

International Journal of Computer Science and Mobile Computing



A Monthly Journal of Computer Science and Information Technology

ISSN 2320-088X
IMPACT FACTOR: 7.056

IJCSMC, Vol. 11, Issue. 7, July 2022, pg.48 – 63

A Result Analysis of Impact of Information Technology on the Banking Sector

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DOI: <https://doi.org/10.47760/ijcsmc.2022.v11i07.005>

Abstract:

The use of the internet as an electronic delivery method for banking services and products is a general extension of traditional banking. With the use of IT, banking has been redefined and re-engineered today, and the future of banking will undoubtedly offer more.

Customers receive advanced services thanks to ongoing product and process improvements. Thus From a seller's market to a buyer's market, there occurs a paradigm change. Banks therefore modify their strategy of "Mass banking to Class" and "Conventional banking to Convenience banking" Banking". The report looks at a number of pertinent problems regarding the use of IT in banking and proposes implementing IT and other cyber regulations, protecting the privacy and confidentiality of data correctly. This will ensure that IT plays a growing role in the financial sector.

Keywords: ATM, E banking, Debit Card, Credit Card

I. Introduction:

The Indian banking industry is likewise making an effort to get out of bed and start acting pro-actively. Up until 1990, Indian banks operated in a relatively safe and comfortable environment. Since then, though, new economic policies have forced them into fierce rivalry. The banking industry is becoming more competitive thanks to technology. Banks have long used technology to enhance their offerings and productivity. Technology today is altering not only the environment but also how we interact with our consumers. Although technology has not eliminated many barriers, it has created better products and distribution methods. These have pushed the consumer relationship to the fore. Aside from that, it is seen as a way to cut costs and improve communication with people and institutions in the banking sector. Technology upgrades in the financial sector have been prioritized by the RBI. New products and services, new markets, and more efficient delivery routes for the banking business have been opened up by technology. In today's competitive banking market, IT provides a framework for the banking industry to handle these problems. The use of IT has the potential to reduce the cost of international money transfers.

Informatics is the study and application of the management, storage, and transmission of data. All of these gadgets are connected to a telecommunications network that includes computers.

There is no geography boundaries for it. Financial intermediaries can reach far-flung and diverse markets because of advances in information technology (IT), which enables sophisticated product development, improved market infrastructure, and the adoption of dependable risk-control measures. As a result of the Internet, banks' delivery channels have changed dramatically. Banking products and services are increasingly being delivered via the Internet.

Simply by pressing a few keys, consumers can monitor their accounts, obtain account statements, transfer payments, and generate purchase draughts. Additions to the scenario have been made possible by the use of smart cards, which are cards having microprocessor chips embedded. "Cyber Cash" is a new form of electronic payment. "Cyber-books" are the only means of exchanging money. As a result, the collection of utility and phone bills has become a lot easier. With unprecedented access to clients, the internet's upgradeability and flexibility have made it easier for banks to reach out. Banking services have experienced significant transformations, and clients' expectations of banks have risen along with them.

The role of IT in a bank is shifting from one of a support function to one of a key contributor to its long-term growth. IT accomplishes so by optimizing banks' proactive actions, such as improving and standardizing banks infrastructure in terms of security, communication, and networking, attaining inter branch connection, moving toward Real Time Gross Settlement (RTGS) environment, anticipating liquidity by developing real time databases, usage of Magnetic Ink Character Recognition and Imaging technology for cheque clearing, to mention a few. India's banks are investing heavily in retail banking. The most important factor in charging has essentially disappeared.

II. E-BANKING

The internet is used as an electronic delivery method for banking products and services in electronic banking, which is often an extension of traditional banking. There are several types of electronic banking, including telephone banking, internet banking, automated teller machines (ATMs), and debit/credit cards, all of which make use of electronic technology EFT, AFT, and so on. With the use of computers and technological devices, several banks have upgraded their services. The technological revolution has made banking processes more convenient and flexible for the consumer. Large account registries and physical bank accounts have been replaced by e-banking.

The advent of automated teller machines (ATMs) paved the way for "anywhere, anytime" banking. When using ATM cards, one is allowed to withdraw money from any of the bank's ATMs that have been installed or are available in the area. This has dismantled the limitations of space and time.

Some of the new banks' services are only available through ATMs. Increasingly, banks are using the internet as a means of receiving instructions and providing their goods and services to consumers due to the widespread use of personal computers, simple internet connection, and the World Wide Web. The term "Internet Banking" or "Net Banking" is commonly used to describe this. This is a relatively new kind of electronic banking that is quickly gaining traction. E-banking is a step-by-step procedure that begins with the opening of a website and concludes with a payment.

