

## Impact of e-banking on Agriculture: An empirical study with special reference to Amravati and Yavatmal District

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**Abstract:** Indian banking sector have responsible commitment to straighten the agricultural sector in lending. India growing in population needs more food production even to meet its own demand. It is critical now that agricultural sector has been pushed as secondary sector rather than primary. Author has conceptually presented in this article the need for banking sector to consider improving their lending schemes. The primary objective of the author is to highlight that banks data are not sufficiently supporting the Priority sector lending, which in turn is going to have big impact on the agricultural sector itself. The factors like branch operations, number of branches in rural areas, financial inclusion and its impact, credit deposit ratio, lending policies, RBI policy, sectoral development and other factors are analyzed with empirical evidence and statistical relevance. Authors are of opinion that agricultural sector needs more attention from union government and also they should watch how their policies are implemented in banks. More researchers should drive their academic and empirical research to show how rural branches at micro level functions. Authors are given their own suggestions and conclusions based on the statistical data collected from different reliable sources.

**Key words:** Banks, agricultural lending, priority sector lending, financial inclusion

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### I. Introduction:

Due to globalization & liberalization many significant modifications are taking place in different sectors of economy like industry, business & management. To retain pace with these modifications, banking industry has also accepted several innovative exercises and methods in its day-to-day functioning. Such new modifications in the techniques, methods of operation, and management in the day to day functioning of banks are known as innovative banking or e-banking. The modifications, that the banking industry has seen in the last decade is the outcome of globalization & liberalization, which possibly were not seen, anywhere, in its whole history. These modifications are not only seen in developed countries but they are found in developing countries like India. The financial reforms that were introduced in the early 1990s and globalization & liberalization measures brought in a completely new functional environment to the banking services and products like anywhere banking, telebanking, internet banking and so on. In this era, Banks are actively looking at unified core banking solution. The solution that offers one view of the customer across all service lines. Modifications in the regulatory government and the move to participate in the Global banking system, centered to look at technologically based solution. Therefore, banking industry is acceptance of technology in a big way. The development of information technology has been a big boon to the banking industry. The term Information technology defines the phenomenon created by the merging of technologies associated with computing, communication and office systems. In the past, most accounting processes in bank were paper oriented. With the beginning of new technology like computers, electronic equipments and communication networks, the modern accounting systems have under gone a sea-change both in their preparation and presentation. The traditional system of preparing the account at quarterly, half yearly and annually misplaced their significance since the information are continuously up-dated and made available at anytime and anywhere. The information technology allows the banking organization to redesign and restructure their working. It has assisted the banking industry in several ways, especially enlightening its customer relation and build up the business development. Banking industry has accepted various activities under the purview of IT in its operation. Globalization and Liberalization have enforced the banks to think in terms of technology benefits and quality services to customers as future is full of challenges and survival will be a difficult task. The entry of IT infrastructure in the corporate world of banks has taken many innovations, in particular the E-banking.

## II. Review Of Literature

**Barwise P. (2020)** states that the performance of the banking sector has been greatly affected by technology; The banking sector has shown a significant growth due to usage of technology. It is expected that with a time span of ten years approximately 60% of the bank dealings will be done online. In the modern day business world Online banking is becoming an essential part of the present banking services.

**Roboff and Charles (2019)** in their study investigated the fact that though people are aware of the risks associated with Internet banking but they have a poor understanding of the internet banking security risks. In addition, to this it has been highlighted that the consumers often display more trust on their bank and consider that the bank is more anxious in context of privacy issues and will take care of them.

**Tan & Teo (2018)** in their study stated that the fear among potential customers with regard to Internet banking can be minimized if these customers are given an opportunity to try new innovations. When customers realize that the mistakes could be easily rectified they would start using Internet banking services. Moreover, Internet banking services are free , also the risk and cost of trial is quite low when access to internet is available from workplace.

**Aladwani (2017)** in his study investigated that Privacy and Security were of prime concern to the potential customers with respect to online banking. Privacy, Security, Banks image must be duly taken care off when conducting internet banking transactions. Moreover, online banking laws & regulations need to be carefully addressed in internet banking.

**Chung and Paynter (2016)** suggested that since Internet banking was not much used earlier by the customers, so it repressed consumer adoption of Internet banking. The study further investigated that the consumers who were not making use of Internet banking were the ones who did not feel the necessity of internet banking signifying the value of its comparative benefits.

**Bradley, I et al (2003)** in study stated that bank branches were no longer enough to provide services to its customers. The customers in the current scenario are more demanding and challenging. The customers look for newer options in all aspects. Internet banking is the most recent channel of delivery to provide services to customers. The retail banks nowadays are providing internet banking services to its customers which are highly acceptable to the customers. Thus, retail banks offering Internet banking services are experiencing greater acceptance of internet banking services.

