

A study on the usage and awareness of UPI among rural people

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Abstract

Unified Payments Interface (UPI) has changed the way payments have been happening in the Indian digital payment landscape. The UPI has gained huge popularity but it is not equally pervasive across different regions within the country. Some regions such as rural India are still catching up to the digital payment system for various reasons. The present study aims to determine the level of awareness, usage pattern, and perception towards UPI. The study is focused on rural respondents. A quantitative research design will be adopted to achieve the objectives of the study. Specifically, the study will rely on primary data collected from participants using a well-designed questionnaire. Both descriptive and inferential statistics will be used to analyze the data. The analysis will focus on identifying the factors that explain differences in the level of awareness and usage of UPI among the sampled respondents. The study will also highlight the major challenges that hamper people in rural India from adopting digital payment systems. The expected outcome of the study is that although most people are aware of the UPI system, their level of digital literacy prevents them from using the system. The study will add value to the existing body of knowledge on digital payment systems and their impact on the informal sector. It will also provide some managerial implications that can be used to improve digital payment systems and promote their usage in the informal sector.

Key Words

UPI, Digital Payments, Rural India, Financial Inclusion, Digital literacy, Digital Banking, Cashless Economy

Introduction

Due to the technological developments, the financial system has evolved from cash-based transactions to digital payments. Unified payment interface (UPI) has emerged as one of the popular digital payment methods in India. Operated by the National Payments Corporation of India (NPCI), it allows money transfer from one bank account to another through a smartphone. The Indian government has promoted digital transactions through various campaigns such as Digital India, Pradhan Mantri Jan Dhan Yojana (PMJDY), Aadhaar-enabled services, and financial inclusion drives. The growing smartphone penetration and internet accessibility have also improved digital payment adoption in the country. As of now, UPI has overtaken other payment systems in terms of volume. However, the digital payment method has not gained popularity among rural residents. Lack of smartphones, digital literacy, internet penetration, awareness, and security issues are some of the primary reasons for low

uptake of UPI in rural areas. Since most of India's population resides in rural areas, it is essential to encourage them to adopt digital payment methods to boost the country's financial inclusion and economy. Hence, understanding the extent to which rural people are informed or knowledgeable about UPI is critical. It will help the researchers and policymakers come up with strategies to improve the literacy levels of rural citizens concerning UPI and promote its adoption. This study will also review the factors affecting UPI usage and challenges encountered while using the digital payment method. Overall, the findings of this study will provide insight into improving the level of digital payments in rural India.

Literature Review

Dusmant Kumar Sahoo, Dr. B.C.M. Patnaik, & Dr. Ipseeta Satpathy (2024): The study concluded that ease of use, security, convenience, and interoperability are the critical success factors of UPI in India. The study found that UPI has increased financial inclusion, reduced cash transactions, and improved India's digital payment infrastructure.

Aditi Gupta & Dr. Anil Tiwari (2025): The study suggests that digitization of transactions is on the rise in rural India, thanks to the government's push and increased awareness about it. It also points out that there is a need for development in this area.

Mr. C. Muthukumar & Dr. C. Paramasivan (2026): Research shows that UPI has been a huge success by increasing the level of banking penetration and facilitating financial transactions. However, it was also found that the main barriers to UPI adoption include low digital literacy levels, lack of internet access, and fraud concerns.

Mohammad Imdadul Haque, Abdul Azeez N. P., & S. M. Jawed Akhtar (2025): The study establishes a positive relationship between age, the level of education, and income, and the tendency to adopt the UPI among rural households. Consequently, the paper recommends promoting digital literacy and improving digital infrastructure in rural areas to increase financial inclusion.

Dr. Rashi Malik, Gargi, Anjali & Neha Singh (2026): The study suggests that urban users utilize UPI for commercial purposes whereas the rural users tend to use it for financial inclusion and government benefits. The research reveals that the low level of digital literacy and the absence of infrastructure hamper the usage of UPI by the rural population.

Jadhav, S. D., & Pawar, N. B. (2022): The study concluded that UPI, Google Pay, and PhonePe are popular in rural areas because they are convenient and time-saving, while also noting the challenges of connectivity and fraud and suggesting increased financial literacy to encourage their use.

