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Research Article

Problems on using Mobile Payments Applications

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ABSTRACT

Mobile payment applications have transformed financial transactions. They are convenient and efficient but face several challenges that impact the user experience and adoption. Some of the common problems include device incompatibility, limited support for certain currencies, and technical difficulties resulting from poor internet connectivity. Privacy and data security issues, such as fraud risks and data breaches, also discourage trust among users. In addition, accessibility barriers, ranging from geographical restrictions to high transaction costs and usability issues for lesser tech-savvy folks, add to the woes of adoption. Ensuring widespread acceptance and satisfaction through addressing these issues with proper security protocols, improving infrastructures, and focusing more on user-centric design innovation is important.

Keywords: Mobile Payments, Data Security, Accessibility Challenges, Fraud Risks, Usability Barriers

INTRODUCTION

Mobile payment applications have revolutionized the way people interact with financial systems. This is because they offer unprecedented convenience, efficiency, and accessibility. However, despite their widespread use, users face several challenges that hinder the optimal experience and utilization of these technologies. One of the key concerns is the unavailability of mobile payment applications on outdated devices, thus limiting access for nearly half of the population that cannot afford or upgrade to more recent models of smartphones (Jain & Singh, 2021). More importantly, many mobile payments face a challenge with few currency support, thus limiting the ease and smoothness of cross-border transactions (Sarma, 2012). The lack of robust customer support further exacerbates these issues, leaving users stranded when they encounter problems, especially in rural areas where access to help may be scarce (Mackay, 2019). Additionally, many mobile payment applications rely on third-party service providers, which can lead to service disruptions or delays, creating dependency and compromising the reliability of transactions (Liu & Yang, 2020). Another critical challenge is the integration issue of loyalty programs, which is discouraging for the users who are habitual in earning rewards for their respective purchases, thus reducing the overall appeal of such sites (Zhou, 2014). Another very significant barrier is the one related to privacy. These days, users are worried about sharing personal information mainly because they do not have an idea of how their data is being stored and used by the respective providers of payment services (Ayo et al., 2016). The dependency on battery life further complicates the use of mobile payment applications, especially in areas with unreliable electricity or where users may not have the means to charge their devices regularly (Chung & Lee, 2021). Universal acceptance still faces a challenge even with mobile payments, where most businesses, especially the small and rural ones, do not have the capabilities to use mobile payments; thus, their reach is restricted (Kshetri, 2017). In addition, users experience restrictions from transaction limits and fees imposed on them that will eventually limit their applications to only smaller or infrequent transactions, hence diminishing their value (Chakrabarty & Raj, 2017). Another common problem that leads to failed transactions or unintended consequences is user error, resulting from unfamiliarity or lack of understanding of the system (Venkatesh et al., 2012). Connectivity and network problems, especially in rural or underdeveloped areas, also contribute to the challenges of using mobile payment platforms, leading to frustrations and incomplete transactions (Ayo et al., 2016). Additional technical factors such

as crashing apps, failure to execute payment or glitching the system might decrease users confidence (Bikker, 2020). The concern over security and risk factors related to a cyber attack or unauthorized access also persist; users still have some fears about data security relating to their monetary accounts. Last but not least, fraudulent practices through phishing, identity theft and scamming users of the mobile payment systems persist which makes users lack confidence in such applications (Sarma, 2012). Given all these factors and complications, it is highly necessary to study the problem areas that surround the usability of mobile payment applications, find a way of rectifying these issues for efficiency, security, and wider adoption of such applications hence ease the experience across people with varying demographics.

REVIEW OF LITERATURE

Jain, P., & Singh, V. (2021) in its study found that older phones often have technical limitations such as slower processing speeds and not being compatible with newer mobile payment applications thereby significantly hampering user adoption in some demographics.

Ali, M., & Farhan, M. (2019) has highlighted that compatibility issues with older devices act as a major barrier to the use of mobile payments, especially in low-income and rural areas, where there is a higher prevalence of older devices.

Kshetri, N. (2017) observed that limited currency support in mobile payment systems restricts the global reach of mobile payments, particularly cross-border transactions, thereby affecting the users satisfaction and restricting the effectiveness of mobile payments in international markets.

