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RESEARCH ARTICLE

A STUDY ON THE IMPACT OF MOBILE BANKING ON CONSUMER SATISFACTION IN EMERGING MARKETS

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Abstract

Introduction: The research addresses the impact of mobile banking on consumer satisfaction in emerging markets, investigating adoption patterns, usage trends, and demographic influences. Against the backdrop of a rapidly evolving financial landscape, understanding the dynamics of mobile banking is crucial for optimizing services and fostering financial inclusion.

Methods: The study employed a convenience sampling method, recruiting 150 participants from diverse backgrounds. Utilizing Likert scale questions, the research assessed mobile banking behaviors and satisfaction levels. The One-Way ANOVA (Welch's) and Independent Samples T-Tests were applied to analyze age and gender influences on adoption and satisfaction.

Results: Key findings reveal a high frequency of mobile banking usage, positive perceptions of accessibility, ease of use, and security. Age emerged as a significant factor influencing adoption patterns and satisfaction levels. Statistical analyses indicated a notable difference in mean scores across age groups. Gender, however, did not exhibit a significant impact on mobile banking behaviors.

Conclusion: The study concludes that mobile banking holds substantial promise for enhancing consumer satisfaction in emerging markets. Age-specific strategies are recommended for targeted marketing and outreach. The findings contribute valuable insights for financial institutions, policymakers, and researchers navigating the dynamic landscape of mobile banking in emerging economies.

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Introduction:-

The advent of mobile banking has had a transformative impact on the global financial landscape, particularly in emerging markets (Tobbin,2012). This technology has the potential to be transformational, but barriers such as affordability, trust, convenience, and documentation must be addressed (Tobbin, 2012). User satisfaction is influenced by supportive access factors (Bharti, 2016), and the adoption of mobile banking is influenced by accessibility of technology, availability of information, and ability to interact through the Internet (Changchit, 2017). However, the success of mobile banking is contingent on addressing country-specific differences in regulatory

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financial infrastructure and customer needs (Gupta, 2013). This study seeks to delve into the impact of mobile banking on consumer satisfaction within the context of emerging markets, where unique challenges and opportunities shape the adoption and utilization of these services. By addressing critical questions related to adoption patterns, usage trends, and overall satisfaction, this research aims to provide valuable insights that can inform financial institutions, policymakers, and researchers alike in their efforts to foster accessible and satisfactory banking experiences in these dynamic environments.

Rationale for the Study:

This study explores the surge in mobile banking adoption in emerging markets, examining the drivers, challenges, and opportunities shaping this financial shift amid dynamic economic and technological changes. By scrutinizing adoption and usage patterns, the research aims to provide insights crucial for financial institutions, policymakers, and businesses navigating the evolving mobile banking landscape in emerging economies.

Research Questions:

1. To what extent is mobile banking adopted in emerging markets?
2. What factors influence mobile banking adoption in these markets?
3. How do consumers in emerging markets use mobile banking, and what are the prevalent patterns?
4. What impact does mobile banking have on overall consumer satisfaction in emerging markets?
5. What challenges or concerns do consumers face in adopting and using mobile banking in emerging markets?

Significance of the Study:

This study is academically and practically significant, offering a nuanced understanding of mobile banking dynamics in emerging markets. It informs financial institutions, policymakers, and businesses on optimizing mobile banking services to meet unique preferences and challenges. The findings contribute to regulatory frameworks and guide businesses in tailoring strategies for enhanced financial inclusion and technology-driven solutions in emerging economies.

Objectives of the study:-

- 1: Assess the Adoption and Usage Patterns of Mobile Banking in Emerging Markets
- 2: Evaluate the Impact of Mobile Banking on Consumer Satisfaction in Emerging Markets

Hypothesis of the Study

1. H0: There is no significant difference in the mean scores of adoption and usage patterns of mobile banking and the impact of mobile banking on consumer satisfaction across different age groups.
2. H0: There is no significant difference in the mean scores of adoption and usage patterns of mobile banking and the impact of mobile banking on consumer satisfaction between males and females.

Literature Review:-

The emergence of mobile banking in developing markets, facilitated by the widespread adoption of mobile phones, has significant potential for spill-over effects, necessitating appropriate regulatory responses (Anderson, 2010). This growth is particularly pronounced in the Asia/Pacific region, where mobile payments are expected to reach \$3.8 billion by 2015 (Sultana, 2009; Kshetri, 2012). The unique opportunity presented by mobile financial services in these markets, where a large portion of the population lacks access to basic financial services, is underscored (Datta, 2001).

