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ACCESSING E-BANKING SERVICE QUALITY AND CUSTOMER SATISFACTION IN SIKKIM

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Abstract
In recent years, E-banking has been properly developing only especially with the introduction of innovations such as UPI, AEPS etc. in India, which has further boosted the e-banking industry as a whole. The Digital payment stood at 2,071 cr which rose up to 18,737 cr at an CAGR of 44% which reflects high level of adoption of E banking services. This paper seeks to analyse the E- banking service quality and customer satisfaction in the state of Sikkim. The study is based on the Servqual model which has identified reliability, responsiveness, assurance, empathy and tangibility of E-banking services to be the core factors affecting service quality of E-banking services. Factor analysis was conducted to analyse customer satisfaction which has identified 4 core factors the effect customer satisfaction. Hypothesis testing has identified significant socio-economic variables which impacts each identified factors in the study.

Keywords: Customer Satisfaction, Digital Payment, E-Banking, Service Quality, Sikkim.

Introduction

E-Banking (Electronic Banking) refers to the provision of banking services and products through electronic channels, such as the internet, mobile devices, ATMs, and other digital platforms. E-banking service quality refers to the extent to which electronic banking services meet or exceed customer expectations in terms of efficiency, reliability, security, and user-friendliness. E-Banking provides varied array of services to the banking customers which were traditionally only available in the traditional banking system. Digital payments a subset of E-banking has gained a lot of growth amounting to and has reached varies facets of the Indian economy. Digital payments transactions grew at a CAGR of 44% and the volume of Digital payment grew by a CAGR of 11% between FY 17-18 and FY 23-24. (PIB reports, 2024)[i]. Digital payment has developed to be ever evolving and growing among all the instruments UPI has had the most impact and it accounts for almost 75% of the total digital payments done in India and has a CAGR of 129% in terms of volume and 138% (PIB reports,2024) in terms of value of total payment made through UPI platform. The delivery of service of Banking has been revolutionised by E-banking services basic banking services such as balance enquiry, changes in basic information, availing services, withdrawing and depositing cash, making merchant payments, making peer to peer payments and also new neo banks have also facilitated

the introduction of fully digital bank accounts which does not require visiting bank branches at all.

[1] https://www.pib.gov.in/PressReleasePage.aspx?PRID=2057013&utm_source=chatgpt.com

Accessing Customer Service Quality has a multi layered benefit to a organisation improved service quality of customers enhanced loyalty, customer satisfaction, value creation among customers. For a bank service quality helps identify gaps, refine service and gain competitive edge among its peers alongside enhance its existing customer base. To access service quality E-Servqual scale has been used developed by Parasuraman, Zeitmai and Malhotra which identifies key factors which impact service quality such as

Efficiency: It refers to how quick and conveniently a user can utilise the services of E-Banking. Efficiency is majorly the driving factor to differentiate various platforms of E-Banking provided by various banks.

Fulfilment: It refers to E-Banking services delivers the needs of users and stands true to the necessities it was designed to perform.

System Availability: It refers to the time that the E-Banking services are online and usable by the banking customers. Timeouts and Maintenance time taken to improve such platforms are often the cause for less system availability.

Privacy: When using online platforms, it is very necessary that personal information of the banking users is kept safe and away from third party users. Hence, It becomes very necessary that privacy is maintained in a E-Banking service platform and sound privacy in a platform acts as a driver towards the adoption of such E-banking platform. All the identified factors act as a key indicator with respect to service quality of E-Banking services.

Customer satisfaction in e-banking is the degree to which customers perceive their needs and expectations are fulfilled through digital banking services. It is a key indicator of customer loyalty and retention, often measured through surveys and feedback mechanisms. In a competitive environment such as the banking industry Customer satisfaction works as a edge among industry peers to increase customer base and integrate existing customers of a particular bank or non-banking financial institution. Hence, for a service heavy industry such as banking it is very essential to increase customer satisfaction on a continuous basis as well as identify gaps which has adverse effects on it. Customer satisfaction with respect to various E-banking service platforms and customer satisfaction of various service provided by the platform have to be studied in-depth to develop an understanding of customer satisfaction towards E-Banking services.

