

Effect of Information and Communication Technology (ICT) on Consumer Behaviour in Banking Services in India

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Abstract:

The article relates to knowing Information Communication Technology (ICT) impact on banking services, which helps to deep understanding of ICT applications in various banking solutions and influence the customer towards banking services and enhance the customer satisfaction. Here various literatures are reviewed to understand ICT applications in different banking services. In this context, the study examined consumer behaviour of ICT applications in banking services with respect to service quality and customer satisfaction by using a convenient sampling method with a structured questionnaire. The results of the study indicate that ICT infrastructure plays a key role in productivity and growth in the banking industry.

Key words: Information and communication Technology, banking industry, service quality and customer satisfaction.

1. Introduction:

The UN summit on Millennium Development Goals (MDG) initiated to achieve eight anti poverty goals by the 2015; poverty and hunger, women empowerment, child mortality, maternal health, HIV/AIDS, malaria, environmental sustainability and global partnership (UN: MDG Report, 2010).The Information and communication technology (ICT) plays a crucial role to achieve this MDGs. ICT is also the part of the MDGs and impacts more on other goals. Moreover, it is assisted and helps to achieve goals by wide applications like tele-medicine, e-commerce, e-banking, and e-government etc. ICT is the foundation of the knowledge based world. It allows nations to acquire and share ideas, expertise, services, and technologies locally, regionally, nationally and across the globe. ICT contributes to pooling of all the economies more integrated and helps to create new opportunities for economic development, increase speed of knowledge transfer and technology diffusion boost up the

competitive advantages for fast developing countries through high speed internet (broadband) connection.

The information and communication technology (ICT) has been a pioneer and a powerful catalyst in addressing the needs and interests of low income communities in developing countries like India. The rate of technological innovation in the ICT sector has accelerated dramatically. Today the sector includes hardware, software, the internet, telephony; content application supports corporate giants to individual developers. ICT applications such as e-government, e-commerce, e-education, e-health and e- environment are seen as enabling for development as they provide an efficient channel to deliver a wide range of basic services in remote and rural areas. This explosion of technology is changing the banking industry from paper and branch banks to digitalized and networked bank services (Hassan Ghaziri, 1998).

Banking services:

Banking today is a flourishing industry focused on technological innovation; internet banking has emerged as the biggest focus area in the 'digital transformation'. They deployed technology intensive solutions to increase revenue, enhance customer experience, optimized cost structure, and manage enterprise risk. The banking industry, where the introduction of IT related products in internet banking, electronic payments, security investments, and exchanges, banks now can provide more diverse services to customers with less man power (Shiorky J.H and Sushanta K. Mallick, 2006). In India, there has been a noticeable shift from traditional to channel based banking, introduction of ATMs (Automated Teller Machines) provided customers with anytime access to their money. The Credit Card enabling cashless transactions unleashed a revolution in the banking world. Directing the banking transactions through different electronic channels and by providing customer direct access to their bank accounts. Banks could now offer quick services and transparency as well.

Another milestone was the introduction of mobile banking primarily through SMS. The launch of smart phones created a revolution of sorts in the banking world. As the number of mobile phone users in India increases rapidly, banks are using these as an alternative channel for delivery of full-fledged banking services. At present, all banking services such as opening an account, transaction processing, record maintenance, queue management and information providing have been changed by using information technology. Technology enhancement changes batch processing system of the bank into the real-time processing

system. ATM, Internet banking, mobile banking, and plastic money are some new emerging concept which changes mass services into customized services

2. Literature Review:

Vandana Tandon Khanna and Neha Gupta (2015) aimed to focus on the customer's perception about technology being used for delivery of financial products and services by Public Sector Banks (PSBs) of India. They conducted a survey to understand the factors influencing customers' perception about the technology used for innovative delivery channels by PSBs on five factors viz., acceptability, safety, availability, user friendliness, and accessibility. The study found that, the factors such as technology acceptability, safety, availability, user friendliness, and accessibility are highly depending on the demographic profile of the population size.

Alhaji Abubakar Aliyu and Rosmaini Bin HJ Tasmin (2012) made a critical literature review of previous researchers with the objective to examine the impact of Information and Communication Technology on the bank's performance and customer service delivery. They analyze the impact of ICT on banks' performance and examined if banks have successfully achieved effective customer service delivery, by providing a high level of customer service through the online delivery channel, besides operating cost minimization and revenue maximization. The study showed that enhancing ICT in the banking industry is a must in a rapidly changing market place, as the ICT revolution has set the stage for an exceptional increase in financial activity across the globe.

Dr. Bhavana Jaina attempted a critical literature review of previous researchers with an objective to examine the impact of e-banking on consumer behaviour to e-service quality. The study found that E-banking and hence Information and Communication Technology has impacted positively on customer service and profitability of banks though there are a number of challenges.