Zink, A., & Rajendran, M. (2019) has found in its study that currency restrictions on mobile payment platforms will not let businesses and consumers carry out cross-border trade and thus restrict the full-fledged adoption of mobile payments by various economies.

Mackay, H. (2019) in his study finds that inadequate support services for customers are often a result of frustration and reduced utilization of mobile payments applications. This is especially pronounced in countries having less digitization.

Munkhbat, B., & Ishikawa, T. (2018), in their paper, highlighted that if proper customer service is not in place responsive and accessible users will become hesitant to give their confidence and continue their usage and it hampers their retention as users.

Liu, C., & Yang, Z. (2020) in their study reveals that dependence on third-party service providers for mobile payments can create vulnerabilities in terms of security and reliability, as these providers are often external to the ecosystem.

Thakur, M., & Sharma, D. (2019), in their study highlighted that reliance on third parties can be highly risky due to the introduction of factors such as service interruptions and frauds because direct access to such service providers would not be possible.

Zhou, T. 2014, in his study highlighted that integration among mobile payment systems and reward programs may not motivate regular use of mobile payments toward long-term adoption due to the absence of such coordination.

Sahoo, S., & Choudhury, S. (2020) in their study opined that without the integration of loyalty programs, the mobile payment systems cannot compete with the traditional payment systems where rewards and incentives are made available immediately.

Ayo, C. K., Adewoye, J. O., & Oni, A. A. (2016) concluded that privacy concern is one of the most significant barriers to adoption of mobile payment in the developing countries. Consumers become very cautious regarding their financial and personal information in sharing.

Bikker, J. A. (2020) in their study highlights the growing concerns over data security in mobile payment systems and suggests that privacy issues are preventing users from fully embracing these technologies.

Chung, T. L., & Lee, Y. C. (2021) in their research identifies battery life as a key limitation for mobile payment adoption, particularly in developing regions where smartphones are often not charged or maintained regularly.

Patel, R., & Singh, P. (2019) found that limited battery life in mobile devices causes significant disruption to the user experience, particularly during payment transactions, which results in a negative perception of mobile payments.

Kshetri, N. (2017) highlighted that non-universal acceptance of mobile payments across all types of retailers and industries limits practical usage of mobile payment systems.

Gupta, S., & Srinivasan, A. (2020) in their study stated that the failure of people to accept mobile payments in some areas or industries creates frustration for consumers, hence reducing the incentive for the widespread use.

Ayo, C. K., & Oni, A. A. (2018) in their study pointed out that limited internet and mobile network coverage mainly in rural areas significantly hinders the access of mobile payment applications.

Wills, C., & McDonald, D. (2021) pointed out in their study that many lack of access to mobile payment systems due to the infrastructural gaps in underserved regions and that such systems have not achieved full potential for financial inclusion.

Chakrabarty, S., & Raj, D. (2017) in their study concluded that some mobile payment systems have transaction limits, which discourage smaller transactions and are also characterized by a high transaction fee that is unaffordable for the low-income users.

Singh, M., & Gupta, A. (2019) argued in their study that the adoption of mobile payments in sectors like retail is being restricted due to significant fees and limiting transaction limits associated with mobile payments.

Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012) in their research found that lack of user technical knowledge results in technical errors while using mobile applications for payment and this hurts the satisfaction level and motivates them not to utilize the application in the near future.

Raj, S., & Agarwal, P. (2020) in its research found that user mistake, especially when entering data or navigating an application about payment, can cause annoyance and may affect the belief in the system.

Ayo, C. K., Adewoye, J. O., & Oni, A. A. (2016) in their study cited network problems like connectivity problems and signal interference as the main obstacle to smooth mobile payment transactions, especially in rural settings.

Zhang, D., & Li, X. (2021) in their research concluded that network problems impact the reliability of mobile payment significantly as users often encounter transaction failure due to connectivity problems.

Bikker, J. A. (2020) determined that technical issues, for example, software bugs, app crashes, and problems with data synchronization affect the effectiveness and reliability of mobile payments.

Lee, H., & Kim, J. (2019) found that many users face technical issues in their mobile wallets, such as slow processing speeds and errors in the confirmation of transactions.

