The Role of Digital Finance in Promoting Economic Growth in India

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***Abstract*—Digital finance has emerged as a transformative force in modern economies by enhancing financial accessibility, efficiency, and transparency. In India, rapid technological advancement, government initiatives, and increasing smartphone penetration have accelerated the adoption of digital financial services. This study examines the role of digital finance in promoting economic growth in India using secondary data from national financial institutions and payment systems. The paper analyses trends in digital payments, financial inclusion, and economic indicators to evaluate their contribution to economic development. The findings suggest that digital finance improves financial inclusion, reduces transaction costs, enhances economic participation, and supports sustainable economic growth. The study concludes that strengthening digital infrastructure and financial literacy can further accelerate India's digital economic transformation.**

***Keywords*— Digital Finance, Economic Growth, Financial Inclusion, Digital Payments, India**

I. INTRODUCTION

Twenty first century is the age of digital transformation, which has emerged as the most influential factor for economic development globally. Digital transformation means the integration of digital technologies in the various aspects of an organization, economy or society. It has multiple dimensions, one of such dimensions is "digital finance." Digital finance means the use of digital technologies such as mobile banking, internet banking, digital wallets, Unified Payments Interface (UPI), fintech applications, blockchain systems, and online financial services to deliver financial products and services to individuals and businesses. Digital finance has reduced the dependency on traditional banking and made banking services faster, safer, and more accessible. With the enhancement of digital finance financial inclusion has gained remarkable importance which results in enhancing economic efficiency and supporting sustainable economic growth.

In the recent years India has witnessed a rapid shift towards digital financial services due to increased accessibility to internet, smartphones, technological innovations and government support. Government initiatives such as Digital India, Jan Dhan Yojana, Aadhaar integration, and the introduction of UPI has played a major role in enhancing the reach of digital finance throughout the India across urban as well as rural areas. Along with this rise of fintech companies and digital payment applications has further strengthened the financial ecosystem by making financial services more convenient, affordable, and accessible to the population.

Digital Finance plays a key role in promoting the economic growth as it improves the efficiency of financial transactions and increasing access to credit, savings, insurance, and investment opportunities. Traditional financial systems have limited reach to reach low-income groups, rural areas, and small businesses due to high costs and geographical barriers. Digital finance has helped to overcome this gap by providing inclusive financial services through digital platforms.

In India digital finance has contributed immensely in financial inclusion by providing affordable and accessible financial services to underserved sections of society. This increased financial inclusion is the result of digital banking, mobile payments, fintech services and direct benefit transfers. All these services have increased the transparency and accountability for financial transactions. Digital finance also provides support to the small businesses by improving their access to the credit. Previously during traditional lending services these businesses faced hurdles in obtaining loans due to complex procedures and collateral requirements. But nowadays with digital lending platforms and fintech companies credit assessment and loan disbursement is made easy. This easier access to finance encourages business expansion, innovation, and employment generation. In addition to this, digital finance improves the speed and efficiency of economic transactions. Reduced transaction costs, secure and instant payments and growth of e commerce are the results of improves digital payment systems such as Unified Payments Interface (UPI). Increased digital transactions ultimately improve tax compliance and transparency, contributing positively to overall economic development.

Although digital finance offers numerous benefits, it also comes with some challenges. Digital finance raises concerns related to cybersecurity, data privacy, digital illiteracy, and unequal access to technology. Therefore, although digital finance offers significant opportunities for economic development, it also has certain risks and challenges that must be effectively addressed.

The present study aims to examine the growth of digital finance in India. Further the study seeks to analyze how digital financial services led to the economic growth of India and the role of digital payments in promoting financial inclusion in India.

II. REVIEW OF LITERATURE

The growing integration of digital technologies into financial systems has significantly transformed the structure and functioning of modern economies (Dias & Perera, 2026). Digital finance, which includes mobile banking, online payments, fintech innovations, and digital lending platforms, has emerged as a critical driver of financial inclusion and economic development, particularly in developing countries such as India (Vijai, 2019).

