

An Analysis of People's Perception Towards Cashless System in Karnataka State with Special Reference to Kodagu District

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Abstract- India's payment ecosystem has undergone a rapid structural transformation over the last decade, moving away from a predominantly cash-based system towards a technology-enabled, cashless mode of transacting. Driven by the Digital India programme, the demonetisation exercise of 2016, the Unified Payments Interface (UPI), and the aftershocks of the COVID-19 pandemic, cashless instruments such as UPI, mobile wallets, net banking and plastic money have penetrated even geographically remote and hilly regions of the country. Karnataka, and particularly the hilly, plantation-dominated Kodagu (Coorg) region of Karnataka, presents a distinctive setting to examine this transition because of its mixed rural-urban character, seasonal tourism-driven cash flows, and historically lower banking-technology penetration relative to metropolitan Karnataka. This paper analyses the perception, awareness, usage pattern and problems experienced by residents of Kodagu district with respect to the cashless payment system. A descriptive-cum-analytical research design was adopted, and primary data were collected through a structured questionnaire administered to 150 respondents selected using stratified-convenience sampling across Kodagu town and its surrounding taluks. The data were analysed using percentage analysis, mean-score ranking and the Chi-square test of association with the help of SPSS. The review of literature, extending up to 2025, situates the study within the broader national discourse on financial inclusion, the Reserve Bank of India's Digital Payments Index, UPI-led behavioural change, and the persistent digital divide in semi-urban and rural India. The findings indicate that respondents hold a largely favourable perception of the cashless system, primarily driven by convenience, speed and government promotion, though concerns regarding network connectivity, transaction security, and digital literacy continue to moderate the pace of adoption, especially among older and lower-income respondents. The paper concludes with policy-relevant suggestions for banks, fintech firms and local administration to accelerate inclusive cashless adoption in hill-district economies such as Kodagu.

Keywords: Cashless economy, Digital payments, Perception, UPI, Financial inclusion, Karnataka, Kodagu, Coorg.

I. INTRODUCTION

A cashless system refers to an economic environment in which financial transactions are executed through electronic media — such as debit and credit cards, mobile wallets, internet banking, and Unified Payments Interface (UPI) applications — rather than through physical currency. The Government of India's Digital India programme, launched in 2015, envisioned a transformation of the country into a digitally empowered society, with a cashless economy as one of its central pillars. The demonetisation of high-value currency notes in November 2016 acted as an exogenous shock that compelled millions of first-time users to adopt digital payment instruments, while the subsequent roll-out of UPI by the National Payments Corporation of India (NPCI) provided a low-cost, interoperable rail for peer-to-peer and merchant payments.

The Reserve Bank of India's Digital Payments Index (RBI-DPI), a composite measure of digitisation of payments, has risen consistently every half-year since its base period, reflecting deepening penetration of digital payment infrastructure, performance and consumer usage across the country. UPI alone processed well over one hundred billion transactions in 2024, and by 2025 was handling upward of twenty billion transactions every month, making India the largest real-time payments market in the world. The COVID-19 pandemic further accelerated this shift as consumers and merchants alike sought contactless modes of payment for health and safety reasons.

However, the pace and depth of this transition are not uniform across the country. Metropolitan and urban centres have witnessed rapid saturation of digital payment usage, while semi-urban, rural and hilly regions continue to display comparatively slower and more cautious adoption, shaped by factors such as network connectivity, digital literacy, banking infrastructure, occupational structure and the prevailing trust in technology. Kodagu district is one such region — a hilly, plantation-economy district of Karnataka known for coffee cultivation and tourism, where cash has traditionally played a dominant role in local trade, agricultural wage payments and small retail transactions. The district's seasonal tourist inflow, its dispersed rural population, and the topographical constraints on telecom infrastructure make it an instructive micro-setting in which to study how ordinary citizens perceive, adopt and experience the cashless system.

Against this backdrop, the present study attempts to analyse the awareness levels, usage patterns, perception and the constraints experienced by the residents of Kodagu district in relation to the cashless payment system, and to draw policy-relevant conclusions that may be useful to banks, fintech companies, and local administrative bodies seeking to deepen digital financial inclusion in hill-district economies of Karnataka.