Bikker, J. A. (2020) shows that trust in mobile payment systems is decreasing because of concerns over cyber risks, especially data breaches and hacking, which undermines trust.

Liu, C., & Yang, Z. (2020) concluded security risks such as phishing and identity theft are a threat to full adoption in mobile payments.

Sarma, M. (2012) discusses the surge of fraud in mobile payment systems, especially in emerging markets where consumers have less knowledge of fraud risk and mobile literacy is relatively low.

Gupta, R., & Sharma, V. (2019) notes fraudulent activity as a main barrier to the adoption of mobile payment systems where, in fact, users end up as victims of fraud and identity theft.

RESEARCH GAP

A significant research gap in the current literature on mobile payment adoption is how the complex relationship between device limitations, infrastructure, and user experience varies across different demographic segments. While there has been a lot of study on the challenges posed by older devices and their incompatibility with newer payment systems, how these issues uniquely affect users in rural or low-income areas is not well explored. Similarly, whereas issues related to currency restrictions and lack of cross-border functionality have been

addressed, the challenge is that further investigation on how these challenges specifically impact particular industries or user groups remains an open question, especially in emerging markets. In terms of privacy and security, those issues are well-noted; however, much more research is needed in how those concerns vary from culture to culture and socio-economic contexts. Moreover, although the issue of battery life, network connection, and technical error being cited most often, as a barrier, their eventual impact on long-term user confidence and adoption, particularly across developing regions, has not received adequate research. The inculcation of loyalty programs into the mobile payment system is a relatively under-exploited area that can enhance engagement and retention among users. A comprehensive study considering these interrelated factors would provide a deeper understanding of the barriers to mobile payment adoption, particularly in underserved and low-tech areas.

STATEMENT OF THE PROBLEM

Widespread adoption of mobile payment applications has made financial transactions easy, faster, and more accessible. But despite the many advantages these have over others, various challenges exist to limit the effectiveness and extensive usage. Users find these applications incompatible with older devices, limiting currency support, and the lack of universal acceptance in rural and less technologically advanced regions. Technical issues such as connectivity, dependency on the battery, and limitations in the number of transactions have also contributed to the problem of making seamless transactions. Security concerns, including fraud and loss of privacy, are other significant barriers that many people are skeptical about the security of their financial information. Third-party service providers often characterize the mobile payment applications, which cause system failures and service interruption. Lack of integration with loyalty programs, bad customer support, and user errors also add up to the woes of user experience. These are challenges not only for adoption rates of mobile payments but also concerning issues related to access, reliability, and inclusiveness, especially in developing economies. Thus, addressing these concerns is of prime importance in enhancing user experience, instilling confidence, and further encouraging wider use of mobile payment applications.

OBJECTIVE OF THE STUDY

- To learn the problems in using mobile payment applications

SCOPE OF THE STUDY

The present study is focused on the Ernakulam district of Kerala. More specifically, it examines the personal profile, bank profile, and the challenges associated with using mobile payment applications.

RESEARCH METHODOLOGY

Data

The data required for the study is primary in nature and has been collected using a questionnaire.

Sampling

The study employed a purposive sampling technique, focusing solely on customers who use mobile payment applications. A total of 360 questionnaires were distributed to mobile payment users. However, 56 questionnaires were not returned, and 54 were only partially completed. As a result, the final sample consists of 250 respondents.

Framework of Analysis

The collected data have been analyzed by employing simple percentage and factor analysis.

SIGNIFICANCE OF THE STUDY

The significance of this study lies in its potential to identify and address the key problems users face when utilizing mobile payment applications. By understanding issues such as technical glitches, security concerns, lack of customer support, and limited compatibility with devices, this research offers valuable insights into the barriers hindering the widespread adoption of mobile payments. The findings can guide the development of more user-friendly, secure, and inclusive mobile payment systems, ultimately improving the overall user experience and contributing to the financial inclusion of underserved populations. Additionally, this study can inform

policymakers, businesses, and developers about the challenges that need to be addressed to enhance the effectiveness and reliability of mobile payment platforms in the evolving financial landscape.

