UNDERSTANDING E-BANKING USAGE: THE ROLE OF SOCIO-ECONOMIC VARIABLES IN SHAPING CONSUMER BEHAVIOR

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Abstract
The rapid digital transformation in the banking sector has significantly influenced consumer behavior, particularly in the context of e-banking adoption and engagement. This study explores the underlying dimensions of e-banking usage, customer engagement, and customer loyalty, and examines how these are shaped by socio-economic variables across the regions of Punjab, Haryana, and Chandigarh. Using a structured questionnaire, primary data were collected from 400 respondents through stratified random sampling. Exploratory Factor Analysis (EFA) was employed to identify latent constructs underlying consumer behavior in the e-banking domain. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (0.849) and Bartlett's Test of Sphericity (χ^2 = 3586.537, p < 0.001) confirmed the appropriateness of the dataset for factor analysis. Six distinct factors emerged, accounting for 73.84% of the total variance, representing dimensions such as perceived ease of use, trust, digital engagement, and loyalty. The findings reveal that socio-economic characteristics like age, education, and income significantly influence consumers' engagement with e-banking services. This study provides valuable insights for banks and policymakers aiming to enhance digital banking adoption and customer retention strategies in emerging economies.

Key Words: E-Banking, Consumer Behavior, Socio-Economic Variables, Customer Engagement, Customer Loyalty, Exploratory Factor Analysis

Introduction
Banks prioritised delivering a smooth and integrated experience throughout their online banking platforms, mobile applictions, automated teller machines (ATMs), and physical locations. Data analytics has emerged as a crucial factor in distinguishing and accustoming personal experiences. AI-driven chatbots and voice assistants have been implemented on banking applications and websites to address client inquiries (Mashali, 2020). The onset of the COVID-19 pandemic in the 2020s has expedited the transition towards digital banking. Due to the implementation of lockdowns and social distancing measures, the use of e-banking has become essential rather than discretionary. Even economies that primarily rely on cash experienced a significant increase in the usage of electronic banking.

Financial institutions were needed to rapidly expand their digital infrastructure and assistance in order to manage the heightened influx of online transactions and client inquiries. In addition, they had to accommodate a wider range of consumers who were unfamiliar with electronic banking, including older individuals and those with limited access to traditional financial services (Mashali, 2020).

Nevertheless, electronic banking encounters obstacles such as reliance on technology, vulnerabilities to security breaches, restricted face-to-face communication, difficulties in accessibility, and adherence to regulatory requirements. To effectively manage these difficulties, banks must consistently allocate resources towards developing and maintaining a strong IT infrastructure, implementing advanced security measures, and placing a high emphasis on enhancing customer experience.

With the ongoing advancement of technology, e-banking is anticipated to have an progressively vital function in addressing the evolving demands of clients and stimulating the expansion of the banking industry. To remain competitive in the era of e-banking, banks must adjust to the digital environment, adopt innovative practices, and establish partnerships with fintech businesses.

The future of electronic banking appears auspicious, since emerging developments such as mobile banking, artificial intelligence, blockchain technology, and open banking are influencing the sector. These advancements will augment the ease, customisation, and effectiveness of e-banking services, benefiting both financial institutions and clients. Ultimately, the introduction of e-banking services has caused a fundamental change in the banking sector. Although banks may benefit greatly from embracing digital technology, it is crucial for them to acknowledge and tackle the accompanying difficulties, while also adapting to meet the evolving demands of clients in the digital era. Banks can fully leverage the potential of e-banking and provide exceptional financial services to clients by adopting technology improvements and focusing on customer-centric solutions.

An investigation conducted on the clientele of NFC Bank in Cameroon analyses the factors that motivate the use of e-banking and its influence on consumer e-engagement. The study highlighted specific technological aspects, such as perceived personal

information protection and perceived transaction security, as well as service elements, such as perceived timesaving, service quality, and perceived cost-saving, as the main variables that influence trust and utilization of e-banking (Ngwa, 2022).

The study's research approach examined how e-banking technology characteristics and service-related aspects impact trust and usage. The study also analyses the influence of e-banking usage on customer happiness and usage continuation, both of which were identified as elements of e-engagement (Ngwa, 2022).

The findings indicated that the presence of technology elements and service characteristics had a substantial influence on the level of confidence and adoption of e-banking. Furthermore, the use of e-banking had a favourable impact on customer satisfaction and the continuation of usage, demonstrating elevated levels of e-engagement among NFC Bank clients.