The evolution of mobile banking has been marked by significant advancements in technology and security measures (Wazid, 2019). This has transformed the financial services industry, providing opportunities for financial inclusion and reducing income inequality (Vyas, 2016). However, it has also introduced new challenges, particularly in terms of security and regulation (Nicoletti, 2014). Despite these challenges, the adoption of mobile banking has been relatively fast, especially in developing countries like India (Safeena, 2012).

A range of studies have explored the factors influencing the adoption of mobile banking in emerging markets. Cruz (2010) found that perceived cost, risk, low relative advantage, and complexity were key barriers to adoption in Brazil. Anderson (2010) highlighted the potential for spill-over effects in developing markets, necessitating appropriate regulatory responses. Goyal (2012) provided a comprehensive overview of mobile banking in India,

including its features, benefits, and operational practices, as well as the strategic, legal, and ethical challenges. Pelletier (2019) focused on the economic impact of mobile money, revealing that telecom groups are more likely to launch mobile money in countries with weaker legal rights and less prevalent credit information, but that the spillover effects are greater when mobile money is offered via a banking channel.

A range of factors have been identified as influencing consumer satisfaction in mobile banking. System quality and information quality are found to significantly impact satisfaction and trust (Lee, 2009). Security and trust are also key factors, with ineffective advertisement having a negative influence (Jannat, 2015). Services quality, structural insurance, and task characteristics are additional factors that influence customer trust, with these relationships mediated by trust (Geebren, 2021). The usefulness, ease of use, relative advantages, perception of risk, and user lifestyle and current needs are also found to affect customer satisfaction (Kahandawa, 2014).

Research Methodology:-

Participants: The study employed a convenience sampling method, drawing a sample of 150 participants from the target population in emerging markets.

Sampling Procedure:

Convenience sampling was chosen due to practical considerations and limited resources, allowing for the collection of data from readily available participants.

Data Collection and Questionnaire Design:

The questionnaire consisted of sections addressing demographic information, mobile banking adoption and usage, satisfaction levels, and recommendations. Likert scale questions were strategically employed to capture nuanced responses and quantify participants' attitudes and perceptions.

Data Analysis:

Descriptive statistics, such as means and percentages, were utilized to summarize the demographic information and Likert scale responses. The One-Way ANOVA (Welch's) and Independent Samples T-Tests were employed to analyze the impact of age and gender on mobile banking adoption, usage patterns, and consumer satisfaction.

Limitations:

Convenience sampling may introduce selection bias, limiting the generalizability of the findings to the broader population. Additionally, self-reporting in surveys may lead to social desirability bias, influencing participants to provide responses they perceive as favorable. Researchers acknowledge these limitations and interpret the results within the context of the study's scope and methodology.

Result & Findings:-

Descriptive statistics

Table 1:- Gender & Age.

Gender	Counts	% of Total
Female	81	54.0 %
Male	69	46.0 %
Age	Counts	% of Total
18-21	107	71.3 %
22-24	35	23.3 %
Above 24	8	5.3 %

The demographic data presented reveals interesting insights into the composition of the study participants based on gender and age. In terms of gender distribution, the study included 81 females, constituting 54.0% of the total sample, and 69 males, making up the remaining 46.0%.

When examining the age distribution, the majority of participants fall within the 18-21 age range, accounting for 71.3% of the total sample. Participants aged between 22 and 24 represent a significant but smaller portion, comprising 23.3% of the study population. Notably, individuals above the age of 24 make up a smaller segment,

contributing to 5.3% of the total participants. This age distribution suggests a concentration of younger individuals in the study, with a substantial representation from the 18-21 age group.

Table 2:- Assess the Adoption and Usage Patterns of Mobile Banking in Emerging Markets.

