.60 in the present study which is satisfactory for the sample adequacy and further hypothesis test. The Bartlett's test of Sphericity relates to the significance of the study and must be less than 0.05. It can be seen in given table that Bartlett's test of Sphericity value is less than 0.05, it is actually 0.000 shows significant for the study.

Secondary Data: **A**nnual reports, Peer reviewed reputed journal ,Bank's Website.

Independent and Dependent Variables

There is a strong association between a satisfied and retained customer with highly efficient innovative online banking service. The growth and customer satisfaction have been influenced through effective implementation of information technology in banking services.

Dependent Variable	Independent Variable
Start up promotion & customer satisfaction	Online mobile Banking Benefits
	Reliability
	Customer Support Services
	Data Security in E-Banking Risk

PILOT STUDY - RELIABILITY and VALIDITY

Researcher investigated the "Cronbach's alpha or "the reliability coefficient" in Pilot study. Pilot study had been conducted on responses of 150 customers out of 400 respondents for all dimensions.

Table 1.4 Pilot Study – Reliability Statistics - Results Of Cronbach's Alpha on Questionnaire Administered To Customers

Sr. No.	Study Dimensions	Reliability Statistics	
		No. of Items	Cronbach's Alpha value
1	Online Banking Benefits	6	.771
2	Customer Satisfaction with Innovative E-Banking services	23	.752
3	Reliability	5	.754
4	Customer Support Services	4	.761
5	Data Security and Privacy	5	.732

Source: SPSS 22 Result of Primary Data

Pilot study results depicts that Cronbach's alpha values were more than **0.70** in all dimensions and results were found acceptable & indicates a high level of internal reliability.

DATA ANALYSIS -> HYPOTHESIS TESTING and DISCUSSION

"Multiple – Pearson's Correlation"

H_o: There is no significant association of emerging mobile -banking services on customers satisfaction

H_a: There is a significant association of emerging mobile -banking services on customers satisfaction.

2.1 "Correlation Analysis of Public Sector Banks"

Table 2.1 (Public Sector Bank) Correlation[a]

		Customer Satisfaction	Null Hypothesis Accept/Reject
Online Banking Benefits	Pearson Correlation	.318**	Reject
	Sig. (2-tailed)	.000	
	N	200	
Reliability	Pearson Correlation	.554**	Reject
	Sig. (2-tailed)	.000	
	N	200	
Customer Support Service	Pearson Correlation	.185**	Reject
	Sig. (2-tailed)	.009	
	N	200	
Data Security	Pearson Correlation	.457**	Reject
	Sig. (2-tailed)	.000	
	N	200	

Source: "SPSS 22 Result of Primary Data"

Inference: Correlation analysis in PSUs banks shows that there is a degree of relationship between Online Benefits, Reliability, Customer Support Service and Data Security with Customer Satisfaction. It can be seen in given table that there is a significant relationship between all the parameters with customer satisfaction. In PSUs bank *Reliability* is a factor which has highest **Pearson correlation value 0.554** and **sig value .000** which indicates that there is a significant correlation between reliability and customer satisfaction. It has analysed that null hypothesis has rejected in all the dimensions which shows that there is a significant association among emerging mobile banking start up of banks and customers satisfaction with the e-banking services in public sector banks.

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2.2 "Correlation Analysis of Private Sector Bank"

Table 2.2 (Private Sector Bank) Correlations[a]

		Customer Satisfaction	Null Hypothesis Accept/Reject
Online Banking Benefits	Pearson Correlation	.543[**]	Reject
	Sig. (2-tailed)	.000	
	N	200	
Reliability	Pearson Correlation	.652[**]	Reject
	Sig. (2-tailed)	.000	
	N	200	
Customer Support Service	Pearson Correlation	.237[**]	Reject
	Sig. (2-tailed)	.001	
	N	200	
Data Security	Pearson Correlation	.608[**]	Reject
	Sig. (2-tailed)	.000	
	N	200	

Source: "SPSS 22 Result of Primary Data"

Inference: Correlation analysis in PSIB banks shows that there is a degree of relationship between Online Banking Benefits, Reliability, Customer Support Service and Data Security with Customer Satisfaction. The above table revealed that in PSIB banks there is a significant relationship between all the parameters with customer satisfaction. In PSIB banks *Reliability* dimension has highest **Pearson correlation value 0.652** and **sig value .000** which indicates the significant correlation between Reliability and Customer Satisfaction. Then *Data Security* has **second highest Pearson correlation value 0.608** and **sig value .000** that indicates a significant correlation between Data Security and Customer Satisfaction. *Customer Support Service* has **Pearson correlation value 0.237** and **sig value 0.000** which indicate a significant and moderate correlation between Customer Support Service and Customer Satisfaction. It has analysed that null hypothesis has rejected in all the dimensions which shows that there is a significant association among emerging mobile application and customers satisfaction in banks.