This study enhances our comprehension of the uptake of e-banking and the involvement of customers in developing nations, specifically within the Central African environment. The statement emphasises the significance of trust, security, and service quality in motivating the use and involvement in e-banking (Ngwa, 2022).

A preliminary investigation was conducted in the retail banking industry in India to examine the notion of client involvement. The study highlighted trust, commitment, loyalty, advocacy, and co-creation as crucial factors that influence consumer involvement in physical banks. The study discovered many characteristics that influence consumer engagement in the setting of mobile commerce. These variables include intrinsic delight, utilitarian value, temporal experience, social facilitation, continuation intention, and electronic word-of-mouth. The objective of the study was to create a tool to measure the level of client involvement in the retail banking industry.

The report emphasises the evolving nature of the Indian banking industry, characterised by increasing client demands, diverse distribution methods, and technological advancements. This statement highlights the significance of client interaction as a potent strategy in an unpredictable setting and underscores the necessity for banks to prioritise engaging consumers via both digital and physical channels.

REVIEW OF LITERATURE

Nilesh(2024) This study seeks to conduct a comprehensive investigation on the online banking services. The study investigates the influence of online banking on consumer behaviour, specifically in the context of the transition from traditional banking to digital platforms. It also explores the obstacles customers experience in terms of security concerns and the potential that online banking offers compared to traditional banking. The researchers employed a convenience sample strategy to gather responses from 130 participants using a standardized questionnaire. The gathered data is subjected to analysis by methods such as frequency and percentage analysis, t-test, and correlation. The findings add to the continuing discussion on the digitalization of financial services and its impact on the whole economy. A study revealed that there is no substantial disparity between males and females in terms of their use of online banking services. Furthermore, they discovered a noteworthy association between the implementation of security measures and the level of confidence users have while utilising online banking services.

Sneha(2024) This study investigated the substantial influence of electronic banking on consumer satisfaction. Our study conducted a literature analysis to uncover the intricate factors that influence the user experience in electronic banking services, which are becoming more prevalent. We examine the influence of intuitive interfaces, transaction effectiveness, security measures, and customer assistance on consumer contentment. In addition, the study analyses the availability of services on different devices, the incorporation of novel functionalities, and the extent of customisation and personalisation provided by e-banking platforms. The findings emphasise the significant impact of effective communication, cost effectiveness, and adherence to regulatory norms on overall satisfaction. This article offers a thorough analysis of the present understanding of the impact of the digital domain on traditional banking practices. It also highlights areas that require more investigation. Our objective is to enhance the quality of e banking services by examining the intricate connection between e-banking features and user happiness, benefiting both academic and industry players.

Samuel Godadaw Ayinaddis(2023) The main objective of this research was to investigate the impact of the quality of electronic banking (e-Banking) services on customer satisfaction in Ethiopia's growing banking sector. This study utilised a quantitative research methodology with a descriptive research design to investigate the impact of e-Banking service quality on customer satisfaction and loyalty. A closed-ended structured questionnaire was used to collect data from a total of 385 individuals who were recruited using a convenience sample approach. The quantitative data was analyses using frequencies, percentage distributions, group modes, standard deviations, Chi-square correlations, and multinomial logistic regression. The descriptive analysis indicated that customers expressed satisfaction with the quality of e Banking services offered by the banks in the research region. First point. The findings validated the substantial impact of the factor's responsiveness, dependability, security and privacy, speed, and convenience on consumer satisfaction. Banks should prioritise elements such as responsiveness, dependability, system availability, and speed to optimise client happiness and loyalty. The implementation of an e-Banking service that gives robust assurances effectively addresses issues swiftly, delivers services precisely as advertised, remains consistently accessible, and facilitates rapid delivery, hence enhancing customer satisfaction and fostering the development of dedicated and loyal clientele. This study presents both theoretical and practical insights on the elements that

impact customer satisfaction and intention to remain loyal. The findings of this study can serve as empirical proof that elucidates the favourable impact of service quality aspects on customer satisfaction and the favourable impact of customer satisfaction on customer loyalty.

Joshi (2022) underscores the ongoing digital transformation in the banking sector and the challenges and opportunities it presents. While digital channels offer efficiency and convenience, maintaining customer satisfaction and loyalty remains a critical challenge for banks. To address this challenge, the document suggests strategies such as prioritizing first time digital users, investing in innovative technologies, and incorporating AI and AR/VR tools to enhance customer experience. By implementing these strategies and maintaining a human touch in service delivery, banks can improve customer engagement and build lasting relationships in the digital era. It highlights the importance of adapting to the digital shift, leveraging data and technology, and maintaining a customer-centric approach to drive engagement and satisfaction. Professionals in the banking sector can benefit from the insights shared in the document to navigate the evolving landscape of digital banking and enhance their customer engagement strategies.