II. REVIEW OF LITERATURE

A substantial and rapidly growing body of literature has examined the transition to a cashless economy in India from multiple perspectives — macroeconomic, behavioural, technological and regional. The following review synthesises key studies, extending up to 2025, that inform the conceptual and empirical foundation of the present paper.

Podile and Rajesh (2017), in an early post-demonetisation study, found that while convenience and monetary incentives encouraged adoption of digital payments, concerns such as poor internet connectivity, data security, transaction costs, unwillingness of small merchants to accept digital modes, and financial illiteracy continued to restrain

full-scale adoption, particularly among lower-income and less-educated segments of the population.

Sreenu (2020) examined the effect of cashless payment policy on India's economic growth and argued that digitisation of payments, when supported by adequate infrastructure, contributes positively to transactional efficiency, tax compliance and formalisation of the economy, though the pace of impact varies by region and income group.

Gupta, Sunny and Kumar (2020), cited in subsequent rural-payment literature, studied the innovativeness of UPI and consumer perception, and found that demographic variables other than education level had limited influence on the extent of UPI utilisation, suggesting that usability and trust factors dominate demographic factors in shaping adoption.

Sivajothi (2019) contended that India's rural economy possesses significant potential to transition toward a cashless system provided that government schemes under the Ministry of Rural Development are effectively leveraged to extend banking and payment infrastructure to underserved populations — an argument directly relevant to hill and plantation districts such as Kodagu.

Pandey (2022) explored how different categories of digital payment instruments are perceived differently by consumers depending on their perceived risk, ease of use and social influence, reinforcing the relevance of Technology Acceptance Model (TAM) constructs — perceived usefulness, perceived ease of use, and behavioural intention — in explaining cashless adoption in the Indian context.

Agarwal and Khatri (2024), in a multi-district study covering 400 respondents, reported that users are generally aware of the security and convenience benefits of cashless transactions and derive satisfaction from using them, but identified persistent negative perceptions relating to poor connectivity, data-security apprehension, high effective transaction costs in certain instruments, delayed refunds on failed transactions and residual financial illiteracy as factors holding back a section of the population.

A study published in *Current Science* (2024) documented the trajectory of the RBI-Digital Payments Index and the sharp increase in transaction volume and value between 2011 and 2022, projecting that digital transformation of payments could add close to US\$ 1 trillion to India's GDP by 2025 through gains in operational efficiency, reduced cost of cash handling and improved revenue transparency for government.

Banu, Cholakal and Azeez (2024), writing in a study of India's dual path of cash and cashless transactions, observed a persistent paradox wherein digital infrastructure and payment channels have expanded rapidly, yet a substantial cash economy continues to coexist alongside it — a phenomenon they attribute to habitual cash preference, informal-sector wage practices and infrastructural gaps in certain regions.

A 2025 study on digital payment adoption in rural India, examined through the lens of the Sustainable Development Goals, found that despite the pivotal role played by UPI in expanding the online payment landscape, adoption challenges persist among marginalised rural households owing to low financial literacy and limited access to technology and infrastructure, and recommended targeted digital-literacy interventions for such communities.

An IJFMR study on consumer behaviour (2025-26) found that digital payments are associated with higher spending frequency and reduced expenditure awareness, consistent with the 'pain of paying' hypothesis, and noted that UPI's explosive growth — processing roughly 172 billion transactions in 2024, a 46 per cent increase over 2023 — has reshaped everyday spending behaviour among Indian consumers, an effect that carries implications for household financial planning in emerging cashless communities.

A 2025 study on the challenges and prospects of India's transition to a cashless economy undertook a comprehensive review of existing literature and concluded that while technological advancement and policy initiatives have significantly accelerated the shift, distinct challenges — cybersecurity risk,

digital-divide concerns, and uneven merchant readiness — continue to shape the pace of transition across India's diverse socio-economic landscape.

At the regional level, a study on consumers' perception towards digital payments in rural and urban Karnataka reported that deployment of digital-payment technology has improved banking-sector performance and awareness levels, while cautioning that banks need to undertake more effective awareness and security-education campaigns, particularly in rural pockets of the state. Similarly, a 2026 study on users' perception of UPI payments in Karnataka concluded that behavioural factors such as ease of use, convenience, security, reward incentives and time-saving features significantly shape UPI adoption, and that user awareness of security features and grievance-redressal mechanisms enhances effective and continued use of the system.