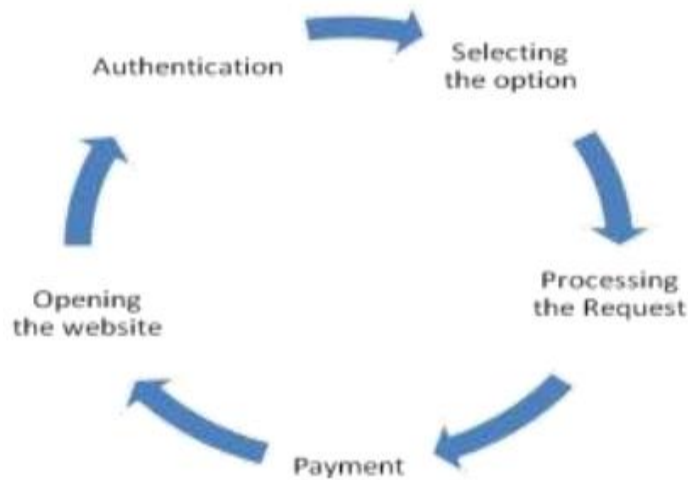


Fig: 1 Process of E-banking

PROFITS OF E-BANKING:

Anywhere Banking is available to all customers, regardless of where they are in the world. Anywhere in the globe may conduct a balance inquiry, a service request, an instruction issuance, etc. Money management in real time and at any moment of the day or night, seven days a week, according to the preferences of consumers. Reduces the customer's "Cost of Banking" over time. Use any branches or ATM's cash machine to get your money. On-line shopping, includes online payment for the items and services purchased.

III. Effect of IT on Banking System

Conventional banking is gradually being replaced by relationship banking in the banking industry. – e.g. This contact has traditionally been one-on-one between the bank and its clients via the branch network. With clearance and decision-making duties focused at the branch level, this was put into practice. Clearing and branch networks were handled by the main office, which was also responsible for ensuring that all branch workers were properly trained. Branch personnel and consumers were only allowed to get information about the organization's performance from a single location because of a bank policy.

Branch networks are no longer sufficient for a contemporary bank. Customers are expecting new, more convenient delivery methods, and services like Internet banking play a dual function

for the client. As well as providing standard banking services, these banks also provide a wide range of extra services, such as access to information about their accounts and the bank's other offerings. To do this, banks must develop layers of account information that can be accessible by both bank personnel and clients. Through the use of Internet-based interactive electronic linkages, users might gain a wealth of knowledge about their own financial status and that of their bank.

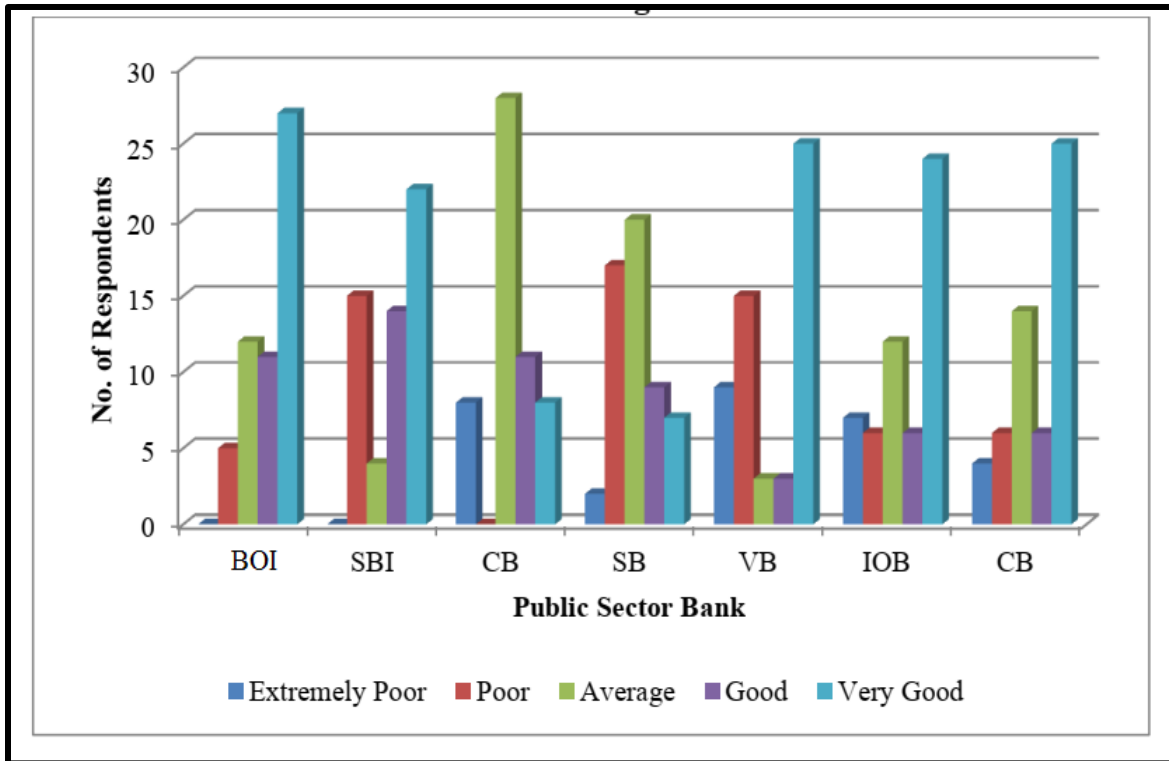
IV. Internet Banking Services:

It is also known as E-banking or virtual banking because it allows bank and other of the latter. In contrast to branch banking, which was the conventional method of accessing banking services, the internet banking system will often connect to or be part of the main banking system operated by a bank. Table 6.1 shows the distribution of respondents' views on internet banking services by bank in this context.