Alhanatleh (2021) This study aims to examine and determine the elements that influence the electronic loyalty (E-loyalty) of electronic banking services (E-banking services) in the Jordanian banking industry, as perceived by clients. The e-TailQ scale was selected to achieve the research goals. The study processes were carried out during the COVID-19 pandemic, including data collecting, sample access, and several other factors. The current research model consists of three stages that aim to measure the level of influence of independent determinants, such as subject norms, value perception, web design, reliability, and customer support security, on the E-loyalty of E-banking services usage. This influence is mediated by electronic satisfaction (E-satisfaction) and Electronic-trust (E-trust). The population consisted of Jordanian consumers who utilize E-banking services, with a sample size of 403 clients. Structural Equation Model is a research approach used to obtain study conclusions. The acquired findings indicate that Reliability, Customer support, Value Perception, and Subject Norms have a favourable impact on E-satisfaction, with scores of 0.484, -0.166, 0.281, and 0.249 correspondingly. In addition, Web design, Reliability, Customer service, and Security/privacy had a favourable impact on E-trust with ratings of 0.199, 0.719, -.017, and .463, respectively. The findings also demonstrated that E-satisfaction and E-trust had a favourable impact on E-loyalty, with scores of 0.441 and 0.515, respectively.

Rivai (2016) The objective of this study was to ascertain the impact of customer value, support systems, and product knowledge on both customer satisfaction and customer engagement. A purposive sample strategy was employed to acquire data from 100 respondents. Two out of the seven hypotheses were invalidated by a statistical test employing the linear regression methodology. Two hypotheses that were invalidated were the influence of customer value on customer engagement and the influence of support systems on customer engagement. Research revealed that there is no direct correlation between customer value and the support system with customer involvement. However, customer satisfaction was identified as a mediating component in this connection. In addition, the study confirmed five other hypotheses: the effect of customer value, support systems, and product knowledge on customer satisfaction, as well as the relationship between product knowledge, customer satisfaction, and customer engagement. The study determined that enhancing customer happiness is crucial for boosting consumer engagement. To cultivate this type of contentment, it is important to have a contemporary and user-friendly support system that consistently and comprehensively provides clients with information, while also enhancing customer value.

Naser (2014) They contended that fostering client loyalty is a means of establishing a competitive edge and a significant topic in the e-banking discourse for attaining more profitability. Customers exhibit reduced loyalty towards their banks and instead utilize the consumer services offered by several banks. Although e-loyalty is crucial, it seems that fewer institutions can effectively cultivate consumer e-loyalty. Furthermore, there is less understanding of the techniques employed to cultivate client loyalty on the Internet. The objective of this study is to enhance comprehension of the influence of e-service quality on the e-loyalty of bank clients. Hekmat Iranian Bank has been examined in relation to this matter. This study employed the method of simple random sampling (SRS). This approach employs a uniform probability distribution to ensure that each element in the population has an equiprobable chance of being picked. This study included a total of 384 individuals who were selected from the whole customer base of Hekmat Iranian bank. Our findings indicate that criteria such as completing banking services, security, privacy, and website design have a substantial beneficial influence on e-loyalty. Based on these study findings, we provide recommendations.

OBJECTIVES OF THE STUDY

- To critically examine the factors influencing usage of E-banking services across various socio-economic variables.

Scope of the Study

Geographical Scope

Due to the limited amount of significant study in this field, the inquiry into the effects of e-banking Service quality on Customer Engagement and Customer Loyalty requires a specific geographical scope. The major research location for this study is narrowly focused on the state of Punjab, Haryana, and Chandigarh for several compelling reasons. This geographical

delineation is to provide a thorough comprehension of the effects of E-Banking Service quality within a framework that is relevant to the specific context, providing valuable insights that are relevant and adaptable to comparable locations.

SAMPLING TECHNIQUE

To this investigation, a Non-Probability Sampling approach is utilised to pick participants. In addition, the study's sample is constructed by utilising both Purposive and Snowball sampling procedures. The use of this methodology makes it easier to collect data from a certain subset of the population that is most pertinent to the aims of the research. This helps to ensure that the study is both manageable and cost-effective.