Dr. Yogesh Shukla (2026): The study reported that the UPI apps' awareness and adoption level among college students were very high, with the majority preferring the PhonePe apps. The study suggests that there is a need to increase awareness and knowledge about cyber security to minimize the risks that come with the use of these digital platforms.

R. Selvaraju (2026): Found that convenience, trust and ease of use encourage the adoption of payments. Security concerns and limited digital literacy stand as obstacles to using digital payments. To help more people embrace payments the study recommends running awareness campaigns and adding stronger security features.

M. Waheeda Banu & Dr. R. Poornimarani (2026): The research reports that UPI and mobile wallets are popular in rural and semi-urban women due to their ease of use. The study finds fraud concerns and low digital literacy as primary challenges and suggests awareness and digital literacy campaigns.

Rosin C. Jacob, Mishel Elizabeth Jacob & Johny Johnson (2024): The study revealed that ease of use, usefulness, and infrastructure positively influenced UPI adoption, whereas the perceived risk had a

negative effect on the UPI adoption intention. The study suggests strengthening of security and infrastructure to foster financial inclusion through UPI transaction.

Swapna N.S. & Dr. Kanthimathinathan (2025): The research establishes that users' perception of ease of ease of use, usefulness, and innovativeness has a positive effect on UPI adoption, whereas perceived risk to use negatively affects its adoption. Additionally, the study finds that financial illiteracy and the lack of digital infrastructure hamper UPI adoption among rural women.

Diya Samit (2025): The study concluded that the application of UPI leads to increased frequency of spending and encourages unplanned purchases since the payment method is convenient and very easy to use. The study further establishes digital literacy as a significant predictor of the level of UPI adoption.

Shruthi L., Dr. Stalin Panner Selvam and Dr. C. J. Priya (2026): Conducted a study that found most small-scale traders in Mysuru had a good understanding of digital payment systems. The level of awareness varied depending on factors such, as education and the type of business they ran. The researchers said that improving literacy and strengthening infrastructure would help encourage wider adoption of digital payments.

Dr. Rakshit Madan Bagde and Dr. Alka W. Patil (2026): Found that the growing use of UPI has played a role in promoting financial inclusion and boosting income, in rural areas of India. The study also highlights how internet access, availability of banking services and better financial literacy are essential for people to fully benefit from payment systems. Without these basics the advantages of payments may not reach everyone.

Bhumi Verma, Mihir Purohit, & Jignesh Vidani (2024): Shows that UPI has changed the payment system by allowing people to make real-time payments. UPI is now a tool for financial inclusion. The article also mentions developments and challenges, around cybersecurity and privacy issues that affect UPI.

Vedantam Seetha Ram, Dowluri Sudhakar and Pamapana Surya Prakasa Rao (2026): Wrote an article that looks at how UPI has helped build Digital India. The article explains how UPI has made inclusion possible by making payments easier and more accessible for people. The study points out that several things affect whether people choose to use UPI. These include awareness, about UPI, how much people know about finances and how convenient the system is to use.

Nandish Dilip Bhai Joshi, Apurva C. Pathak, & Vilas Kulkarni (2025): Researching of factors affecting consumer decision making in using UPI as a mode of payment by conducting interview of 20 participants has discovered that young people tend to use this system more often, prefer Google Pay, and suffer from fears or lack of knowledge about UPI and cyber fraud. The results highlight the importance of enhancing cyber security and educating users.

Jayantika Yavad & Dr. Aamir Aijaz Syed (2026): The research made a discovery that digital payment systems are key to enhancing financial inclusion and banking services to rural women. The research also indicates that there is a low level of digital literacy, access to smartphones, and internet connectivity which are challenges to financial inclusion.

Surekha Invali (2025): The study indicates that UPI emerged as a preferred mode of digital payment due to its convenience which complements the increasing smartphone penetration. At the same time, it also throws light on UPI's contribution towards financial inclusion and altering consumer payment behavior in the country.

S. Vijay Kumar & Nayeema Unnisa (2024): The study concluded that growing internet penetration and easily available cheap data plans have contributed immensely towards the popularity of UPI in India. The study also says that this growth is aiding financial inclusion and a cashless, digital economy.

Objectives

To identify the level of awareness of UPI among rural people.

To evaluate the factors influencing the adoption of UPI among rural users.

To assess the challenges and barriers faced by rural people while using UPI.

