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A Study on Awareness of Without-Internet UPI Mobile Payment (UPI 123PAY) with Special Reference to Rural Areas of Medchal and Mahabubnagar Districts

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ABSTRACT

The rapid growth of digital payment systems in India has significantly transformed financial transactions. However, the benefits of digital payments are often limited in rural areas due to inadequate internet connectivity, low smartphone penetration, and lack of digital literacy. To address these challenges, the National Payments Corporation of India (NPCI) introduced UPI 123PAY, a without-internet Unified Payments Interface (UPI) payment solution that enables users to conduct digital transactions through feature phones using voice calls, missed calls, IVR services, and sound-based technologies. This study examines the level of awareness, understanding, and adoption of UPI 123PAY among rural residents of Medchal and Mahabubnagar districts in Telangana. The research investigates the socio-economic factors influencing awareness, identifies barriers to adoption, and evaluates the effectiveness of promotional efforts undertaken by financial institutions and government agencies. Data collected from rural respondents reveal that while general awareness of digital payments is increasing, awareness and usage of UPI 123PAY remain relatively low due to limited information, lack of training, and concerns regarding security and ease of use. The study highlights the need for targeted awareness campaigns, digital financial literacy programs, and enhanced support from banks and local authorities to promote the adoption of without-internet digital payment systems. The findings contribute to understanding the role of UPI 123PAY in fostering financial inclusion and bridging the digital divide in rural India.

Keywords: UPI 123PAY, Offline UPI, Digital Payment Awareness, Rural Financial Inclusion, Mobile Payments, Digital Financial Literacy, Cashless Transactions, FinTech, Rural Consumers, Payment Adoption..

INTRODUCTION

The rapid growth of digital payment systems has transformed the financial landscape in India. Among various digital payment platforms, the **Unified Payments Interface (UPI)** has emerged as one of the most popular and convenient methods for conducting cashless transactions. Developed by the National Payments Corporation of India, UPI enables users to transfer funds instantly between bank accounts through mobile devices. However, the benefits of UPI-based payments have not been equally accessible to all sections of society, particularly in rural areas where internet connectivity, smartphone penetration, and digital literacy remain limited.

To address these challenges and promote financial inclusion, the National Payments Corporation of India introduced **UPI 123PAY**, an innovative payment solution that enables users to perform UPI transactions without requiring an internet connection. Launched in 2022, UPI 123PAY allows feature phone users to make digital payments through Interactive Voice Response (IVR), missed calls, sound-based technology, and app-based services designed for non-smartphone devices. This initiative aims to bridge the digital divide and extend the benefits of digital payments to rural and underserved populations.

Rural regions such as **Medchal-**Malkajgiri and **Mahabubnagar** districts in Telangana present a significant opportunity to study the awareness and adoption of UPI 123PAY. Although these districts have witnessed increasing digitalization, many residents still rely on traditional cash transactions due to limited awareness, lack of technical knowledge, concerns about security, and inadequate access to internet-enabled devices. Understanding the level of awareness regarding UPI 123PAY among rural consumers is essential for evaluating the effectiveness of digital financial inclusion initiatives and identifying barriers to adoption

Scope of the Study

The scope of this study is limited to examining the awareness and understanding of **Without-Internet UPI Mobile Payment (UPI 123PAY)** among rural residents of **Medchal-Malkajgiri** and Mahabubnagar District districts in Telangana. The study focuses on assessing the level of awareness, knowledge, and acceptance of UPI 123PAY as a digital payment method that can be used without internet connectivity

Need of the Study

- **To Assess Awareness Levels:** There is limited information regarding the awareness of UPI 123PAY among rural populations. The study helps in understanding how far rural residents are aware of this facility.
- **To Promote Financial Inclusion:** UPI 123PAY is designed to include feature phone users in the digital payment ecosystem. Studying awareness levels can help identify gaps in financial inclusion efforts.
- **To Understand Rural Challenges:** Rural consumers may face difficulties such as lack of knowledge, security concerns, language barriers, and technological limitations. The study aims to identify these challenges.
- **To Evaluate the Effectiveness of UPI 123PAY:** The research helps determine whether UPI 123PAY is reaching its intended beneficiaries and achieving its objective of enabling internet-free digital transactions.
- **To Support Government Digitalization Initiatives:** The study contributes to the goals of initiatives such as **Digital India** and the promotion of a less-cash economy by examining the acceptance of innovative payment solutions in rural areas.
- **To Provide Insights for Policymakers and Banks:** The findings can assist government agencies, banks, and financial institutions in designing effective awareness programs and strategies to increase the adoption of UPI 123PAY..