Early studies examining the finance–growth relationship established that financial sector development enhances capital allocation efficiency and promotes economic expansion (Cabeza-García et al., 2019). Research on financial development and economic growth nexus demonstrates that improved access to financial services encourages investment, entrepreneurship, and productivity growth (Tadesse, 2005). Empirical investigations into financial inclusion and inclusive growth in India indicate that expanding banking access and digital payment infrastructure contributes to poverty reduction and strengthens economic participation across socio-economic groups (Mohammad THAHER et al., 2021; Tadesse, 2005).

Recent literature highlights the role of digital financial inclusion as a catalyst for economic growth. Studies on digital financial inclusion and economic growth show that digital platforms reduce transaction costs, increase transparency, and enhance financial accessibility for previously unbanked populations (Rajni Narvariya & Singh, 2022). The expansion of fintech services has accelerated financial deepening by enabling faster payments, simplified credit delivery, and improved savings mechanisms (Rajni Narvariya & Singh, n.d.; Sreenu, 2020). Global fintech research further confirms that technological innovation in financial services promotes efficiency and stimulates economic activity through enhanced market connectivity (Kandpal & Mehrotra, 2022).

The Indian digital payment ecosystem has received considerable scholarly attention due to its rapid expansion (Sreenu, 2020). Research focusing on digital payments and economic development in India emphasizes that the growth of interoperable payment systems such as Unified Payments Interface (UPI) has fundamentally changed transaction behaviour (Rajni Narvariya & Singh, 2022.). The payment infrastructure developed under the supervision of the Reserve Bank of India and operational innovations introduced by the National Payments Corporation of India have encouraged a shift towards a less-cash economy (Choudhary, 2018). These developments have improved efficiency in trade, increased formalization of economic transactions, and strengthened financial transparency (Chinoda & Kapingura, 2024).

Studies on mobile banking adoption in India reveal that digital banking services expand financial accessibility in rural and semi-urban regions by overcoming geographical barriers (Widjaja, 2026). Digital financial services enable small businesses and households to participate more actively in formal financial systems, leading to improved consumption smoothing and investment decisions (Kabeer, 2012). Research examining digitalization and economic growth also finds a positive association between technology adoption and macroeconomic performance indicators such as

GDP growth and employment generation (Choudhary, 2018)(Meher et al., 2021).

Government initiatives supporting digital transformation have also been widely discussed in the literature. Policy analyses highlight the role of digital governance frameworks promoted by institutions such as NITI Aayog in strengthening India's digital economy (RBL Srivastava, n.d.). Digital infrastructure combined with financial innovation has facilitated direct benefit transfers, reduced leakages in welfare distribution, and enhanced institutional efficiency (Venkatesh & Lavanya Kumari, 2018). Reports by the World Bank further demonstrate that digital financial inclusion improves economic resilience by integrating marginalized populations into formal economic networks (Ozili, 2026).

The emergence of the fintech ecosystem in India has created new opportunities for credit expansion and entrepreneurial development (Mahammad Rafee & Ijssc, 2024). Studies on fintech ecosystems suggest that digital lending platforms reduce information asymmetry through alternative data analytics, enabling financial institutions to extend credit to underserved individuals and micro-enterprises (Bhattarai BBA Scholar et al., 2023). Research examining digital economy transformation indicates that fintech innovation supports sustainable economic development by promoting innovation-led growth and improving financial market efficiency (Lavrinenko et al., 2023).

Financial literacy and digital capability are identified as essential factors influencing the effectiveness of digital finance adoption (Andriamahery & Qamruzzaman, 2022). Literature on digital financial literacy emphasizes that awareness, trust in technology, and user capability significantly determine adoption rates (Dias & Perera, 2026). Higher financial literacy improves individuals' ability to utilize digital platforms effectively, thereby strengthening savings behaviour, investment participation, and overall financial wellbeing (Ravikumar et al., 2022)(Jr et al., 2025).