Research Methodology

This study employs quantitative research design, seeking to investigate the awareness and use of UPI among rural populations. This study will collect primary data from 100 rural respondents through a well-structured questionnaire. The convenience sampling technique has been used, and the data has been analyzed using the descriptive statistics method to understand and explain the common awareness and factors affecting UPI usage in rural areas.

Significance of Study

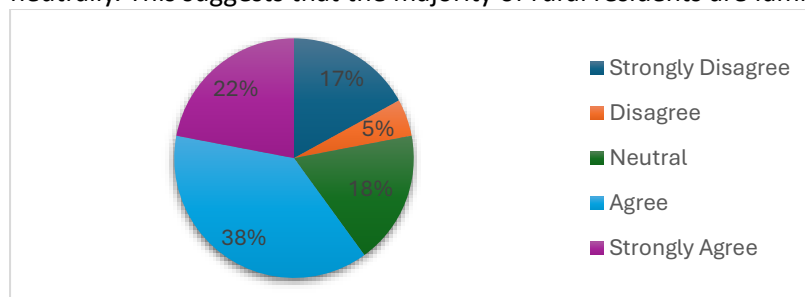
Studying is important as it helps understand the level of UPI awareness and utilization in the rural population. This information will be helpful as rural areas tend to have issues such as lack of digital literacy, internet access, and security risks. Understanding the effect that these issues have on UPI usage will help address the problems. The conclusions made from the study will be beneficial banks, financial institutions, governments, policymakers, and digital payment firms in creating appropriate awareness and digital literacy programs. The findings will also help increase the adoption rate of digital payment methods and improve financial inclusion in rural areas.

Data Analysis and Interpretation

I am aware of UPI and its basic functions

Particulars	Frequency
Strongly Agree	22
Agree	38
Neutral	18
Disagree	5
Strongly Disagree	7
Total	100

Analysis: The above table shows that 60% of respondents agreed or strongly agreed that they are aware of UPI and its basic functions. 22% disagreed or strongly disagreed whereas 18% responded neutrally. This suggests that the majority of rural residents are familiar with UPI.

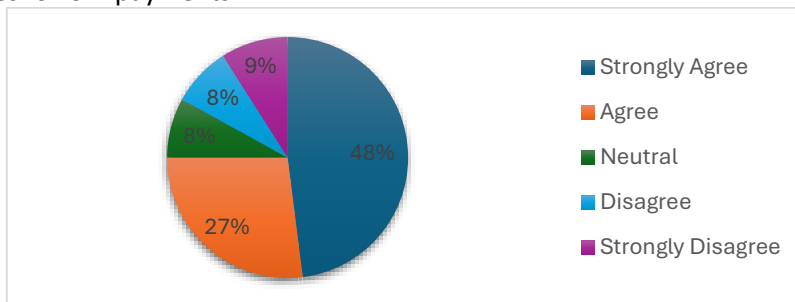


Interpretation: The results of the study indicate that the majority of rural respondents are knowledgeable about UPI and its core offerings. Nevertheless, it is crucial to promote digital and financial literacy among the respondents through awareness and educational campaigns.

I know how to scan a QR code to make a UPI payment

<i>Particulars</i>	<i>Frequency</i>
<i>Strongly Agree</i>	<i>48</i>
<i>Agree</i>	<i>27</i>
<i>Neutral</i>	<i>8</i>
<i>Disagree</i>	<i>8</i>
<i>Strongly Disagree</i>	<i>9</i>
<i>Total</i>	<i>100</i>

Analysis: The above table indicates that 75% of respondents either agreed or strongly agreed that they knew how to scan a QR code to make a UPI payment. 17% disagreed or strongly disagreed, whereas 8% responded neutrally. This implies that most of the residents are aware of scanning QR codes for UPI payments.



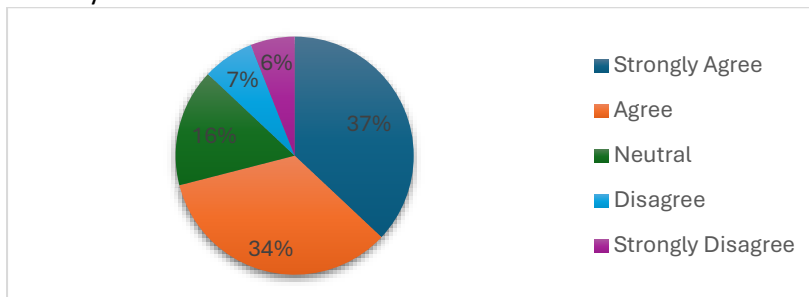
Interpretation: The results suggest that rural respondents were confident using QR codes to pay through UPI. This implies that the rural respondents are conscious of the practical application and relevance of QR codes in UPI payments.