LIMITATIONS OF THE STUDY

The data required for the study is primary in nature. A key limitation of primary data is the potential for bias. Therefore, careful consideration must be taken when generalizing the results.

FINDINGS

The following Table 1 discloses about socio-economic profile of mobile payment application users.

Table 1: Socio Economic Profile

Particulars	Numbers (n=250)	Percentage (%)
Area of Residence		
Urban	75	30.0
Semi-urban	63	25.2
Rural	112	44.8
Age (Years)		
Up to 30	66	26.4
30 – 50	155	62.0
Above 50	29	11.6
Gender		
Male	93	37.2
Female	157	62.8
Educational Qualification		
SSLC	39	15.6
H.Sc.,	18	7.2
Diploma	13	5.2
UG	45	18.0
PG	104	41.6
Professional	31	12.4
Occupation		
Business	19	7.6
Employee	99	39.6
Homemaker	31	12.4
Student	24	9.6
Professional	77	30.8
Type of Family		
Joint	51	20.4
Nuclear	199	79.6
Status in Family		
Head	67	26.8
Member	183	73.2
Marital Status		
Married	203	81.2
Unmarried	47	18.8
Monthly Income (Rs.)		
Up to 15000	94	37.6
15001 - 30000	88	35.2
Above 30000	68	27.2
Family Income (Rs.)		
Up to 40000	88	35.2
40001 - 80000	81	32.4

Particulars	Numbers (n=250)	Percentage (%)
Above 80000	81	32.4
Family Expenditure (Rs.)		
Up to 20000	75	30.0
20001 – 40000	85	34.0
Above 40000	90	36.0
Earning Members		
One	52	20.8
Two	140	56.0
Above Two	58	23.2
Non Earning Members		
One	53	21.2
Two	70	28.0
Above Two	127	50.8

The data shows that among the 250 respondents, rural areas account for the highest proportion of mobile payment application users, with 112 users (44.8%), suggesting significant adoption even in less urbanized regions, potentially due to expanding mobile infrastructure and financial inclusion initiatives. Urban areas follow with 75 users (30.0%), reflecting moderate adoption driven by better access to technology and financial services. Semi-urban areas have the smallest share, with 63 users (25.2%), indicating room for growth as mobile penetration and awareness improve. This distribution highlights the growing reach of mobile payment systems across all areas of residence.

The data reveals that the majority of mobile payment application users fall within the 30–50 age group, comprising 155 users (62.0%), indicating that this demographic is most likely to adopt such technology due to their financial independence and familiarity with mobile tools. Users aged up to 30 account for 66 individuals (26.4%), reflecting significant adoption among younger users, likely driven by their tech-savviness and early exposure to mobile ecosystems.

Table 2 Discusses about Bank Details of Mobile Payment Users.

Table 2: Bank Details

Type of Bank	Numbers (n=250)	Percentage (%)
Public Sector Banks	153	61.2
Private Sector Banks	91	36.4
Foreign Banks	6	2.4
Type of Account		
Savings	223	89.2
Current	27	10.8
Periodicity (Years)		
Up to 5	89	35.6
6 – 10	44	17.6
Above 10	117	46.8

The data shows that the majority of mobile payment application users hold accounts in public sector banks, with 153 users (61.2%), indicating a strong preference for these banks, possibly due to their widespread reach, government backing, and higher customer base. Users with accounts in private sector banks make up 91 individuals (36.4%), reflecting significant adoption but to a lesser extent compared to public sector banks. Only 6 users (2.4%) have accounts in foreign banks, suggesting minimal usage of mobile payment applications among this group, which could be attributed to the relatively limited presence of foreign banks and their mobile services in the region. This distribution highlights that public sector banks are the primary banking choice for mobile payment application users.

The data from the table shows that most of its users have savings accounts and are 223, giving an indication that savings account is the most used mobile payment application account type at 89.2%. The high percentage shows preference of the convenience and accessibility of users toward their everyday financial activities. On the other hand, 27 users or 10.8 percent hold current accounts, an adoption smaller in business-oriented account holders who may demand other kinds of banking services. The distribution shows savings accounts to be the account type in which most mobile payment application users hold.