Despite strong positive outcomes, several scholars acknowledge existing challenges. Studies identify digital divide issues, cybersecurity concerns, infrastructure gaps, and regional disparities as barriers that may limit the inclusive benefits of digital finance (Abad-Segura et al., 2020). Unequal access to internet connectivity and digital skills continues to affect rural populations and women, suggesting the need for supportive policy interventions and capacity-building initiatives (Kumari et al., 2025; Morsy et al., 2017)

Overall, the reviewed literature establishes that digital finance plays a multidimensional role in promoting economic growth in India (Bm Volume V | Issue & December, 2018; Kireyeva et al., 2021). By enhancing financial inclusion, improving transaction efficiency, supporting entrepreneurship, and strengthening governance mechanisms, digital financial systems contribute significantly to economic modernization and inclusive development (MSME Access to Finance: The Role of Digital Payments United Nations Economic and Social Commission for Asia and the Pacific MSME Financing Series No. 7, 2022 ; Vijai, 2019). However, sustained growth requires continued investment in digital infrastructure, regulatory innovation, and financial literacy programs to ensure equitable participation in India's evolving digital economy (Xi & Wang, 2023).

III. OBJECTIVES OF THE STUDY

1. To examine the growth of digital finance in India.
2. To analyse the relationship between digital financial services and economic growth.
3. To evaluate the role of digital payments in promoting financial inclusion.

IV. RESEARCH METHODOLOGY

The present study is based on a quantitative and analytical research approach. The study aims to examine the growth of digital finance in India and analyse its relationship with economic growth. The research is descriptive as well as analytical in nature because it describes the trends in digital finance and also evaluates its impact on economic indicators.

Research Design

The study follows a descriptive and analytical research design. Descriptive analysis has been used to explain the growth trend of digital finance in India, while analytical tools have been used to measure the relationship between digital finance and economic growth.

Nature of Data

The study is based entirely on secondary data. The data has been collected from the provided dataset containing information related to: UPI transaction volume, Digital Payment Index, GDP Growth Rate, and other indicators of digital finance in India.

Data Sources

- Reports of the Reserve Bank of India
- National Payments Corporation of India (NPCI)
- Government publications,
- Economic Survey reports
- World Bank databases
- Provided statistical dataset by other organisations

Period of Study

The study covers a period of 10 years (2016–2025) to understand the recent growth and impact of digital finance in India (Post-digital payment expansion period).

Data Analysis

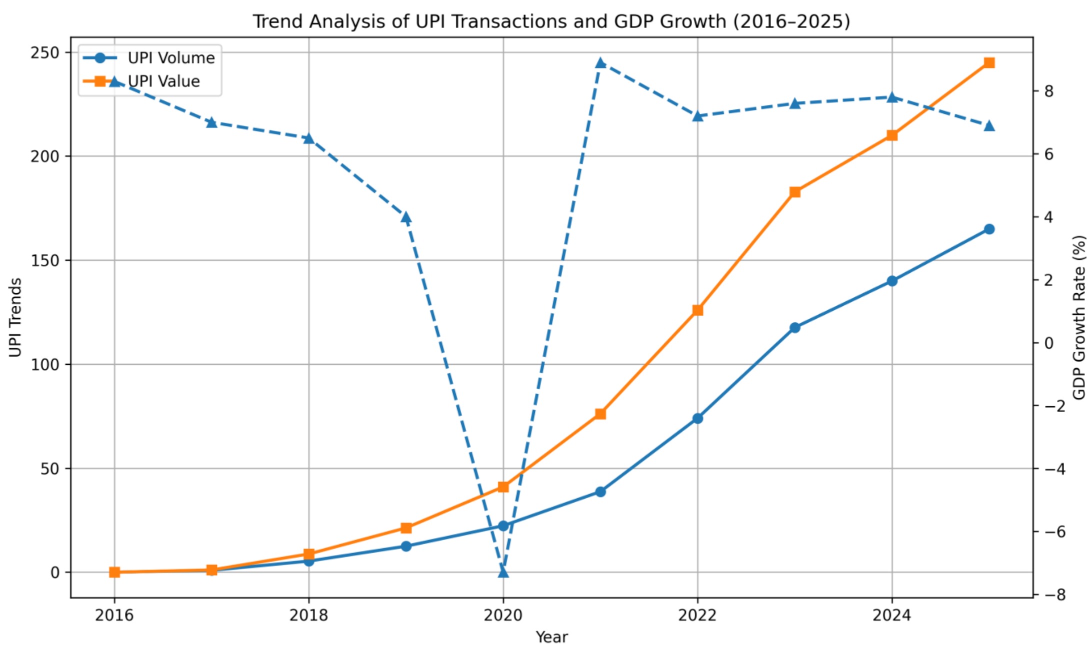
The data analysis for the study "was conducted using statistical and analytical techniques such as descriptive statistics, trend analysis and correlation analysis. The study uses data from 2016 to 2025 to examine the growth of digital finance and its relationship with economic growth in India.