High service quality in e-banking is critical for building trust and fostering long-term customer relationships. Studies (e.g., Parasuraman et al., 2005) emphasize that superior service quality directly influences customer satisfaction and loyalty, which are vital for competitive advantage in the digital banking sector. Empirical studies (e.g., Jun & Cai, 2001) demonstrate a strong positive correlation between e-banking service quality and customer satisfaction. Hence, we can positively conclude that increasing customer service quality also enhances customer satisfaction.

Objective of the Study

- To identify the factors affecting E-Banking Service Quality among banking customers in the state of Sikkim.
- To measure the Customer Satisfaction level of banking customers with regard to E-Banking Services.
- To identify the relationship among various socio-economic variables and E-Banking Service Quality.

Methodology of the Study

This Paper is descriptive and analytical in nature. Self-structured questionnaire was prepared with E-Servqual construct by incorporating measures and variables in Likert scale and reliability of the questionnaire was checked through pilot data of 50 using the cron bach's alpha. The questionnaire included two parts. First part encompassed demographic questions, and the second part comprised of questions related to various aspects of E-Banking Service quality and Customer Satisfaction.Convivence sampling was used for the study and 200 samples were collected for the purpose of the study for all 6 districts of the state of Sikkim. For the purpose of analysis SPSS was used to conduct factor analysis of 25 variables affecting the Service Quality. Hypothesis testing was conducted using Chi square to check the significance of various socio-economic variables on E-Banking Service Quality.

Literature Review

Vyas (2008) He aimed to understand the opportunity, function, types, advantages and disadvantages and he has also aimed to study the effect of the E-banking on the traditional banking system. He has found that the E-banking was helpful in getting real time account information, fund transfers and various other functions he has stated that E-banking facilities has virtually ended the need to visit the physical bank branches, however he also stated that E-banking has a huge limitation which comes in the form of limited literacy and mistrust among the users with regard to security and usage. The impact of E-banking has been huge in the banking sector and the advantage of having a huge channels of bank branches which was a competitive advantage can lead to becoming a disadvantage as the need to visit branches is diminishing day by day and the operational cost of branches will eventually cause losses to the banks. Another impact that E-banking has caused is that customers have become more adaptable and responsive and due to E-banking they are provided huge array of choices with regard to banks and therefore they will not remain loyal to one bank as opposed to the traditional banking. He suggested that portal providers are likely to claim a huge share of profits of the banks and therefore banks must look into providing tailored specific portals which caters to retail needs of the customers and the banks must be prepared "martini banking" (providing services at any time, place or person).

Gupta,Bansal (2018) Their study aims to identify the customer satisfaction among the customers with regard to e banking in various private and public banks and it seeks to find out the current scenario of e-banking. They have found that majority of the customer of banks were aware of e-banking and majority are using e-banking in a daily basis and have found that e-banking has saved time and provides safety and security. They have found that most of the banking customers are content with the e-banking services. It was also found that customers age, income and education levels are the major influence with regard to customer satisfaction,

The paper concludes that still majority of respondents don't have the necessary knowledge of internet and computers to effectively use e-banking Therefore banks should provide new schemes which are more user friendly and should provide customer satisfaction which will lead to customer retention.

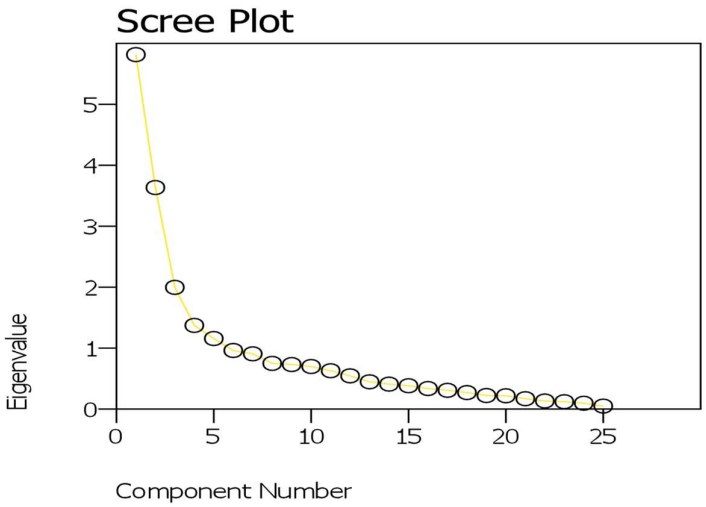
Sohail, Shanmugham (2003) They seek to understand the customer preference and the outlook of the customer with regard to E-banking in Malaysia. They also seek to understand the determinants and factors which has an influence in the customers adoption of Electronic banking. In the study they found that age and educational qualification had no significant influence in the perception of Electronic banking among the customers, however it was also found the lower the age of the respondents the more likely he is to adopt E-banking and also that higher literacy leads to higher adoption and more affluent people have adopted Electronic banking more than the less affluent customers. They have found that the major factors of adoption of e-banking are Awareness, Internet accessibility, attitude towards change, the level of trust the banking system, security concerns, ease of use and convenience of E-banking tools.