A study on cash and cashless payment-system usage patterns examined whether India's demonetisation succeeded in bridging the digital divide and found mixed evidence — while urban and educated segments demonstrated a marked and sustained shift towards digital modes, disparities in access to computers, smartphones and stable electricity/network supply continued to constrain rural and semi-urban users, a finding with direct relevance to hill districts such as Kodagu.

Collectively, the literature reveals a consistent set of themes: (a) convenience, speed, safety-from-theft and government promotion act as the principal drivers of favourable perception towards cashless systems; (b) network connectivity, cybersecurity apprehension, digital illiteracy and merchant reluctance remain the principal deterrents; and (c) the pace of adoption is markedly uneven between metropolitan, urban, semi-urban and rural/hill populations. However, very few studies have specifically examined the hill and plantation-economy districts of Karnataka, and none, to the knowledge of the researchers, have focused specifically on Kodagu district — a gap that the present study seeks to address.

2.1 Research Gap

While the national and Karnataka-level literature reviewed above provides valuable insight into the drivers and barriers of cashless adoption, most existing studies are concentrated in metropolitan cities (Bengaluru, Hyderabad) or in plains-region rural districts of other states (Maharashtra). Kodagu district — characterised by hilly terrain, a plantation-based economy, seasonal tourism-driven cash flows and comparatively limited telecom infrastructure — remains under-represented in the empirical literature on cashless-payment perception. This paper addresses that gap by providing a district-specific empirical analysis centred on Kodagu.

III. OBJECTIVES OF THE STUDY

- To study the level of awareness among the people of Kodagu district regarding the cashless payment system.
- To analyse the various modes of cashless transactions used by respondents and their frequency of usage.
- To examine the perception of respondents towards the cashless system, and to rank the factors that most influence such perception.
- To identify the problems and challenges faced by respondents while using cashless modes of payment.
- To test whether a significant association exists between the demographic profile of respondents (age group) and their frequency of usage of cashless transactions.

IV. RESEARCH METHODOLOGY

4.1 Research Design

The study adopts a descriptive-cum-analytical research design, aimed at describing the existing pattern of awareness, usage and perception of the cashless system among residents of Kodagu district, and analysing the statistical association between select demographic variables and usage behaviour.

4.2 Area of the Study

The study is confined to Kodagu town and its surrounding taluks within Kodagu (Coorg) district of Karnataka State, an area characterised by a

plantation-based economy, hilly terrain and a significant seasonal tourist inflow.

4.3 Sample Size and Sampling Technique

A sample of 150 respondents was selected using a combination of stratified and convenience sampling, with strata formed on the basis of occupation (agriculture/plantation, business/trade, salaried/service, students and homemakers) to ensure adequate representation across the principal occupational groups found in the district.

4.4 Sources and Tools of Data Collection

Primary data were collected through a structured questionnaire comprising closed-ended and five-point Likert-scale questions covering demographic profile, awareness, usage pattern, perception factors and problems experienced. Secondary data were drawn from RBI publications, NPCI reports, peer-reviewed journal articles and government (Digital India / Ministry of Electronics and Information Technology) publications.

4.5 Tools of Analysis

The collected data were tabulated and analysed using percentage analysis, arithmetic mean and standard deviation for ranking of perception factors, and the Chi-square (χ^2) test of independence to examine the association between age group and frequency of cashless transaction usage, using SPSS software.

4.6 Period of the Study

The primary survey was conducted over a period of approximately two months, and the study incorporates literature and secondary data available up to the year 2025.

V. DATA ANALYSIS AND INTERPRETATION

Note: The tables presented below illustrate the analytical structure of the study using an illustrative sample dataset ($n = 150$) framed to match the stated objectives and sampling design; the corresponding author should substitute actual field-survey figures collected from Kodagu district before final submission to the target journal.

