International Journal of Scientific Research in Engineering and Management (IJSREM)
Volume: 08 Issue: 06 | June - 2024 SJIF Rating: 8.448 ISSN: 2582-3930

Determinants of E-Banking Adoption: A Study of Co-operative Banks in Himachal Pradesh

Tanvee[1], Prof. O.P. Verma[2]

[1](*Assistant Professor, GDC Nankhari, Shimla, India)*

[2](*Professor, Department of Commerce, Himachal Pradesh University, Shimla, India)*

Abstract

In this digital age, every sector of the world is changing rapidly and on a massive scale. Banking, in particular, plays a crucial role in the foundation of any economy. With the advent of e-banking, the banking structure and process of the world have changed, and India is no exception. The use of technology provides ample opportunities for growth. Today, e-banking is a necessity that not only provides hassle-free services but also creates new opportunities for unbanked individuals to access banking services directly. Easy access to the internet and the declining cost of digital gadgets promote awareness about technology, resulting in an increase in the use of e-banking. This paper explores the major driving factors that prompt users to use e-banking services. Data were collected from a sample of 300 respondents in the region of Himachal Pradesh. The analysis reveals six significant driving factors that propel respondents towards online banking, including cost-effectiveness, ease of use, accessibility, queue management, timeliness, and user/eco-friendliness.

Keywords: E-Banking, Digital Era, Driving Factor, and Technology

INTRODUCTION

The Banking sector has a rich history that reflects the lifestyle, political, and cultural aspects of society.[1] With the advent of the new millennium and the information age, technology has rapidly become the driving force of change. The shift from manual-based ledger systems to systematic processes and the transition to internet-based facilities have transformed the banking sector. Banks are now embracing the electronic age to join the race for globalization. Technological advancements in different areas of the industry have accelerated overall production and service delivery, crossing all geographical rules and industrial barriers beyond boundaries. These technological advances have made a tremendous impact on the banking industry as well. The use of the Internet is growing rapidly and it has become a means of distribution. India is currently on the cusp of a digital revolution. To sustain their existence in the liberalized, privatized, and globalized market environment and meet the demands of tech-savvy customers, banks have embraced the use of IT in their operations. As a result of the major changes and developments taking place in information technology, e-banking has emerged as a new innovative development. In 2000, the Government of India enacted the IT Act, which came into force on October 17, 2000, giving legal recognition to electronic transactions and other forms of e-commerce.[2] E-banking, or electronic banking, refers to the deployment of digital technologies to deliver banking services and manage financial transactions through electronic channels. This paradigm shift from traditional banking enables customers to access a wide array of banking functions, such as account management, fund transfers, bill payments, loan applications, and financial planning, via internet-enabled

devices like computers, smartphones, and tablets. E-banking platforms utilize secure, scalable, and user-friendly interfaces to ensure 24/7 availability and improve operational efficiency. They also contribute to environmental sustainability by reducing the need for paper-based transactions and minimizing the carbon footprint associated with physical branch operations. Overall, e-banking represents a significant change in the banking sector, driven by the increasing demand for digital solutions and the need for more efficient, secure, and accessible financial services. However, this study focuses on the cooperative banks of Himachal Pradesh, a region where traditional banking practices and modern technological advancements intersect to create a unique ecosystem for evaluating digital transitions. Himachal Pradesh, with its diverse topography and dispersed population, presents distinct challenges and opportunities for the implementation of online banking services. Cooperative banks, traditionally rooted in community-oriented services, face the dual task of maintaining customer intimacy while embracing technological innovations. This research aims to dissect the multifaceted drivers of online banking adoption within these banks.