Rahmath Safeena, Hema Date, Abdullah Kammani, and Nisar Hundewale (2012) examined the impact of perceived usefulness, perceived ease of use, consumer awareness on mobile banking and perceived risk on the acceptance of mobile banking by the consumers. The result of this study shows that perceived usefulness, perceived ease of use, consumer awareness and perceived risk are the important determinants of mobile banking adoption.

Oluwagbemi Oluwatolani, Abah Joshua and Achimugu Philip (2011) presents the current trend in the application of IT in the banking industries in Nigeria and gives an insight into how quality banking has been enhanced via IT. They further revealed that the deployment of

IT facilities in the Nigerian Banking industry has brought about fundamental changes in the content and quality of banking business in the country. This analysis and clarification of how Nigerian Banks have used IT to reengineer their operations is detailed through literature review and observation. They observed that, three categories of variables that relate to the use and implementation of information technology devices. These include the nature and degree of adoption of innovative technologies; degree of utilization of the identified technologies; and the impact of the adoption of IT devices on the bank operations.

Basweti Ogachi Kevin, Masese Chuma Benard and Dr. Martin Onsiro Ronald (2013) investigated the impacts and challenges of ICT adoption in the Tanzanian banks. The study found out that there is a need for bankers to educate public in the use of online banking products, invest more in ICT infrastructure and the government to reduce taxes of ICT gadgets.

T. T. Alabar and R. J. Agema (2014) examined the impact of ICT on customer satisfaction in Nigerian banking industry. The study adopts an empirical approach in determining the relationship that exists between the current state of ICT and customer satisfaction in the industry. The following recommendations were therefore made: banks should continually explore the possibility of raising the standard of ICT based systems and services, intensify efforts in meeting up with global operational systems and demonstrate a high sense of reliability, responsiveness and credibility in the application of ICT in their operations.

Dr. V. Vimala (2015) an attempt was made to examine the impact of Information Technology (IT) adoption on the selected bank customers of Bank of India. She examined how the adoption of Information Technology affects the operations of BOI's customer's terms of effectiveness, efficiency, competitiveness, customer base and globalization of the bank. Information Technology led to increase customer satisfaction, improved operational efficiency, reduced transaction time, better competitive edge, reduced the running cost and ushered in swift response in service delivery.

Amit Shankar and Puja Kumara (2016) explore factors affecting mobile banking (m-banking) adoption behaviour of Indian consumers. Furthermore, the purpose of this study was to identify which factors have a major influence on adoption intention in context with m-banking. They found that, a total of eight factors awareness, usefulness, ease of use, compatibility, social influence, security and privacy risk, self efficacy and financial costs has been identified which affect m-banking adoption behaviour in India. Usefulness has been

found to be making the most impact with reference to m-banking adoption. However, social influence is identified as least influential factor among all factors.

Ankita Sharma and Akansha Kansal (2015) examined the impact of e-banking on consumer behaviour to e-service quality. They made a critical review of the organizational literature regarding the impact of e-banking, on banks' performance to examine if banks have successfully achieved customer's satisfaction, by providing a high level of quality service through the online delivery channel, besides operating cost minimization and revenue maximization.

Saranya. J, Anitha. K and Dr. S.Vasanth (2014) showed how people can make use of ICT in banking. They identified various factors that attract a customer towards ICT banking and analyzed factors which influence a customer towards ICT banking are grouped into 4 factors such as convenience, confidence, safe, and easy.

3. Research Methodology:

The Research methodology is a way to systematically solve the research problem. It may understand as a science of studying how the research is done scientifically. It explains the various steps adopted in studying research problems. The research methodology is defined as the systematic, theoretical analysis of the procedures applied to a field of study (Kothari, 2004). The methodology involves procedures of describing, explaining, and predicting the phenomena so as to solve a problem. It is necessary for the researchers to know not only the research methods and techniques but also methodology.

Objective of the study: the key objectives of the study are:

- To know the ICT applications in various banking services.
- To analyse customer perceptions towards ICT related banking services.
- To examine customer perception towards service quality of ICT related services.
- To study customer satisfaction towards ICT applications.

Research design:

This research was descriptive research.

Data sources:

Primary data: Primary data was collected from the various bank customers.

Secondary data: Journals, Magazines, Web portals, etc.

Research approach: Survey method

Research instrument: Structured questionnaire

Sampling plan :

Sampling unit: Bank customers in India.

Sampling size: 100

Sampling procedure: Convenient sampling method

Contact method: Mailed questionnaire

Statistical tools used: Percentages, Regression analysis with SPSS20.