## III. Research Methodology

This research study is limited to the state of Amaravati and Yavatmal. Amidst the lush greenery of the Vidarbha region in the state of Maharashtra lies a quaint little town known as Amravati. Widely known for its Ambadevi Temple and mythological connections, the city is quite popular among many. Today Amravati is a rapidly growing educational and industrial centre being the seventh most populous city in the state of Maharashtra. Apart from being a pilgrimage town, the city has played a crucial role in the freedom movement as well. And today it also serves as the headquarters of the Amravati district in Maharashtra. Yavatmal is a city and municipal council in the Indian state of Maharashtra. It is the administrative headquarters of Yavatmal District. Yavatmal is around 90 km away from divisional headquarters Amravati while it is 670 km (420 mi) away from the state capital Mumbai. The name is derived from the Marathi Yavat (mountain) and mal (row). The participants for this study were selected from urban areas of Amaravati and Yeotmal from all domain of the society like private sector employee, government sector employee, business man, students, and housewife having age above of 18 years

## IV. Research Design

Research design is a blue print of the research work that helps in answering all research questions. It gives a way to the investigation to be conducted in the most resourceful manner. Kerlinger (1995) defined research design as a plan of study that helps in answering all the research questions. According to him, it is complete arrangement of the research study that would give direction to the researcher to design his hypothesis and to convert these hypotheses into findings. Research design can be of three types i.e. exploratory, descriptive and experimental. This study uses a combination of descriptive and exploratory design. Descriptive research design provides a comprehensive and detail explanation of the phenomena under study. Exploratory research design is the simplest and most loosely planned. Its basic objective is to discover and attain clarity about the problem situation. The study uses descriptive because of its fact-finding nature, as in this study the group wise comparison like between male & female, age group etc. is done and also exploratory research design is used because of the use of raw data through which the study explored consumers acceptance and satisfaction towards Internet banking in Amravati and Yavatmal.

## V. Hypothesis

To achieve the objectives of the study, following hypothesis have been framed and tested in the study. For the second objective of identifying the demographic co-relates of customers towards acceptance and non-acceptance of internet banking services the following set of hypothesis and sub hypothesis have been framed.

**H01:** There is no significant relationship between demographic characteristics and Internet banking acceptance of the respondents.

## VI. Objective Of Research

- To Study the concept of quality in E- banking services.
- To study the origin, growth and theoretical aspects of online banking services in India.
- To understand the impact of various factors of quality services dimensions on the overall Agriculture sectors towards E- Banking services provided in Amravati and Yavatmal district.
- Analyze the Farmers and Person related to Agriculture sectors attitude towards E-Banking services available at Amravati and Yavatmal district.

### 6.1 Data Collection Procedure

This study has used survey method of data collection. A structured questionnaire has been used to collect the data. The objectives of the study are to identify the factors that affects acceptance of Internet banking and to access the impact of Internet banking services on the satisfaction level of customers in Amravati and Yavatmal district. Sample was collected from the customers of the banks in all talukas of the two districts. The responses given by the respondents on the questionnaire sheet was used as a major source of data collection. The respondents were made to submit their response. Each and every participant was supposed to answer the questionnaire as and when suitable to them and submit it back. Total number of distributed questionnaires were 700 out of which only 599 are complete and taken into consideration. This number of sample collected is reasonably sufficient for the purpose of this study.

## VII. Data Analysis

The adoption of technology in the banking industry is growing at a fast pace. This will contribute a great deal in providing value added services to customers. Acceptance towards Internet banking services is relatively less in India. Also, there are certain factors causing non-acceptance of Internet banking. The chapter attempts to outline the factors that will not only help the current and potential customers in accepting Internet banking but will also enhance the level of acceptance for such services. It will also focus on the reasons for resistance as well as non-acceptance of such services. The first objective of the study is to identify the major factors affecting the acceptance and non-acceptance of respondents towards Internet Banking. For achieving this objective, Factor analysis test has been used to identify the factors affecting the acceptance of the respondents towards Internet banking. Factors were extracted from the survey of responses by making use of Principal component extraction method. Factors with Eigen values above 1 is accepted as desirable results of PCA (Principal Component Analysis) (Hair et al; 1992; Straub.1989). The tables below give results of the factor analysis of survey responses. Two precautions are applied for conducting factor analysis. First one is to judge the measure of adequacy of sample and to confirm that the variables within the factor are co-related. Kaiser - Meyer-Olkin test is used to check the adequacy of the sample size whereas Bartlett's Test of Sphericity is used to check the presence of correlation among the variables used in the research instrument.