The data also shows that a significant portion of mobile payment application users have held their bank accounts for more than 10 years, with 117 users (46.8%). This suggests that long-term account holders are more likely to use mobile payment applications, possibly due to greater familiarity with banking services and financial stability. There are 89 users who have had accounts for up to 5 years, or 35.6%. These have moderate adoption rates and possibly more recent involvement with the mobile banking applications. Another 44 users (17.6%) have accounts held for 6 to 10 years, a relatively less substantial percentage within this category. This spread demonstrates that account holders for longer periods of time are the primary users of mobile payment applications.

Problems in using Mobile Payments Applications

To identify the challenges faced by users of mobile payment applications, factor analysis was done. Before that, Kaiser-Meyer-Olkin (KMO) measure and Bartletts Test of Sphericity was done as pre-analysis test to check the suitability of the sample for factor analysis. The KMO value was more than 0.70, thereby confirming the adequacy of the dataset for this purpose. Particularly, Bartletts Test of Sphericity came out to be highly significant $\chi^2 = 2363.219$, $df = 105$, $p < 0.001$ while the KMO statistic is 0.921 which clearly shows that the sample would fit well for factor analysis thereby bringing valid and relevant interpretations.

Table 3: KMO and Bartletts Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.921
Bartlett's Test of Sphericity	Approx. Chi-Square	2363.219
	df	105
	Sig.	.000

Table 4: Problem on using Mobile Payment Applications

Particulars	1	2	3
Incompatibility with Older Devices	.846		
Limited Currency Support	.811		
Lack of Customer Support	.782		
Dependency on Third-Party Service Providers	.736		
Lack of Integration with Loyalty Programs	.714		
Privacy Concerns	.700		
Dependence on Battery Life	.607		
Lack of Universal Acceptance		.810	
Limited Accessibility		.806	
Transaction Limits and Fees		.629	
User Error		.591	
Connectivity and Network Problems			.847
Technical Issues			.802
Security Risks			.626
Fraudulent Activities			.553
Eigen Values	7.737	1.498	1.033
% of Variance	51.577	9.987	6.887
Cumulative % of Variance	51.577	61.563	68.450

The analysis identified three key factors contributing to the challenges faced by users of mobile payment applications. These factors were determined based on Eigenvalues greater than one, a standard criterion in factor analysis. Components with loadings of 0.5 or higher were considered significant, as they indicate meaningful contributions to the identified factors. Insights from the rotated component matrix provide a deeper understanding of the underlying issues.

Factor 1: Technical and Operational Limitations

This factor highlights challenges that stem from the functionality and compatibility of mobile payment systems. The significant issues identified include:

- **Incompatibility with older devices:** Many users face limitations when mobile payment applications are not supported on outdated hardware, reducing accessibility for those unable to upgrade their devices.
- **Limited currency support:** Applications that fail to accommodate multiple currencies restrict their usability for international transactions, impacting global users.
- **Lack of customer support:** Insufficient or ineffective customer service mechanisms can frustrate users when technical issues or transaction errors occur.
- **Dependency on third-party service providers:** Relying on external services can result in delays or inconsistencies, especially when such providers experience technical difficulties.
- **Lack of integration with loyalty programs:** Users value seamless integration with rewards and loyalty systems, and its absence reduces their incentive to use such applications frequently.
- **Privacy concerns:** With the increasing prevalence of data breaches, users are apprehensive about how their personal and financial information is handled and stored.
- **Dependence on battery life:** Since most mobile payment systems operate through mobile devices, users are constrained by battery limitations, which can pose challenges during emergencies or prolonged usage.

This factor is the most influential, contributing 51.577% of the total variance in the problems associated with mobile payment applications. Its dominant role highlights the need for developers to address these operational and technical barriers to enhance user satisfaction.

Factor 2: Accessibility and Usage Barriers

The second factor focuses on the usability and reach of mobile payment systems. Key challenges identified include:

- **Lack of universal acceptance:** The inability of certain merchants or platforms to accept specific payment methods limits their practical utility.
- **Limited accessibility:** Geographic restrictions, language barriers, or device incompatibility can exclude potential users, particularly in rural or underserved regions.
- **Transaction limits and fees:** Policies that restrict maximum transaction values and the high cost of the services used by the applications discourages the community to use them for every day transactions.
- **User error:** Where interfaces or processes are complicated or ambiguous there can often be errors that cause transactions not to go through or unintended consequences for financial instruments.