I am aware of the security measures required while using UPI

<i>Particulars</i>	<i>Frequency</i>
<i>Strongly Agree</i>	<i>37</i>
<i>Agree</i>	<i>34</i>
<i>Neutral</i>	<i>16</i>

Disagree	7
Strongly Disagree	6
Total	100

Analysis: The above table shows that 71% of respondents agreed or strongly agreed that they are aware of the security measures required while using UPI. 13% disagreed or strongly disagreed, whereas 16% responded neutrally. This suggests that the majority of respondents are aware of UPI security measures.

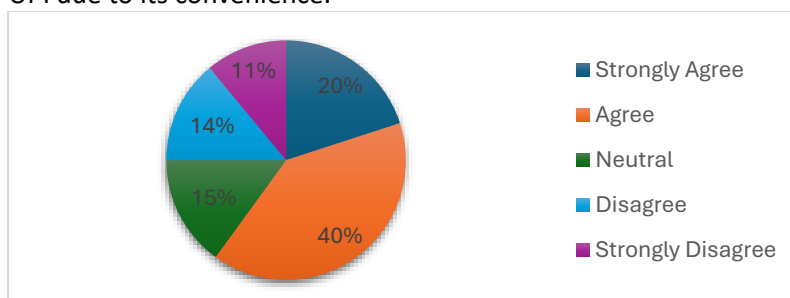


Interpretation: The results from the survey show that most respondents know about UPI security features showing that they are well informed about digital payment methods. However there is a need, for guidance so that everyone can use UPI safely and confidently.

The convenience of UPI encourages me to use if for payments

Particulars	Frequency
Strongly Agree	20
Agree	40
Neutral	15
Disagree	14
Strongly Disagree	11
Total	100

Analysis: The above table shows that 60% of respondents agreed or strongly agreed that the convenience of UPI encourages them to use it for payments. 25% disagreed or strongly disagreed, whereas 15% responded neutrally. This suggests that the majority of respondents are motivated to use UPI due to its convenience.

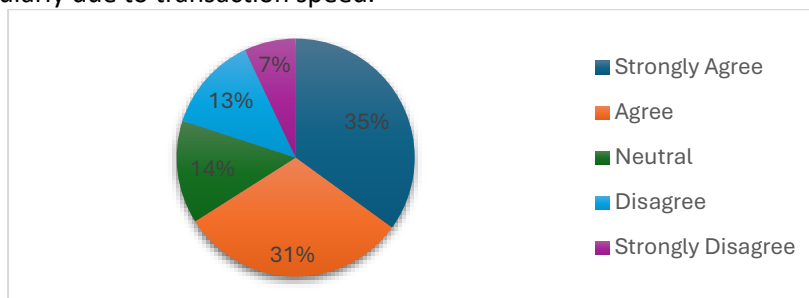


Interpretation: The identified results prove that the convenience of the UPI usage explains its frequent application. In particular, the strong preference for UPI among rural respondents can be explained by its perceived convenience and ability to make payments easy, fast, and accessible.

The speed of UPI transactions motivates me to use UPI regularly

<i>Particulars</i>	<i>Frequency</i>
<i>Strongly Agree</i>	<i>35</i>
<i>Agree</i>	<i>31</i>
<i>Neutral</i>	<i>14</i>
<i>Disagree</i>	<i>13</i>
<i>Strongly Disagree</i>	<i>7</i>
<i>Total</i>	<i>100</i>

Analysis: The above table shows that 66% of respondents agreed or strongly agreed that the speed of UPI transactions motivates them to use UPI regularly. 20% disagreed or strongly disagreed, whereas 14% responded neutrally. This suggests that the majority of respondents are motivated to use UPI regularly due to transaction speed.

