

A Study on the Usage Pattern and Behavioural Aspects of Digital Payment Systems Among Young and Middle-Aged Consumers in Vijayawada City of Andhra Pradesh

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ABSTRACT

The rapid expansion of digital payment systems has significantly transformed household financial transactions in urban India. The present study examines the usage pattern, preferences and perceptions of digital payment modes among young and middle-aged respondents in Vijayawada. The study is based on primary data collected from 240 respondents using a structured questionnaire, with equal representation from both age groups. The analysis focuses on frequency of usage, changes in expenditure after digital adoption, preference for digital payments over cash, consumption categories dominated by digital transactions, effectiveness of budgeting through digital applications and preferred digital payment platforms. Descriptive statistical tools such as percentage analysis were used for data analysis. The findings reveal that digital payment systems are widely adopted across both age groups, with higher intensity of usage among young respondents. A majority of respondents prefer digital payments over cash, particularly for essential household purchases such as groceries and utility bills. UPI emerges as the most preferred digital payment platform. While many respondents perceive digital applications as helpful for budgeting, a section of users also report increased expenditure due to ease of transactions. The study highlights that age influences digital payment behaviour, particularly in terms of usage intensity, expenditure perception and platform preference.

Keywords: Digital Payments, UPI, Household Expenditure, Age Groups,

At the global level, the financial ecosystem has undergone a rapid transformation with the advancement of digital technologies and the widespread adoption of cashless payment systems. Countries across the world are increasingly moving towards digital economies driven by innovations in financial technology, smartphone penetration and internet connectivity. Digital payment systems such as mobile wallets, contactless cards and real-time payment platforms have improved transaction efficiency, reduced dependency on cash and enhanced financial inclusion. Economies like the United States, China and several European nations have already achieved high levels of digital transaction adoption, reflecting a global shift towards a cashless society.

In the Indian context, the digital payment landscape has witnessed remarkable growth, especially after the introduction of initiatives such as Digital India, Unified Payments Interface (UPI) and the promotion of financial inclusion programs. The demonetisation exercise in 2016 acted as a major catalyst, accelerating the adoption of digital payment methods across urban and rural areas and further intensified during the COVID-19 pandemic. Due to a shortage of cash during this demonetisation period, it caused disruption in the economy and thus paved way to provide a platform for the growth of digital payments. Today, India stands as one of the global leaders in real-time digital transactions, with UPI becoming a widely accepted and preferred mode of payment for everyday transactions. The increasing availability of smartphones, affordable internet services and government support has further strengthened the digital payment ecosystem in the country.

The transition from cash-based transactions to digital payments represents a significant behavioural and structural shift in the economy. Traditionally, cash was the dominant medium for household transactions due to its simplicity and universal acceptance. However, the emergence of digital payment platforms has transformed consumer behaviour by

offering convenience, speed, transparency and better record-keeping. Households are now increasingly using digital modes for groceries, utility bills, shopping and even small-value transactions. This shift has also influenced budgeting practices and spending behaviour, as digital transactions provide real-time tracking and ease of access to financial data.

Looking ahead, the future of digital payments is expected to be highly dynamic and technology-driven. With continuous advancements in artificial intelligence, blockchain technology and biometric authentication, digital payment systems are likely to become more secure, seamless and integrated into everyday life. The expansion of UPI into international markets, the growth of contactless payments and the increasing role of fintech innovations suggest a strong move towards a near cashless economy. However, challenges such as digital literacy gaps, cybersecurity concerns and unequal access to technology still need to be addressed to ensure inclusive growth.

The proliferation of digital payment systems has significantly transformed economic behaviours across India. Digital payments reduce transaction costs, improve financial inclusion and alter consumption behaviours at the household level. The rise of digital payment systems has fundamentally changed how consumers and businesses conduct financial transactions, transforming traditional monetary exchanges. On 11th April 2016, the National Payments Corporation of India (NPCI) launched the Unified Payments Interface (UPI) which opened up scope for a better mode of transaction in the market, alongside mobile wallets such as Paytm and Amazonpay, credit/debit cards and other modes of internet banking.

Review of Literature

Li et al. (2020) examined digital inclusive finance using China Household Finance Survey data (2013–2017). The study finds that digital finance significantly increases household consumption, especially among low-income, less wealthy and financially less literate households. It also shows stronger effects in smaller cities and across essential consumption categories like food, clothing, healthcare and education through channels such as online shopping and digital payments.

