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A Study On Impact Of Innovative Banking Services Rendered By Nationalized Banks

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Abstract: Today banking is known as innovative banking. Information technology has given rise to new innovations in the product designing and their delivery in the banking and finance industries. The tremendous advances in technology and the aggressive infusion of information technology had brought in a paradigm shift in banking operations. The banking industry has experienced a series of significant transformations in the last few decades. Among the most important of them is the E-Banking i.e. though Electronic channels, such as the telephone, the internet, the cell phone, etc. The concept and scope of E-banking is still evolving. It facilitates an effective payment and accounting system thereby enhancing the speed of delivery of banking services considerably. Due to E-Banking there is increase in customer satisfaction level, reduction in cost of banking operations, increased productivity and as such there is a tremendous scope for Indian banks to enlarge their E-banking services which could enhance their competitiveness. While E-banking has improved efficiency and convenience; it has also posed several challenges to the regulators and supervisors. The shift from traditional banking to online banking or digital banking has been gradual and should be rather described in degrees of digitalization services. It involves high levels of automation and web-based services. The paper suggests some measures to tackle the challenges faced by the banks particularly public sector banks.

Keywords: Information Technology, E-Banking Challenges, Opportunity, Consumers, Trends.

Introduction

Banking has gone through massive transformations in the past decades. This is a universal fact that the banking sector forms the core of any economy. Banking systems capture an important place in a nation's economy. A banking institution is indispensable in a modern society. The Banking sector in India has always been one of the most preferred areas of study. In this decade, this sector has emerged as a sunrise sector in the Indian economy. Banking in India has gone through a long journey. Indian banking sector has witnessed a number of changes. In the 1990s, the banking sector in India saw greater emphasis being placed on technology and innovation. Banks began to use technology to provide quality services at greater speed. Technology has not broken barriers but has also brought about superior products and channels. This has brought customer relationship into greater focus. It is also viewed as an instrument of cost reduction and effective communication with people and institutions associated with the banking business. Internet banking and mobile banking made it convenient for customers to do their banking form geographically diverse places.

Information Technology in the banking sector refers to the use of sophisticated information and communication technologies along with computer science to enable banks to offer better services to its customers in a secure, reliable and affordable manner. It also sustains competitive advantage over other banks. The significance of technology is prominently in the financial sector in view of the competitive advantage for banks resulting in the efficient customer service. In the development of Indian economy, banking sector plays a very important and crucial role. With the use of technology, there has been an increase in penetration, productivity and efficiency. It has not only increased the cost effectiveness but also has helped in making small value transactions viable. Electronic delivery channels, ATMs, variety of cards, web based banking, and mobile banking are the names of few facilities available due to the process of automation and computerization in the Indian banking sector.

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Review Of Literature

Machogu, A. M., & Okiko, L. (2015) research brought to light that with e-banking complexities on customer satisfaction. Results shows that there are factors which lead to customer satisfaction particularly in e-banking, which is one of the very important and fast growing way of doing banking. The factors such as accessibility, convenience, security, privacy, content, design, speed, fees and charges have influence on customer satisfaction where as the other factors notified have no significant influence.

Ameme, B., & Wireko, J. (2016) claimed in their research that in today's competitive world where technology plays a very important role and if we talk about banking sector or industry there is a positive relationship between technology and customer satisfaction. They also stated that satisfaction of customers is not merely introducing innovative products and services rather it is much more than that. They also found that if the bank wants to become the market leader in the competitive environment it must use the innovation approach in all the aspects like products and services. Also there is a significant relationship between technological innovation and cost. As the innovation increase the cost also increases.

Statement Of The Problem

The technological advancements all over the world have created a pressure for the use of better technology in the banking sector. Indian Banking System has witnessed some of the major problem due to the financial innovations are as follows. There exists a significant gap between the growth expectations and the ground realities. There is also a significant disparity among the people of rural and urban area in availing the services of the financial system. There is a need for effective tools to bridge the gap and bring in every section of people from all parts whether rural or urban to take part in the mainstream financial activities. The lopsided effect of the technology upgraded help the upper class of the people and the illiterates are still not able to attain the benefits. Hence, this study is about the technological innovations that are taken place in Indian banking sector and they have led to the changing trend from cash to cashless payments for easy, efficient and quicker customer service.