Literature review

According to Sohail and Shanmugham's 2003 study, the adoption and use of Internet banking services are influenced by several factors, including accessibility to the Internet, attitude towards change, cost of computer and Internet access, trust in one's bank, security concerns, ease of use, and convenience. Similarly, Jahangir and Begum (2008) reported that customer attitude variables such as perceived usability, ease of use, security, and privacy were positively related to customer adoption. The study further suggested that banks should develop an e-banking system that is easy to use, secure, and private to their users. Auta (2010) revealed that e-banking is a convenient and flexible mode of banking, providing various transaction-related services such as easy transfer, quick transactions, cost-effectiveness, and time-saving. Meanwhile, Jalal et al. (2011) found that ease of use and perceived usability were major sources of satisfaction, while security and privacy were major sources of dissatisfaction. Kumbhar (2011) reported that highly educated individuals, employees, businessmen, those belonging to higher-income groups, and youth groups are increasingly using e-banking services. However, Lal and Saluja (2012) learned that the most serious threat facing e-banking is that it is not always safe and secure. Technical glitches, lack of preparedness, and lack of infrastructure for e-delivery channels can lead to data loss as e-banking is still in its initial stage. A number of studies have investigated people's perceptions and use of e-banking services. For example, Fozia (2013) found that customers in the 20-29 age group generally have a positive view of e-banking, citing speed and convenience as major factors. Similarly, Nathan (2014) concluded that customer satisfaction with internet banking tends to increase over time. Sikdar and Mukkad (2015) developed a model of online banking adoption that identified trust, usage constraints, ease of use, accessibility, and intent to use as key factors. Ibidolapo Ezekiel and Olalekan (2016) suggested that customers should switch to electronic banking for its ease of use and stability benefits, while Alwan et al. (2016) argued that banks should prioritize security issues. Amutha (2016) identified several reasons why customers prefer e-banking, including time savings, convenience, reliability, and the ability to pay bills online. However, lack of knowledge and concerns about security remain obstacles to more widespread adoption. Finally, Pattan and Agarwal (2018) found that debit cards are the most popular form of e-payment among e-commerce users, followed by net banking, e-cash/e-wallets, and credit cards. Ketema (2020) suggests that the bank management, as a service provider, should focus on the ease of use and reliability of m-banking services. Moreover, demographic variables, as indicated by Madavan and Vethirajan's (2020) study, have a strong influence on customer perception, satisfaction, and intent for continued service use. Similarly, Rajasulochana's (2022) research concluded that customers of different age groups and education levels have different perceptions about internet banking services and varying usage levels. Consequently, banks should cater to customers of all age groups.

Need and Scope of the Study

This study is pivotal for understanding the factors that influence the adoption and efficacy of e-banking in cooperative banks in Himachal Pradesh. Cooperative banks play a crucial role in the economy of Himachal Pradesh, significantly contributing to the region's financial inclusion and socio-economic development. Therefore, this research aims to explain the motivating factors that drive users to use e-banking services. It has examined these motivating factors based on respondents' gender, age, bank affiliation, residential background, and educational background. The scope of this study is limited to customers of Himachal Pradesh State Cooperative Bank Limited and Kangra Central Cooperative Bank Limited in the Shimla and Kangra districts. The field survey was conducted during the year 2023. This study is essential for understanding regional trends and the unique challenges faced by cooperative banks.

Objective of the Study: To investigate the main driving factors responsible for the adoption of e-banking based on respondents' perceptions.

RESEARCH METHODOLOGY

Data was gathered from a sample of 300 respondents hailing from the Shimla and Kangra Districts. The data collection process involved the use of a questionnaire containing both open and close-ended questions. Additionally, an interview method was also employed to obtain more accurate results from the participants. Special care was taken to ensure that the sample was representative of people from different backgrounds, in terms of gender, age, occupation, income, and educational background.

RESULTS AND DISCUSSIONS

In this study, factor analysis was used to identify the main factors that drive users to use e-banking. This method offers a systematic approach to understanding the various motivational factors in e-banking, providing valuable insights for strategic decision-making and service improvements. To identify the factors, a scale consisting of twenty-one statements was used. These statements were measured using a 5-point Likert scale with five response options.

DESCRIPTIVE STATISTICAL ANALYSIS OF DRIVING FACTORS TOWARDS E-BANKING

Table 1: provides a descriptive statistical analysis of the factors influencing the adoption of e-banking services. The analysis includes the mean scores and standard deviations of responses from 300 participants on various aspects of e-banking. E-banking is appreciated for eliminating the need to visit bank branches, with statements about reducing queues with a mean score of (4.77), easy to follow and understand transaction process (4.67), promoting a calm atmosphere (4.65), website requires little effort (4.64), and easy to use (4.62), have the highest mean scores. In conclusion, the data suggest that users generally find e-banking easy to use, convenient, and cost-effective, with significant benefits in terms of time savings and accessibility similar to study Auta (2010). However, the lower score for providing up-to-date information suggests that this aspect may need attention to enhance user satisfaction.