Table 1.1: Bank wise distribution of respondents about opinion on internet banking services

Bank	Extremely Poor	Poor	Average	Good	Very Good	Total	Test statistics
BOI	0	5	12	11	27	55	$\chi^2=74.597$ $P=.000$ $CV=.357$; $P=.000$
	0.0%	9.1%	21.8%	20.0%	49.1%	100%	
State Bank of India	0	15	4	14	22	55	
	0.0%	27.3%	7.3%	25.5%	40.0%	100%	
Canara Bank	8	0	28	11	8	55	
	14.5%	0.0%	50.9%	20.0%	14.5%	100%	
Syndicate Bank	2	17	20	9	7	55	
	3.6%	30.9%	36.4%	16.4%	12.7%	100%	
Vijaya Bank	9	15	3	3	25	55	
	16.4%	27.3%	5.5%	5.5%	45.5%	100%	
Indian Overseas Bank	7	6	12	6	24	55	
	12.7%	10.9%	21.8%	10.9%	43.6%	100%	
Corporation Bank	4	6	14	6	25	55	
	7.3%	10.9%	25.5%	10.9%	45.5%	100%	
Total	30	64	93	60	138	385	
	7.8%	16.6%	24.2%	15.6%	35.8%	100%	

Source: Data gathered through Primary investigation, July 2019 to January 2020



Graph 1.1: Bank wise distribution of respondents about opinion on internet banking services

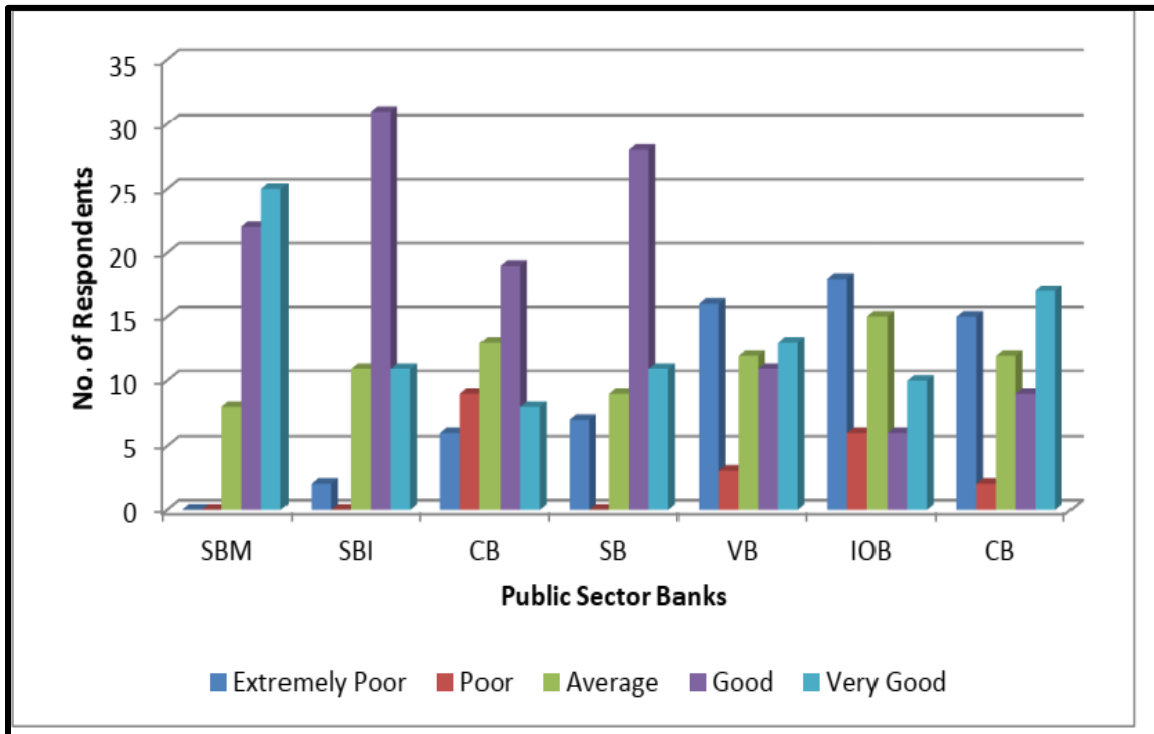
The chi-square value of 74.597 and the P value of 0.000 were found in the table and graph 6.1 for the opinion of internet banking services. 35.8 percent of respondents said that online banking services were excellent. 24.2 percent of those polled stated that banking services were mediocre or below average, respectively. A strong correlation was found between the banks' internet banking services (Cramer's $V = .357$; $P = .000$), with the majority of Vijaya Bank, Indian Overseas Bank, and Corporation Bank customers saying they are excellent. However, around 7% of Indian Overseas Bank and Corporation Bank customers said they are poor, while 50.9% of Canara Bank customers said they were average, and 33% said they were poor.

V. Mobile Banking Services

As a service provided by a bank or other financial institution, mobile banking lets consumers use their mobile devices to perform a wide variety of financial transactions using software provided by the financial institution for the purpose. Table 5.2 shows the distribution of respondents' views on mobile banking services by bank in this context.