Table 1: Growth of Digital Finance

Year	UPI Transactions Volume (Billion)	UPI Transaction Value (₹ Lakh Crore)	GDP Growth Rate (%)	Digital Payment Index
2016	0.02	0.01	8.3	100
2017	0.92	1.09	7	120
2018	5.35	8.77	6.5	145
2019	12.52	21.31	4	170
2020	22.34	41.03	-7.3	210
2021	38.74	76.21	8.9	260
2022	74.05	125.95	7.2	310
2023	117.64	182.84	7.6	370
2024	140	210	7.8	420
2025	165	245	6.9	470

Source: NPCI official website

Figure 1: Trend Analysis of Digital Finance



The diagram shows the trend of UPI transaction volume, UPI transaction value, and GDP growth rate in India from 2016 to 2025. The analysis indicates a strong growth in digital payments over the years along with fluctuations in GDP growth.

1. Rapid Growth of UPI Transactions

- UPI transaction volume increased significantly from 0.02 billion in 2016 to 165 billion in 2025.
- Similarly, UPI transaction value rose sharply from ₹0.01 lakh crore in 2016 to ₹245 lakh crore in 2025.
- This continuous rise reflects the increasing adoption of digital payment systems in India due to smartphone penetration, internet accessibility, government initiatives, and growth of fintech services.

2. Expansion after 2020

- The graph shows a steep increase in UPI usage after 2020.
- During the COVID-19 pandemic, people preferred contactless and online transactions, which accelerated digital payment adoption.
- From 2021 onwards, both transaction volume and value grew rapidly, indicating stronger trust and dependence on digital finance.

3. GDP Growth Trend

- GDP growth declined gradually from 8.3% in 2016 to 4% in 2019.
- In 2020, GDP growth became negative (-7.3%) because of the economic slowdown caused by the pandemic.
- After 2020, GDP growth recovered and remained positive between 6.9% and 8.9% from 2021–2025.

4. Relationship between UPI Growth and GDP Growth

- The graph suggests a positive relationship between digital finance growth and economic recovery.
- Even when GDP growth fluctuated, UPI transactions continued to rise steadily.
- The increase in digital transactions may have contributed to economic activities by improving transaction speed, financial inclusion, transparency, and ease of business.

Table 2: Correlations Table

Variables	UPI Transaction Volume	UPI Transaction Value	GDP Growth Rate	N
UPI Transaction Volume	1.0	0.997	0.244	10
UPI Transaction Value	0.997	1.0	0.242	10
GDP Growth Rate	0.244	0.242	1.0	10

Table 3: Significance Table

Variable 1	Variable 2	Pearson Correlation	Sig. (2-tailed)	N
UPI_Transaction_Volume	GDP_Growth_Rate	0.244	0.498	10
UPI_Transaction_Value	GDP_Growth_Rate	0.242	0.501	10

Interpretation

The correlation analysis shows a strong positive relationship between UPI Transaction Volume and UPI Transaction Value. However, the relationship between UPI variables and GDP Growth Rate is weak in this dataset. The significance values indicate that the correlations with GDP Growth Rate are not statistically significant at the 5% level.

