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FACTORS SHAPING CONSUMER BEHAVIOUR IN MOBILE BANKING ADOPTION AND USAGE WITH REFERENCE TO AHMEDABAD DISTRICT

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Abstract

This study examines the factors influencing the adoption and usage of mobile banking in Ahmedabad District, focusing on device preferences, banking type, and user convenience. The research aims to identify preferred devices for mobile banking and their impact on usage frequency, explore the relationship between bank type and the duration of association with mobile banking usage patterns, and evaluate the elements that encourage mobile banking adoption. Utilizing a descriptive research design, primary data was collected from 708 respondents through a structured Google Form questionnaire. Purposive sampling was employed to target mobile banking users, and the research was conducted in October 2024. The findings revealed that mobile banking is predominantly preferred over internet banking, with confidentiality and accessibility being key factors in its adoption. Private sector banks were more popular, with users exhibiting long-term loyalty. The study suggests that banks should focus on enhancing user-friendly features and security to boost mobile banking adoption, particularly among younger users. The implications highlight the importance of transparency, convenience, and customer-oriented services in the growing mobile banking sector. This research contributes valuable insights for banks seeking to improve their mobile banking services and cater to the evolving needs of their customers.

Keywords: *Mobile Banking, Adoption, Usage, Ahmedabad District, Factor Analysis*

INTRODUCTION

Mobile banking, or m-banking, has rapidly emerged as a transformative tool in the financial services sector, reshaping the way consumers' access and manage their banking needs. With the proliferation of smartphones and the widespread availability of wireless networks, mobile banking has become a convenient and efficient alternative to traditional banking. The ability to perform financial transactions, such as checking account balances, transferring funds, and paying bills, has never been more accessible—empowering users to carry out banking activities anytime and anywhere.

The shift from brick-and-mortar banking to mobile platforms reflects broader technological advancements, facilitating the integration of financial services into the mobile ecosystem. This shift is indicative of a broader trend in consumer behaviour, where convenience, cost efficiency, and real-time access to financial information are driving factors in the adoption and usage of mobile banking. In particular, mobile banking allows for greater autonomy, enabling consumers to make timely and informed financial decisions without the need for physical bank visits. However, this transition is not without its challenges, particularly in the realms of security risks, technological dependency, and the digital literacy gap.

As mobile banking continues to evolve, understanding the factors that influence its adoption and usage becomes critical. Consumers' preferences for mobile banking devices, their trust in mobile applications, and their overall comfort with digital banking are central to shaping how mobile banking services are used. Furthermore, the role of digital literacy and access to technology plays a significant part in determining adoption rates across different demographics. This paper delves into the underlying consumer behaviours that drive the adoption and usage of mobile banking, focusing on the benefits, challenges, and

the dynamic nature of this financial revolution.

As the popularity of mobile banking grows, understanding the factors influencing its uptake will help banks and financial institutions better serve their customers and streamline their mobile offerings, ultimately fostering more widespread and secure adoption.

LITERATURE REVIEW

Singh and Sinha (2016) examined the significance of e-transactions through mobile banking and encouraged banks to focus on customer relationships to increase transaction volumes and revenue. Their study assessed mobile banking services of ten banks in the Delhi/NCR region and provided insights into customer perceptions, which can help banks enhance their mobile banking strategies.

Ali and Kaur (2015) suggested that gaining the trust of people across different age groups remains a significant challenge for banks and mobile manufacturers. Their study provides practical recommendations for banks and upcoming managers to devise strategies that promote mobile banking adoption. They emphasize that integrating social processes, consumer education, and partnerships with key stakeholders is essential for mobile banking penetration.

Alsamydai et al. (2014) explored the impact of Perceived Usefulness on attitudes, intentions, and usage of mobile banking services. Their findings indicate a positive correlation between Perceived Usefulness and mobile banking adoption, with mean values of 3.44 and 3.52, respectively. This suggests that consumers who find mobile banking beneficial are more likely to adopt and continue using these services.

Nayak, Nath, and Goel (2014) found that users of mobile banking services express high satisfaction due to accessibility features such as balance inquiries, transaction history checks, checkbook requests, and card blocking. They also highlighted the role of One-Time Passwords (OTP) in enhancing security and preventing unauthorized transactions. Their study underscores the role of mobile banking in reducing the need for physical bank visits.