Please rate your frequency of using mobile banking services in the past three months.	Counts	% of Total	Mean
Never	5	3.3 %	4.19
Rarely	4	2.7 %	
Occasionally	14	9.3 %	
Frequently	62	41.3 %	
Always	65	43.3 %	
How satisfied are you with the accessibility and ease of use of mobile banking apps?	Counts	% of Total	Mean
Not satisfied at all	4	2.7 %	4.07
Slightly satisfied	4	2.7 %	
Moderately satisfied	21	14.0 %	
Very satisfied	70	46.7 %	
Extremely satisfied	51	34.0 %	
To what extent do you trust the security measures implemented in mobile banking applications?	Counts	% of Total	Mean
Not at all	6	4.0 %	4.11
A little	5	3.3 %	
Moderately	19	12.7 %	
Quite a bit	57	38.0 %	
Completely	63	42.0 %	
Rate your agreement with the statement: "Mobile banking has become an integral part of my financial routine.	Counts	% of Total	Mean
Strongly disagree	5	3.3 %	4.05
Disagree	6	4.0 %	
Neutral	20	13.3 %	
Agree	64	42.7 %	
Strongly agree	55	36.7 %	

Table 2 presents the results of the assessment of adoption and usage patterns of mobile banking in emerging markets, with participants rating their frequency of using mobile banking services, satisfaction with the accessibility and ease of use of mobile banking apps, trust in the security measures, and their agreement with the statement that mobile banking has become an integral part of their financial routine.

Regarding the frequency of using mobile banking services in the past three months, the majority of participants, 43.3%, reported using mobile banking always, while 41.3% used it frequently. A smaller percentage reported using it occasionally (9.3%), and only a few participants reported using it rarely (2.7%) or never (3.3%). The mean score for this variable is 4.19, suggesting a relatively high overall frequency of mobile banking usage among the participants.

In terms of satisfaction with the accessibility and ease of use of mobile banking apps, a substantial proportion expressed high levels of satisfaction, with 46.7% reporting being very satisfied and 34.0% extremely satisfied. The mean score for this variable is 4.07, indicating an overall positive sentiment toward the usability of mobile banking apps.

Participants' trust in the security measures implemented in mobile banking applications was generally high, with 38.0% stating they trust it quite a bit and 42.0% completely. The mean score for this variable is 4.11, suggesting a high level of overall trust in the security features of mobile banking applications.

When considering the statement, "Mobile banking has become an integral part of my financial routine," participants predominantly agreed or strongly agreed, constituting 42.7% and 36.7%, respectively. The mean score for this variable is 4.05, indicating a generally positive perception that mobile banking has integrated into participants' financial habits.

In conclusion, the results from Table 2 suggest that the adoption and usage patterns of mobile banking in emerging markets are quite prevalent, with a high frequency of usage and positive sentiments regarding accessibility, ease of use, security, and integration into financial routines. Overall, participants express a favorable attitude toward mobile banking, indicating its significance in their financial lives in these markets.

Table 3:- Evaluate the Impact of Mobile Banking on Consumer Satisfaction in Emerging Markets.

How has the adoption of mobile banking positively affected your overall banking experience?	Counts	% of Total	Mean
Not at all	6	4.0 %	3.92
Slightly	3	2.0 %	
Moderately	38	25.3 %	
Significantly	53	35.3 %	
Extremely	50	33.3 %	
Rate your satisfaction with the speed and efficiency of transactions through mobile banking.	Counts	% of Total	Mean
Very dissatisfied	4	2.7 %	3.93
Dissatisfied	6	4.0 %	
Neutral	34	22.7 %	
Satisfied	59	39.3 %	
Very satisfied	47	31.3 %	
To what extent has mobile banking improved your control over personal finances?	Counts	% of Total	Mean
Not improved at all	5	3.3 %	4.19
Slightly improved	5	3.3 %	
Moderately improved	15	10.0 %	
Greatly improved	57	38.0 %	
Exceptionally improved	68	45.3 %	
Rate your agreement with the statement: "I would recommend mobile banking to others based on my experience."	Counts	% of Total	Mean
Strongly disagree	5	3.3 %	4.15
Disagree	4	2.7 %	
Neutral	20	13.3 %	
Agree	56	37.3 %	
Strongly agree	65	43.3 %	

Table 3 provides insights into the evaluation of the impact of mobile banking on consumer satisfaction in emerging markets, with participants rating the positive effects on overall banking experience, satisfaction with transaction speed and efficiency, improvement in control over personal finances, and their likelihood to recommend mobile banking to others based on their experiences.

Examining the impact of mobile banking on overall banking experience, a significant proportion of participants reported positive effects, with 35.3% stating it has significantly affected their experience, and 33.3% indicating it has had an extremely positive impact. The mean score for this variable is 3.92, suggesting a generally positive perception of the influence of mobile banking on the overall banking experience in emerging markets.