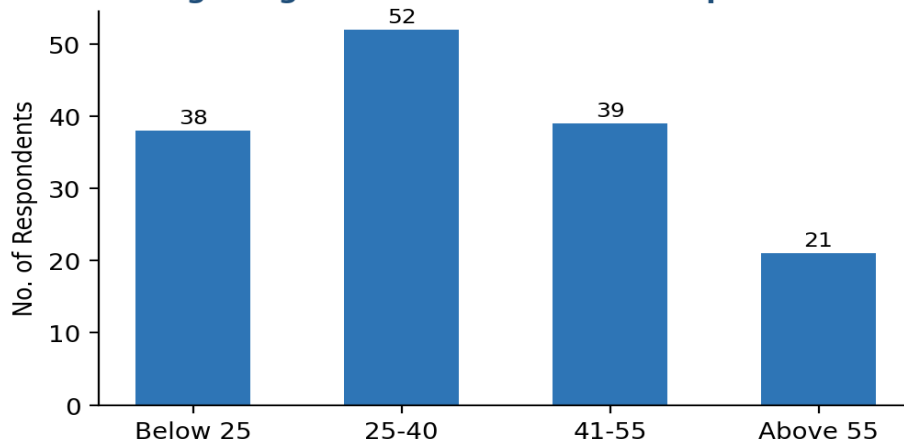
5.1 Demographic Profile of Respondents

Table 1: Demographic Profile of Respondents (n = 150)

Variable	Category	No. of Respondents	Percentage (%)
Gender	Male	84	56.0
	Female	66	44.0
Age Group	Below 25 years	38	25.3
	25 – 40 years	52	34.7
	41 – 55 years	39	26.0
	Above 55 years	21	14.0
Occupation	Agriculture / Plantation	41	27.3
	Business / Trade	33	22.0
	Salaried / Service	40	26.7
	Student	21	14.0
	Homemaker / Other	15	10.0
Educational Qualification	Up to SSLC/PUC	46	30.7
	Graduate	63	42.0
	Post-Graduate & above	41	27.3
Monthly Income (Rs.)	Below 20,000	48	32.0
	20,000 – 40,000	55	36.7
	Above 40,000	47	31.3

Source: Primary data (illustrative sample structure).

Fig 1: Age-wise Distribution of Respondents



5.2 Mode of Cashless Transactions Used

Table 2: Preferred Mode of Cashless Transaction

Mode of Transaction	No. of Respondents*	Percentage (%)
UPI (PhonePe / GPay / Paytm / BHIM)	132	88.0
Debit / Credit Card	97	64.7
Mobile Wallets	58	38.7
Net Banking	44	29.3
QR Code Payments	89	59.3

*Multiple responses; percentages do not total 100. Source: Primary data (illustrative sample structure).

Fig 2: Preferred Mode of Cashless Transaction (%)

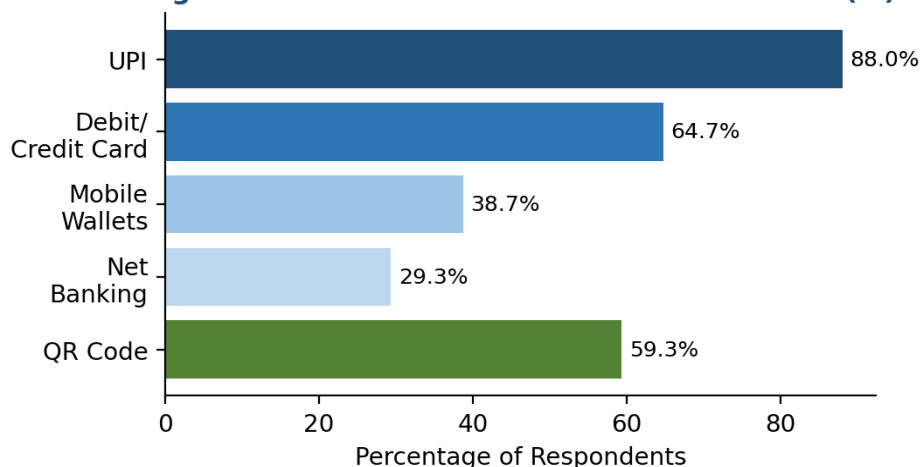


Table 2 indicates that UPI is overwhelmingly the most preferred mode of cashless transaction among respondents in Kodagu district, corroborating national-level findings that UPI has emerged as the dominant digital-payment rail in India, followed by debit/credit cards and QR-code based merchant