Wadhe and Ghodke (2013) discovered that although most customers are aware of mobile banking, few actively use it. Their study suggests that word-of-mouth communication, including recommendations from friends, family, and colleagues, plays a crucial role in mobile banking adoption. They identified factors such as usefulness, ease of use, and awareness as key determinants of consumer interest in mobile banking.

Bamoriya and Singh (2012) noted that while frequent users of mobile banking engage primarily in information-based activities such as checking balances, they rarely conduct high-value financial transactions. The study suggests that improved security measures and user education could enhance the adoption of mobile banking for financial transactions. It also highlights that banks are investing heavily in mobile banking technology to enhance service efficiency and reduce operational costs.

Samudra and Phadtare (2012) proposed that mobile banking adoption is higher among middle-level managers with salaries in the Rs. 1-6 lakh range and in the 25-30 age group. Their study found that men, particularly those with higher education, are more likely to use mobile banking services. They recommend targeted advertising at ATM centers to increase awareness and usage.

Safeena et al. (2012) identified key factors influencing mobile banking adoption, including perceived utility, ease of use, consumer awareness, and perceived risk. Their study found that while mobile banking provides significant advantages, the limited sample size restricts the generalizability of their findings. They suggest that consumer education and risk mitigation strategies are essential for broader adoption.

Barmoriya and Singh (2011) identified key consumer concerns regarding mobile banking, including handset operability, security, privacy, and service standardization. Their study highlighted that, compared to retail and internet banking, customers displayed limited interest in mobile banking due to these concerns.

Thus, the existing literature highlights the various factors influencing mobile banking adoption, including security concerns, consumer awareness, ease of use, and perceived utility. While mobile banking offers convenience and efficiency, challenges such as trust issues, privacy concerns, and limited awareness remain barriers to widespread adoption. Future research should focus on addressing these concerns through innovative security measures, targeted marketing, and improved consumer education initiatives.

RESEARCH METHODOLOGY

1. To identify the preferred devices for mobile banking and their impact on the frequency of usage.
2. To explore the relationship between the preferred type of bank and the duration of association with mobile banking usage patterns.
3. To evaluate the convenience of mobile banking usage and the elements that encourage its adoption.

RESEARCH DESIGN

- This study is mainly based upon Descriptive Research Design.

SAMPLING DESIGN

- This study is based on primary data collected from 708 respondents of Ahmedabad District.
- The selection of the respondents is based on Purposive Sampling, drawn from mobile banking users residing in Ahmedabad District.
- The data is collected through structured Google form questionnaire.
- The period undertaken to conduct the research was a month October, 2024.

Tools and Techniques

- IBM Statistical Package for Social Science 20.0 (SPSS 20.0) has been used for comprehensive analysis of the data collected. The results arrived at using statistical tools and techniques such as Descriptive Statistics and Factor Analysis.

Table 1 below summarizes the sample composition as regards various demographic features of sample respondents.

Demographic Characteristics		Frequency	Percentage
Zones of Ahmedabad city	Centre Zone	87	9.55
	East Zone	68	7.46
	North Zone	76	8.34
	North West Zone	95	10.43
	South Zone	91	9.99
	South West Zone	106	11.64
	West Zone	137	15.04
	Talukas	251	27.55
Gender	Male	386	55
	Female	322	45
Age	Below 20 Years	38	5.37
	20 to 25 Years	222	31.36
	25 to 30 Years	121	17.09
	30 to 35 Years	119	16.81
	35 to 40 Years	89	12.57
	40 to 45 Years	61	8.62
	45 to 50 Years	40	5.65
	50 to 55 Years	12	1.69
	55 to 60 Years	4	0.56
	Above 60 Years	2	0.28
	Below HSC	2	0.28
	HSC	33	4.66
	Under Graduation	276	38.98
	Post - Graduation	367	51.84
	Special Professional Training	18	2.54