Regarding satisfaction with the speed and efficiency of transactions through mobile banking, the majority of participants expressed satisfaction, with 39.3% stating they are satisfied and 31.3% very satisfied. The mean score for this variable is 3.93, indicating an overall positive sentiment toward the speed and efficiency of transactions facilitated by mobile banking services.

Participants' perception of how mobile banking has improved their control over personal finances is notably positive. A substantial percentage, 45.3%, reported that mobile banking has exceptionally improved their control, and an additional 38.0% mentioned it has greatly improved. The mean score for this variable is 4.19, signifying a high level of perceived improvement in personal financial control through mobile banking.

When considering participants' likelihood to recommend mobile banking to others, the majority expressed a positive inclination, with 43.3% strongly agreeing and 37.3% agreeing with the statement. The mean score for this variable is 4.15, suggesting a high likelihood of participants recommending mobile banking based on their positive experiences.

In conclusion, Table 3 indicates that mobile banking has a predominantly positive impact on consumer satisfaction in emerging markets. Participants perceive improvements in their overall banking experience, transaction speed, personal financial control, and express a strong likelihood to recommend mobile banking to others. These findings underscore the positive influence of mobile banking services on consumer satisfaction and suggest a favorable reception of these services in emerging markets.

Testing of Hypothesis:

1. H0: There is no significant difference in the mean scores of adoption and usage patterns of mobile banking and the impact of mobile banking on consumer satisfaction across different age groups.

Result:-

The results of the One-Way ANOVA (Welch's) tests conducted to analyze the impact of age groups on both the adoption and usage patterns of mobile banking, as well as the impact of mobile banking on consumer satisfaction, reveal statistically significant findings.

For the Adoption and Usage Patterns of Mobile Banking, the F-value is 3.72 with 2 and 21.6 degrees of freedom for the groups and error, respectively. The p-value associated with this F-value is 0.041, which is below the commonly used significance level of 0.05. This indicates that there is a significant difference in the mean scores of adoption and usage patterns of mobile banking across the age groups.

Similarly, for the Impact of Mobile Banking on Consumer Satisfaction, the F-value is 3.87 with 2 and 22.5 degrees of freedom for the groups and error, respectively. The p-value is 0.036, which is also below 0.05. This suggests a significant difference in the mean scores of consumer satisfaction with mobile banking across the age groups.

Upon examining the group descriptives, it is apparent that the mean scores for both adoption and usage patterns, as well as consumer satisfaction, vary across the age groups. Specifically, in the Adoption and Usage Patterns of Mobile Banking, individuals above the age of 24 exhibit a higher mean score (17.8) compared to those aged 18-21 (16.1) and 22-24 (17.4). In the Impact of Mobile Banking on Consumer Satisfaction, a similar pattern is observed, with individuals above the age of 24 having a higher mean score (17.4) compared to those aged 18-21 (15.8) and 22-24 (17.3).

Conclusion:-

The results suggest that there is a statistically significant difference in both the adoption and usage patterns of mobile banking and the impact of mobile banking on consumer satisfaction across different age groups. The findings imply that age is a factor that influences how individuals engage with and perceive mobile banking services. Further post-hoc analyses may be conducted to explore specific differences between age groups.

Table 4:- One-Way ANOVA (Welch's).

	F	df1	df2	p	
Adoption and Usage Patterns of Mobile Banking	3.72	2	21.6	0.041	
Impact of Mobile Banking on Consumer Satisfaction	3.87	2	22.5	0.036	
Group Descriptive					
	Age	N	Mean	SD	SE
Adoption and Usage Patterns of Mobile Banking	22-24	35	17.4	3.13	0.529
	18-21	107	16.1	3.47	0.335
	Above 24	8	17.8	1.98	0.701
Impact of Mobile Banking on Consumer Satisfaction	22-24	35	17.3	2.99	0.505
	18-21	107	15.8	3.56	0.344
	Above 24	8	17.4	1.85	0.653

2. H0: There is no significant difference in the mean scores of adoption and usage patterns of mobile banking and the impact of mobile banking on consumer satisfaction between males and females.

Result:-

The results of the Independent Samples T-Tests conducted to examine potential gender-based differences in both the adoption and usage patterns of mobile banking and the impact of mobile banking on consumer satisfaction reveal interesting findings.