Ma et al. (2024) analysed digital financial usage and consumption upgrading using China Household Finance Survey data (2015–2019). The study shows that digital finance improves household consumption by enhancing financial asset allocation and encouraging participation in risky financial markets. It also finds heterogeneous effects based on age, wealth and region.

Hussain and Goyel (2025) studied digital payment systems and consumer spending in Greater Noida. The findings reveal widespread adoption, especially among younger and educated users, driven by convenience and cashback offers. The study also notes that digital payments tend to increase spending, with age and education influencing behaviour more strongly than usage itself.

Tulpule et al. (2025) examined digital payment gateways and consumer expenditure behaviour. The study finds that digital payments increase transaction frequency, purchasing power and impulse buying, while also improving budgeting and financial tracking. It concludes that digital payments have a dual effect by encouraging both spending and financial control.

Zhou et al. (2025) studied digital payment capability and food consumption upgrading among rural Chinese households. The study finds that stronger digital payment capability improves consumption patterns through higher income and better health awareness. The impact is stronger in digitally developed regions and among lower-education or poorer-health households.

Bhavana and Sivakanni (2025) analysed digital payments and consumer spending habits. The study highlights that while digital payments improve convenience and adoption, they may also encourage impulsive spending. It recommends stronger awareness, security measures and financial literacy to ensure responsible usage.

Patro (2025) examined the impact of UPI adoption on household investment in shares and debentures in India. The study finds no statistically significant impact of UPI on formal investment behaviour, suggesting that UPI adoption alone does not substantially influence financial market participation.

Vlaicu (2025) studied digital payment adoption in Latin America and the Caribbean. The study finds growing adoption of digital wallets and payment apps, but significant gaps remain due to income, age, rural location and firm size. It emphasises the need for targeted policies to improve inclusive adoption.

Kanwal and Singh (2025) investigated digital payment systems and spending behaviour in urban and semi-urban India. The study finds that digital payments increase spending frequency and discretionary expenditure, driven by convenience and cashback benefits, while financial literacy helps moderate overspending tendencies.

Saxena (2025) analysed digital payment adoption and spending behaviour in India using household data. The study finds higher adoption in urban areas and increased discretionary spending among users of digital payments. It highlights the role of financial literacy and infrastructure in ensuring balanced and responsible usage.

Statement of the problem

Despite the rapid proliferation of digital payment infrastructure in urban India, the relationship between payment mode adoption and household consumption behaviour remains inadequately studied at the city level. Digital payment systems have fundamentally altered how households manage money in India over the past decade. The Unified Payments Interface (UPI), launched in April 2016, exemplifies this transformation, providing a 24/7, interoperable, zero-merchant-discount infrastructure that has enabled unprecedented growth in cashless transactions. Yet the debate persists regarding UPI's broader impact on household financial behaviour, specifically whether adoption drives households beyond improved transaction convenience toward deeper engagement with formal financial markets, particularly holdings of shares and debentures. This question matters because it probes whether digital payments constitute merely a technological substitution for cash or a gateway to expanded financial inclusion and portfolio diversification (Saion Patro, 2025).

The rapid expansion of digital financial infrastructure in India has significantly transformed the way households manage their daily transactions. Digital payment systems such as UPI applications, debit and credit cards, net banking and mobile wallets have increasingly replaced traditional cash-based transactions due to their convenience, speed and accessibility. In urban areas like Vijayawada, the penetration of these digital payment modes has grown substantially, influencing not only purchasing behaviour but also budgeting practices and overall expenditure patterns of individuals.

Despite this growing adoption, the usage of digital payment systems is not uniform across all sections of society. Variations are likely to exist based on demographic factors, particularly age, which influences technological adaptability, financial behaviour and spending habits. Young individuals are generally perceived to be more technologically inclined and quicker in adopting digital innovations, whereas middle-aged individuals may exhibit comparatively cautious or diversified usage patterns. These differences may further extend to aspects such as frequency of usage, preference for payment platforms and perception of financial management through digital tools.

In this context, it becomes essential to systematically examine how different age groups engage with digital payment systems for household needs and how their perceptions vary regarding expenditure changes, budgeting effectiveness and platform preferences. Understanding these behavioural differences is important for assessing the real impact of digital payment adoption and for identifying the challenges and opportunities associated with achieving a more inclusive and efficient cashless economy at the household level.

Objectives and Methodology

The main objective of the study is to examine the usage pattern and behavioural aspects of digital payment systems among respondents in Vijayawada with special reference to age differences.