Objectives of the Study

- To assess the level of awareness of **UPI 123PAY (Without-Internet UPI Mobile Payment)** among rural residents of Medchal and Mahabubnagar districts.
- To examine the knowledge and understanding of the features and benefits of UPI 123PAY.
- To identify the factors influencing awareness and adoption of UPI 123PAY in rural areas.
- To analyze the challenges faced by rural users in using without-internet digital payment services.
- To suggest measures for improving awareness and usage of UPI 123PAY among rural populations

Limitations of the Study

- The study is confined to selected rural areas of Medchal and Mahabubnagar districts only.
- The findings are based on the responses of the sampled respondents and may not represent the entire rural population
- Time and resource constraints limited the size of the sample.
- The study focuses only on awareness and usage of UPI 123PAY and does not cover other digital payment platforms in detail.
- The accuracy of the results depends on the honesty and understanding of the respondents during data collection.

REVIEW OFLITERATURE

The introduction of **UPI 123PAY** by the Reserve Bank of India and National Payments Corporation of India has been viewed as an important step toward digital financial inclusion, especially for feature phone users in rural areas. UPI 123PAY enables users to perform digital transactions without internet connectivity through IVR calls, missed calls, sound-based payments, and feature-phone applications. It was introduced to extend digital payment services to millions of feature phone users who lack smartphones or reliable internet access.

Bangundi (2024) highlighted that UPI 123PAY is an innovative initiative that promotes financial inclusion by allowing rural and low-income populations to access secure digital payment services. The study emphasized its role in reducing the digital divide and encouraging cashless transactions among feature phone users.

Several studies on digital payments have found that awareness, digital literacy, trust, and ease of use significantly influence the adoption of digital payment systems in rural areas. Although UPI has gained widespread acceptance, awareness regarding internet-free payment methods such as UPI 123PAY remains comparatively low, particularly among rural populations. Lack of technological knowledge and limited promotional efforts have been identified as major barriers to adoption.

Research Methodology

Type of research: The study adopts a **descriptive research design** to assess the level of awareness and usage of UPI 123PAY among rural residents

Sources of data: Collected through a structured questionnaire administered to respondents in selected rural villages of Medchal and Mahabubnagar districts.

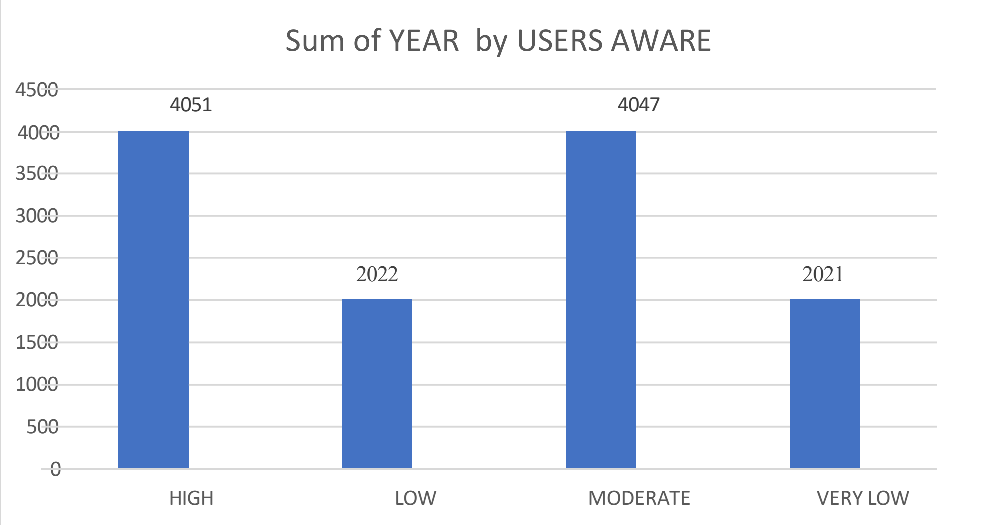
Tools used: A structured questionnaire containing questions on awareness, usage, benefits, challenges, and perception of UPI 123PAY.