Data analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.917**
Bartlett's Test of Sphericity	**Approx. Chi-Square**	**1851.819**
	df	**190**

With the help of KMO and Bartlett's test of sphericity we can clearly observe that the data is favorable as the KMO value of 0.917 indicates a high level of sampling adequacy and is often a score of more than 0.9 is termed as "meritorious" and represents data fit for conducting factor analysis. It suggests that the correlation of the data is high enough to justify dimension reduction and establishes that there is significant relationships among variables.

Further with the help of Approx Chi Square data we can interpolate that the p value is below 0.000 which is much less than 0.05 hence we can conclusively reject the null hypothesis hence we can state that there is significant correlation among the variables, and the data is appropriate for factor analysis. With the help of these tests, we can conclude that the factor analysis output will be reliable and valid.



Scree Plot is a graphical representation of component number in the Y axis and Eigen value in the X axis and as it can be noticed that in accordance to the Cattell's Scree Test we have to assume the stark break in the figure (Elbow Shape) as a cutoff point wherein factors above the cutoff point are significant and the factors following the cutoff point do not represent the data properly and the former variables explain the data sufficiently. As the scree plot graph of the study forms the elbow shape it further supports the validity of the factor analysis.

Total Variance Explained

Total Variance Explained

	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	5.82	26.0%	26.0%	5.82	26.0%	26.0%	4.80	21.4%	21.4%
2	3.63	16.3%	42.3%	3.63	16.3%	42.3%	3.78	16.9%	38.4%
3	2.00	8.9%	51.2%	2.00	8.9%	51.2%	2.48	11.1%	49.5%
4	1.37	6.1%	57.3%	1.37	6.1%	57.3%	1.52	6.8%	56.2%
5	1.16	5.2%	62.5%	1.16	5.2%	62.5%	1.40	6.3%	62.5%
6	.96	4.3%	66.8%						
7	.91	4.1%	70.9%						
8	.75	3.4%	74.2%						
9	.73	3.3%	77.5%						
10	.70	3.1%	80.6%						
11	.63	2.8%	83.4%						
12	.54	2.4%	85.9%						
13	.45	2.0%	87.9%						
14	.41	1.8%	89.7%						
15	.38	1.7%	91.4%						
16	.34	1.5%	92.9%						
17	.31	1.4%	94.3%						
18	.27	1.2%	95.5%						
19	.22	1.0%	96.5%						
20	.22	1.0%	97.5%						
21	.17	.8%	98.2%						
22	.13	.6%	98.8%						
23	.12	.5%	99.4%						
24	.10	.4%	99.8%						
25	.05	.2%	100.0%						

The study considered 25 variables whereby factor reduction has indicated 5 major factors which have eigen value greater than 1 which in accordance to the Kaiser's Criterion must be retained for the purpose of Factor analysis. In this case, **5 factors** have eigenvalues greater than 1:

- Factor 1: 5.825 (26.0% variance explained)
- Factor 2: 3.63 (16.3% variance explained)
- Factor 3: 2.00 (8.9% variance explained)
- Factor 4: 1.37 (6.1% variance explained)
- Factor 5: 1.16 (5.2% variance explained)
- Together, these 5 factors explain **62.5% of the total variance**.