Table 1.2: Bank wise distribution of respondents about opinion on mobile banking services

Bank	Extremely Poor	Poor	Average	Good	Very Good	Total	Test statistics
Bank of India	0	0	8	22	25	55	$X^2=79.896;$ $P=.000$ $CV=.325;$ $P=.000$
	0.0%	0.0%	14.5%	40.0%	45.5%	100.0%	
State Bank of India	2	0	11	31	11	55	
	3.6%	0.0%	20.0%	56.4%	20.0%	100.0%	
Canara Bank	6	9	13	19	8	55	
	10.9%	16.4%	23.6%	34.5%	14.5%	100.0%	
Syndicate Bank	7	0	9	28	11	55	
	12.7%	0.0%	16.4%	50.9%	20.0%	100.0%	
Vijaya Bank	16	3	12	11	13	55	
	29.1%	5.5%	21.8%	20.0%	23.6%	100.0%	
Indian Overseas Bank	18	6	15	6	10	55	
	32.7%	10.9%	27.3%	10.9%	18.2%	100.0%	
Corporation Bank	15	2	12	9	17	55	
	27.3%	3.6%	21.8%	16.4%	30.9%	100.0%	
Total	64	20	80	126	95	385	
	16.6%	5.2%	20.8%	32.7%	24.7%	100.0%	



Graph 1.2: Bank wise distribution of respondents about opinion on mobile banking services

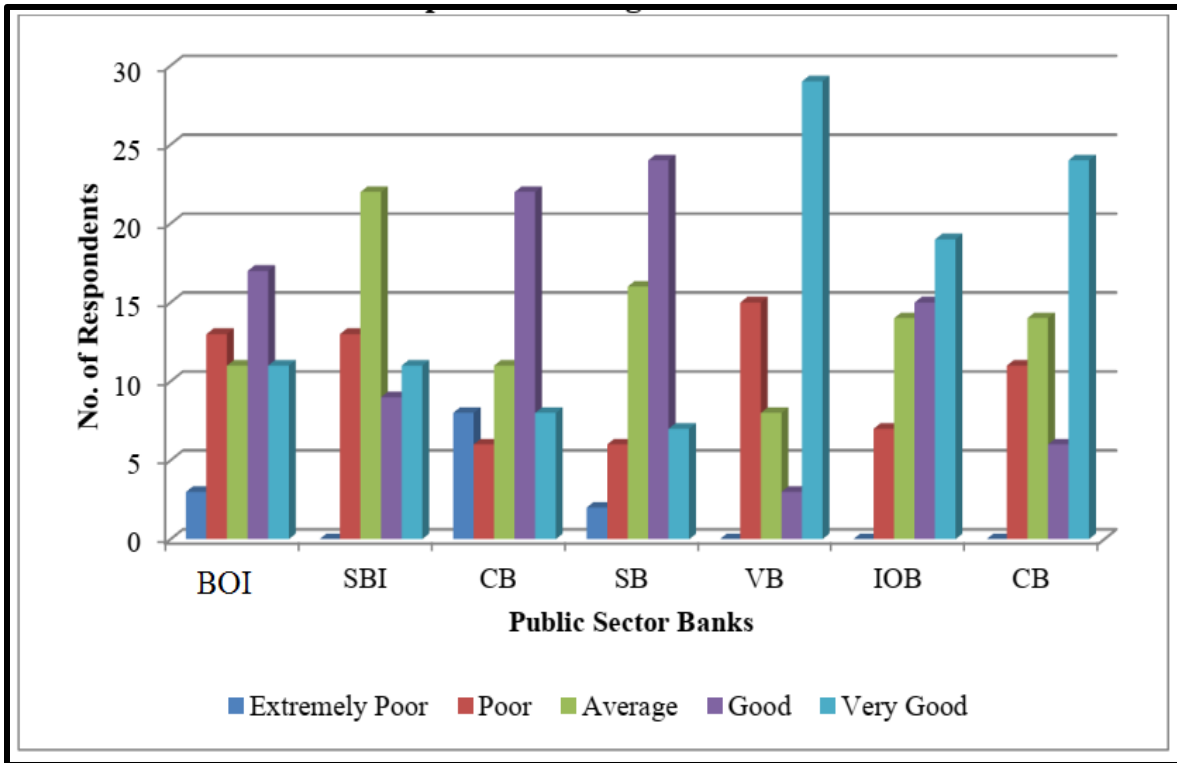
Results from Chi-Square analysis show that there is a substantial difference in the opinions of the respondents and chosen banks on mobile banking services, with an X² value of 80.996 and P value of 0.000. Approximately 32.7% of those polled agreed that the mobile banking services offered are good, while 24.7% said they were very good, and 20.8% said they were ordinary. Cramer's V value of .325 and P value of .000 indicated a significant correlation in the test for association. There were just 27.3 per cent, 29.1 per cent, and 32.7 per cent of respondents from the three banks that participated in the survey deeming the mobile banking service excellent, whereas the majority of the respondents from State Bank of India and Syndicate Bank agreed.

VI. Phone Banking Services:

Banks and financial institutions provide phone banking, a service that allows consumers to complete a variety of financial activities over the phone without having to visit a bank office or ATM. Table 6.3 shows the distribution of respondents' views on phone banking services by bank in this context.