The study is based on primary data collected from respondents in Vijayawada. A structured questionnaire was used to gather information relating to the usage pattern, preferences and perceptions of digital payment systems for household needs. The respondents were selected using a simple random sampling technique and classified into two age groups, namely young and middle-aged, for comparative analysis. Individuals aged 18 to 35 years are considered young respondents, while individuals aged 36 to 55 years are considered middle-aged respondents. The total sample size consists of 240 respondents, with 120 respondents in each age group. The data collected were systematically coded, tabulated and analysed using simple percentage analysis to examine distribution patterns across different variables. The study primarily focuses on descriptive and inferential statistical techniques to draw meaningful interpretations from the collected data.

Results and Discussion

Frequency of Utilizing Digital Payment Modes for Household Needs

Table – 1 presents the distribution of respondents according to their frequency of using digital payment modes for household needs across two age groups, namely young and middle-aged. At the overall level, it is observed that 33.8 per cent of the respondents frequently use digital payment modes, while 27.5 per cent use them daily and an equal proportion of 27.5 per cent use them weekly. Only 11.3 per cent of the respondents use digital payments occasionally. This indicates that a majority of respondents are regular users of digital payment systems for household transactions. Across the strata, it is obvious from the table that with regard to young respondents, 37.5 per cent frequently use digital payment modes, followed by 29.2 per cent who use them daily. About 25.0 per cent use them weekly, while only 8.3 per cent use them occasionally. This shows a strong tendency among the young group toward frequent and consistent use of digital payment methods. In the case of middle-aged respondents, 30.0 per cent frequently use digital payments, while 25.8 per cent use them daily. A comparatively higher proportion of 30.0 per cent use them weekly and 14.2 per cent use them occasionally. This suggests that middle-aged respondents rely more on moderate usage patterns compared to the younger group.

It can be concluded that digital payment modes are widely used by both age groups, with a higher level of frequent usage among young respondents.

Table - 1

Distribution of the respondents by their frequency of utilizing digital payment modes for household needs

Age category	Frequently Use	Daily Use	Weekly Use	Occasional Use	Total
Young	45 (37.50)	35 (29.20)	30 (25.00)	10 (8.30)	120 (100.00)
Middle aged	36 (30.00)	31 (25.80)	36 (30.00)	17 (14.20)	120 (100.00)
Total	81 (33.80)	66 (27.50)	66 (27.50)	27 (11.30)	240 (100.00)

Note: Figures in the parenthesis represent row percentages.

Source: Computed from the Primary Data.

Change in Total Monthly Expenditure after Digital Adoption

Table – 2 presents the opinion of respondents regarding the change in their total monthly expenditure after adopting digital payment modes, classified by age group as young and middle-aged. On the whole, it is evident from the table that about 28 per cent of the respondents reported that their expenditure remained the same after adopting digital payments. About 23.3 per cent stated that their expenditure decreased, while 20.0 per cent experienced a slight increase. A further 19.6 per cent reported a significant increase and only 8.8 per cent indicated a slight decrease. This shows that for a considerable proportion of respondents, digital adoption has not altered their expenditure, although a noticeable share has experienced an increase.

Age group wise, it is noticed from the table that among young respondents, 28.3 per cent reported no change in their expenditure. About 24.2 per cent indicated a significant increase, while 18.3 per cent experienced a slight increase. On the other hand, 21.7 per cent reported a decrease and 7.5 per cent a slight decrease. This suggests that a relatively higher proportion of young respondents perceive an increase in expenditure following digital adoption. In the case of middle-aged respondents, 28.3 per cent stated that their expenditure remained the same. About 25.0 per cent reported a decrease, while 21.7 per cent experienced a slight increase. A smaller proportion of 15.0 per cent indicated a significant increase and 10.0 per cent reported a slight decrease. This reflects a comparatively balanced perception, with a slightly higher tendency toward reduced expenditure. A comparison between the two age groups indicates that young respondents are more likely to report an increase in expenditure, whereas middle-aged respondents show a relatively higher inclination toward decreased or stable expenditure. Overall, the findings suggest that digital payment adoption has not led to a uniform change in monthly expenditure.

It can be concluded that while a majority of respondents perceive no change in their expenditure, a significant proportion, particularly among the young, report increased spending after digital adoption.