Table 1: Descriptive Statistical Analysis of Driving Factors towards E-Banking

	Mean	Std. Deviation	N
It is easy to use and you can easily find what you are looking for on the website	4.6200	.58028	300
Using the bank's website does not require much effort	4.6400	.57576	300
There is a lot of clarity and visibility in the language	4.3400	.73907	300
Easy to follow and understand transaction process	4.6700	.60192	300
You can keep proof for future reference by doing online transaction with e-banking without any charges and hard paper	4.4700	.74225	300
E-banking is more convenient as there is no need to go to the bank anymore	3.9967	1.06164	300
Instant transactions are processed with a single click	3.9800	1.06930	300
E-banking provides up to date information to the user	2.9500	1.17136	300
With an online service, you don't need to stand in long queues anywhere like banks, utility bill payment centers etc.	4.7700	.50790	300
It helps in reducing the number of queues in bank branches and creates a calm atmosphere	4.6500	.65493	300
It also creates a social distancing	4.5400	.72813	300
E-Banking services are available 24/7	4.1900	.88119	300
It provides facilities anytime and anywhere	4.1600	.89278	300
It provides access to current and past transactions	4.1300	.92518	300
The services are easily accessible viz mobile banking, telephone, EFT, ATM	4.5400	.64013	300
The cost of every transaction is less as compared to manual system	4.1700	.87387	300
Funds can be easily transferred without any charges using e-banking	4.1400	.87347	300
Bank’s annual or service fee is reasonable	4.1567	.86484	300
It explains the cost of each service being used	4.1167	.88260	300
It provides a platform for customers to connect to their bank servers and transact themselves over the internet	3.4733	1.17497	300
E-banking helps in environmental sustainability	3.9200	.84616	300

Source: Data Collected through Questionnaire

RELIABILITY STATISTICS FOR DRIVING FACTORS:

Table 2: presents the reliability statistics for the driving factors influencing the adoption of e-banking among customers of cooperative banks in Himachal Pradesh. The reliability analysis, measured by Cronbach's Alpha, resulted in a coefficient of 0.876 for the driving factors. This high value indicates strong internal consistency among the items that make up the driving factors construct, showing that these items effectively measure the same underlying concept. With a total of 21 items included in the analysis, this coefficient indicates a high level of reliability for the driving factors examined in this study.

Table 2: Reliability Statistics for Driving Factors

Cronbach's Alpha	No. of Items
.876	21

KMO AND BARTLETT'S TEST VALUE FOR DRIVING FACTORS:

In Table - 3, the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity for the driving factors influencing the adoption of e-banking are presented. The KMO measure, with a value of 0.777, indicates a high level of sampling adequacy. This suggests that the variables included in the analysis are suitable for factor analysis, as they exhibit sufficient correlations among them to justify the extraction of common factors. Additionally, Bartlett's Test of Sphericity yielded an approximate chi-square value of 7230.187 with 210 degrees of freedom and a significance level of .000. This indicates that the correlation matrix is significantly different from an identity matrix, providing further support for the appropriateness of conducting factor analysis on the dataset. Overall, these results suggest that the dataset is suitable for factor analysis, with the variables demonstrating adequate interrelationships and meeting the assumptions necessary for meaningful factor extraction.