This factor contributes 9.987 % of the variation. Thus, there is need to improve and popularize mobile payment solutions to reflect market demands.

Factor 3: Social Issues: Security and Connection

The third one is more focused on matters of security and stability of payment systems in the electronic environment. The significant challenges under this factor are:

- Connectivity and network problems: Unpredictable connectivity of the internet or disruptions in the network adversely affects the running of these applications.

- Technical issues: Monetary transactions can be interrupted by bugs, glitches, or other circumstances that would erode the transactional credibility of the platform.
- Security risks: General Security fears such as hacking, phishing and other cybercrimes make consumers to hold back when using mobile payments systems.
- Fraudulent activities: Negative events such as cases of frauds or unauthorized transactions distort the confidence the users will place in such social platforms.

This factor accounts for 6.887 % of the data variance which goes to echo the importance of proper security and dependable, secure networks to guarantee the satisfaction and security of the users.

Combined, these three variables explain 68.450% of the total variance in regard to problems concerning the mobile payment applications. Technical and operation constraints occupy the lions share of contribution in the first factor developed for the study while the second factor relates to accessibility and usage restrictions and the third relates to security and connectivity issues. Based on the analysis of the identified factors, it is clear that their consideration in the full capacity may lead to a high increase in the use and function of mobile payment applications. Stakeholders can better maintain the long-term growth of the mobile payment platforms by paying more attention on technicality, easier ways of accessing the payment platforms, and ensuring that the payment platforms are secure enough for users to access.

SUGGESTIONS

To address the challenges faced by users of mobile payment applications, the following suggestions are offered:

1. **Incompatibility with Older Devices**: Mobile payment firms should ensure that their first-generation apps run well on older devices and more versions of smartphones and operating systems than the newer versions. Other obvious updates may also be useful, updating the nice on a frequent basis to improve compatibility.
2. **Limited Currency Support**: Mobile payment platforms should add more options of local and international currencies to the system in order to support user s in different locations of the world, encourage people to transact globally.
3. **Lack of Customer Support**: For the purpose of enhancing customer experience there is a need for mobile payments services to have round clock customer support in modes like phone, chat and email. The use of artificial intelligence in chatbots can also help in management of incoming inquiries or answers to simple questions as well as shorter response time.
4. **Dependency on Third-Party Service Providers**: Mobile payments should focus on improving bonds with third party reps and guarantee that Service Level Agreements (SLAs) are sustainable so that dependency dangers are minimized.
5. **Lack of Integration with Loyalty Programs:** There is always a possibility of improving the user experience, when and if mobile payment platforms are linked with well-known loyalty programs. Users stand to benefit from the availability of such platforms, and more so when incentives are awarded basis transactions made.
6. **Privacy Concerns:** Mobile payment providers should use end to end encryption, follow data protection laws and offer clear privacy policies to consumers to correct for privacy ill effects. Precautions should also be in place to protect data which should warrant biannual or annual audits.
7. **Dependence on Battery Life**: Low battery usage is an important factor that should be adopted in mobile payment apps; and customers should be offered an option of making several transactions offline or use less battery power when making payments.
8. **Lack of Universal Acceptance:** It is thus possible for mobile payment platforms to engage more merchants and service providers which most especially are located within rural and hard to reach regions to ensure higher acceptance levels are achieved. Banks, for instance, can help expand the company's access to furniture customers even more.
9. **Limited Accessibility:** Making sure that mobile payment apps are easily available to be useable by disabled persons through features such as speech, further texts, and clear layouts are good ways of increasing the

criterion of inclusion. Similarly, there is an improvement in the simplest availability by deploying inexpensive smartphones and data tariffs in the unconnected regions.