Hair et.al(1998) "Multivariate Data Analysis"

Factors affecting E-Banking Service Quality among Banking Customers of Sikkim

Extracted Factors

Rotated Factor Analysis	1	2	3	4	5
EF1	0.96				
EF2	0.54				
EF3	0.58				
EF4	0.65				
EF5	0.68				
EF6	0.78				
EF7	0.57				
EF8	0.62				
EF9	0.52				
EF10	0.57				
EF11	0.52				
EF12	0.45				
Pr1		0.52			
Pr2		0.93			
Pr3		0.68			
Pr4		0.78			
Pr5		0.60			
Fu1			0.54		
Fu2			0.52		
Fu3			0.93		
Fu4			0.54		
Se1				0.49	
Se2				0.93	
SA1					0.62
SA2					0.69

Factor 1

Efficiency: In factor 1, twelve items were loaded. After considering the elements inside factor 1, it was named as "Efficiency." This factor encompasses variables that represents how quick and conveniently a user can utilise the services of E-Banking.

Factor 2

Privacy: In factor 2, Five variables were loaded. In this factor variables that represents privacy involved while utilising E-Banking services virtually. Privacy is very crucial when it comes to dealing with online platforms especially when it comes to financial platforms like banking.

Factor 3

Fulfilment: In factor 3, Four factors representing responsiveness which indicates the tasks fulfilled by the E-Banking platform and whether it conducts the services that it is made to deliver to the customers.

Factor 4

Customer Satisfaction on Various E-Banking Instruments							
E-Banking Instruments	**1(Not Satisfied at All)**	**2(Not Satisfied)**	**3(Neutral)**	**4(Satisfied)**	**5(Very Satisfied)**	**Mean**	**Standard Deviation**
Debit/Credit Cards	12	0	48	116	24	3.66	0.894655332
Mobile Banking apps	0	4	64	104	28	3.74	0.694291593
Internet Banking portal	8	8	68	100	16	3.5	0.839095723
Unified Payment Interface (UPI)	0	12	28	124	32	3.9	0.735402153
Aadhar Enabled Payment System (AEPS)	0	20	88	76	20	3.4	0.755928946
Mobile Wallets such as Paytm, PhonePe	0	12	64	88	36	3.72	0.809131558
Point of Sale Machine (POS)	0	0	96	92	12	3.54	0.578879988
Insurance and Loans facilities	0	8	108	64	20	3.44	0.704504457
ATM	0	16	24	132	28	3.84	0.738448456

Security: In factor 4, Two factors representing security aspect of the E-Banking services have been grouped into a single factor.

Factor 5

System Availability: In factor 5, Two factors representing system availability which is the amount of time that the E-Banking services are online and usable by the banking customers.

Customer Satisfaction

For the purpose of the study customer satisfaction level of Banking customers on the basis of various E-Banking instruments were taken into account wherein it was found that UPI with a mean score of 0.73 relatively low standard deviation (SD = 0.735) indicates consistency in user experience was found to be the most satisfying instrument followed by ATM with a mean of 3.84 and SD of 0.738 which also reflects a strong satisfaction Mobile Banking apps also reflects a high satisfaction with mean of 3,74 and SD 0.696. Instruments with moderate satisfaction include instruments like Debit/Credit and PoS Machines however it includes greater variation, which may indicate differences among users. Low awareness of instruments includes AEPS, Internet Banking, Insurance and Loans facility.

Conclusion

It was found that there are 5 factors affecting the adoption of E-Banking Service quality among Banking Customers of Sikkim Namely: Responsiveness, Efficiency, Fulfillment, Privacy and System Availability.Overall user satisfaction is high across digital payment methods, with UPI (3.9), ATMs (3.84), and Mobile Banking Apps (3.74) receiving the highest ratings on the Likert scale. Debit/credit cards and mobile wallets also show strong satisfaction. However, POS machines (3.54) and AEPS (3.4) have relatively lower satisfaction levels, indicating room for improvement in reliability and user experience. Hypothesis testing between socio economic variables and E-Banking Service Quality showcases that only income and educational qualification impacted E-Banking Service Quality and other socio-economic variables were not significant.

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