Table 3: KMO and Bartlett's Test Value for Driving Factors

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.777
Bartlett's Test of Sphericity	Approx. Chi-Square	7230.187
	df	210
	Sig.	.000

COMMUNALITIES FOR DRIVING FACTORS

In Table 4, communalities for the driving factors influencing the adoption of e-banking are presented. The initial communalities, all set to 1.000, represent the assumed variance for each driving factor before factor analysis. The extraction communalities, resulting from principal component analysis, indicate the proportion of variance in each factor that is accounted for by the extracted components. The driving factors exhibit varying levels of communalities, ranging from 0.512 to 0.974, indicating the extent to which each factor shares variance with the underlying components identified through principal component analysis. Notably, all factor communality values greater than 0.5 were considered for further analysis. Factors with higher extraction communalities, such as "Funds can be easily transferred without any charges using e-banking" (0.974) and "The cost of every transaction is less as compared to the manual system" (0.970), demonstrate strong consistency with the extracted components, suggesting their

significant contribution to the underlying structure of e-banking adoption. Overall, these communalities provide insights into the degree of alignment between the driving factors and the underlying components identified in the analysis, offering valuable information for understanding the factors influencing e-banking adoption among cooperative bank customers in Himachal Pradesh.

Table 4: Showing Communality for Driving Factors

	Initial	Extraction
It is easy to use and you can easily find what you are looking for on the website	1.000	.779
Using the bank's website does not require much effort	1.000	.814
There is a lot of clarity and visibility in the language	1.000	.648
Easy to follow and understand transaction process	1.000	.663
You can keep proof for future reference by doing online transaction with e-banking without any charges and hard paper	1.000	.618
E-banking is more convenient as there is no need to go to the bank anymore	1.000	.934
Instant transactions are processed with a single click	1.000	.937
E-banking provides up to date information to the user	1.000	.512
With an online service, you don't need to stand in long queues anywhere like banks, utility bill payment centers etc.	1.000	.748
It helps in reducing the number of queues in bank branches and creates a calm atmosphere	1.000	.780
It also creates a social distancing	1.000	.763
E-Banking services are available 24/7	1.000	.899
It provides facilities anytime and anywhere	1.000	.914
It provides access to current and past transactions	1.000	.627
The services are easily accessible viz mobile banking, telephone, EFT, ATM	1.000	.581
The cost of every transaction is less as compared to manual system	1.000	.970
Funds can be easily transferred without any charges using e-banking	1.000	.974
Bank’s annual or service fee is reasonable	1.000	.964
It explains the cost of each service being used	1.000	.947
It provides a platform for customers to connect to their bank servers and transact themselves over the internet	1.000	.684
E-banking helps in environmental sustainability	1.000	.596

Extraction Method: Principal Component Analysis.

TOTAL VARIANCE OF DRIVING FACTORS:

Table 5 illustrates the total variance of the driving factors, along with the initial eigenvalues and the sums of squared loadings after extraction and rotation using Principal Component Analysis. The total variance explained by the extracted factors progressively increases with each component, reaching 34.883% for the first component and culminating at 77.808% for the sixth component. This indicates that the first six components collectively account for approximately 77.808% of the total variance in the driving factors. Therefore, these six factors are the most important among all the driving variables under consideration, with the first factor contributing 34.883%, the second 13.020%, the third 11.487%, the fourth 7.058%, the fifth 6.443%, and the sixth 4.918%. Overall, this suggests that these factors represent a strong underlying dimension or construct that many variables in the analysis have in common.

Table 5: Showing Total Variance of Driving Factors

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.325	34.883	34.883	7.325	34.883	34.883	4.115	19.595	19.595
2	2.734	13.020	47.903	2.734	13.020	47.903	3.230	15.383	34.977
3	2.412	11.486	59.389	2.412	11.486	59.389	2.768	13.181	48.158
4	1.482	7.058	66.447	1.482	7.058	66.447	2.611	12.435	60.593
5	1.353	6.443	72.890	1.353	6.443	72.890	2.328	11.084	71.678
6	1.033	4.918	77.808	1.033	4.918	77.808	1.287	6.130	77.808
7	.799	3.807	81.615						
8	.677	3.222	84.837						
9	.657	3.127	87.964						
10	.593	2.825	90.790						
11	.520	2.478	93.268						
12	.415	1.974	95.242						
13	.280	1.334	96.577						
14	.248	1.179	97.756						
15	.210	1.001	98.757						
16	.117	.556	99.313						

17	.079	.376	99.689						
18	.032	.152	99.841						
19	.018	.085	99.925						
20	.012	.055	99.981						
21	.004	.019	100.000						

Extraction Method: Principal Component Analysis.