Results and Discussion:

4.1. Demographic profile of customers:

This study used a descriptive design with a 100 customers randomly selected from various banks. The demographic profiles of customers were shown below.

Table-1 :					
Demographics		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Female	30	30.0	30.0	30.0
	Male	70	70.0	70.0	100.0
Age	Below 30	35	35.0	35.0	35.0
	30-40	32	32.0	32.0	67.0
	40-50	27	27.0	27.0	94.0
	Above 60	6	6.0	6.0	100.0
Education	Ssc	17	17.0	17.0	17.0
	Inter	40	40.0	40.0	57.0
	Ug	35	35.0	35.0	92.0
	Pg	2	2.0	2.0	94.0
	Phd	6	6.0	6.0	100.0
Prime Bank	Ab	19	19.0	19.0	19.0
	Axis	14	14.0	14.0	33.0
	Icici	21	21.0	21.0	54.0
	Others	16	16.0	16.0	70.0
	Sbi	16	16.0	16.0	86.0
	Syndicat	14	14.0	14.0	100.0
Employment status	Student	33	33.0	33.0	33.0
	Employee	37	37.0	37.0	70.0
	Business man	19	19.0	19.0	89.0
	Others	11	11.0	11.0	100.0
Marital status	Single	48	48.0	48.0	48.0
	Married	52	52.0	52.0	100.0
Income level	Upto 50000	55	55.0	55.0	55.0
	50000-100000	38	38.0	38.0	93.0
	100000-200000	7	7.0	7.0	100.0
Basic account	Cuurent	21	21.0	21.0	21.0
	Savings	79	79.0	79.0	100.0

Table 1 showed that, out of the participants, 70% were male, while 30% female, the age groups below 30 were 35%. 30-40 were 32%, 40-50 were 27% and above 60 were 6%, the respondent qualifications which are ranging from SSC and below were 17%, inter were 40%, UG were 35%, PG were 2% and PHD were 6%. The respondent customers were associated with the prime bank, customers associated with Andhra Bank were 19%, Axis were 14%,

ICICI were 21%, SBI were 16%, Syndicate Bank were 14% and other banks were 16%. Occupations of the customers, which are students 33%, employee 37%, businessmen 19%, and others 11%. The marital status of the customers, out of which, single were 48 % and married were 52%. Income levels of the customers showed in the table-7, out of which, up to 50,000 were 55%, 50,000-1,00,000 were 38% and 1,00,000-2,00,000 were 7%. Customer having their accounts in their prime banks, out of which, savings accounts were 79% and current accounts were 21%.

4.2. Services offered by the banks to their customers:

Table 2 showed services offered by the bank to their customers.

		Responses		Percent Of Cases
		N	Percent	
Bank services ^a	Atm	100	15.8%	100.0%
	Creditcard	34	5.4%	34.0%
	Debitcard	100	15.8%	100.0%
	Electronic transfer	97	15.4%	97.0%
	Telebanking	100	15.8%	100.0%
	Internet banking	100	15.8%	100.0%
	Banking 24 hours	100	15.8%	100.0%
Total		631	100.0%	631.0%

a. Dichotomy group tabulated at value 1.

From this table, it was shown that all the banks were provided 100% ATM facility, debit card, tele banking, internet banking, and banking in 24 hours to their customers. Only 34% providing credit card facility and 97% providing electronic transfer facility to their customers.

4.3. Hypothesis testing:

H1: Service quality of ICT in banking services has a significant effect on customer satisfaction.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.757 ^a	.572	.540	.713	1.794

a. Predictors: (Constant), servqual7, servqual1, servqual5, servqual2, servqual4, servqual6, servqual3

b. Dependent Variable: cs7

The statistical meanings of the statistical tool used in analyzing the model of this research work present here. The correlation coefficient (r) value 0.757 indicates that a strong positive correlation exists between service quality and customer satisfaction variables. The adjusted (r^2) value 0.540 shows the actual variation to the service quality variables to the customer satisfaction.

The F-ratio in the anova table shows $F(7,92) = 17.951$, $p < 0.0005$ (the model is good for fit data). The table shows that the independent variables statistically significantly predict the dependent variable.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	62.611	7	8.944	17.591	.000 ^b
	Residual	46.779	92	.508		
	Total	109.390	99			

a. Dependent Variable: cs7

b. Predictors: (Constant), servqual7, servqual1, servqual5, servqual2, servqual4, servqual6, servqual3

4. Conclusion:

This study revealed that the information and communication technology (ICT) applications in services in banks have a significant effect on the customer satisfaction. It has seen that, a tremendous increase in advancements in Information and Communication Technology in the past decade. The quest for survival, global relevance, maintenance of existing market share and sustainable development has made exploitation of the many advantages of ICT through the use of automated devices imperative in the industry.

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