Objectives

1. To highlight the growing trend of innovations in the banking technology
2. To analyze the redressal mechanism and the levels of satisfaction of e banking services
3. To explore the problems and benefits of e-banking services
4. To give valid suggestions on the basis of the study

Sampling Design And Statistical Tools For Analysis

Statistical techniques such as Trend analysis, Chi-square, Correlation analysis, and T test were used for analyzing the data. Proportionate Random sampling method was employed to select the sample respondents. Totally 300 banking customers of State Bank of India, Indian Bank and Canara Banks were selected for the study and these 300 sample respondents are drawn from five taluks based on the magnitude of the users of banking services.

Hypothesis Of The Study

- Ho: There is no significant difference among the grievance redressal mechanism by banks
- Ho :There is no significant difference between Demographic Profile and level of satisfaction of e-banking services
- Ho : There is no significant difference between the Banking Profile and the level of Satisfaction of e-banking services.

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Growing Trend Of Innovation In Indian Banking Such As Digital Payments & NEFT/EFT

The table 1 reveals the results of Trend analysis and correlation in terms of Digital payments.

Table 1 Annual Turnover of Payment System Indicators in Volume (million)

Year	SIFMIs	Trend %	Total Paper Clearing	Trend %	Total Retail Electronic Clearing	Trend %	Total Card Payments	Trend %	Grand Total	Trend %
2010-11	27.8	100	1439.7	100	218.8	100	316.5	100	2002.8	100
2011-12	35.2	127	1376.8	96	280.6	128	387.2	122	2,079.80	104
2012-13	38.8	140	1376.1	96	313.7	143	404.4	128	2,133.00	107
2013-14	49.3	177	1387.4	96	406.3	186	502.2	159	2346.9	117
2014-15	56.9	205	1,341.9	93	512.5	234	678.1	214	2,589.30	129
2015-16	70.8	255	1,313.7	91	694.1	317	932.6	295	3,011.10	150
2016-17	83.7	301	1,257.3	87	1,108.3	507	1,261.8	399	3,711.10	185
2017-18	95.8	345	1,196.5	83	1,687.4	771	1,737.7	549	4,717.40	236
2018-19	101.4	365	1,096.4	76	3,141.5	1436	2,707.3	855	7,046.60	352
2019-20	111.5	401	1,206.7	84	4,222.9	1930	5,450.1	1722	10,991.20	549
2020-21	127.9	460	1,170.6	81	6,382.3	2977	8,207.6	2593	15,888.40	793
2021-22	140.2	504	1,123.8	78	12,466.7	5698	10,781.2	3406	24,511.90	1224
Mean	78.28	282	1273.9	88	2619.59	1197	2780.56	879	6752.46	337
SD	37.64		114.06		3,652.11		3,496.25		7,050.33	
R	0.99		-0.94		0.81		0.85		0.83	

Source: Compiled from Report on Trend and Progress of Banking in India

For the overall Payment System Indicators, Mean: 6752.46, SD: 7,050.33 and Correlation (r): 0.83 which is positive and high. The growth rate is calculated through trend analysis which is 1224 in the year 2021-22 with an average mean growth rate of 337 over the period from 2010-11 to 2021-22.

National Electronic Funds TransfeR NEFT/EFT

The table 2 shows the result of Trend analysis and correlation in terms of National Electronic Fund Transfer.

Table 2: National Electronic Funds Transfer NEFT/EFT

Year	NEFT/EFT		Trend %	
	Volume	Value	Volume	Value
2006-07	0.82	171.25	100	100
2007-08	2.55	546.01	311	319
2008-09	3.07	612.88	374	358
2009-10	4.78	774.46	583	452

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2010-11	13.32	1,403.26	1624	819
2011-12	32.16	2,519.56	3922	1471
2012-13	66.34	4,095.07	8090	2391
2013-14	132.34	9,391.49	16139	5484
2014-15	226.11	17,903.50	27574	10455
2015-16	394.13	29022.42	48065	16947
2016-17	661.01	43785.52	80611	25568
2017-18	927.55	59803.83	113116	34922
2018-19	1252.88	83273.11	152790	48627
2019-20	1622.10	120039.68	197817	70096
2020-21	1946.36	172228.52	237361	100571
2021-22	2318.89	227936.08	282791	133101
Average	600.28	48344.17	73204	28230
R	0.89	0.85		
	0.98			

Source: Trend and Progress of Banking, RBI Reports Volume in Lakh; Value in Rupee Crore

The table describes the growing trend of National Electronic Funds Transfer in India from 2006-07 to 2021-22. The trend is calculated with the help of trend analysis taking the base year 2003-04. The growth is phenomenal which has grown from 0.82 to 2318.89 lakhs in volume and from Rs. 171.25 Crore to Rs. 2, 27,936.08 Crore in value. As per the trend analysis, it is seen that growth rate is 2, 82,791 for the volume of NEFT/EFT and the same is 1, 33,001 for the value of NEFT/EFT**.** The correlation for the volume of transactions is 0.89, correlation for the value of transactions is 0.85 and between the volume of transactions and value of transactions is high and positive 0.98. Hence it is concluded that the growth is vital as far as NEFT/EFT transactions are concerned in the banking services.