Education	Others	12	1.7
Occupation	Student	255	36.01
	House Wife	54	7.63
	Private Employees	241	34.04
	Government Employees	59	8.33
	Business	90	12.71
	Retired Person	5	0.71
	Other	4	0.57
Monthly Family Income (in Rs.)	Below 50,000	54	7.63
	50,001 to 1,00,000	270	38.14
	1,00,001 to 1,50,000	311	43.93
	1,50,001 to 2,00,000	21	2.96
	2,00,001 and above	52	7.34

DATA ANALYSIS

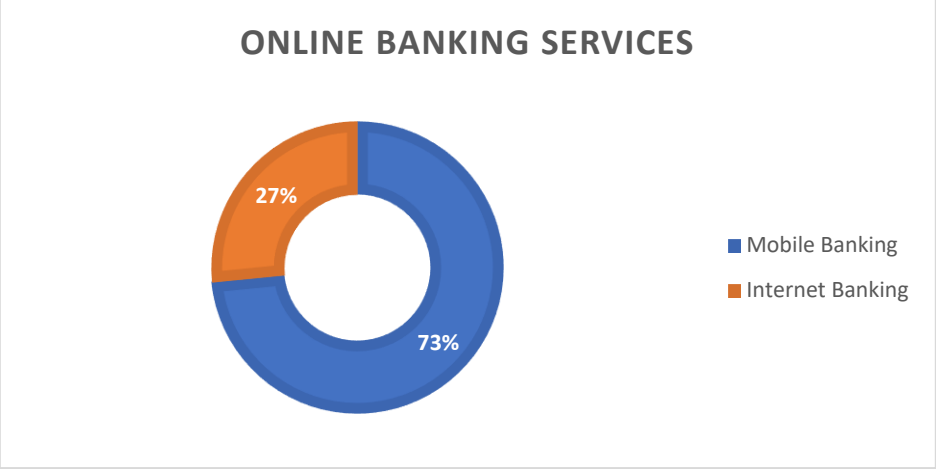
The study aims to understand the preferred devices for mobile banking and their impact on the frequency of usage. The analysis provide insights into consumer behaviour regarding online banking services, device preferences, and usage patterns. The analysis is performed based on the objectives:

1. To identify the preferred devices for mobile banking and their impact on the frequency of usage.

- **Preference for Online Banking Services**

The data indicates that mobile banking has become the dominant mode of online banking. Out of 708 respondents, 520 individuals (73.45%) prefer mobile banking, while only 188 respondents (26.55%) opt for internet banking. The findings suggest that modern banking customers rely heavily on their mobile devices for financial transactions, making mobile banking the preferred option. Although internet banking encompasses a broader range of online banking services, mobile banking has gained popularity due to its accessibility and ease of use.

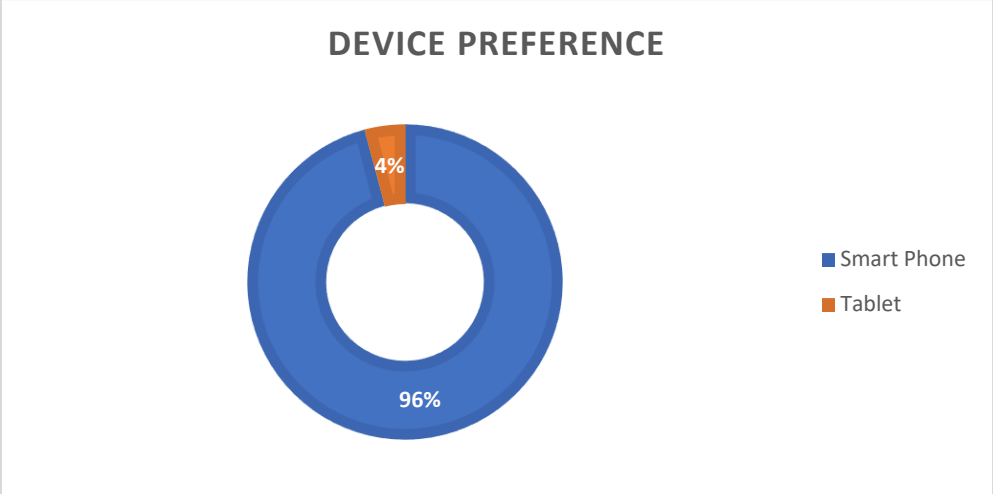
Chart 1 Percentage Distribution of Respondents preferred Online Banking Services



- **Device Preference for Mobile Banking**

The overwhelming majority of respondents (95.90%) prefer smartphones for mobile banking, while only 4.10% use tablets. This preference highlights the convenience and portability of smartphones, allowing users to access banking services anytime, anywhere. Unlike tablets, which are less portable, smartphones offer ease of access, making them the preferred choice for mobile banking transactions. This trend reflects the success of banks in adapting their services for smartphone users, reducing the need for in-person banking transactions.