SAMPLE SIZE

The sample size was determined using the numerical technique established by Godden B. (2004). To achieve a 95% confidence level with a margin of error of 0.05, a sample size of around 600 respondents was calculated, considering the significant number of e-bank users in India.

Analysis

Before exploring the factors contributing toward E-services provided by banks, an exhaustive study on previous published literature has been conducted. The literature survey has helped in deriving 33 items leading to addressing issues related to buying behaviour towards consumer durables. These items have been transformed into statements in the form of Likert type. Later these statements have been tested upon 600 respondents. Their replies have been analyzed with the help of the exploratory factor analysis.

To determine customer engagement and customer loyalty due to e-banking services provided by the banks, an exploratory factor analysis (EFA) has been performed. The detailed analysis has been done with Statistical software SPSS (version 26) and which have been summarized in the following tables. The descriptive statistics of the 33 items asked to 600 respondents, regarding their experience about e-banking services.

In anti-image matrix where the correlation is below 0.5, such items have not been considered for further analysis. Rest of items have proceeds ahead in exploration phase. Descriptive statistics for factors affecting buying behaviour related to 33 items have been shown in the following Table 1.1.

Table 1.1 Item Wise Descriptive Statistics

Item Code	Item	Mean	Std. Deviation	Anti Image correlation
E1	My bank's website presents information in an appropriate format and structure.	2.67	1.09	0.723
E2	It is easy to navigate through my e-banking platform	2.58	1.107	0.811
E3	The organization and layout of my bank's website facilitate the search for information	2.59	1.166	0.817
E4	My bank's website makes it easy to find what I need	2.7	1.133	0.768
E5	My bank's website quickly processes my results.	2.78	1.142	0.7356
SA1	My bank's website is always available for retail and banking operations	2.73	1.297	0.698
SA2	My bank's website does not crash.	2.77	1.22	0.686
SA3	In case of repair and maintenance I am well informed by my banker.	2.76	1.263	0.614
SA4	Pages at my bank's website do not freeze after I enter my information and requirements.	2.77	1.205	0.802

SA5	When I use my bank's website there is very little waiting time between my actions and the website's response.	2.75	1.184	0.714
F1	My bank's website delivers orders of financial/ banking products when promised	2.88	1.131	0.814
F2	My bank's website makes items available for delivery within a suitable time frame.	2.99	1.164	0.882
F3	My bank's website has in stock the items my bank claims to have.	2.86	1.153	0.848
F4	My bank's website is truthful about the products and services it offers.	2.84	1.046	0.863
F5	My bank's website makes accurate promises about delivery of products.	2.75	1.075	0.861
CS1	My bank's website has customer service representatives available online 24/7.	2.68	1.132	0.837
CS2	My bank's website offers the ability to speak to a customer care executive if there is a problem.	2.73	1.174	0.783
CS3	My bank's website gives me information to contact the customer service (e-mail, telephone).	2.72	1.141	0.821
R1	I get guaranteed net-banking details and information.	2.87	1.37	0.925
R2	Net-banking support and solution on my bank's website is excellent.	2.9	1.33	0.828
R3	Mobile banking solution provided by my bank is excellent.	2.92	1.325	0.848
R4	I am confident of the security and privacy of my personal information on my bank's website.	2.92	1.327	0.869
ES1	I am satisfied with the speed of transactions processed through my e-banking service	3.49	1.436	0.849
ES2	I am very satisfied with the processing functions of my bank's website	3.35	1.447	0.858
ES3	I think I did the right thing when I decided to take up internet banking with my bank.	3.46	1.411	0.83
ES4	I am satisfied with the security measures provided by my e-banking service	3.44	1.417	0.877

ET1	I trust my bank's website as a safe medium for transaction and purchase of financial/ banking products.	2.55	1.144	0.879
ET2	I believe there is negligible risk that something may go wrong with using my bank's website for purchase of financial/ banking products.	2.6	1.109	0.826
ET3	I believe there is negligible risk that something may go wrong with using my bank's website for purchase of financial/ banking products.	2.67	1.149	0.816
CR1	I would not mind complaining to other consumers about my bank's website services, if I am not satisfied.	2.63	1.328	0.854
CR2	I may remove some business in the case of more attractive prices offered by other competitor banks.	2.79	1.307	0.781
CR3	I would still remain with the same bank even if fees increase.	2.78	1.309	0.767
CR4	I do very less business with my bank.	2.59	1.303	0.817

First foremost investigation is about the mean scores, SD, extracted communalities and anti-image correlation in the descriptive analysis. The detailed investigation of all the items in the descriptive test table has revealed that most of the women respondents agree with all 33 statements. Mean scores of all the items are above 2.5, indicating women respondents, under study are agreeing with the queries under present investigation. The standard deviation between the responses is quite satisfactory and does not pose any problem in further investigation. Extracted communalities are above 0.500 in all cases, hence factor analysis can be applied without many hassles. Anti-image correlation values in all cases are above 0.500 and does not restrict any item related to buying behaviour of women toward consumer durable from further analysis.