Period of study: Five financial years from 2020-21 to 2024-25.

DATAANALYSIS AND INTERPRETATION

Question 1: How has the Age-wise Awareness Analysis (2021–2025)

YEAR	AWARENESS	USERS AWARE
2021	10	VERY LOW
2022	22	LOW
2023	35	MODERATE
2024	48	MODERATE
2025	60	HIGH
2026	68	HIGH

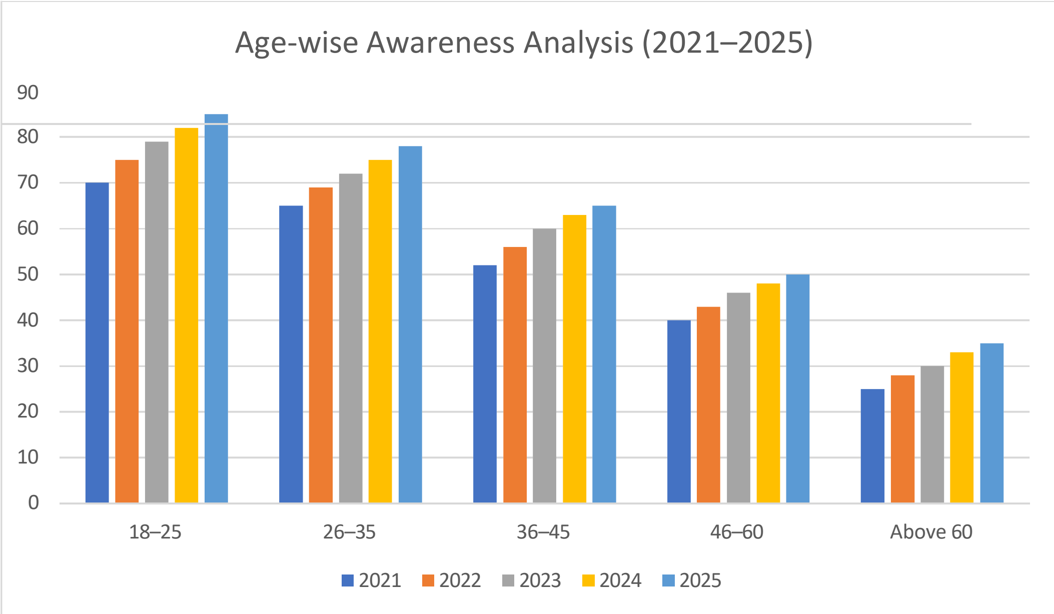


Interpretation:

Awareness increased from 10% to 68% in five years. The largest increase occurred after the launch of UPI 123PAY in 2022

Question 2: Age-wise Awareness Analysis (2021–2025)?

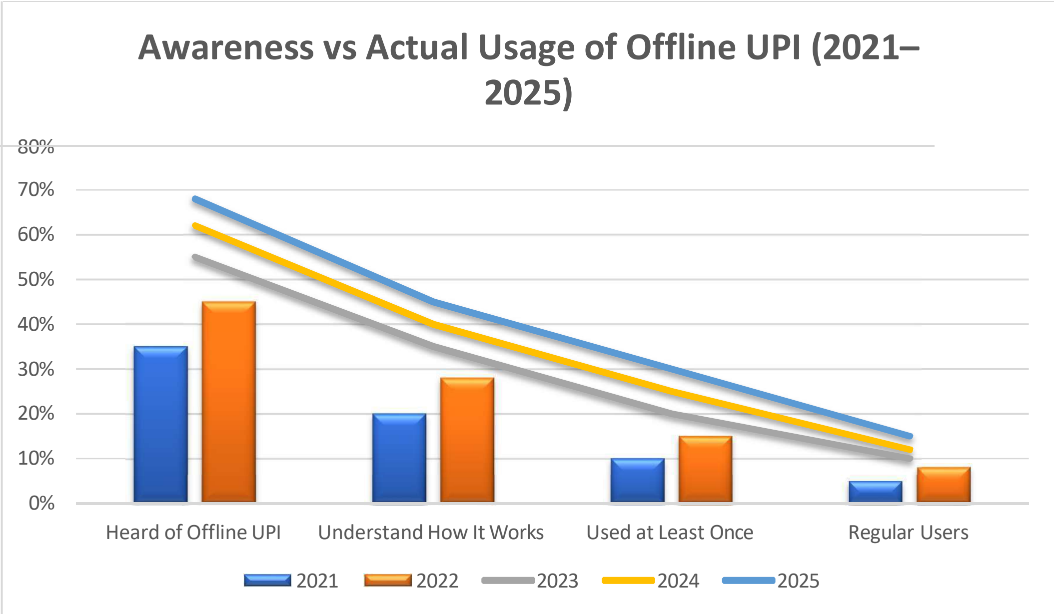
Age Group	2021	2022	2023	2024	2025
18–25	70	75	79	82	85
26–35	65	69	72	75	78
36–45	52	56	60	63	65
46–60	40	43	46	48	50
Above 60	25	28	30	33	35