Redressal Mechanism E -Banking Services
The following table 3 shows the T test for the Redressal Mechanism in e-banking services

Table 3 To Analyze the Redressal Mechanism in E-Banking services

Complaints	t	Sig.	SD	Mean	95% Confidence Interval	
					Lower	Upper
Undue delay	59.57	.000	0.48	1.65	1.59	1.70
Managing without complaining	57.93	.000	0.49	1.62	1.57	1.68
Complaint to Ombudsman	57.50	.000	0.49	1.62	1.56	1.67
Lodge an online complaint	54.71	.000	0.37	1.16	1.12	1.20
Days exceeding time frame	53.87	.000	0.50	1.55	1.49	1.61
Solved within a fixed time frame	53.58	.000	0.50	1.54	1.49	1.60
Days within the time frame	53.43	.000	0.50	1.54	1.48	1.60
Switch over to any other bank	51.65	.000	0.50	1.49	1.44	1.55
Discuss with immediate superior	50.79	.000	0.42	1.22	1.18	1.27
Lodge a written complaint	50.09	.000	0.50	1.44	1.38	1.49

Source: Primary Survey

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As per t test, Undue delay in getting the complaints solved score more with the value of 59.57 and is low for the complaint related to Lodge an online complaint 0.37. Hence it is observed that the delayed solving of complaints is the major issue faced by the sample respondents.

Levels Of Satisfaction On The E-Banking Services

The table 4 reveals the result of Chi-square, p value and their significance for the level of satisfaction on the e-banking services.

Table 4: Levels of Satisfaction on the E-Banking Services

Items	Value of Chi-Square	Significance level	Remarks
Demographic Profile			
Age	7.21	.302	Not Significant
Income	5.77	.449	Not Significant
Gender	2.55	.280	Not Significant
Occupation	4.63	.592	Not Significant
Marital Status	8.24	.083	Not Significant
Education	6.73	.346	Not Significant
Residential Status	.324	.850	Not Significant
Banking Profile			
Type of Banks	1.33	.856	Not Significant
Number of Bank Accounts	1.66	.948	Not Significant
Type of Cards	1.32	.518	Not Significant
Ownership of Credit Cards	5.15	.076	Not Significant
General Opinion	3.62	.459	Not Significant

Source: Calculated

From the ongoing analysis, it is understood that, from among the Demographic Profile, the variables Age, Income, Gender, Occupation, Marital Status, Residential Status and Education do not influence the Levels of Satisfaction on the E-Banking Services and among Banking profile the variables Type of Banks, Number of Bank Accounts, Type of Cards, Ownership of Credit Cards and General Opinion on E-Banking transactions do not influence the Levels of Satisfaction. Hence it is observed that both the variables under demographic Profile and banking Profile have no influence over the e-banking services because everybody ought to adopt the innovations irrespective of the backgrounds.

General Problems Of E- Banking Services

The table 5 shows the result of Anova and reliability statistics for the general problems faced by customers while using e-banking services.

Table 5: ANOVA for the General problems of E-Banking Services

Items		Sum of Squares	df	Mean Square	F	Sig
Between People		27524.743	299	92.056		
Within People	Between Items	2118.410	14	151.315	10.440	.000
	Residual	60671.857	4186	14.494		
	Total	62790.267	4200	14.950		
Total		90315.010	4499	20.074		
Reliability Statistics						
Cronbach's Alpha		.843				
N of Items		15				
Grand Mean = 7.4702						

Source: Derived

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The reliability statistics for the reasons for the General problems of E- Banking services reveal that the Sum of Squares between People is 27524.743 and Between Items is 2118.410 and the Mean Square between People is 92.056 and Between Items is 151.315. The value of $F_{(299, 14)}$: 10.440 with the p-value of 0.000, which is below the value of 0.05 and hence the statements taken for reasons for the General problems of E-Banking services are statistically significant. The grand means is 7.4702 and the Cronbach's Alpha value stood at .843, depicting high reliability of the statements for further statistical analysis.

Peculiar Problems In The Innovations Of Banking Technology

The following table 6 shows the factor analysis and Cronbach Alpha for the peculiar problems faced by the banking customers.