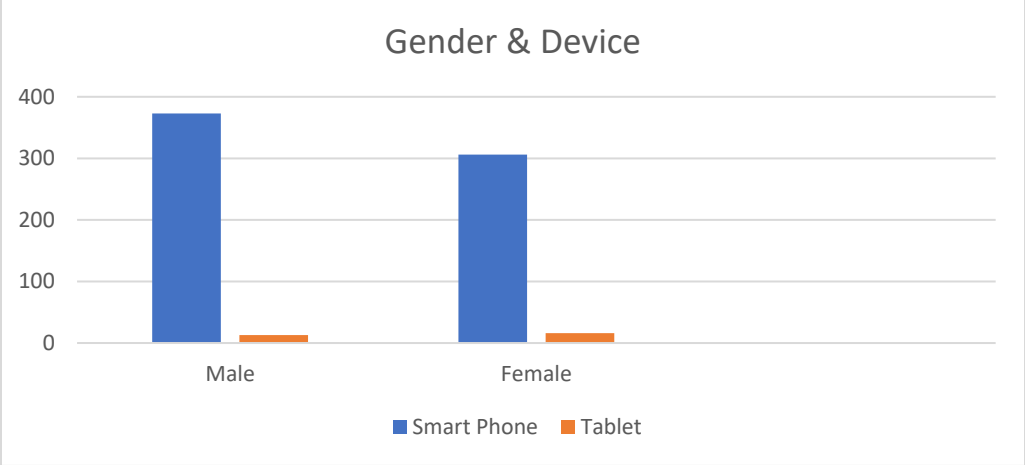
Chart 2 Percentage Distribution of Respondents preferred Device



- **Gender-Wise Classification of Preferred Device**

The results indicate that both males (96.63%) and females (95.03%) predominantly prefer smartphones over tablets for mobile banking. The difference in preference between genders is minimal, reinforcing the universal appeal of smartphones for digital banking. The findings suggest that mobile banking applications cater equally to both male and female users, with convenience being the key

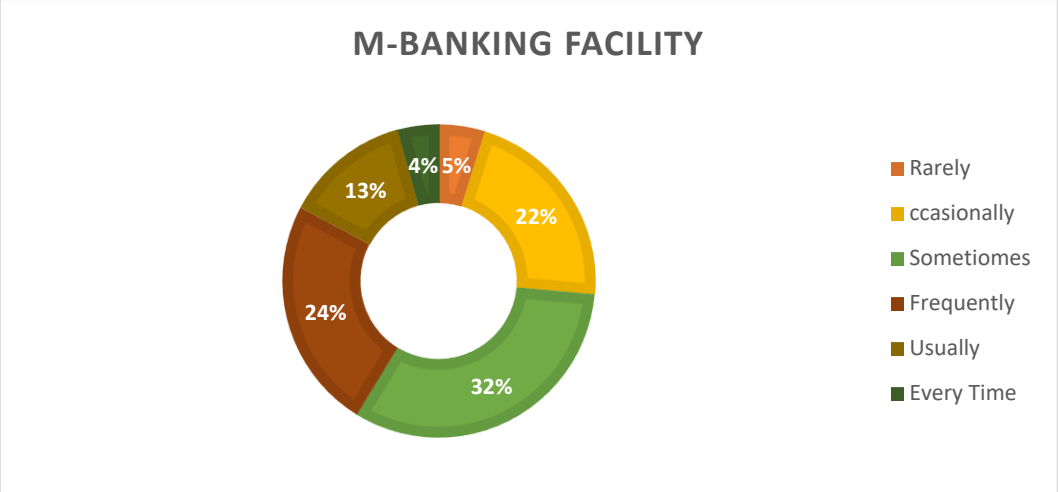
Chart 3 Gender Wise Percentage Distribution of preferred Device