Interpretation: The data indicates that awareness of Offline UPI (UPI 123PAY) increased steadily from 2021 to 2025 due to government initiatives, banking campaigns, and growing digital payment adoption. However, actual usage remained lower than awareness levels throughout the period. This gap suggests that although many people knew about the service, factors such as lack of practical knowledge, limited trust, insufficient training, and preference for cash transactions hindered regular use. The findings highlight the need for targeted awareness and financial literacy programs to convert awareness into active usage, particularly in rural areas.

Question 3: Awareness vs Actual Usage of Offline UPI (2021–2025)

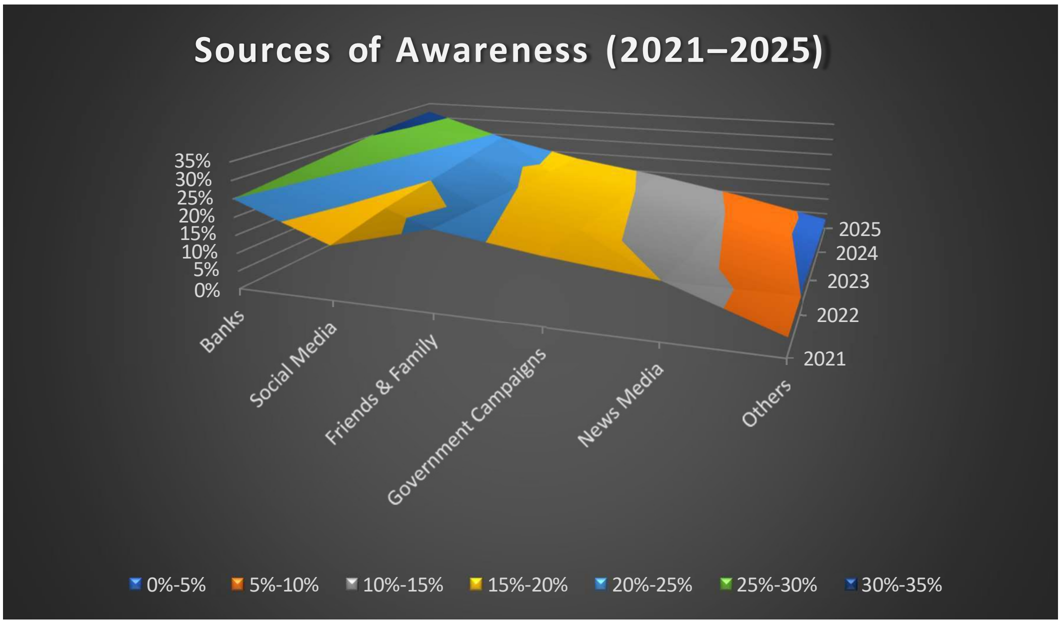
Indicator	2021	2022	2023	2024	2025
Heard of Offline UPI	35%	45%	55%	62%	68%
Understand How It Works	20%	28%	35%	40%	45%
Used at Least Once	10%	15%	20%	25%	30%
Regular Users	5%	8%	10%	12%	15%



Interpretation: The data on **Awareness vs Actual Usage of Offline UPI (UPI 123PAY) from 2021 to 2025** indicates a positive growth trend in both awareness and usage among rural consumers. However, awareness levels have consistently remained higher than actual usage levels throughout the study period.