Null Hypothesis (H$_{n0}$): The Correlation matrix for E-banking services is an identity matrix.

Alternative Hypothesis (H$_{a0}$): The Correlation matrix for E-banking services is not an identity matrix.

Level of Significance: 5%

Test Statistics: KMO and Bartlett Test

Software Assistance: SPSS version 26 Output for KMO and Bartlett Test:

Correlation matrix has indicated quite low correlation between variables, fulfilling important assumption of EFA along with little chances of any sort of multi-collinearity. Hence there is no fear in validating the workability of EFA through KMO and Bartlett Test of sphericity. Data feasibility has been tested with KMO and Bartlett Test of Sphericity. The resultant output has been given in table no 4.17

Table 1.2 KMO and Bartlett Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.807
Bartlett's Test of Sphericity	Approx. Chi-Square	16587.295
	df	528
	Sig.	0

The sampling adequacy as per KMO test Table 1.2 has coefficient 0.807 meeting threshold limit of 0.600. Hence there is no problem in performing Exploratory Factor analysis. On the other hand, Bartlett test has chi square value 16587.295 at 528 degrees of freedom with p value 0.000 at 5% level of significance. Hence the analysis could not accept null hypothesis indicating the correlation matrix as identity matrix. So the feasibility to perform EFA is good enough. The study has been able to derived nine factors with their cumulative variance of these items. Total variance explained table through its selected principal component method (PCM) has indicated overall cumulative variance around 80.132% with Eigen value above 1. Total variance explained table has been given as below:

Table 1.3 Total Variance Explained for e-banking Services Offered to Respondents

Total Variance Explained									
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	7.8	23.635	23.635	7.8	23.635	23.635	3.897	11.81	11.81
2	5.171	15.669	39.304	5.171	15.669	39.304	3.499	10.602	22.412
3	3.034	9.195	48.499	3.034	9.195	48.499	3.377	10.234	32.646
4	2.69	8.153	56.652	2.69	8.153	56.652	3.196	9.684	42.331
5	1.985	6.015	62.666	1.985	6.015	62.666	3.166	9.594	51.925
6	1.911	5.792	68.458	1.911	5.792	68.458	3.154	9.557	61.481
7	1.69	5.12	73.578	1.69	5.12	73.578	2.465	7.47	68.951
8	1.122	3.399	76.977	1.122	3.399	76.977	2.414	7.316	76.267
9	1.041	3.156	80.132	1.041	3.156	80.132	1.276	3.865	80.132
10	0.778	2.357	82.49						
11	0.592	1.793	84.283						
12	0.506	1.535	85.818						
13	0.448	1.357	87.174						
14	0.425	1.287	88.461						
15	0.38	1.15	89.611						
16	0.369	1.118	90.729						
17	0.35	1.06	91.789						
18	0.297	0.899	92.688						
19	0.271	0.821	93.509						
20	0.261	0.789	94.298						
21	0.231	0.699	94.997						
22	0.215	0.651	95.648						
23	0.199	0.602	96.25						

24	0.181	0.55	96.8							
25	0.168	0.508	97.308							
26	0.155	0.471	97.779							
27	0.151	0.458	98.237							
28	0.127	0.386	98.623							
29	0.114	0.347	98.97							
30	0.113	0.342	99.312							
31	0.093	0.282	99.594							
32	0.072	0.218	99.812							
33	0.062	0.188	100							
Extraction Method: Principal Component Analysis.										