Table 1.3: Bank wise distribution of respondents about opinion on phone banking services

Bank	Extremely Poor	Poor	Average	Good	Very Good	Total	Test statistics
Bank of India	3	13	11	17	11	55	X ² =76.338; P=.000 CV=.257; P=.000
	5.5%	23.6%	20.0%	30.9%	20.0%	100.0%	
State Bank of India	0	13	22	9	11	55	
	0.0%	23.6%	40.0%	16.4%	20.0%	100.0%	
Canara Bank	8	6	11	22	8	55	
	14.5%	10.9%	20.0%	40.0%	14.5%	100.0%	
Syndicate Bank	2	6	16	24	7	55	
	3.6%	10.9%	29.1%	43.6%	12.7%	100.0%	
Vijaya Bank	0	15	8	3	29	55	
	0.0%	27.3%	14.5%	5.5%	52.7%	100.0%	
Indian Overseas Bank	0	7	14	15	19	55	
	0.0%	12.7%	25.5%	27.3%	34.5%	100.0%	
Corporation Bank	0	11	14	6	24	55	
	0.0%	20.0%	25.5%	10.9%	43.6%	100.0%	
Total	13	71	96	96	109	385	
	3.4%	18.4%	24.9%	24.9%	28.3%	100.0%	



Graph 1.3: Bank wise distribution of respondents about opinion on phone banking services

According to the results shown in Table 6.3 and Graph 6.3, there was a significant difference in attitudes regarding phone banking services among respondents from different banks ($X^2=76.338$; $P=.000$). Cramer's V value of .257 and P value of .000 showed a significant correlation in the test of association as well. More over a quarter (28.3) of the people polled thought phone banking services were excellent overall.

More over two-thirds of those polled said that the service was either ordinary or good. Nearly two-thirds (53%) of the respondents from Vijaya bank, Corporation Bank and the Indian Overseas Bank claimed that they were satisfied. For the most part, customers at the State Bank of India (40.0 percent) were satisfied with the services they received.

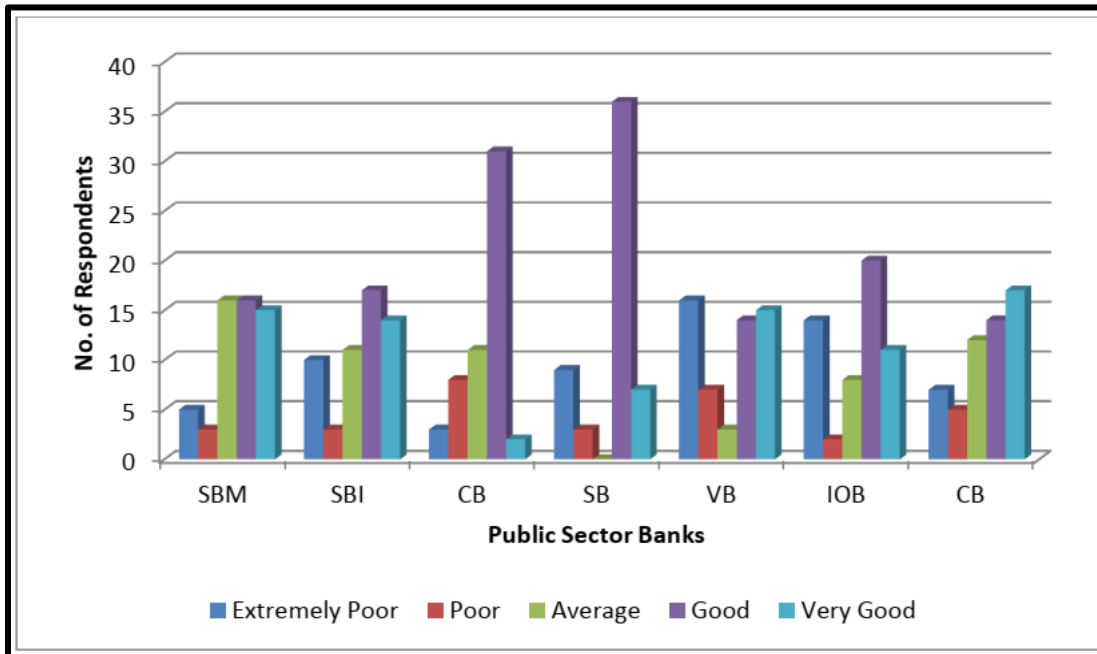
VII. ATM facilities

An ATM card is a plastic card issued by a bank that contains all of the relevant information regarding a customer's bank. The bank provides its customers with 24-hour access to their funds via an Automated Teller Machine (ATM). The bank has made this service available around the clock for the convenience of its customers. Repayments, balance inquiries, and deposits may all be done using an ATM card. The bank will send an alert message to your mobile device anytime your ATM card is being used for any reason, so

keep that in mind. So that you may double-check your transaction and make sure it wasn't done by someone else, we've provided you with this notice. Table 6.5 shows the distribution of respondents' opinions on ATM facility services by bank in this context.

Table 1.4 Bank wise distribution of respondents about opinion on ATM facilities

Bank	Extremely Poor	Poor	Average	Good	Very Good	Total	Test statistics
Bank of India	5	3	16	16	15	55	X ² =98.675; P= .000 CV=.293; P=.000
	9.1%	5.5%	29.1%	29.1%	27.3%	100.0%	
State Bank of India	10	3	11	17	14	55	
	18.2%	5.5%	20.0%	30.9%	25.5%	100.0%	
Canara Bank	3	8	11	31	2	55	
	5.5%	14.5%	20.0%	56.4%	3.6%	100.0%	
Syndicate Bank	9	3	0	36	7	55	
	16.4%	5.5%	0.0%	65.5%	12.7%	100.0%	
Vijaya Bank	16	7	3	14	15	55	
	29.1%	12.7%	5.5%	25.5%	27.3%	100.0%	
Indian Overseas Bank	14	2	8	20	11	55	
	25.5%	3.6%	14.5%	36.4%	20.0%	100.0%	
Corporation Bank	7	5	12	14	17	55	
	12.7%	9.1%	21.8%	25.5%	30.9%	100.0%	
Total	64	31	61	148	81	385	
	16.6%	8.1%	15.8%	38.4%	21.0%	100.0%	