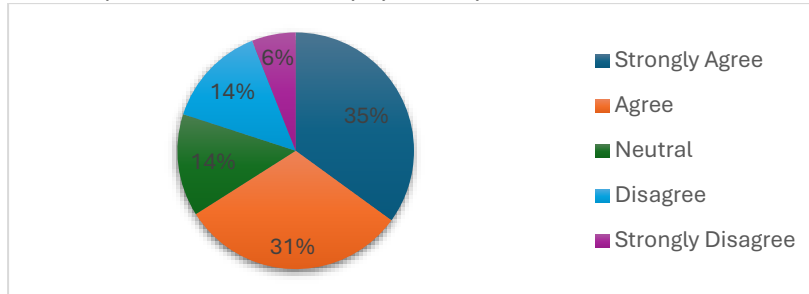


Interpretation: The results indicate that ease of the transaction is a significant determinant affecting the regular use of UPI. The respondents have stated that they use UPI as it helps them to make swift and convenient payments in their daily routine.

The acceptance to UPI by local shops and businesses encourages me to use it

Particulars	Frequency
Strongly Agree	35
Agree	31
Neutral	14
Disagree	14
Strongly Disagree	6
Total	100

Analysis: The above table shows that 66% of respondents agreed or strongly agreed that the acceptance of UPI by local shops and businesses encourages them to use it. 20% disagreed or strongly disagreed, suggests that the widespread acceptance of UPI by local merchants acts as a strong incentive for respondents to use the payment system.

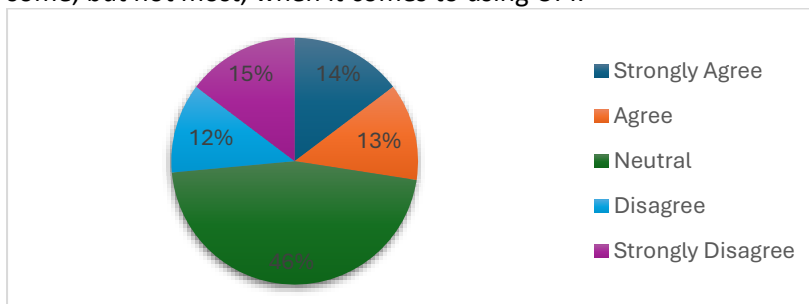


Interpretation: The results reveal that UPI adoption by local shops boosts its use. This implies that availability of UPI payment mode at the nearby shops makes it convenient and easily accessible for the rural respondents.

Poor internet connectivity makes it difficult for me to use UPI

Particulars	Frequency
Strongly Agree	15
Agree	13
Neutral	47
Disagree	12
Strongly Disagree	15
Total	100

Analysis: The table shows that 28% of people agreed or strongly agreed that bad internet connectivity makes it hard to use UPI. Another 27%. Strongly disagreed. The rest 47% stayed neutral. This means that even though some users find internet issues a problem many others don't see it as a major barrier. A big group just doesn't have an opinion either way. So poor internet connectivity seems to affect some, but not most, when it comes to using UPI.

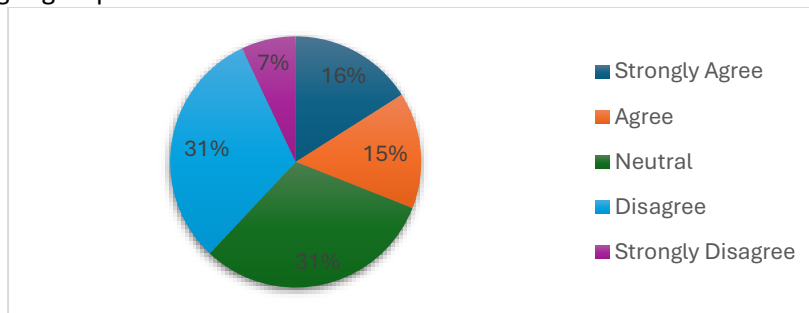


Interpretation: The analysis shows that most people don't see connectivity as a big issue. However, some people are dealing with networks and this problem needs to be fixed. There are people who face network instability and this issue should be addressed. The problem of network instability affects some people. This issue should be addressed.

Fear of online fraud or financial loss discourage me from using UPI

Particulars	Frequency
Strongly Agree	16
Agree	15
Neutral	31
Disagree	31
Strongly Disagree	7
Total	100

Analysis: The table shows that 31% of people said they agree or strongly agree that fear of fraud or financial loss stops them from using UPI. Another 38% said they disagree or strongly disagree and 31% gave a response. This means that while almost a third of the people are worried, about security a bigger group is not afraid of fraud and still uses UPI without hesitation.