V. FINDINGS OF THE STUDY

The trend analysis of the study reveals a significant and continuous growth in digital finance in India, particularly through UPI transactions. The volume of UPI transactions increased remarkably from 0.02 billion in 2016 to 165 billion in 2025, reflecting the rapid adoption of digital payment systems across the country. Similarly, the value of UPI transactions rose substantially from ₹0.01 lakh crore in 2016 to ₹245 lakh crore in 2025, indicating increased consumer trust, wider acceptance of digital payment platforms, and greater integration of digital finance into everyday economic activities. The findings further show that digital transactions experienced a major acceleration after 2020, largely due to the COVID-19 pandemic, which encouraged contactless payments and enhanced digital financial inclusion. The consistent yearly rise in both transaction volume and value suggests that digital finance has gradually become a mainstream component of

India's financial ecosystem and economic structure. At the same time, GDP growth rates fluctuated during the study period, with a sharp decline of –7.3% in 2020 because of the pandemic. However, the economy recovered strongly in subsequent years, recording growth rates above 7% in most years after 2021. This recovery coincided with rapid growth in UPI transactions, indicating that digital finance may have played a supportive role in economic recovery and business continuity.

The findings from the correlation analysis indicate a positive relationship between digital finance and economic growth in India. The correlation coefficient between UPI transaction volume and GDP growth rate was found to be 0.244, suggesting that an increase in digital transaction volume is associated with improvement in GDP growth. Similarly, the correlation coefficient between UPI transaction value and GDP growth rate was 0.242, which also reflects a positive association between digital payments and economic performance. However, the strength of these correlations is weak, implying that although digital finance contributes positively to economic growth, GDP is also influenced by several other macroeconomic and structural factors. Furthermore, the p-values were greater than 0.05, indicating that the relationships are statistically insignificant at the 5% significance level. Therefore, the study cannot establish a strong conclusive relationship between digital finance and GDP growth solely on the basis of the available dataset. Nevertheless, the overall trend analysis and positive correlation findings suggest that digital finance supports economic activities by improving financial inclusion, increasing transaction efficiency, and facilitating smoother economic operations in the country.

VI. CONCLUSION

Digital finance has become a key driver of India's economic growth by expanding financial access, improving transaction efficiency, and promoting economic formalisation. The increasing adoption of digital payment systems and financial technologies demonstrates India's transition toward a digitally empowered economy. Continued policy support, technological innovation, and inclusive financial strategies will further strengthen the role of digital finance in achieving sustainable economic development. The overall data analysis indicates that digital payment systems, particularly UPI transactions, have experienced remarkable growth in India from 2016 to 2025. UPI Transaction Volume increased from 0.02 billion transactions in 2016 to 165 billion transactions in 2025, while UPI Transaction Value increased from ₹0.01 lakh crore to ₹245 lakh crore during the same period. This reflects the rapid adoption of digital financial services and the increasing acceptance of cashless transactions in the Indian economy.

The correlation analysis shows a positive relationship between UPI transaction indicators and GDP growth rate. However, the correlation values are weak, indicating that although digital payments contribute to economic activities and financial inclusion, GDP growth is also influenced by several other macroeconomic factors such as industrial production, inflation, employment, government policies, global economic conditions, and investment levels.

The analysis also highlights that digital finance has strengthened financial inclusion by improving accessibility, convenience, transparency, and transaction efficiency. The growth of UPI has supported the government's vision of a digital economy and has encouraged formalization of financial transactions across urban as well as rural areas.