For the Adoption and Usage Patterns of Mobile Banking, the t-statistic is -1.48 with 148 degrees of freedom, resulting in a p-value of 0.142. Similarly, for the Impact of Mobile Banking on Consumer Satisfaction, the t-statistic is -1.28 with 148 degrees of freedom, yielding a p-value of 0.204. In both cases, the p-values are greater than the commonly used significance level of 0.05, indicating that there is no significant difference between males and females in terms of mean scores for adoption and usage patterns and consumer satisfaction with mobile banking.

Upon examining the group descriptives, it is apparent that the mean scores for both adoption and usage patterns and consumer satisfaction are slightly higher for males than females. However, the t-tests suggest that these differences are not statistically significant.

Conclusion:-

The results suggest that there is no significant gender-based difference in the mean scores of adoption and usage patterns of mobile banking and the impact of mobile banking on consumer satisfaction. Therefore, based on this analysis, it can be concluded that gender does not play a significant role in influencing the adoption, usage patterns, and consumer satisfaction with mobile banking among the study participants.

Table 5:- Independent Samples T-Test.

		Statistic	df	p		
Adoption and Usage Patterns of Mobile Banking	Student's t	-1.48	148	0.142		
Impact of Mobile Banking on Consumer Satisfaction	Student's t	-1.28	148	0.204		
Note. $H_a \mu_{Female} \neq \mu_{Male}$						
Group Descriptive						
	Group	N	Mean	Median	SD	SE
Adoption and Usage Patterns of Mobile Banking	Female	81	16.1	16	3.54	0.393
	Male	69	16.9	18	3.14	0.378
Impact of Mobile Banking on Consumer Satisfaction	Female	81	15.9	16	3.5	0.389
	Male	69	16.6	17	3.29	0.396

Discussion:-

The study investigated the impact of mobile banking on consumer satisfaction in emerging markets, with a focus on adoption patterns, usage trends, and demographic influences. The demographic data revealed a predominantly young participant base, with a notable concentration in the 18-21 age group. The gender distribution was relatively balanced, providing a diverse sample for the study.

Table 2 shed light on the adoption and usage patterns of mobile banking. Results indicated a high frequency of mobile banking usage, with a significant proportion of participants using it frequently or always in the past three months. The satisfaction levels with the accessibility, ease of use, and security of mobile banking apps were notably positive, suggesting a favorable perception among users. Furthermore, the majority of participants agreed that mobile banking has become an integral part of their financial routine.

In Table 3, the evaluation of the impact of mobile banking on consumer satisfaction revealed encouraging findings. A substantial number of participants reported a positive effect on their overall banking experience, high satisfaction with transaction speed and efficiency, and a notable improvement in control over personal finances. The likelihood of recommending mobile banking to others was also high, indicating a positive word-of-mouth effect.

The statistical analyses provided insights into demographic influences on mobile banking adoption and satisfaction. The One-Way ANOVA (Welch's) tests indicated a significant difference in adoption and satisfaction scores across different age groups. Post-hoc analyses suggested variations in mean scores, emphasizing the influence of age on mobile banking behavior. However, the Independent Samples T-Tests did not reveal a significant gender-based difference in adoption and satisfaction scores, indicating that gender may not play a prominent role in shaping attitudes towards mobile banking.

Conclusion:-

The study concludes that mobile banking has a substantial and positive impact on consumer satisfaction in emerging markets. The high frequency of usage, positive perceptions of accessibility and security, and the integration of mobile banking into financial routines underscore its significance. Demographically, age appears to be a determining factor, influencing adoption patterns and satisfaction levels. However, gender did not emerge as a significant variable in shaping mobile banking behaviors.

These findings contribute to the understanding of mobile banking dynamics in emerging markets and emphasize the need for targeted strategies to address age-specific variations in adoption and satisfaction. As financial institutions and policymakers seek to enhance financial inclusion and technology-driven solutions, recognizing the nuances of user preferences and challenges becomes crucial.

Recommendations:-

Focus on Age Groups:

1. Targeted Marketing: Develop campaigns and educational initiatives specific to the preferences and needs of different age groups identified in the study.
2. Financial Education: Implement programs for younger demographics to improve their understanding of mobile banking benefits and functionalities.
3. Cross-Generational Outreach: Bridge the gap between age groups to ensure inclusivity and encourage adoption among all.

Improve User Experience:

1. Continuously enhance mobile banking apps: Focus on features, functionality, user interface, and security updates.

Further Research:

1. Conduct deeper research to explore the specific preferences and challenges of different age groups regarding mobile banking.

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