- **Frequency of Using Mobile Banking Facility**

The data reveals diverse usage patterns of mobile banking among respondents. The largest group (32.34%) uses mobile banking "sometimes," while 24.01% use it frequently. A smaller group of 4.24% uses mobile banking "every time," indicating a highly engaged user segment. Meanwhile, 4.80% of respondents rarely use mobile banking, highlighting a potential area for banks to improve adoption rates. These findings suggest that while mobile banking is widely accepted, user engagement varies based on individual preferences and banking needs.

Chart 4 Frequency of using Mobile Banking Facility

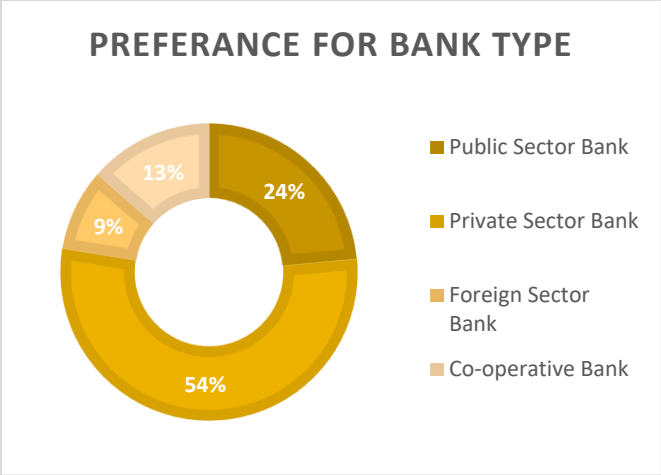


2. To explore the relationship between the preferred type of bank and the duration of association with mobile banking usage patterns.

➢ **Preferred Bank Type of Respondents**

The data reveals that the majority of respondents prefer private sector banks for their banking needs. As shown in the table, 53.96% of respondents have their accounts with private sector banks, making them the most preferred type. Public sector banks are the second most preferred, with 23.59% of respondents favoring them. Meanwhile, 13.56% of respondents prefer co-operative banks, and 8.89% hold accounts in foreign sector banks. This indicates that respondents tend to favor private sector banks, possibly due to their advanced digital banking services, ease of access, and customer-centric approach.

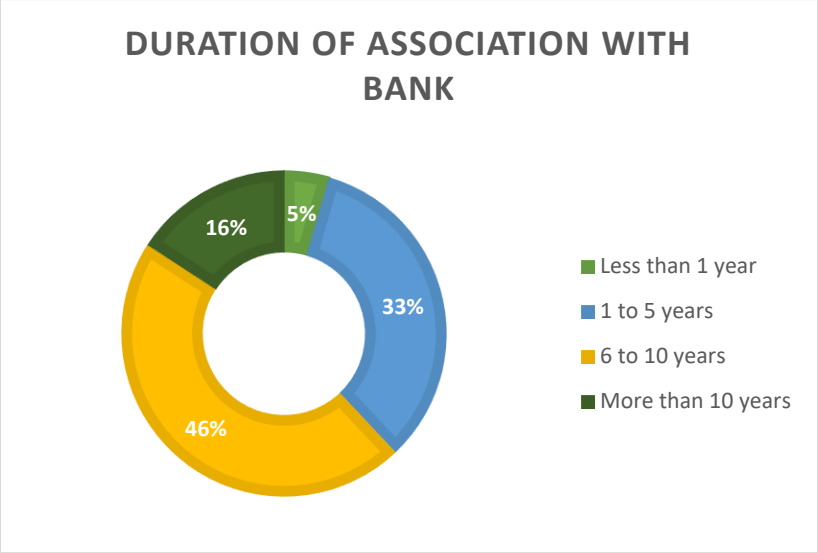
Chart 5 Preferred bank type of respondents



➢ **Duration of Association with the Specified Bank**

The analysis of respondents' banking relationships indicates that the largest proportion, 46.19%, have been associated with their bank for a period of 6 to 10 years. This suggests strong loyalty and long-term engagement with financial institutions. Additionally, 33.47% of respondents have maintained their banking relationships for 1 to 5 years, showing a considerable number of new account holders in the past few years. Only 15.82% of respondents have been associated with their bank for more than 10 years, while 4.52% have been customers for less than a year. The findings suggest that mobile banking users have varying levels of engagement with banks, with the highest adoption seen among those who have maintained accounts for a medium-term duration (6 to 10 years).