SCREE PLOT SHOWING DRIVING FACTORS:

The scree plot in Figure -1 is used to determine the number of factors to retain in a factor analysis. This plot displays the eigenvalues for each component number, with the components ordered from left to right based on their eigenvalues. From the graph, it is evident that the curve starts to flatten between the sixth and seventh factors. Therefore, only the first six factors have been retained.

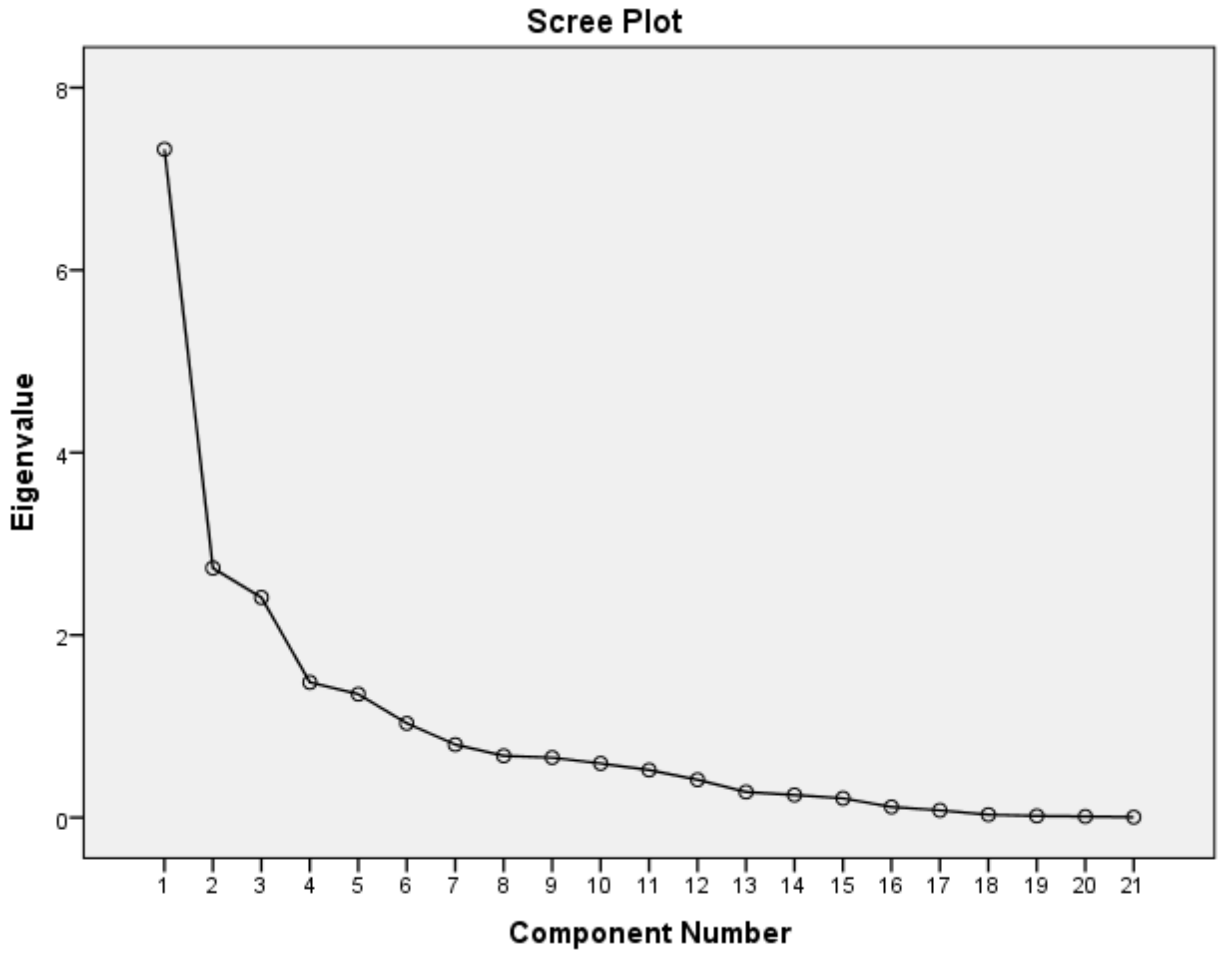

Figure -1: Scree Plot Showing Driving Factors

COMPONENT MATRIX FOR DRIVING FACTORS:

The component matrix from a Principal Component Analysis in Table -6 reveals six key factors that influence users to use e-banking services. Each component represents different aspects of the customer experience. Understanding these components can help banks identify areas to improve their e-banking services, making them better aligned with customer expectations and needs.