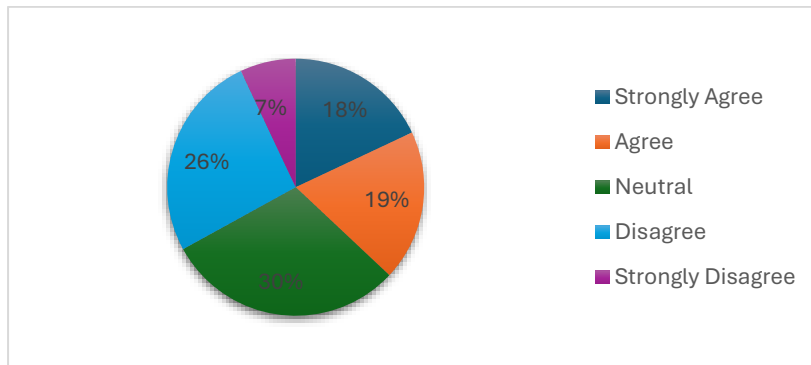


Interpretation: I think the results show that fear of being cheated is not the main worry, for most participants. Yet the same participants say that financial security is the concern.

Technical problems or transaction failures discourage me from using UPI

Particulars	Frequency
Strongly Agree	18
Agree	19
Neutral	30
Disagree	26
Strongly Disagree	7
Total	100

Analysis: I see that the table shows that 37 percent of respondents agreed or strongly agreed that technical problems or transaction failures discourage them from using UPI. Thirty-three percent. Strongly disagreed and thirty percent responded neutrally. This indicates that technical problems and transaction failures are a deterrent, for many respondents while others are not worried.



Interpretation: The study shows that many respondents say technical issues and transaction failures are making it hard to use UPI. I think that because of these issues and transaction failures people find it difficult to adopt UPI. This means we need technical support and better services so that more people can keep using the platform.

Findings of the study

As per the research conducted, the majority of rural respondents are aware of UPI and its fundamental processes.

The target audience is well-versed in the process of scanning QR codes to make payments through UPI.

Most of the respondents are familiar with essential security measures related to UPI.

The most common reason for the frequent use of UPI by rural people is its convenience.

Quick process of money transfer using UPI encourages the respondents to adopt digital payments.

Easy availability of UPI payment options at nearby shops attracts people to adopt the mode of payment.

Lack of internet connection hinders the process of using UPI, but it is not a significant concern for the majority of the respondents.

Fear of online fraud and loss of money discourages a small proportion of the target audience from using UPI.

Technical issues and glitches in UPI transactions are a matter of great concern for many respondents.

1. Enhancing the digital literacy rate and providing support to technical and security-related issues will motivate the rural population to adopt UPI as a mode payment.

Recommendation

It is suggested that banks, government agencies and UPI service providers conduct more awareness and digital literacy programmes in rural areas. People must be given simple practical training about how to make UPI payments, scan QR codes, check transaction status and use UPI safely. Better internet connectivity and technical support must be offered to reduce transaction failures and other technical problems. Local shops and businesses should also be encouraged to accept UPI payments since easy availability of UPI at nearby shops might motivate rural people to use digital payments more often. In addition, users must be educated about online fraud and UPI PIN safety and other security measures to encourage confidence and promote safe usage of UPI.

Conclusion

The study that was conducted concluded that UPI has become a significant digital payment method among the rural population, with substantial awareness and adoption levels. First, the results suggest

that most respondents had heard about UPI and its underlying functionalities. Moreover, the data demonstrates that many participants were aware of the QR scanning procedure and had knowledge about security features. At the same time, respondents stated that convenience and speed were the key advantages of using UPI. Finally, the findings reveal that the popularity of UPI is enhanced by the fact that local shops are embracing this technology.

However, the study also reports a number of disadvantages associated with UPI that could undermine its adoption in the future. Technical issues, transaction errors, unstable internet connections, and vulnerability to fraud were some of the problems that participants identified. Even though not all of these disadvantages apply to every respondents, the results highlight that these issues cannot be ignored. Thus, it is essential to enhance digital payment literacy, raise awareness about security concerns, optimize technical processes, and ensure stable connectivity to maximize UPI's potential in the rural region. As can be seen, the widespread adoption of UPI will result in convenient digital payments and increased financial inclusion in rural areas.

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