Chart 6 Duration of association with specified bank



3. To evaluate the convenience of mobile banking usage and the elements that encourage its adoption.

➢ **Factor Analysis for Convenience of Mobile Banking**

Factor Analysis, a multivariate statistical technique, was used to determine key determinants of convenience among respondents. This method simplifies data complexity by reducing a large number of variables into a few controllable factors. A five-point Likert scale was used to analyse 12 statements, resulting in the extraction of six major factors.

Table 2 Descriptive Statistics

Variable No.	Statements	Mean	Standard Deviation	Coefficient of Variation
1	Application can be easily accessed.	**1.6201**	0.52490	0.3239
2	Transactions can be tracked	**1.9124**	0.51918	0.2715
3	Provides clear and transparent information in one click	1.8842	0.52720	0.2798
4	Flexible and saves time	1.8107	0.55099	0.3043
5	Guidelines and manuals are user friendly	1.8799	0.58117	0.3092
6	Quick completion of transaction	1.8701	0.53193	0.2844
7	Quick acknowledgement	1.7952	0.55184	0.3074
8	24*7 mobile banking services available	1.7867	0.48572	**0.2706**
9	Reduce cost of communication	1.8206	0.55302	0.3038
10	Immediate updating of transaction details	1.7444	0.52481	0.3009
11	SMS alert about the mobile banking transaction	1.7811	0.49761	0.2794
12	The customer redressal services provided.	1.8517	0.60342	**0.3259**

- The highest mean score was for "Transactions can be tracked" (1.9124), indicating that tracking transactions is the most significant convenience factor.
- The lowest mean score was for "Application can be easily accessed" (1.6201), suggesting it is not a primary factor influencing mobile banking adoption.
- The least coefficient of variation was for "24*7 mobile banking services available" (0.2706), indicating the most consistent responses.

- The highest coefficient of variation was for "The customer redressal services provided" (0.3259), showing the most inconsistent responses.

In order to test the data appropriateness for factor analysis "KMO and Bartlett's Test" has been carried out as shown in Table 5.16

Table 3 KMO and Bartlett's Test		
Kaiser – Meyer – Olkin Measure of Sampling Adequacy.		0.885
Bartlett's Test of Sphericity	Approx. Chi Square	5252.429
	Df	66
	Sig.	0.000

- The KMO value of 0.885 indicates data adequacy for factor analysis.
- The significance value of Bartlett's Test is 0.000 (<0.05), rejecting the null hypothesis and confirming significant relationships between variables.

Table 4 Principal Component Method			
Variable No.	Statements	Initial	Extraction
1	Application can be easily accessed.	1.000	0.816
2	Transactions can be tracked	1.000	0.844
3	Provides clear and transparent information in one click	1.000	0.777
4	Flexible and saves time	1.000	0.773
5	Guidelines and manuals are user friendly	1.000	0.732
6	Quick completion of transaction	1.000	0.793
7	Quick acknowledgement	1.000	0.822
8	24*7 mobile banking services available	1.000	**0.898**
9	Reduce cost of communication	1.000	0.842
10	Immediate updating of transaction details	1.000	0.788
11	SMS alert about the mobile banking transaction	1.000	0.842
12	The customer redressal services provided.	1.000	0.857
Extraction Method: Principal Component Matrix			

- The highest communality (0.898) was for "24*7 mobile banking services available," indicating it explains the most variance.