Table 6: Component Matrix for Driving Factors

	Component					
	1	2	3	4	5	6
The cost of every transaction is less as compared to manual system	.746	-.601	.103	-.176	-.095	.031
Bank's annual or service fee is reasonable	.741	-.603	.112	-.166	-.103	.030
You can keep proof for future reference by doing online transaction with e- banking without any charges and hard paper	.741	-.047	-.185	.154	-.084	-.039
Funds can be easily transferred without any charges using e-banking	.740	-.608	.116	-.197	-.067	.023
It helps in reducing the number of queues in bank branches and creates a calm atmosphere	.729	.144	-.062	.200	.194	-.383
It explains the cost of each service being used	.725	-.597	.144	-.197	-.053	.045
With an online service, you don't need to stand in long queues anywhere like banks, utility bill payment centers etc.	.695	.135	-.183	.177	.335	-.262
It also creates a social distancing	.667	.064	-.001	.085	.355	-.425
The services are easily accessible viz mobile banking, telephone, EFT, ATM	.651	.166	.274	.192	.125	.043
Easy to follow and understand transaction process	.563	.062	-.515	.019	-.221	.165
E-Banking services are available 24/7	.548	.323	.499	.359	-.339	.023
It provides access to current and past transactions	.546	.318	.355	.037	-.180	.261
It provides facilities anytime and anywhere	.528	.316	.517	.387	-.340	.047
Instant transactions are processed with a single click	.526	.541	.149	-.512	.269	.108
E-banking is more convenient as there is no need to go to the bank anymore	.536	.538	.146	-.508	.258	.106

Using the bank's website does not require much effort	.556	.233	-.625	.121	-.185	.109
There is a lot of clarity and visibility in the language	.413	.180	-.619	-.135	-.019	.208
It is easy to use and you can easily find what you are looking for on the website	.555	.215	-.607	.086	-.217	.045
E-banking provides up to date information to the user	.202	.380	.301	-.426	-.204	-.001
E-banking helps in environmental sustainability	.356	-.168	.151	.311	.512	.245
It provides a platform for customers to connect to their bank servers and transact themselves over the internet	.009	-.119	.008	.295	.437	.626

Extraction Method: Principal Component Analysis.
a. 6 components extracted.

ROTATED COMPONENT MATRIX FOR DRIVING FACTORS:

The table -7 displays the results of a Rotated Component Matrix using Varimax with Kaiser Normalization to improve the interpretability of the components. The table reveals six factors extracted through factor analysis. The study has found that several significant driving factors align with previous studies conducted by Jahangir and Begum (2008), Sikdar and Mukkad (2015), Amutha (2016), and Ketema (2020). Factors such as ease of use, cost-effectiveness, time-saving, and accessibility were positively related to customer adoption. Additionally, user-friendly and queue management were consistent with the study done by Auta (2010). Here's a brief overview of the six factors derived from the rotated component matrix:

Factor 1: Cost Effectiveness – This factor encompasses elements related to the affordability of transactions, such as the ability to transfer funds easily without charges and the low cost of transactions compared to manual systems. This factor includes four statements, each ranging from strongly disagree to strongly agree, resulting in a minimum and a maximum score for cost effectiveness.

Factor 2: Ease of Use – This factor seems to represent aspects related to the usability of e-banking websites, including ease of use, clarity, and minimal effort required. It consists of five statements, each ranging from strongly disagree to strongly agree, resulting in a minimum and a maximum score for ease of use.

Factor 3: Accessibility – This factor may reflect elements related to the availability and accessibility of e-banking services anytime and anywhere, including 24/7 availability and access to current and past transactions. It consists of four statements, each ranging from strongly disagree to strongly agree, resulting in a minimum and a maximum score for accessibility.