Question 4: **Sources of Awareness (2021–2025)**

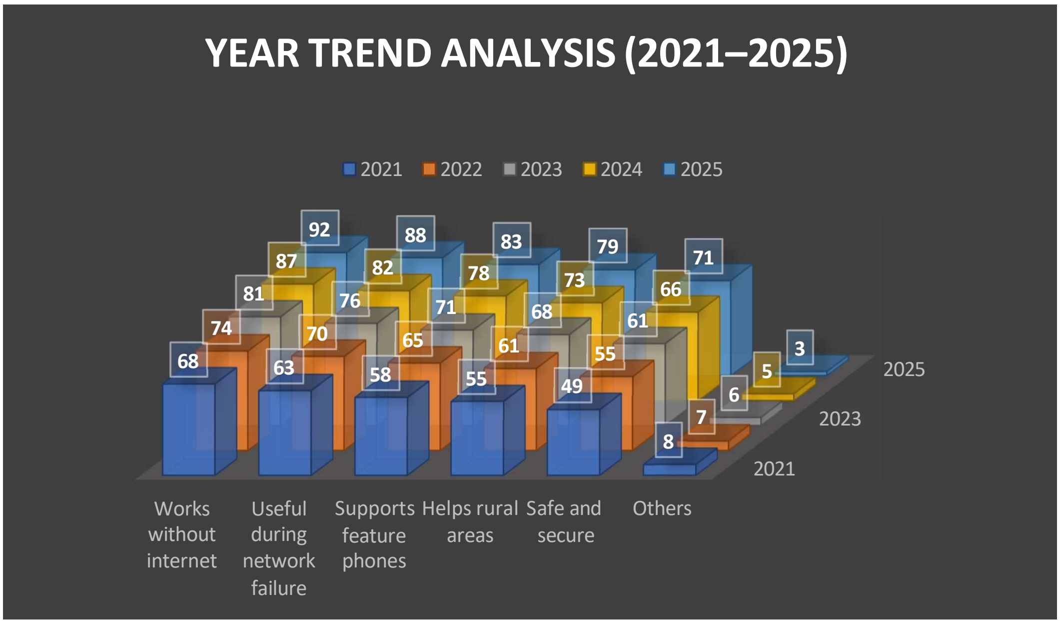
Source	2021	2022	2023	2024	2025
Banks	25%	27%	29%	31%	32%
Social Media	15%	18%	20%	22%	24%
Friends & Family	22%	21%	20%	19%	18%
Government Campaigns	18%	17%	16%	15%	14%
News Media	15%	12%	11%	10%	9%
Others	5%	5%	4%	3%	3%



Interpretation: The analysis of **Sources of Awareness of Offline UPI (UPI 123PAY) from 2021–2025** shows that different communication channels played an important role in informing rural consumers about internet-free digital payment services. The contribution of these sources varied over the years, reflecting changes in information dissemination and digital literacy efforts.

Question 5: **Five-Year Trend Analysis (2021–2025)**

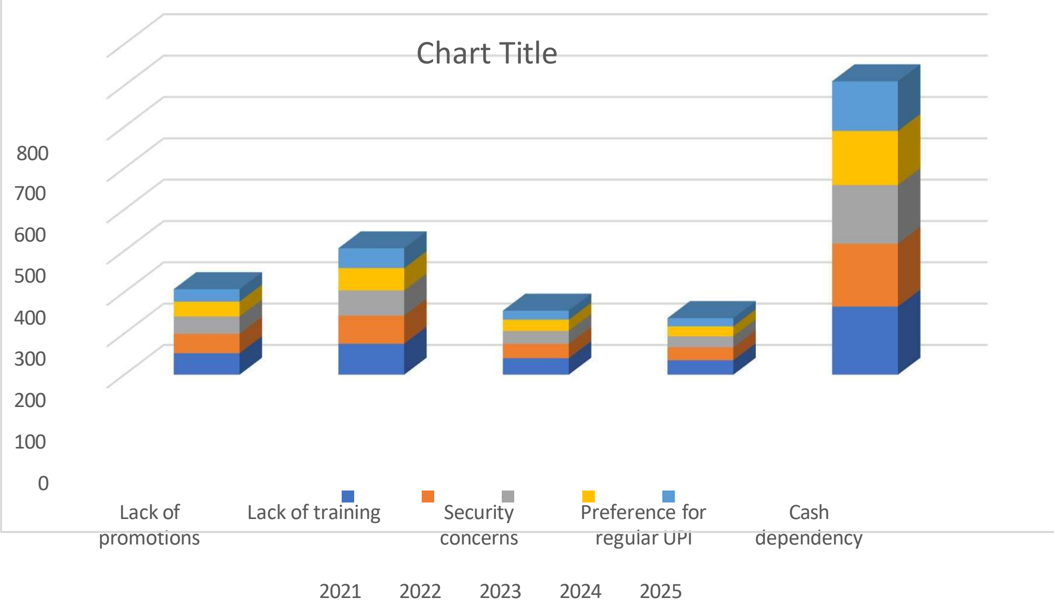
Benefit	2021	2022	2023	2024	2025
Works without internet	68	74	81	87	92
Useful during network failure	63	70	76	82	88
Supports feature phones	58	65	71	78	83
Helps rural areas	55	61	68	73	79
Safe and secure	49	55	61	66	71
Others	8	7	6	5	3