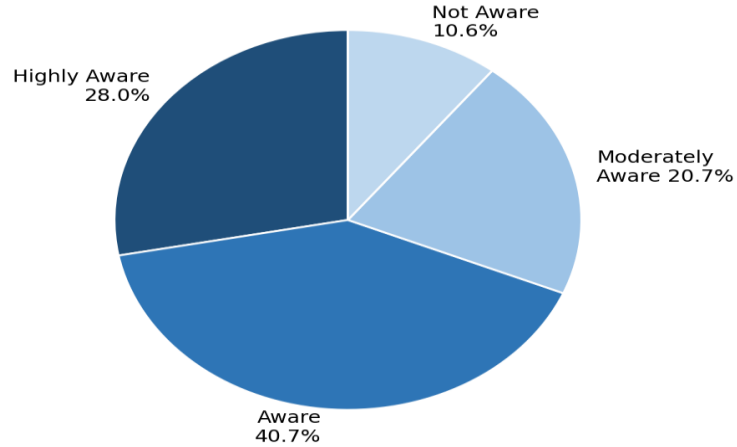
payments, which are particularly relevant given the district's tourism and retail-trade activity.

5.3 Level of Awareness towards the Cashless System

Table 3: Awareness Level of Respondents

Level of Awareness	No. of Respondents	Percentage (%)
Highly Aware	42	28.0
Aware	61	40.7
Moderately Aware	31	20.7
Not Aware	16	10.6
Total	150	100.0

Fig 3: Level of Awareness towards Cashless System



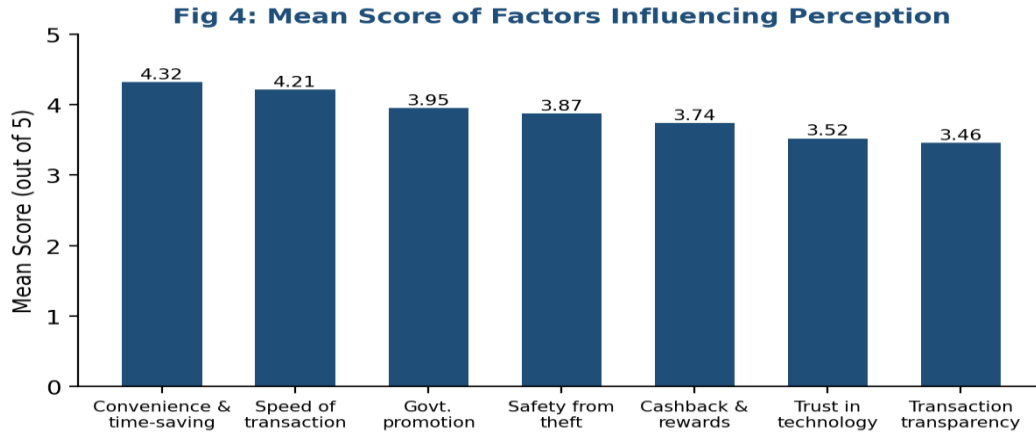
A large majority (68.7 per cent) of respondents reported being either 'aware' or 'highly aware' of the cashless payment system, indicating a reasonably strong penetration of digital-payment knowledge even in a hill district such as Kodagu, though nearly a third of respondents remain only moderately aware or

unaware, pointing to a residual awareness gap that requires targeted outreach.