Table 5 Total Variance Explained						
Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of variance	Cumulative %
1	6.527	54.393	54.393	6.527	54.393	54.393
2	1.011	8.423	62.816	1.011	8.423	62.816
3	0.830	6.918	69.734	0.830	6.918	69.734
4	0.736	6.135	75.869	0.736	6.135	75.869
5	0.679	5.661	81.530	0.679	5.661	81.530
6	0.492	4.103	85.633			
7	0.424	3.535	89.167			
8	0.355	2.959	92.127			
9	0.320	2.663	94.790			
10	0.253	2.110	96.900			
11	0.203	1.689	98.589			
12	0.169	1.411	100.000			
Extraction Method: Principal Component Matrix						

- The first five components explain 81.530% of total variance.
- The rotated component matrix in Table 6 extracted five factors which are given below:

Table 6 Rotated Component Matrix					
	Components				
	1	2	3	4	5
Easily Accessible	0.793				
Tracked Transactions	0.755				
Clear and Transparent Information	0.737				
Flexible and time saving		0.808			
User friendly guidelines and manuals		0.686			
Quick completion of transaction		0.574			
Quick acknowledgement			0.845		
24*7 mobile banking services availability			0.706		
Reduction in cost of communication				0.828	
Immediate updation of transaction details				0.801	
SMS alert about m-banking transactions					0.811
The customer redressal services provided					0.727
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization					
a. Rotation converged in 6 iterations.					

Names of extracted factors

The five factors extracted has been named as below mentioned

- ✓ The first factor accounts for a total variance of 54.393%, it comprises of items such as – Easily Accessible, Tracked Transactions, Clear and Transparent Information which has been named as **"Accessibility."**
- ✓ The second factor accounts for a total a variance of 8.423%, it comprises of items – Flexible and time saving, User friendly guidelines and manuals, Quick completion of transaction which has been named as **"Consumer oriented."**
- ✓ The third factor accounts for a total variance of 6.918%, it comprises of items – Quick acknowledgement, 24*7 mobile banking services availability which has been named as **"Service Oriented."**
- ✓ The fourth factor accounts for a total variance of 6.135%, it comprises of items – Reduction in cost of communication, Immediate updation of transaction details which has been named as **"Commerce Oriented."**
- ✓ The fourth factor accounts for a total variance of 5.661%, it comprises of items – SMS alert about m-banking transactions, The customer redressal services provided which has been named as **"Communication Oriented."**