Graph 1.5: Bank wise distribution of respondents about opinion on ATM facilities

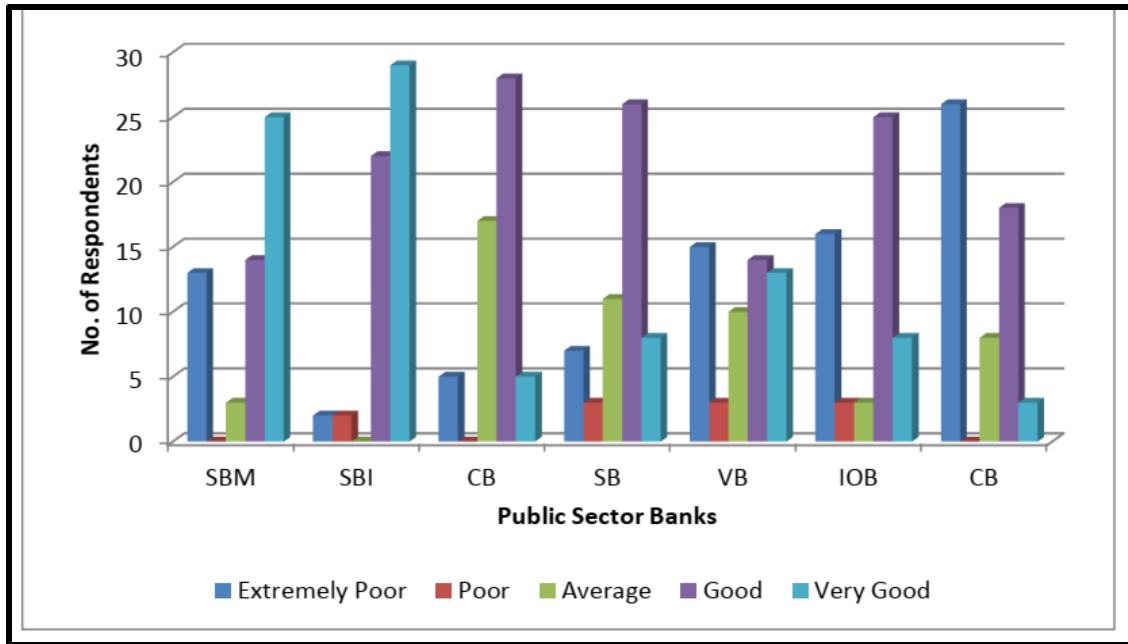
There was a substantial variation in answer patterns among respondents from various selected banks, as shown in Table and Graph 6.5, with an X² value of 98.675 and a P value of.000. According to the survey, 38.4 percent of the public agreed that ATM facilities are acceptable, followed by 16.6 percent who said it was really poor, 15.5% said it was medium, 21.0 percent said it was very good, and 8.1% said it was bad. Syndicate Bank, Canara Bank, SBI, and SBM customers overwhelmingly agreed that the ATMs they received were satisfactory or excellent. Vijaya Bank and Indian Overseas Bank received 29.1% and 25.5% of the votes, respectively, saying that ATMs are in very bad condition. Testing for a relationship between the two variables produced significant results (Cramer's V =.393; P=.000).

VIII. Credit Card Facility:

Cardholders are provided a credit card as a means of payment. It is a credit card provided by a financial institution that allows its bearer to borrow money at the time of purchase. Interest is charged on credit cards, which are often used for short-term purchases. Table 5.6 shows the bank-by-bank distribution of respondents' opinions on credit card facility services in this context.

Table1.6: Bank wise distribution of respondents about opinion on credit card facility

Bank	Extremely Poor	Poor	Average	Good	Very Good	Total	Test statistics
State Bank of Mysore	13 23.6%	0 0.0%	3 5.5%	14 25.5%	25 45.5%	55 100.0%	X ² =131.506; P=.000 CV=.299; P=.000
State Bank of India	2 3.6%	2 3.6%	0 0.0%	22 40.0%	29 52.7%	55 100.0%	
Canara Bank	5 9.1%	0 0.0%	17 30.9%	28 50.9%	5 9.1%	55 100.0%	
Syndicate Bank	7 12.7%	3 5.5%	11 20.0%	26 47.3%	8 14.5%	55 100.0%	
Vijaya Bank	15 27.3%	3 5.5%	10 18.2%	14 25.5%	13 23.6%	55 100.0%	
Indian Overseas Bank	16 29.1%	3 5.5%	3 5.5%	25 45.5%	8 14.5%	55 100.0%	
Corporation Bank	26 47.3%	0 0.0%	8 14.5%	18 32.7%	3 5.5%	55 100.0%	
Total	84 21.8%	11 2.9%	52 13.5%	147 38.2%	91 23.6%	385 100.0%	



Graph 1.6: Bank wise distribution of respondents about opinion on credit card facility

Respondents from several chosen banks had X2 values of 131.506 and P values of .000 for their views on the Credit Card facility. A total of 38.2% of those polled thought the credit card facility given was decent, 21.8% thought it was absolutely poor, and 23.6% thought it was excellent. Canara Bank and Syndicate Bank received 50.9% and 47.3% of the votes, respectively, for their credit card services. It was found that credit card facilities are quite low among respondents from Corporation Bank (47.3 percent) and Indian Overseas Bank (29.5 percent). The test of association (Cramer's V = .299; P=.000) likewise found a significant connection.