Factor 4: Queue Management – This factor captures elements related to reducing queues in bank branches, resulting in social benefits such as social distancing and reduced wait times in bank branches. It consists of three statements, resulting in a minimum and a maximum score for queue management.

Factor 5: Timeliness – This factor might represent elements related to the convenience of e-banking, including instant transactions with a single click and not needing to visit physical banks. It consists of three statements, resulting in a minimum and a maximum score for timeliness.

Factor 6: User/Eco-Friendliness – This factor seems to relate to elements concerning the informational benefits of e-banking, such as providing a platform for users to connect and promote environmental sustainability. It consists of two statements, resulting in a minimum and a maximum score for user/eco-friendly.

Table-7: Rotated Component Matrix for Driving Factors

	Component					
	1	2	3	4	5	6
Q.71 Funds can be easily transferred without any charges using e-banking	.958	.117	.092	.172	.053	.048
Q.70 The cost of every transaction is less as compared to manual system	.953	.141	.113	.162	.036	.043
Q.72 Bank's annual or service fee is reasonable	.951	.135	.123	.159	.026	.040
Q.73 It explains the cost of each service being used	.945	.092	.102	.157	.067	.070
Q.56 Using the bank's website does not require much effort	.044	.873	.109	.192	.032	-.004
Q.55 It is easy to use and you can easily find what you are looking for on the website	.070	.846	.101	.204	.032	-.078
Q.58 Easy to follow and understand transaction process	.229	.770	.092	.087	.045	.002
Q.57 There is a lot of clarity and visibility in the language	.058	.757	-.141	.071	.205	.071
Q.59 You can keep proof for future reference by doing online transaction with e-banking without any charges and hard paper	.397	.487	.277	.381	.011	.038
Q.67 It provides facilities anytime and anywhere	.090	.022	.934	.159	.083	-.010
Q.66 E-Banking services are available 24/7	.101	.039	.918	.179	.105	-.035
Q.68 It provides access to current and past transactions	.163	.145	.650	.028	.381	.107
Q.69 The services are easily accessible viz mobile banking, telephone, EFT, ATM	.227	.098	.501	.405	.235	.225
Q.65 It also creates a social distancing	.243	.117	.104	.807	.170	.012
Q.64 It helps in reducing the number of queues in bank branches and creates a calm atmosphere	.201	.271	.253	.769	.103	-.027
Q.63 With an online service, you don't need to stand in long queues anywhere like banks, utility bill payment centers etc.	.163	.339	.113	.748	.134	.128
Q.61 Instant transactions are processed with a single click	.043	.153	.128	.241	.914	.053

Q.60 E-banking is more convenient as there is no need to go to the bank anymore	.050	.162	.136	.242	.909	.047
Q.62 E-banking provides up to date information to the user	.031	-.039	.266	-.093	.578	-.289
Q.74 It provides a platform for customers to connect to their bank servers and transact themselves over the internet	-.014	.025	-.004	-.108	-.049	.818
Q.75 E-banking helps in environmental sustainability	.210	-.055	.114	.332	-.006	.653

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

CONCLUSION

E-banking is known for minimizing transaction costs, reducing the need for physical visits to bank branches, and providing real-time access to banking services. It improves customer experience through user-friendly interfaces and personalized services while maintaining strong security protocols to protect sensitive financial information. The adoption of e-banking reflects a broader trend towards digital transformation in the financial sector, driving innovation and fostering a more inclusive banking environment. This study provides a comprehensive analysis of the key factors affecting the adoption of e-banking among cooperative bank customers in Himachal Pradesh. Through a comprehensive analysis, six key drivers have been identified that significantly encourage respondents to opt for online banking: cost-effectiveness, ease of use, accessibility, queue management, timeliness, and user/eco-friendliness. These insights illustrate the multifaceted appeal of e-banking, which not only offers substantial economic and practical benefits but also aligns with environmental sustainability and user-centric considerations. By strategically addressing these determinants, cooperative banks in Himachal Pradesh can further enhance the adoption of e-banking services, thereby achieving higher levels of customer satisfaction and operational efficiency.