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2.3 "Correlation Comparison Analysis of Customer Satisfaction between Public and Private sector Banks"

Table 2.3 Correlation Comparison Analysis Customer Satisfaction in PSUs and PSIBs Banks Correlation[a]

		Customer Satisfaction in PSUs Banks	Customer Satisfaction in PSIBs Banks
Online Banking Benefits	Pearson Correlation	.318**	.543**
	Sig. (2-tailed)	.000	.000
	N	200	200
Reliability	Pearson Correlation	.554**	.652**
	Sig. (2-tailed)	.000	.000
	N	200	200
Customer Support Service	Pearson Correlation	.185**	.237**
	Sig. (2-tailed)	.009	.001
	N	200	200
Data Security	Pearson Correlation	.457**	.608**
	Sig. (2-tailed)	.000	.000
	N	200	200

Source: "SPSS 22 Result of Primary Data"

Inference: It is evident that Customers **of PSIBs bank are more satisfied** as compare to PSUs banks in all dimensions. It can see than in terms of ***online banking benefits*** respondents of private sector banks were more satisfied than respondents of public sector banks, as in both cases null hypotheses have been rejected as sig. value is less than 0.05 and it has been proved that there is a significant association among online banking benefits and customers satisfaction with the e-banking services. In case of ***reliability*** in respondents of private sector banks the satisfaction level identified more as compare with public sector bank's respondents, however null hypothesis has been rejected in both the sectors as sig. value is less than 0.05 and it can be seen that there is a significant association among reliability and customer satisfaction with the e-banking services.

Conclusion

The foremost objective was "***To assess the impact of mobile banking services in start up in banks". However,*** to prove this objective, the framed hypothesis is ***"There is a significant association among emerging mobile banking adopted by banks and customers satisfaction"***. The Pearson – Correlation test has been performed to identify the association of independent variables with dependent variables of given research. Analysis drawn depicts that **"There is an association among mobile Banking Benefits, Reliability, Customer Support Service and Data Security with Customer Satisfaction in both PSUs and PSIBs banks.** Another objective was "T*o explore the Customer's awareness, customers satisfaction and belief about mobile –banking, EFT, RTGS, Internet banking and Credit cards to assess the problems faced by the customers in banks".*

Limitations

- The primary data has been collected from the jaipur city. Though jaipur is the capital of Rajasthan state and commercial center of North India, samples selected cannot be considered as a proper representation of the population of the India.

- The major limitation was the **availability of time** for data collection and analysis.

- Even though the researcher has collected data from the respondents with patience in their good mood there could have been personal **bias of the respondents.**

References

- Bhosale, Minakshi and K.M. Nalawade (2016).E-Banking Services: Comparative Analysis of Nationalized Banks**.** *International Journal of Engineering Research & Technology (IJERT)*, **1(8)**, 1-12.

- Brown, Irwin. and Ruwanga. Jayakody (2015). B2C E-Commerce Success: A Test and Validation of a Revised Conceptual Model. *The Electronic Journal Information Systems Evaluation ,* **11(3),** 167 – 184.

- Fozia (2015) A Comparative Study of Customer Perception toward E-banking Services Provided By Selected Private & Public Sector Bank in India**.** *International Journal of Scientific and Research Publications,* **3(9),** 1-5.

- Gunasekaran, K. and Poornima. M (2014) Structural Solutions to Internet Banking Frauds, *Cauvery Research Journal Special Issue on E-Services and its Emerging issues in the Global Business Environment*, pp.

- Kalia, Sumedha. and Urvashi Kalra (2014). Analysis of SBI Customer's Attitude towards E-Banking. *The International Journal's Research journal of science & IT Management, RJSITM,* **1(4),** pp 1-5.

- Mawa Nupur Jannatul (2013) E-Banking and Customers' Satisfaction in Bangladesh: An Analysis. *International Review of Business Research Papers, (6),* 145 – 156.

- Mishra, Suyash. and Kant. Rishi (2015) Effectiveness of Management Information System in Improving the Performance of Punjab National Bank (PNB). *International Journal of Business and Management Tomorrow* **2(5)**, 1-7.