Table - 2

Distribution of the respondents by their opinion on the change in total monthly expenditure after digital adoption

Age category	Slightly Decreased	Decreased	Remained the Same	Slightly Increased	Significantly Increased	Total
Young	9 (7.50)	26 (21.70)	34 (28.30)	22 (18.30)	29 (24.20)	120 (100.00)
Middle aged	12 (10.00)	30 (25.00)	34 (28.30)	26 (21.70)	18 (15.00)	120 (100.00)
Total	21 (8.80)	56 (23.30)	68 (28.30)	48 (20.00)	47 (19.60)	240 (100.00)

Note: Figures in the parenthesis represent row percentages.

Source: Computed from the Primary Data.

Preference for Digital Payments over Cash in Daily Household Transactions

Table – 3 presents the distribution of respondents based on their preference for digital payments over cash in daily household transactions, classified by age group as young and middle-aged. By and large, 65.0 per cent of the respondents stated that they always prefer digital payments over cash. About 17.1 per cent reported that they sometimes prefer digital payments, while 12.5 per cent indicated that they often prefer them. Only 5.4 per cent of the respondents stated that they never prefer digital payments. This clearly indicates a strong overall preference for digital payment modes in daily household transactions.

Among young respondents, 67.5 per cent reported that they always prefer digital payments, followed by 16.7 per cent who sometimes prefer them. About 13.3 per cent stated that they often prefer digital payments, while only 2.5 per cent never prefer them. This shows a very strong inclination among younger individuals toward consistent use of digital payment methods. In the case of middle-aged respondents, 62.5 per cent stated that they always prefer digital payments, while 17.5 per cent sometimes prefer them. About 11.7 per cent reported that they often prefer digital payments and a comparatively higher 8.3 per cent stated that they never prefer digital payments. This indicates a slightly lower level of preference compared to the young group, with a small section still relying on cash transactions. A comparison between the two age groups reveals that young respondents demonstrate a higher and more consistent preference for digital payments, whereas middle-aged respondents show relatively greater variation in preference.

Table - 3

Distribution of the respondents by their perception of Preference for Digital Payments over Cash in Daily Household Transactions

Age category	Always	Often	Sometimes	Never	Total
Young	81 (67.50)	16 (13.30)	20 (16.70)	3 (2.50)	120 (100.00)
Middle aged	75 (62.50)	14 (11.70)	21 (17.50)	10 (8.30)	120 (100.00)
Total	156 (65.00)	30 (12.50)	41 (17.10)	13 (5.40)	240 (100.00)

Note: Figures in the parenthesis represent row percentages.

Source: Computed from the Primary Data.

Primary Consumption Category Dominated by Digital Transactions

Table – 4 presents the distribution of respondents based on the primary consumption category where digital transactions are most frequently used. On the whole, 73.3 per cent of the respondents primarily use digital transactions for groceries and daily essentials, followed by 21.2 per cent for utility bills. A very small proportion of respondents use digital payments for dining out and entertainment (2.5 per cent) and healthcare and pharmacy (2.9 per cent). This indicates that digital payment usage is highly concentrated in essential household consumption activities.

Among young respondents, 71.7 per cent primarily use digital payments for groceries and daily essentials, while 25.0 per cent use them for utility bill payments. Only 0.8 per cent use digital payments for dining out and entertainment and 2.5 per cent for healthcare and pharmacy. This shows that young respondents predominantly use digital modes for essential and routine household purchases, with minimal use in discretionary spending categories. In the case of middle-aged respondents, 75.0 per cent use digital payments mainly for groceries and daily essentials, followed by 17.5 per cent for utility bills. About 4.2 per cent use digital payments for dining out and entertainment, while 3.3 per cent use them for healthcare and pharmacy. This suggests a slightly higher concentration on essential goods compared to the young group, with marginally greater use in non-essential categories. A comparison between the two age groups indicates that both groups primarily rely on digital transactions for essential consumption categories, particularly groceries and daily essentials.

Overall, the findings reveal that digital transactions are predominantly used for essential household consumption across both age groups.

Table - 4

Distribution of the respondents by the primary consumption category dominated by digital transactions

Age category	Groceries and Daily Essentials	Utility Bills	Dining Out and Entertainment	Healthcare and Pharmacy	Total
Young	86 (71.70)	30 (25.00)	1 (0.80)	3 (2.50)	120 (100.00)
Middle aged	90 (75.00)	21 (17.50)	5 (4.20)	4 (3.30)	120 (100.00)
Total	176 (73.30)	51 (21.20)	6 (2.50)	7 (2.90)	240 (100.00)

Note: Figures in the parenthesis represent row percentages.