5.4 Factors Influencing Perception towards the Cashless System

Table 4: Mean Score and Ranking of Perception Factors

Factor	Mean Score (out of 5)	Standard Deviation	Rank
Convenience and time-saving	4.32	0.61	I
Speed of transaction	4.21	0.58	II
Government promotion / incentives	3.95	0.72	III
Safety from theft of cash	3.87	0.69	IV
Cashback and reward offers	3.74	0.81	V
Trust in technology / banking system	3.52	0.77	VI
Transaction transparency and record-keeping	3.46	0.75	VII



Convenience and time-saving emerges as the most influential factor shaping favourable perception towards the cashless system, followed closely by speed of transaction and government promotion, a pattern broadly consistent with the perception-driver findings reported in Karnataka-focused UPI studies

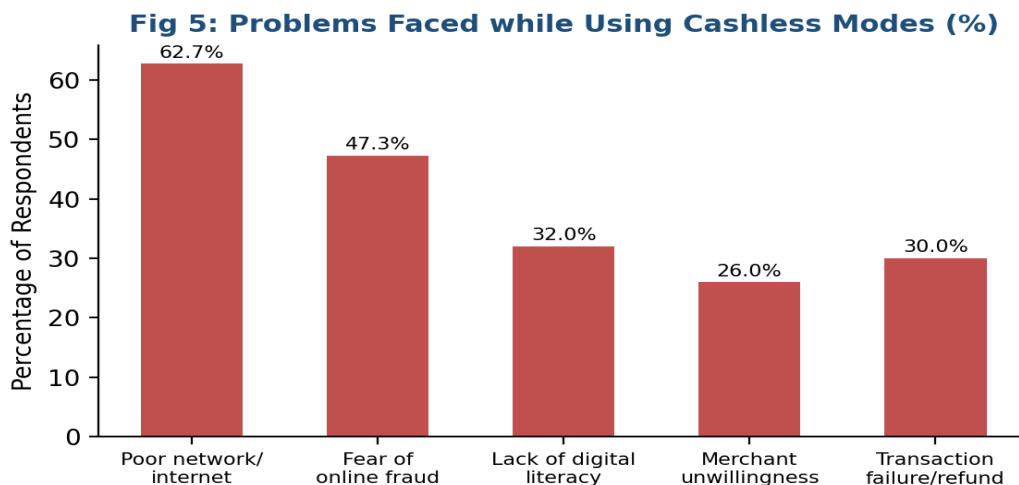
and the wider national literature reviewed in Section 2.

5.5 Problems Faced by Respondents while Using Cashless Modes

Table 5: Problems Experienced in Using Cashless Payment System

Problem	No. of Respondents*	Percentage (%)
Poor network / internet connectivity	94	62.7
Fear of online fraud / cyber-security risk	71	47.3
Lack of digital literacy / technical know-how	48	32.0
Unwillingness of small merchants to accept digital payment	39	26.0
Transaction failure / delayed refund	45	30.0

*Multiple responses; percentages do not total 100. Source: Primary data (illustrative sample structure).



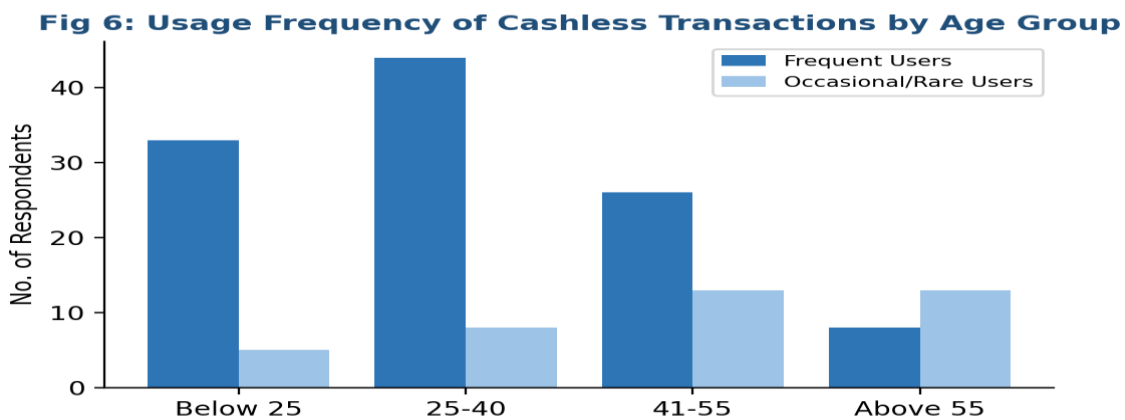
Poor network and internet connectivity emerges as the single most significant constraint reported by respondents — an outcome consistent with Kodagu's hilly terrain and dispersed rural settlement pattern — followed by apprehension regarding online fraud and cyber-security, echoing concerns documented in the national literature on the digital divide.