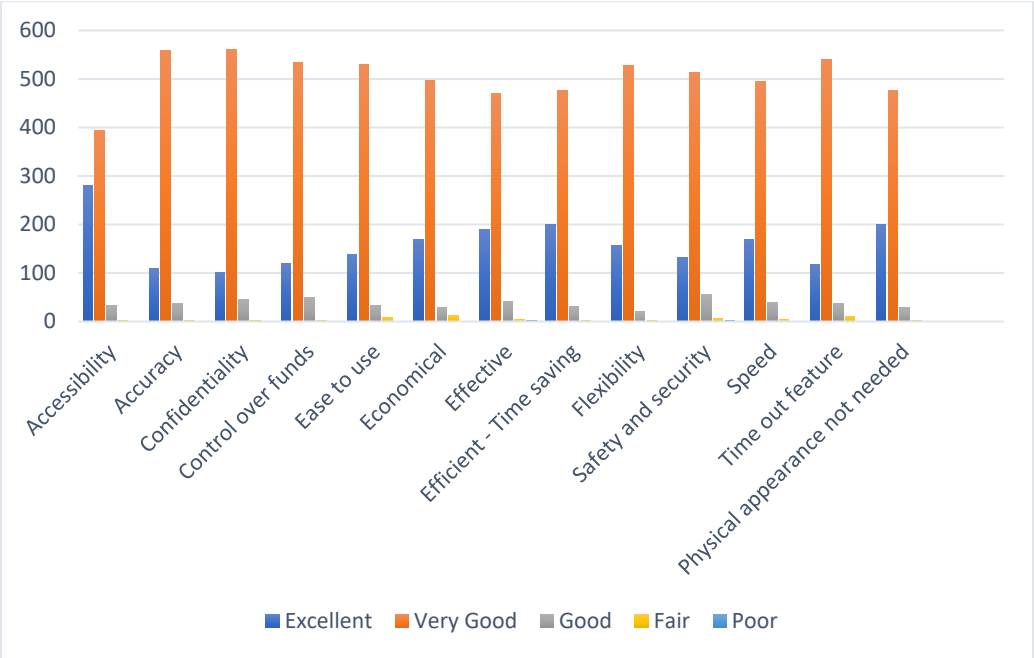
➢ **Elements that encourage the usage**

Table 8 Elements that encourage the usage

	Excellent	Very Good	Good	Fair	Poor
Accessibility	280	393	32	2	1
Accuracy	109	558	38	2	1
Confidentiality	100	560	45	2	1
Control over funds	119	535	50	3	1
Ease to use	138	529	32	8	1
Economical	169	497	29	13	0
Effective	190	471	41	4	2
Efficient – Time saving	199	476	30	3	0
Flexibility	157	528	20	2	1
Safety and security	131	514	55	6	2
Speed	169	495	40	4	0

Time out feature	118	541	37	11	1
Physical appearance not needed	199	477	28	3	1

Chart 5.13 Elements that encourage the usage



Interpretation: The data indicates that respondents generally rate the mobile banking features highly, with the majority of responses falling in the "Very Good" category. Notably, confidentiality, accuracy, and control over funds received the most favorable responses, with a significant number of respondents rating them as "Very Good." Accessibility, safety and security, and speed also garnered positive feedback, though with slightly fewer "Excellent" ratings compared to confidentiality. Other features such as ease of use, flexibility, and effectiveness maintained a strong presence in the "Very Good" category, reflecting a positive perception of mobile banking's user-friendliness and functionality. The "Poor" ratings for most attributes were minimal, suggesting a high level of overall satisfaction with mobile banking services.

FINDINGS AND IMPLICATIONS

The findings of this study reveal that a significant majority of respondents (73%) exclusively use mobile banking, with a smaller portion (27%) opting for internet banking. Approximately 96% of respondents utilize smartphones for mobile banking, with a slightly higher preference among males (97%) compared to females (95%). Interestingly, while only 5% of respondents "rarely" use mobile banking, a substantial 32% use it "sometimes," highlighting its widespread but occasional usage. The study also reveals that 54% of respondents prefer private sector banks, and a majority have been associated with their bank for 6 to 10 years. The primary motivations for using mobile banking are centered around factors such as accessibility, consumer-oriented factors, service availability, and communication. Among these, "Confidentiality" emerged as the most highly rated factor, with 560 respondents rating it "Very good." These findings imply that mobile banking is predominantly used by younger users, especially females in the 20 to 25 age group, and that the accessibility and consumer-oriented features of mobile banking—such as ease of access, clear information, and transaction tracking—are key drivers of its adoption. Moreover, a preference for private sector banks and long-term banking relationships underscores the loyalty of mobile banking users. These insights provide valuable implications for banks to enhance their mobile banking services, focusing on transparency, ease of use, and accessibility to further attract and retain users.

SUGGESTIONS

Based on the findings, it is recommended that banks, especially in the private sector, focus on enhancing the user experience by

making mobile banking services more accessible, user-friendly, and secure. Banks should prioritize improving the "Confidentiality" and "Accessibility" aspects of their mobile banking platforms, as these factors are highly rated by users. To cater to the growing preference for mobile banking, banks could offer more personalized services, such as tailored notifications, transaction tracking, and clear, transparent information to foster trust. Additionally, given that a large proportion of users are between 20 to 25 years old, banks should adopt a more tech-savvy approach, integrating features that appeal to the younger demographic, including simplified user interfaces and enhanced mobile app functionality. To increase adoption rates, banks should also consider promoting their mobile banking services to users of internet banking, emphasizing the ease, flexibility, and time-saving benefits of mobile platforms.

CONCLUSION

In conclusion, mobile banking is rapidly becoming the preferred method for financial transactions, with a majority of users favouring it over traditional internet banking. Key factors such as accessibility, confidentiality, and consumer-oriented services significantly influence the usage of mobile banking. The study also highlights the strong loyalty of users, particularly those associated with private sector banks for extended periods. The findings underscore the importance of offering secure, easily accessible, and customer-focused mobile banking services to cater to the needs of the modern banking consumer. By focusing on these aspects, banks can enhance customer satisfaction, boost user engagement, and maintain long-term relationships with their clients.

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