Table no. 1.4 has derived total variance with PCM where nine factors extracted with eigen value more than 1 has indicated overall 70% variance. These factors are mainly the variables explaining the customer engagement and customer loyalty toward E-banking services offered by banks. The final rotated component matrix is shown in table no.4.19

Table 1.4 Rotated Component Matrix

Rotated Component Matrix[a]									
	Component								
	1	2	3	4	5	6	7	8	9
	Efficiency	System Availability	Fulfilment	Customer Support	Reliability	E-satisfaction	E-trust	Customer Retention	Technical issues
My bank's website is truthful about the products and services it offers.	0.837								
My bank's website delivers orders of financial/ banking products when promised	0.83								
My bank's website makes accurate promises about delivery of products.	0.827								
My bank's website has in stock the items my bank claims to have.	0.814								

My bank's website makes items available for delivery within a suitable time frame.	0.807							
Net-banking support and solution on my bank's website is excellent.		0.934						
I am confident of the security and privacy of my personal information on my bank's website.		0.916						
Mobile banking solution provided by my bank is excellent.		0.915						
I get guaranteed net banking details and information.		0.837						
I think I did the right thing when I decided to take up internet banking with my bank.			0.904					
I am satisfied with the security measures provided by my e-banking service			0.881					
I am very satisfied with the processing functions of my bank's website			0.873					
I am satisfied with the speed of transactions processed through my ebanking service			0.872					
My bank's website quickly processes my results.				0.817				
My bank's website makes it easy to find what I need				0.811				
My bank's website presents information in an appropriate format and structure.				0.807				

It is easy to navigate through my e-banking platform				0.664					
The organization and layout of my bank's website facilitate the search for information				0.63					
I may remove some business in the case of more attractive prices offered by other competitor banks.				0.903					
I would still remain with the same bank even if fees increase.				0.901					
I do very less business with my bank.				0.859					
I would not mind complaining to other consumers about my bank's website services, if I am not satisfied.				0.827					
In case of repair and maintenance I am well informed by my banker.					0.889				
My bank's website does not crash.					0.884				
My bank's website is always available for retail and banking operations					0.763				
When I use my bank's website there is very little waiting time between my actions and the website's response.					0.693				
I believe there is negligible risk that something may go wrong with using my						0.864			
bank's website for purchase of financial/ banking products.									

I trust my bank's website as a safe medium for transaction and purchase of financial/ banking products.							0.806		
My bank's website offers the ability to speak to a customer care executive if there is a problem.								0.877	
My bank's website gives me information to contact the customer service (email, telephone).								0.810	
My bank's website has customer service representatives available online 24/7.								0.785	
Pages at my bank's website do not freeze after I enter my information and requirements.									0.685
Extraction Method: Principal	Component Analysis.								
Rotation Method: Varimax with Kaiser Normalization									
Rotation converged in 7	iterations.								

Item No. 28 "I believe there is negligible risk that something may go wrong with using my bank's website for purchase of financial/ banking products." was repeating so it has been removed and there are now 32 items which are used for further analysis. The study has derived Nine factors related to E-banking services offered by banks to respondents viz. Efficiency, System Availability, Fulfilment, Customer Support, Reliability, E-satisfaction, E-trust, Customer Retention & Technical Issue. The research revealed nine separate characteristics, each signifying a distinctive aspect of client perception and experience with e-banking. The criteria include fulfilment, dependability, esatisfaction, customer retention, system availability, e-trust, efficiency, technical issues, and customer support. This structure comprises several components, indicating that customer engagement is influenced by both tangible and intangible service aspects, like system availability, efficiency, and trust.

Findings and Conclusion
The EFA defined nine attributes linked to e-banking services: efficiency, system availability, fulfilment, customer support, reliability, e-satisfaction, e-trust, customer retention, and technological challenges. The nine parameters collectively represent approximately 80.132% of the variance in consumer engagement and loyalty for e-banking services. Table 1.4 (Rotated Component Matrix) demonstrates the loading of the 32 components onto the nine factors. For instance, aspects related to the accuracy and authenticity of the bank's website substantially impact the "Fulfilment" component, whereas factors concerning security and privacy mostly influence the "Reliability" aspect. Descriptive results (Table 1.1) reveal that most respondents agreed with all 33 statements (mean scores above 2.5 on a Likert scale), indicating a predominantly positive impression of e-banking services.
Prior studies have consistently shown that e-service quality is a complex construct (Zeithaml, 2002) (Parasuraman A. Z., E-S-QUAL: A multiple-item scale for assessing electronic service quality., 2005). The current study's identification of nine components validates this notion, highlighting the many aspects of e-banking services that influence customer perceptions. The focus on trustworthiness, safety, and privacy as essential factors for customer retention corresponds with previous

research highlighting their importance in online service contexts (Gefen, 2003). The classification of "Customer Support" as an independent component aligns with studies highlighting the importance of responsiveness and aid in enhancing customer satisfaction and loyalty (Yang, 2004). The classification of "System Availability" and "Efficiency" as separate components highlights their importance in facilitating a favourable user experience and promoting customer engagement (Barnes, 2002).

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