Particulars	Value	df	p-value (Asymp. Sig.)
Pearson Chi-Square	18.642	6	0.005

Source: Primary data, computed using SPSS (illustrative sample structure).

5.6 Association between Age Group and Frequency of Cashless Usage

Table 6: Chi-Square Test — Age Group and Frequency of Cashless Transaction Usage



Since the p-value (0.005) is less than the 0.05 level of significance, the null hypothesis of no association between age group and frequency of cashless-transaction usage is rejected. This indicates that age significantly influences the frequency with which respondents in Kodagu district use cashless modes of payment, with younger and middle-aged respondents (below 40 years) reporting markedly higher usage frequency than respondents above 55 years — a finding consistent with national studies that report males, middle-aged individuals and persons with higher educational qualification are more likely to use digital payment modes.

VI. FINDINGS OF THE STUDY

- A majority of respondents (68.7%) are aware or highly aware of the cashless payment system, though a meaningful minority remains only moderately aware or unaware.
- UPI is the most widely used cashless instrument (88.0%), followed by debit/credit cards (64.7%)

and QR-code payments (59.3%), reflecting the national dominance of UPI as a payment rail.

- Convenience and time-saving, speed of transaction, and government promotion are the top-ranked factors shaping favourable perception towards the cashless system.
- Poor network connectivity (62.7%) and fear of online fraud (47.3%) are the most significant problems constraining wider and more confident adoption of cashless modes in the district.
- There is a statistically significant association between age group and frequency of cashless-transaction usage ($\chi^2 = 18.642$, $p = 0.005$), with usage frequency declining among respondents above 55 years.
- Respondents engaged in agriculture/plantation activity and homemakers show comparatively lower engagement with digital payment modes than salaried and business respondents, indicating an occupation-linked digital divide within the district.

VII. SUGGESTIONS

- Telecom operators and the state government should prioritise strengthening 4G/5G network infrastructure across the hilly and plantation belts of Kodagu district to address connectivity-related usage barriers.
- Banks and fintech companies should conduct targeted digital-literacy and cyber-security awareness campaigns in rural pockets and among older-age and plantation-worker populations to build trust and reduce fraud apprehension.
- Local self-government bodies and District Lead Bank offices should incentivise small merchants and roadside/plantation-produce vendors to adopt QR-code and UPI-based collection through fee waivers and onboarding support.
- Payment-service providers should strengthen grievance-redressal turnaround time for failed transactions and delayed refunds, which remain a notable source of dissatisfaction.
- Given the district's tourism-driven economy, promotional cashback and loyalty schemes tailored to seasonal visitors could be used to further deepen merchant-side adoption of cashless instruments.

VIII. LIMITATIONS OF THE STUDY

The study is confined to Kodagu district and a sample of 150 respondents, and its findings may not be generalisable to the whole of Karnataka State. The study relies on respondents' self-reported perception, which may be subject to recall and social-desirability bias, and the cross-sectional design captures perception at a single point in time rather than tracking adoption trends over a longer horizon.

IX. CONCLUSION

The transition towards a cashless economy in India has been swift and, on the whole, welcomed by consumers on account of the convenience, speed and safety it offers over physical cash. The present study of Kodagu district, Karnataka, demonstrates that this national trend has meaningfully permeated even a hilly, plantation-economy region with historically lower technology penetration: awareness levels are

reasonably high, UPI has emerged as the dominant instrument, and respondents display a broadly favourable perception towards cashless transacting. At the same time, the study underscores those factors — network connectivity, cyber-security apprehension, digital illiteracy and merchant readiness — that continue to act as friction points, and it confirms that age remains a significant differentiator of usage frequency. For Kodagu district to fully realise the efficiency, transparency and financial-inclusion benefits associated with a cashless economy, coordinated action by telecom infrastructure providers, banks, fintech firms, local self-government bodies and community organisations will be essential, with particular attention to older residents, plantation workers and small rural merchants who currently lag behind in adoption. The findings of this study may serve as a useful reference point for future, larger-scale research covering the wider hill-district belt of Karnataka.

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