Despite these positive developments, certain challenges remain, including cybersecurity risks, digital illiteracy, internet accessibility issues, and dependence on technological infrastructure. Therefore, continuous policy support, digital awareness programs, stronger cybersecurity measures, and improved digital infrastructure are necessary to maximize the benefits of digital finance.

Overall, the study concludes that digital finance and UPI-based transactions play an important supportive role in India's economic development and financial inclusion, although their direct impact on GDP growth appears moderate based on the present correlation analysis.

REFERENCES

[1] Abad-Segura, E., González-Zamar, M. D., López-Meneses, E., & Vázquez-Cano, E.

(2020). Financial Technology: Review of trends, approaches and management. *Mathematics*, *8*(6). https://doi.org/10.3390/math8060951

[2] Andriamahery, A., & Qamruzzaman, M. (2022). Do Access to Finance, Technical Know-How, and Financial Literacy Offer Women Empowerment Through Women's Entrepreneurial Development? *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.776844

[3] Bhattarai BBA Scholar, B., Bhattarai, B., Shrestha, R., Maharjan, S., Malla, S., Shakya, S., & Scholar, B. (2023). *N Perspective ournal of Business and Economics I N F O Corresponding Author Effectiveness of Digital Payments in the Performance of Nepalese Micro, Small and Medium Enterprises (MSME) the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0)*. *6*. https://orcid.org/0009-0001-2398-6437

[4] Bm Volume V | Issue, J., & December, I. |. (2018). Digital Financial Literacy: A Study of Households of Udaipur. In *The Journal of Business and Management* (Vol. 23).

[5] Cabeza-García, L., Del Brio, E. B., & Oscanoa-Victorio, M. L. (2019). Female financial inclusion and its impacts on inclusive economic development. *Women's Studies International Forum*, *77*. https://doi.org/10.1016/j.wsif.2019.102300

[6] Chinoda, T., & Kapingura, F. M. (2024). Digital financial inclusion and economic growth in Sub-Saharan Africa: the role of institutions and governance. *African Journal of Economic and Management Studies*, *15*(1), 15–30. https://doi.org/10.1108/AJEMS-09-2022-0372

[7] Choudhary, A. (2018). *ON WAY TOWARDS A CASHLESS ECONOMY CHALLENGES AND OPPORTUNITIES*. https://doi.org/10.1186/s40854-016-0047-4?site=jfin-swufe.springeropen.com

[8] Dias, S. N. R. F., & Perera, K. L. W. (2026). Exploring the role of digital finance in advancing financial inclusion with challenges and future directions. In *Discover Sustainability* (Vol. 7, Number 1). Springer Nature. https://doi.org/10.1007/s43621-026-02629-8

[9] Jr, I., Jangid, A., & Bohra, N. (2025). DRA ANNUAL INTERNATIONAL CONFERENCE 2024 ON "SOCIO-ECONOMIC TRANSFORMATION: OPPORTUNITIES AND CHALLENGES" The Study of Understanding Women Financial Literacy and Its Impact on Socio-Economic Transformation DRA ANNUAL INTERNATIONAL CONFERENCE 2024 ON "SOCIO-ECONOMIC TRANSFORMATION: OPPORTUNITIES AND CHALLENGES" the Creative Commons Attribution 4.0 International License (CC BY NC ND).https://creativecommons.org/licenses/by/4.0. *Contemp. Res. in Multi. PEER-REVIEWED JOURNAL*, *4*, 19. https://doi.org/10.5281/zenodo.18240096

[10] Kabeer, N. (2012). *Women's economic empowerment and inclusive growth: labour markets and enterprise development*.