10. **Transaction Limits and Fees**: Lowering the limits per transaction while decreasing the cost of the transactions would ensure they incorporated the use of mobile equipment for transactions. Another way is also the proper disclosure of the fees and charges applied in the course of service provision in order to facilitate proper decision making among the users.
11. **User Error:** Reducing user errors means that user interfaces, tutorial guides and help within the app must be developed. As well, making the checkout or payment processes require a step to confirm an action that has been performed might help avoid some unintended actions.
12. **Connectivity and Network Problems**: The problems of connectivity would become less of a concern if offline transaction capability was enhanced, and there was work done on faster, reliable networks. Mobile payment services can also incorporate offline payment methods where network connectivity such as in the rural regions.
13. **Technical Issues:** There should be routines that are performed for the apps to allow prevention of certain technical issues such as hitches. There are ways that eliminate the frustration of users for instance giving them detailed guides on how to 'fix' a problem on their own as well as providing them with notifications that state that the system will be down for maintenance at a time convenient for them.
14. **Security Risks**: Implementing enhanced security features as; MFA, biometric scans, real-time action fraud detection mechanisms helps to alleviate the security issues. Indeed, this will make the users safe in their transactions, and also if the management goes ahead and educates the users on safe usage practices and regular changing of passwords then more transactions shall be safe.
15. **Fraudulent Activities:** Mobile payment applications should include high levels of fraud detection algorithms and individual options for reporting or freezing at the time of suspicious activity. Users may also be trained on ways to avoid fraud schemes, and ways to safeguard their accounts (for instance by getting notification for transactions).

Therefore, to pay for these challenges, there is potential to increase the utility, security and usability of mobile payment platforms, thus improving the experience of users.

CONCLUSION

The findings analytically reveal the complexity of the adoption patterns and issues, concerning the mobile payment applications. it has highlighted the high levels of uses across the demographics, highlighting the improvements in financial access technologies and the adoption of advanced technology systems. In this regard, high density areas embrace the greatest percentage, in a clear evidence that area of operation focused intervention programs are effective, regional and semi regional zones present additional immense prospects for modest market infiltration. Other demographic antecedents that influence adoption include age, gender, education, and employment status; people between middle age, women, well-educated, and those in paid employments are most likely to adopt new technologies. Furthermore, the nuclear families, working couples and the married clients show comparatively higher usage toward the mobile payment reflecting socio-economic factors influencing mobile payment. Other banking preferences and account type also suggest a continued use of traditional banking systems where savings accounts are the most popular among the users.

Problems related to functionality, accessibility and security of applications for mobile payment indicate potential cautions to user satisfaction. Issues like compatibility with the device and inadequate and unsatisfactory customer support and issues of privacy remain other operative and technical challenges. Problems like restrictive transaction capabilities, geographic limitations and poor interface undoubtedly indicate the requirements for prompt advancement and improvement of the systems' accessibility. Challenges such as connectivity insecurity, cyber threats have shown that protection and good infrastructure are central to any process. The suggestions made in this extensive study underscore the need to locate these problems and design effective ways to improve clients' experience and universalize mobile payments. In this way, different stakeholders are able to bring closer the gaps in

question and contribute to the ways and means that raise adoption, as well as increase the inclusiveness and the trust in mobile economy and make sure that growth is sustainable and truly accessible to all.

SCOPE FOR FURTHER RESEARCH

A vast and highly diverse area of opportunities for further research of the problems related to the usage of the mobile payment applications is identified. It is possible to use research to investigate issues of usability and interface, understand how design problems affect the rates of utilization, and define the most crucial barriers that restrict accessibility to differently abled individuals and elderly users. Issues of security and privacy still persist and thus there is need to establish what users believe about insecurity, vulnerability to data breach and the efficacy of safeguards against fraud. Technical and connectivity issues also needed to study, especially the role of unreliable network on the reliability and obstacles faced in the rural and remote areas. That is why consumer trust and awareness are significant, as investigations can evaluate the level of trust consumers have towards the mobile environment and define areas that need concentration on increasing the population's knowledge of secure transactions. Moreover, the behavioral and cultural drivers that impact the adoption process, for example, socio-cultural resistance and naivety in information technology needs to be analyzed. In the case of vendors, such issues as the evaluation of the possibilities of integration of the mobile payment systems or the occurrence of various issues within micro companies affected by transaction costs could also be valuable. What we are getting to know are the various aspects that, if approached, could improve the functionality, and security of mobile payment systems, besides increasing the uptake of the technologies.

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