REFERENCES:

1. Gajdhane, A. (2012) “The Evolution of Banking in India.” Avishkar – Solapur University Research Journal, Vol. 2, pp. 67-75.
2. Ansari, S.J. and Khan, N.A. (2017) “E-Banking in India: Progress and Challenges.” International Journal of Innovative Research and Advance Studies, Vol. 4, No. 8, pp. 336.
3. Sohail, M.S. and Shanmugham, B. (2003). “E-banking and Customer Preferences in Malaysia: An Empirical Investigation.” Information Sciences, Vol. 150, pp. 207-217.
4. Jahangir, N. and Begum, N. (2008). “The role of Perceived Usefulness, Perceived Ease of Use, Security and Privacy, and Customer Attitude to Engender Customer Adaption in the Context of Electronic Banking.” African Journal of Business Management, Vol. 2, No. 1, pp. 32-40.
5. Auta, E.M. (2010) “E-Banking in Developing Economy: Empirical Evidence from Nigeria.” Journal of Applied Quantitative Methods. Vol. 5, No. 2, pp. 212- 222.
6. Jalal, A. Marzooq, J. and Nabi, H.A. (2011). “Evaluating the Impact of Online Banking factors on Motivating the Process of E-Banking.” journal of Management and Sustainability Vol. 1, No. 1, pp. 32-42.

7. Kumbhar, V. M. (2011) "Service Quality Perception and Customer Satisfaction in Internet Banking Service: A Case Study of Public and Private Sector Banks." The International Online Journal, Vol. 4, No. 2, pp. 21-30.
8. Lal, R. and Saluja, R. (2012). "E-Banking: The Indian Scenario." Asia Pacific Journal of Marketing & Management Review, Vol. 1(4), pp. 16-25.
9. Fozia, M. (2013). "A Comparative Study of Customer Perception toward E-Banking Services provided by Selected Public and Private Sector Banks in India." International Journal of Scientific and Research Publication, Vol. 3, No. 9, pp. 1-5.
10. Nathan, D. (2014). "The Relationship among E-Service Quality Dimensions, Overall Internet Banking Service Quality and Customer Satisfaction in the USA." Journal of Modern Accounting and Auditing, Vol. 10, No. 4, pp. 479-493.
11. Sikdar, P. and Mukkad, M. (2015). "Online Banking Adoption-A factor Validation and Satisfaction Causation Study in the context of Indian Banking Customer." International Journal of Bank Marketing, Vol. 33, No. 6, pp. 760-785.
12. Ibidolapo Ezekiel, A and Olaleakn, E (2016). "Impact of Electronic Banking on Bank Performance in Ekiti State, Nigeria." International Journal of Multidisciplinary and Current Research, Vol. 4, pp. 826-835.
13. Alwan, H. A. and Al-Zu'bi, A.I. (2016). "Determinants of Internet Banking Adoption among Customers of Commercial Banks: An Empirical Study in the Jordanian Banking Sector." International Journal of Business and Management, Vol. 11, No. 3, pp. 95-104.
14. Amutha, D (2016) "A Study of Consumer Awareness towards E-Banking." International Journal of Economics and Management Sciences, Vol. 5, No. 4, pp. 1-4.
15. Pattan, P. and Agrawal, M. (2018). "A Study of Consumer Perception towards frequently use of type of E-Payment System in Indore Division." International Journal of Research and Analytical Reviews, Vol. 5, No. 2, pp. 1884-1888.
16. Ketema, E (2020). "The impact of M-banking quality service on customer's satisfaction during Covid-19 lock down: The case of Bank of Abyssinia, Ethiopia" African Journal of Marketing Management, Vol. 12, No. 2, pp. 21-37.
17. Madavan, K. and Vethirajan, C. (2020). "Customer Satisfaction on E-Banking Services of Public and Private Sector Banks in Puducherry Region – An Empirical Analysis." International Journal of Management, Vol. 11, Issue 6, pp. 649-664.
18. Rajasulochana, Khizerulla. M., kumar, A., Sekhar, B.M.R., and Kethan, M. (2022). "Service Quality in SBI: An Assessment of Customer Satisfaction on E-Banking Services." Journal of Positive School Psychology, Vol. 6, No. 6, pp. 4585-4590.