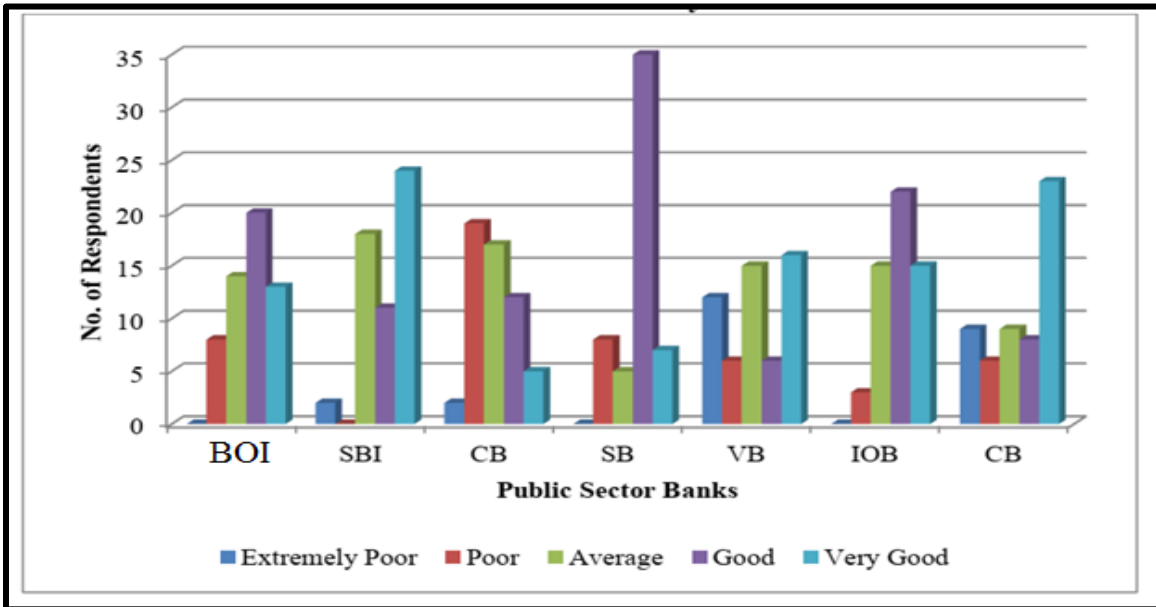
IX. Debit Card Facility:

Debit Cards are plastic cards that may be used at any time to make a payment for products or services that you've purchased. Anyone with a bank account can take use of this service. To make an EFTPOS (Electronic Fund Transfer at the Point of Sale) payment, a consumer can use a debit card. Check the account balance and transfer any cash to any other account holders are also available features for him to use In addition to the Debit Card, customers may use the mobile banking service to get notifications about transactions made directly to their phone. Table 5.7 shows the bank-by-bank distribution of respondents' opinions on debit card services.

Table 1.7: Bank wise distribution of respondents about opinion on debit card facility

Bank	Extremely Poor	Poor	Average	Good	Very Good	Total	Test statistics
Bank of India	0	8	14	20	13	55	X ² =79.662; P= .000 CV=.357; P=.000
	0.0%	14.5%	25.4%	36.4%	23.6%	100.0%	
State Bank of India	2	0	18	11	24	55	
	3.6%	0.0%	32.7%	20.0%	43.6%	100.0%	
Canara Bank	2	19	17	12	5	55	
	3.6%	34.5%	30.9%	21.8%	9.1%	100.0%	
Syndicate Bank	0	8	5	35	7	55	
	0.0%	14.5%	9.1%	63.6%	12.7%	100.0%	
Vijaya Bank	12	6	15	6	16	55	
	21.8%	10.9%	27.3%	10.9%	29.1%	100.0%	
Indian Overseas Bank	0	3	15	22	15	55	
	0.0%	5.5%	27.3%	40.0%	27.3%	100.0%	
Corporation Bank	9	6	9	8	23	55	
	16.4%	10.9%	16.4%	14.5%	41.8%	100.0%	
Total	25	50	93	114	103	385	
	6.5%	13.0%	24.2%	29.6%	26.8%	100.0%	

Graph 1.7: Bank wise distribution of respondents about opinion on debit card facility



As can be seen in the table and graph 6.7, the Chi-square test demonstrated a significant difference ($X^2=79.662$; $P=.000$) in the overall reaction to the Debit Card option. About 29.6% of those polled said that the banks they chose for their debit card programmers offered excellent services. 24.2% thought the services were only OK, while 26.8% thought they were exceptional. The majority of Syndicate Bank customers believe that the debit card option is a good one.