Source: Computed from the Primary Data.

Effectiveness of Budget Tracking and Savings via Digital Apps

Table – 5 presents the distribution of respondents based on their opinion regarding the effectiveness of budget tracking and savings through digital applications. It is revealed from the table that about 45 per cent of the respondents stated that digital apps have made budgeting easier through better tracking of expenses. About 31.7 per cent felt that budgeting has become harder due to easier overspending, while 17.1 per cent reported that they do not maintain a formal budget. A smaller proportion of 5.8 per cent observed no noticeable impact on their budgeting practices. This indicates that although digital apps are largely seen as helpful, a significant share of respondents also experience challenges related to overspending.

Across the strata, it is noticed that among young respondents, 51.7 per cent reported that budgeting has become easier with better tracking through digital apps. About 25.0 per cent stated that it has become harder due to overspending tendencies, while 20.8 per cent do not maintain a formal budget. Only 2.5 per cent observed no noticeable impact. This suggests that young respondents generally perceive digital tools as beneficial for managing budgets, although a notable portion lacks structured budgeting practices. In the case of middle-aged respondents, 39.2 per cent reported that budgeting has become easier, while a higher 38.3 per cent felt that it has become harder due to overspending. About 13.3 per cent do not maintain a formal budget and 9.2 per cent reported no noticeable impact. This indicates a more mixed perception among middle-aged respondents, with nearly equal proportions experiencing benefits and challenges.

Overall, the findings indicate that digital budgeting applications are generally considered useful for expense tracking.

Table - 5

Distribution of the respondents by their opinion on the effectiveness of budget tracking and savings via digital apps

Age category	It has made budgeting easier (better tracking)	It has made budgeting harder (easier to overspend)	No noticeable impact on budgeting	I do not maintain a formal budget	Total
Young	62 (51.70)	30 (25.00)	3 (2.50)	25 (20.80)	120 (100.00)
Middle aged	47 (39.20)	46 (38.30)	11 (9.20)	16 (13.30)	120 (100.00)
Total	109 (45.40)	76 (31.70)	14 (5.80)	41 (17.10)	240 (100.00)

Note: Figures in the parenthesis represent row percentages.

Source: Computed from the Primary Data.

Most Preferred Digital Payment Platform

Table – 6 presents the distribution of respondents based on their most preferred digital payment platform. Of the sample surveyed, half of the respondents prefer UPI applications as their primary digital payment platform, followed by 39.6 per cent who prefer debit or credit cards. Net banking is preferred by 5.4 per cent of the respondents, while 5.0 per cent use other digital wallets. This indicates that UPI has emerged as the dominant digital payment mode among respondents.

Among young respondents, 57.5 per cent prefer UPI applications, making it the most widely used platform in this group. About 39.2 per cent prefer debit or credit cards, while only 1.7 per cent use net banking and another 1.7 per cent use other wallets. This shows a strong preference among young individuals for UPI-based transactions due to ease of use and convenience. In the case of middle-aged respondents, 42.5 per cent prefer UPI applications, closely followed by 40.0 per cent who prefer debit or credit cards. Net banking is used by 9.1 per cent, while 8.3 per cent prefer other wallets. This indicates a more diversified preference pattern among middle-aged respondents compared to the young group. A comparison between the two age groups reveals that young respondents show a stronger inclination toward UPI applications.

Overall, the findings highlight that UPI is the most preferred digital payment platform across both age groups.

Table – 6

Distribution of the respondents by their most preferred digital payment platform

Age category	UPI Apps	Debit/Credit cards	Net banking	Other Wallets	Total
Young	69 (57.50)	47 (39.20)	2 (1.70)	2 (1.70)	120 (100.00)
Middle aged	51 (42.50)	48 (40.00)	11 (9.10)	10 (8.30)	120 (100.00)
Total	120 (50.00)	95 (39.60)	13 (5.40)	12 (5.00)	240 (100.00)

Note: Figures in the parenthesis represent row percentages.

Source: Computed from the Primary Data.