**Table 7.1: Results of KMO and Bartlett's Test for Statements of Acceptance**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.726
Bartlett's Test of Sphericity	Approx. Chi-Square	182.4
	DF	666
	Sig.	.000

Source: Compiled by the researcher using SPSS

The KMO measure of sample adequacy is 0.726 which is higher than the commonly accepted 0.60. Therefore, factor analysis for the data is appropriate. The results of Bartlett's Test of Sphericity is also significant (Sig value=0.00) which shows the presence of correlation among the variables used in the study.

**Table 7.2: Results of Eigen values for statements of Acceptance**

Statements	Initial Eigen values		
	Total	% of Variance	Cumulative %
I prefer Internet banking as it is available 24*7	11.323	30.604	30.604
Internet banking is more convenient as I can perform banking transactions at any place, that has internet connection.	3.124	8.442	39.045
Internet banking saves time of the customers	2.214	5.984	45.029
Internet banking reduces the overall cost of performing banking transactions	1.882	5.087	50.116
Internet banking systems are more useful in conducting bank transactions.	1.744	4.713	54.829
It was easy for me to learn the internet banking system.	1.617	4.370	59.199
I am comfortable in solving all my problems which occur while using the internet banking system	1.571	4.246	63.445
I do not feel mentally exhausted while interacting with the internet banking system.	1.481	4.002	67.447
Overall, I find the internet banking system easy to use.	1.139	3.079	70.525
People can hack your information through internet banking and can-do harmful things.	1.015	2.742	73.267
There is uncertainty in performing transactions on internet because of poor connectivity of Internet.	1.005	2.715	75.982
Frauds are common in Internet banking transactions.	.859	2.322	78.305
Processing Errors are common in Internet Banking Transactions.	.822	2.223	80.527
Providing multilayer of protection to online banking systems, will help prevent fraud.	.755	2.040	82.567
Security Issues are not properly addressed in Internet Banking Transactions.	.655	1.770	84.337
I have good knowledge of computer and Internet banking technologies.	.589	1.592	85.929
I can help others in performing their Internet banking transactions.	.577	1.558	87.488
I have all the resources to use the online banking system.	.518	1.399	88.887
Media advertisement inspires me for Internet Banking	.482	1.303	90.189
Marketing Campaigns by banks influence my use of Internet Banking	.438	1.184	91.373
E-mails and E-leaflets from banks persuade me for using internet banking.	.389	1.050	92.424
Internet Banking reflects my Social Image.	.326	.880	93.304
I feel a greater sense of Prestige when I do Internet Banking.	.313	.847	94.150
My friends and my relatives influenced me to use Internet Banking.	.302	.817	94.967
Bank Officials convinced me for using Internet Banking	.282	.761	95.728
The website of the banks are very user friendly.	.249	.674	96.401
The bank's website provide accurate and timely information.	.190	.515	96.916
Time to time Feedback from the users are duly considered	.186	.503	97.419
The bank's website is regularly maintained and up to-dated.	.166	.449	97.869
The proper layout of the bank's website indicates higher credibility	.160	.433	98.302
Security is the biggest concern for customers when faced with the decision to use Internet banking.	.134	.362	98.664
Positive feedback or comments of customers increases my trustworthiness towards Internet Banking.	.130	.351	99.015
I feel safe in performing my Internet banking transaction.	.113	.304	99.320
I will do more online transactions in the future.	.086	.231	99.551

I intend to continue internet banking rather than traditional banking.	.067	.182	99.733
I will recommend internet banking to my peer groups.	.053	.143	99.876
I will post positive feedback about internet banking services	.046	.124	100.000

Source: Compiled by the researcher using SPSS

The result in the table above shows that out of 37 components, only 11 have their eigen values greater than one. The total variation explained by these nine factors taken together is 75 percent which represents these factors as representative of factors affecting acceptance of Internet banking. In other words, variation in the acceptance of Internet Banking explained by these factors accounts for 75 percent. The table below shows the results of Rotated Component Matrix. The value in each cell represents communality. Communality ( $h^2$ ) indicates how much each variable is accounted for by the underlying factor taken together. The amount of Variance a variable share with all the other variables being considered.

### VIII. Findings And Discussion

#### Factors affecting the acceptance and non- acceptance of respondents towards Internet Banking

The first objective of the study is to identify the major factors affecting the acceptance and non-acceptance of respondents towards Internet Banking. To achieve this objective, in the first-place factors affecting the acceptance of respondents towards internet banking were extracted and the results are presented in the table 9.1. The results in the table identify Eleven factors affecting the acceptance of respondents towards internet banking. The factors are