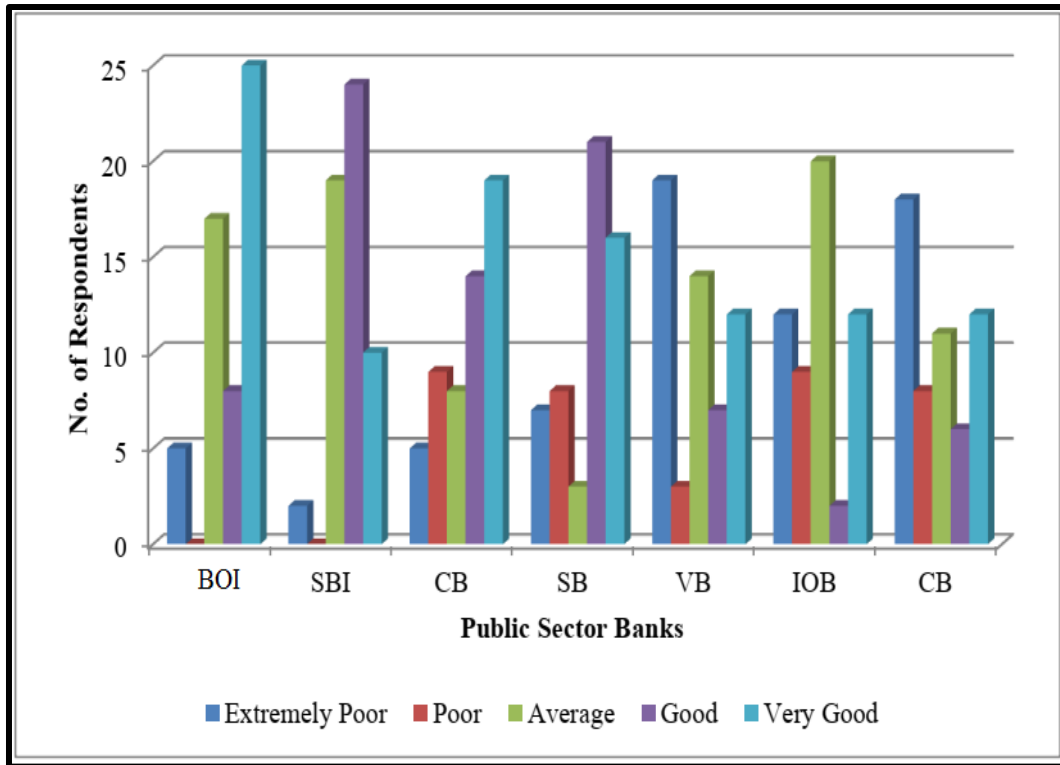
Debit Card facility was rated as excellent or good by 41.8% of respondents from Corporation Bank and 29.1% of respondents from Vijaya Bank. In addition, the test of association revealed a significant link (Cramer's $V = .357$; $P = .000$) between the two variables.

X. Electronic Fund Transfer

It is possible to transfer money electronically from one bank account to another bank account, either inside a single bank or across numerous banks, without the direct interaction of bank employees. EFTs are known by a variety of names. Table 5.8 shows the distribution of respondents' views on EFT services, bank by bank, in this context.

Table 1.8: Bank wise distribution of respondents about opinion on electronic fund transfer

Bank	Extremely Poor	Poor	Average	Good	Very Good	Total	Test statistics
Bank of India	5	0	17	8	25	55	X ² =39.117; P= .000 CV=.328; P=.000
	9.1%	0.0%	30.9%	14.5%	45.4%	100.0%	
State Bank of India	2	0	19	24	10	55	
	3.6%	0.0%	34.6%	43.6%	18.9%	100.0%	
Canara Bank	5	9	8	14	19	55	
	9.1%	16.4%	14.5%	25.5%	34.5%	100.0%	
Syndicate Bank	7	8	3	21	16	55	
	12.7%	14.5%	5.5%	38.2%	29.1%	100.0%	
Vijaya Bank	19	3	14	7	12	55	
	34.5%	5.5%	25.5%	12.7%	21.8%	100.0%	
Indian Overseas Bank	12	9	20	2	12	55	
	21.8%	16.4%	36.4%	3.6%	21.8%	100.0%	
Corporation Bank	18	8	11	6	12	55	
	37.7%	14.5%	20.0%	10.9%	21.8%	100.0%	
Total	68	37	92	82	106	385	
	17.7%	9.6%	23.9%	21.3%	27.5%	100.0%	



Graph 1.8: Bank wise distribution of respondents about opinion on electronic fund transfer

Chi-square test found a significant difference ($X^2=39.117$; $P=.000$) between respondents' views on electronic financial transfers in Table 6.8 and the accompanying graph 6.8. About 23.9% of those polled thought the electronic fund transfer system was above average, 27.5% thought it was excellent, and 21.3 percent thought it was just fair. Among State Bank of India customers, 34.6 percent said the electronic fund transfer service was ordinary, while 43.6 percent said it was excellent, according to the results of a survey. Furthermore, the test of association (Cramer's $V = .328$; $P=.000$) suggested a significant connection.

CONCLUSION

No question, the banking sector has undergone a fundamental shift as a result of IT. It is certain that the future of banking will offer more complex services to clients thanks to continual product and process advancements, as it has already been redefined and re-engineered with the aid of IT. So the paradigm change from seller to buyer's market has occurred. "Convenience Banking" and "Mass Banking" have been renamed as a result of these shifts. The focus of banks has shifted to providing consumers with value-added services.

However, IT can only be completely beneficial if it allows users to meet the current environment's difficulties.

If it is to be effective in rural India, it must be implemented efficiently as well. The privacy and confidentiality of data must also be protected. Data about people may be gathered, integrated, and retrieved fast in many countries that regard privacy to be a human right. Those who are concerned with data processing on computers are held responsible for keeping computer use from spiralling to this point. As part of your role, you must guarantee that the data only serves its intended purpose. This necessitates appropriate implementation of IT and other cyber regulations. This will ensure that IT's position in the banking industry continues to grow.

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