[11] Kandpal, V., & Mehrotra, R. (n.d.). *FINANCIAL INCLUSION: THE ROLE OF FINTECH AND DIGITAL FINANCIAL SERVICES IN INDIA*. Retrieved https://ssrn.com/abstract=3485038

[12] Kireyeva, A. A., Kredina, A., Vasa, L., & Satpayeva, Z. T. (2021). Impact of financial technologies on economic development: Theories, methods and analysis. *Journal of International Studies*, *14*(4), 286–303. https://doi.org/10.14254/2071

[13] Kumari, D., Giri, A. K., & Saruparia, C. (2025). Role of gender-based digital financial inclusion and women empowerment in poverty reduction: evidence from Asian countries. *Discover Sustainability*, *6*(1). https://doi.org/10.1007/s43621-025-01095-y

[14] Lavrinenko, O., Čižo, E., Ignatjeva, S., Danileviča, A., & Krukowski, K. (2023). Financial Technology (FinTech) as a Financial Development Factor in the EU Countries. *Economies*, *11*(2). https://doi.org/10.3390/economies11020045

[15] Mahammad Rafee, . B, & Ijssc, /. (2024). INTERNATIONAL JOURNAL OF SOCIAL SCIENCES AND COMMERCE [IJSSC] Digital India and Economic Growth-An Overview. In *Mahammad Rafee.B .,/IJSSC* (Vol. 1, Number 1).

[16] Meher, B. K., Hawaldar, I. T., Mohapatra, L., Spulbar, C., Birau, R., & Rebegea, C. (2021). The impact of digital banking on the growth of micro, small and medium enterprises (Msmes) in india: A case study. *Business: Theory and Practice*, *22*(1), 18–28. https://doi.org/10.3846/btp.2021.12856

[17] Mohammad THAHER, L., Mohd RADIEAH, N., & Hasan WAN NORHANIZA, W. (2021). The Effect of Microfinance Services on Women Entrepreneurship: A Case Study in Jordan. *Journal of Asian Finance*, *8*(5), 807–0815. https://doi.org/10.13106/jafeb.2021.vol8.no5.0807

[18] Morsy, H., Youssef, H., Nagy, P., De Haas, R., Sanfey, P., Bergman, M., Martin, P., Abril, E. R., Fakhoury, R., & Ababou, A. (2017). *Access to finance-mind the gender gap*.

[19] *MSME Access to Finance: The Role of Digital Payments United Nations Economic and Social Commission for Asia and the Pacific MSME Financing Series No. 7*. (n.d.). Retrieved https://ssrn.com/abstract=4138785

[20] Ozili, P. K. (2026). Geopolitical shocks, capital outflows, financial inclusion and digital financial inclusion. *Journal of Financial Regulation and Compliance*, *34*(1), 132–159. https://doi.org/10.1108/jfrc-03-2025-0061

[21] Rajni Narvariya, M., & Singh, D. (2022). *Cash to Cashless Economy: Opportunities & Challenges in India*. Retrieved www.ijfmr.com

[22] Ravikumar, T., Suresha, B., Prakash, N., Vazirani, K., & Krishna, T. A. (2022). Digital financial literacy among adults in India: measurement and validation. *Cogent Economics and Finance*, *10*(1). https://doi.org/10.1080/23322039.2022.2132631

[23] RBL Srivastava, D. (2022). Role of Digitalization in the Growth of MSMEs in India: Opportunities and Challenges. In *IJFMR23057500* (Vol. 5, Number 5). Retrieved www.ijfmr.com

[24] Sreenu, N. (2020). Cashless Payment Policy and Its Effects on Economic Growth of India: An Exploratory Study. *ACM Transactions on Management Information Systems*, *11*(3). https://doi.org/10.1145/3391402

[25] Tadesse, S. (2005). *Financial Development and Technology*.

[26] Venkatesh, J., & Lavanya Kumari, & R. (2018). *INDIA's DIGITAL TRANSFORMATION: DRIVING MSME GROWTH*. *6*, 49–60. https://ssrn.com/abstract=3159128

[27] Vijai, C. (2019). Fintech in India-opportunities and challenges. *SAARJ Journal on Banking & Insurance Research*, *8*(1), 42. https://doi.org/10.5958/2319-1422.2019.00002.X