Conclusion

The findings reveal that digital payment modes are widely adopted across both groups, with a significant proportion of respondents using them frequently, daily, or weekly. Young respondents show a higher intensity of usage, while middle-aged respondents exhibit a comparatively more moderate and occasional usage pattern. This indicates that age plays a role in influencing the frequency of digital payment adoption. Regarding expenditure patterns after digital adoption, responses are mixed. While a considerable share of respondents reported no change in monthly expenditure, a notable proportion experienced an increase, particularly among young respondents. This suggests that ease of transactions through digital modes may encourage higher spending behaviour in certain cases. In terms of preference, there is a strong inclination towards digital payments over cash in both groups. A majority of respondents, especially the young, consistently prefer digital modes for daily transactions, indicating a clear shift towards cashless practices.

The study further shows that digital transactions are predominantly used for essential household consumption such as groceries and daily essentials, followed by utility payments. Usage in discretionary categories like dining, entertainment and healthcare remains relatively low, indicating that digital payments are still largely centred around routine expenditure. With respect to budgeting and savings behaviour, digital apps are generally perceived as helpful tools for expense tracking, particularly among young respondents. However, middle-aged respondents show more mixed experiences, with a higher tendency to report overspending and lower budgeting discipline. This reflects differences in financial behaviour and digital adaptability across age groups. Finally, UPI applications emerge as the most preferred digital payment platform across both age groups, followed by debit and credit cards. Young respondents show a stronger preference for UPI, while middle-aged respondents display more diversified usage across different platforms. Overall, the study concludes that digital payment systems have achieved strong penetration among both young and middle-aged users, with higher adoption and enthusiasm among the young. However, differences in usage intensity, financial behaviour and platform preference highlight the influence of age on digital payment practices.

It is suggested that digital literacy programmes should be strengthened, particularly for middle-aged users, to improve their confidence and efficiency in using digital payment systems. Awareness initiatives on safe and responsible spending should be promoted, especially among young users, to prevent unnecessary increase in expenditure due to ease of transactions. Digital payment platforms should be made more user-friendly and accessible to all age groups to encourage wider adoption. Greater emphasis should also be given to educating users about budgeting and expense tracking applications to improve financial discipline. In addition, cybersecurity awareness should be enhanced to build trust in digital transactions and prevent fraud. Efforts may also be made to encourage the use of digital payments beyond essential purchases into areas such as healthcare, entertainment and services for more comprehensive adoption. Strengthening the reliability and security of UPI and other leading platforms will further support sustained usage and user satisfaction.

References

1. Hussain, M., & Goyel, A. (2025). The impact of digital payment systems on consumer spending behavior: Greater Noida. *International Research Journal of Modernization in Engineering Technology and Science*, 7(5), 6367–6374.
2. Tulpule, D., Dikonda, S., Aswale, N., Shaikh, N., & Yadav, S. (2025). A study on the influence of digital payment pathways on consumer expenditure behaviour. *International Journal for Innovative Research in Multidisciplinary Field*, 11(5), 295–301.
3. Zhou, C., Wang, S., Zhou, L., & Wan, S. (2025). The impacts of digital payment capability on food consumption upgrading in rural households: Evidence from China. *Frontiers in Nutrition*, 12, 1703317. <https://doi.org/10.3389/fnut.2025.1703317>
4. Bhavana, N., & Sivakanni. (2025). Impact of digital payments on consumer spending habits on online payments. *International Journal of Research Publication and Reviews*, 6(10), 6080–6083.
5. Patro, S. (2025). Effect of UPI adoption on savings behaviour of Indian households: A difference-in-differences analysis. *International Journal for Multidisciplinary Research*, 7(6), 1–10.
6. Vlaicu, R. (2025). *Digital payments adoption by consumers and firms: Implications for financial inclusion* (Working Paper No. IDB-WP-1705). Inter-American Development Bank, Department of Research and Chief Economist.
7. Ma, H., Yin, Y., Liu, Z., & Bai, Y. (2024). A study of the impact of digital finance usage on household consumption upgrading: Based on financial asset allocation perspective. *International Review of Economics & Finance*, 96, Article PA.
8. Li, J., Wu, Y., & Xiao, J. J. (2020). The impact of digital finance on household consumption: Evidence from China. *Economic Modelling*, 86, 317–326. <https://doi.org/10.1016/j.econmod.2019.09.027>
9. Kanwal, J., & Singh, J. (2025). Impact of digital payment systems on consumer spending habits. *European Economic Letters*, 15(2s), 54–69.
10. Saxena, R. B. (2025). Impact of digital payment adoption on consumer spending behavior in urban vs rural households in India. *International Journal of Social Impact*, 10(2), 524–532. <https://doi.org/10.25215/2455/1002050>