Table 6: Peculiar Problems in the Innovations of Banking Technology

Rotated Component Matrix			
	Component		
	Factor Loadings	% of Variance	Cronbach's Alpha
High Transaction Cost			
Errors in monthly statement	.764		
Delay in sending monthly statement	.713		
Difficulty in interacting with the issuing bank for grievances	.709		
Unsolicited phone call for cross selling of products like insurance, tour package.	.654		
High Transaction fee for dial a draft	.645		
High transaction fee for ticket reservation	.642		
Services which are advertised are not in practice	.641		
Incomplete or erroneous cheque sent inadvertently the penalty charged	.590		
High Foreign currency transaction fee	.583	18.52	.905
Incentive offered on card are not much rewarding	.533		
Penalty on late payment is high	.532		
Charges on revolving credit facility	.498		
	.492		
Service charges on petrol filling			
Over limit charges are more	.491		
Delay in issuing new card in place of lost card	.471		.938
Card blocking without instruction	.421		
Credit limit fixed is low	.389		
High charges to replace lost card	.354		
Lack of Adequate Services			
Delay in collection of cheque for payment	.771		
Fraudulence in credit cards use	.738		
Delay in sending duplicate statement	.715		
Merchant establishment charges on transaction cost	.708		
All Merchant establishments not exhibiting "credit card accepted"	.643		
Outstation cheque processing fee more	.577	16.56	.886
Cheque bounces charges more	.539		
Finance charges are high for cash advance	.505		
Poor response for the balance enquiry	.504		
Lack of ATM connectivity	.494		
Charges on rewards redemption	.481		

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Helpline waiting time is long	.454			
Heavy ATM charges for cash withdrawal	.446			
Cheque collection boxes are inadequate	.432			
Merchant establishment hesitates to accept card	.425			
Lesser interest free credit period	.420			
Inadequate ATM Accessibility				
ATM centre are inadequate	.899			
Service charges are very high	.865			
Buying a card is a time consuming process	.852	11.63	.947	
ATM are not in prominent places	.813			
Insufficient ATM cash balance	.729			
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.				
a. Rotation converged in 10 iterations.				

Source: Primary Survey

High Transaction Cost: In general, people neglect to go for e-banking transactions due to fear of high transactions cost. The statements supporting this factor are Errors in monthly statement (.764) as a first high transaction cost and High charges to replace lost card (.354) has least transaction cost . The percentage of variance is 18.52 and the value of Cronbach's Alpha is .905 which is a good indicator.

Lack of Adequate Services: The statements supporting this factor are Delay in collection of cheque for payment (.771) has first place and Lesser interest free credit period has last place (.420). The percentage of variance is 16.56 and the value of Cronbach's Alpha is .886 which is a good indicator.

Inadequate ATM Accessibility: The statements supporting this factor are ATM centre are inadequate (.899) is more inadequate and Insufficient ATM cash balance (.729) is less inadequate. The percentage of variance is 11.63 and the value of Cronbach's Alpha is .947 which is a good indicator.

Suggestion

- Technology being on widespread some is still unaware of benefits and uses of the services provided. Therefore effective awareness must be created among customers through training and notices given regarding innovative services provided.
- Mostly services being computerized there is less interaction between staffs and customers in inquiring their queries, clearing doubts e.t.c. So bank should allot staffs who are specialized in new services, so customers have wider scope in getting personnel advices to avail new services as well as knowing the operation of the services better.
- Bank must not only explain what role does innovative services play but also let them be familiar with the functioning and related technical words used for it.
- Customers must be well informed about the overall security of computerized transaction by conducting workshops to prevent cyber threats and crimes.
- Bank needs to inculcate positive and secure feeling towards customer in adopting more innovative service.

Conclusion

Financial system in India has grown rapidly in the last three decades with stiff competition and advancement in technology, the service provided by the bank has become more easy and convenient. As there is an imperative need to keep them up to date. It is sure that the future of banking will offer more sophisticated services to the customers with the continuous product and process innovations. Adoption of stringent prudential norms and higher capital standards, better risk management systems, adoption of internationally accepted accounting practices and increased disclosures and transparency will ensure the Indian Banking industry keeps pace with other developed banking systems. Based on the research conducted, it is evident that Tech based

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banks play a crucial role in developing a strong relationship with customers as well as trying to increase self confidence in adopting newly introduced services. Finally the banking sector will need to master a new business model by building management and customer services. Banks should contribute intensive efforts to render better services to their customer.

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