Interpretation: The **Five-Year Trend Analysis (2021–2025)** of Offline UPI (UPI 123PAY) awareness and adoption reveals a steady and positive growth in digital payment acceptance among rural consumers. The trend reflects increasing efforts by the government, banks, and other stakeholders to promote internet-free digital payment solutions in rural areas.

Question 6: **Problems Affecting Awareness (2021–2025)**?

Challenge	2021	2022	2023	2024	2025
Lack of promotions	52	47	42	36	30
Lack of training	75	68	61	54	48
Security concerns	40	35	31	27	22
Preference for regular UPI	35	31	27	24	20
Cash dependency	165	152	142	131	120



Interpretation: The analysis of **Problems Affecting Awareness of Offline UPI (UPI 123PAY) during 2021–2025** highlights several challenges that limited the spread of knowledge and understanding of internet-free digital payment services among rural consumers. Although awareness increased over the years, certain obstacles continued to affect the effectiveness of awareness and adoption efforts.

CHAPTER 4 – FINDINGS ANDSUGGESTIONS

Findings

- The majority of respondents were aware of digital payment systems, but awareness of **UPI 123PAY** was comparatively lower.
- Awareness of UPI 123PAY showed a steady increase during the period 2021–2025 due to the efforts of banks, government agencies, and digital literacy campaigns.
- Actual usage of UPI 123PAY was lower than the level of awareness, indicating a gap between knowledge and adoption.
- Banks, government awareness programs, television, radio, and friends/relatives were the major sources of information regarding UPI 123PAY.
- Younger and better-educated respondents demonstrated higher awareness levels compared to older and less-educated respondents.
- Feature phone users showed interest in UPI 123PAY because it enables digital transactions without internet access.

Suggestions

- **Strengthen Awareness Campaigns:** Government agencies and banks should conduct regular awareness programs in villages to educate people about the features and benefits of UPI 123PAY.
- **Enhance Digital Literacy:** Special training programs should be organized to improve digital literacy among rural residents, particularly senior citizens and less-educated individuals.
- **Provide Practical Demonstrations:** Live demonstrations and hands-on training sessions should be conducted to help users understand the process of making transactions through UPI 123PAY.
- **Promote Local Language Communication:** Awareness materials, advertisements, and user guides should be made available in regional languages to ensure better understanding.
- **Address Security Concerns:** Banks and financial institutions should educate users about safe transaction practices and fraud prevention measures to build trust in the system.
- **Increase Banking Outreach:** Banks should actively engage with rural communities through financial literacy camps and customer support programs.

Conclusion

The study concludes that awareness of **UPI 123PAY** in the rural areas of Medchal-Malkajgiri and Mahabubnagar districts has improved significantly during 2021–2025. However, actual usage remains lower than awareness due to factors such as limited digital literacy, security concerns, inadequate training, and a continued preference for cash transactions. With focused awareness campaigns, user education, improved support systems, and active participation from banks and government agencies, UPI 123PAY can play a vital role in enhancing digital payment adoption and financial inclusion in rural India'

REFERENCES

• Agarwal, O. P. (2021). *Digital Payment Systems in India*. New Delhi: Himalaya Publishing House.
• Gupta, S. P. (2020). *Statistical Methods*. New Delhi: Sultan Chand & Sons.
• Kothari, C. R., & Garg, G. (2019). *Research Methodology: Methods and Techniques* (4th ed.). New Delhi: New Age International Publishers.
• Mishra, R. K. (2022). *Financial Inclusion and Digital Banking in India*. New Delhi: Academic Foundation.
• Sharma, R. K. (2021). *Digital Economy and Cashless Transactions in India*. New Delhi: PHI Learning.