**Table-8.1: Factors affecting Internet Banking Acceptance**

<b>Factor 1</b>	<b>FUNCTIONAL EFFICIENCY AND INTENTIONS TO USE (11.182%)</b> <input type="checkbox"/> Banks website regularly maintained and updated(.781) <input type="checkbox"/> Banks website provide accurate and timely information(.634) <input type="checkbox"/> I will post positive feedback about internet banking services(.624) <input type="checkbox"/> Reflects my social image(.611) <input type="checkbox"/> Do not feel mentally exhausted (.592) <input type="checkbox"/> Time to time feedback of users considered (.580) <input type="checkbox"/> I will do more online transactions in future (.438)
<b>Factor 2</b>	<b>EASE OF USE (9.65%)</b> <input type="checkbox"/> Easy to learn (.812) <input type="checkbox"/> Overall, easy to use(.757) <input type="checkbox"/> Comfortable in solving my problems (.695) <input type="checkbox"/> User friendly website of the bank(.597)
<b>Factor 3</b>	<b>SECURITY AND TRUST (8.52%)</b> <ul style="list-style-type: none"> <li>• Security biggest concern for customers (.826)</li> <li>• I intend to continue internet banking (.658)</li> <li>• Positive feedback or comments of customers increases trustworthiness (0.599)</li> <li>• Media advertisement inspires me for internet banking (0.449)</li> <li>• Proper layout of banks website indicates higher credibility (0.389)</li> </ul>
<b>Factor 4</b>	<b>PERCEIVED RISK (7.526%)</b> <ul style="list-style-type: none"> <li>• Frauds are common (.815)</li> <li>• people can hacking Information and do harmful things (0.728)</li> <li>• processing errors are common (0.618)</li> <li>• Uncertainty in transactions (0.553)</li> </ul>
<b>Factor 5</b>	<b>PERCEIVED FAMILIARITY (7.004%)</b> <ul style="list-style-type: none"> <li>• I can help others in performing internet banking (0.759)</li> <li>• I have good knowledge of internet banking (0.742)</li> <li>• I have all resources to use internet banking (0.434)</li> </ul>
<b>Factor 6</b>	<b>USEFULNESS and RECOMMENDATIONS (6.317%)</b> <ul style="list-style-type: none"> <li>• Saves time of customers (0.819)</li> <li>• More useful in conducting bank transactions (0.622)</li> <li>• I will recommend internet banking in my peer groups (0.449)</li> </ul>
<b>Factor 7</b>	<b>CONVIENIENCE (6.226%)</b> <ul style="list-style-type: none"> <li>• Convenience (0.764)</li> <li>• I prefer internet banking (24*7) (0.584)</li> <li>• Reduces overall cost (0.511)</li> <li>• I feel safe in performing internet banking (0.466)</li> </ul>

<b>Factor 8</b>	<b>BANK EMPLOYEE PERFORMANCE (5.38%)</b> <ul style="list-style-type: none"> <li>● Security issues are not properly handled (-0.730)</li> <li>● Bank officials convinced me for internet banking (0.728)</li> </ul>
<b>Factor 9</b>	<b>SOCIAL IMAGE (5.346%)</b> <ul style="list-style-type: none"> <li>● Greater sense of prestige when doing internet banking (0.854)</li> <li>● My friends and relatives influence me for internet banking (.510)</li> </ul>
<b>Factor 10</b>	<b>MARKETING COMMUNICATION (4.958%)</b> <ul style="list-style-type: none"> <li>● Marketing campaigns influence me for internet banking (0.840)</li> <li>● E-mails and e-leaflets from banks persuade (0.553)</li> </ul>
<b>Factor 11</b>	<b>SECURITY MEASURES (3.837%)</b> <ul style="list-style-type: none"> <li>● Multilayer protection help prevent fraud (0.727)</li> </ul>

### **IX. Conclusion:**

On the basis of the findings of the research work, the conclusions drawn states that technology is progressively influencing the current and prospective customers of the bank, They have a reasonably good level of awareness regarding Internet banking facilities like checking online balance, opening a fixed deposit account. Further the study has discovered certain factors affecting the acceptance of the respondents towards Internet banking services. The factors outlined are Functional efficiency and intentions to use, Ease of Use, Security and Trust, Perceived Risk., Perceived Familiarity, Usefulness and Recommendation, Convenience, Bank Employee Performance, Social Image, Marketing Communication, Security Measures. Out of all these factors, Functional efficiency and intentions is most vital factor which contributes in enhancing the acceptance of customers to use the internet banking products and services offered, Also the performance of the employees of the bank has been discovered as a crucial factor that will help a great deal in persuading current and potential customers in making use of internet banking services, The study also revealed that Age, Income, and Occupation were significant factors affecting the acceptance of respondents towards internet banking products and services. However, it was observed that there was not much influence of these demographic factors on the non-acceptance towards Internet banking. Further the study observed certain dimensions to measure service quality and identified Reliability as a vital factor contributing to the satisfaction level of the respondents. The research suggests that more awareness need to be created regarding internet banking services, website of the banks must be user friendly and must have a proper layout. The employees of the banks should take more efforts in convincing people to resort to internet banking. Also, Reliability should be communicated as it accounts for dependability of the respondents for technology-based internet banking services

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