International Journal of Economic Practices and Theories (IJEPT)
ISSN: 2247-7225
Volume 2026, Issue 1

Financial Inclusion, Digital Payment Systems, And Sustainable Economic Growth in Developing Countries

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Abstract

Levying access to financial services and introducing digital payment platforms have become key channels to promote inclusive and sustainable economic growth in developing countries. The use of formal financial services allows children and small businesses to save, secure loans, conduct payments, absorb risks, and pursue other economic activities. Digital payment platforms further contribute to the process by reducing transaction fees, speeding up the process, improving transparency, and connecting the unbanked and underbanked population with financial systems. This work examines how these links are established for financial inclusion with P2P and digital payment systems, digital financial literacy, trust in digital financial services and sustainable economic development in the context of developing nations particularly within the Delhi NCR region of India. This research was descriptive and explanatory, used samples of 300. The research utilizes questionnaires that were filled out and scored on a 1 to 5 Likert scale and secondary data such as published journal articles, policy documents, institutional databases, and scholarly literature. Data analysis included demographic profile, descriptive statistics, reliability assessment, Pearson correlation and multiple regression evaluation. The study generates four hypotheses and provides an illustration of the technique of analysis of the relationships between a multi-noded concept such as digital financial inclusion and a concept with only a few nodes, with particular reference to digital payments systems and/or digital financial literacy and trust in financial institutions and their activities, and to perceived sustainable economic growth. The research argues that the effect of digital payment systems on sustainable economic growth can only be achieved if it's coupled with cost-effectiveness, digital literacy, protection of consumer rights, stable infrastructure, and institutional support.

Keywords: Financial inclusion; Digital payments; Sustainable economic growth; Digital financial literacy; Developing countries; FinTech

1. Introduction

Financial inclusion is a key developmental challenge in emerging economies, providing opportunities for small enterprises, families, and individuals to participate in the formal economy. It concerns economic and beneficial (or helpful) access to financial products and services such as savings, loans, insurance, money-towing and payment services. Many of the world's new middle classes still depend on cash rather than credit, very informal loan arrangements and unregulated finance sources. This limits their ability to save money securely, qualify for credit, build financial records and financial abilities, and manage financial shock. It has been found that access to

financial services is significantly related to poverty alleviation, income inequality, growth of business and inclusive economic growth (Menyelim et al., 2021; Mashoene & Schaling, 2026; Tay et al., 2022).

Digital payment platforms have taken us in a new direction when it comes to financial inclusion. The inclusion of the concept of inclusion was more related to the presence of the bank, to having an account, and to actually "touching" the financial institution. Today the meaning of digital inclusion has never been more important as people are increasingly interacting with mobile banking, internet banking, digital wallets, QR code transactions, instant transfers and all Fintech channels. Electronic payment eliminates the need for paper money, saves time, reduces transaction costs, and leaves a record of transactions. Ahmad et al. (2020) note that mobile money has vastly improved financial access in African economies, while Al-Smadi (2023) found that digital finance has been a positive step to financial inclusion in MENA countries. In India, various platforms such as UPI, bitcoin, mobile wallets, bank-associated applications and QR codes have transformed all sorts of users to accept digital transactions, ranging from a consumer to a merchant, from students to people on a salary, and from small businesses to large.

Digital financial inclusion's relation with sustainable economic development is fundamental because growth does not reduce to just improving incomes, it must also be accessible, equitable, resilient, and sustainable in promoting economic engagement. The potential of digital finance exists to support sustainable development goals, including the ability to receive payments, save, access credit and reduce the need to use cash. Research has identified that the adoption of digital finance can significantly contribute to economic growth, poverty alleviation, sustainable development and quality of economic growth (Shen, Hu, Hueng, 2021; Amaliah, Ali, Sudrajad, Rusgianto, Nu'man, Aspiranti, 2024; Xi, Wang, 2023). Studies also support that digital finance can help reduce poverty, spur the development of micro companies, contribute to sustainable development, and positively impact regional progress (Demirkale et al., 2025; Kamboj & Sharma, 2025; Inoue, 2024).

However, just making digital payment systems available does not automatically mean that there is significant inclusion. They could own a bank account or have a payment app, but not use or use it safely on a regular basis. The actual digital financial benefits may be reduced by technologies that are difficult to use, concerns about scams, lack of trust, failure to complete a transaction, inability to file a complaint, poor internet connectivity, and service charges. Recent research highlights the necessity for digital financial inclusion to be bolstered by digital literacy, consumer safeguards, trustworthiness, robust institutions, and cost-effective infrastructure (Dias & Perera, 2026; Jose & Ghosh, 2025; Meniago, 2025; Shahen & Sharaf, 2025). Therefore, the present research requires financial inclusion – digital payment systems association with the sustainable growth of economy among the developing countries especially focusing on the subjects of the study are from the Delhi NCR area.

In brief, the background of this study highlights the following points:

- Financial inclusion helps people and businesses enter the formal economy.
- Digital payments make transactions faster, cheaper, and more transparent.
- Sustainable growth depends on access, usage, trust, literacy, and institutional support.
- Delhi NCR is a suitable study area because it includes both digitally active users and financially vulnerable groups.

1.1 Statement of the Problem

Contemporary events are witnessing emerging countries making fantastic progress towards expanding availability of finance through digital payment mechanisms, mobile banking and financial technology. However, there is a gap between availability and worthwhile use. Many people have bank accounts and payment applications but they are not always used on a regular basis for things like saving or credit, business ventures, insurance or activities that lead to income. Whilst digital payment systems may be cost-saving and more convenient, they also pose new risks such as fraud, privacy concerns, technological exclusion and over-reliance on digital infrastructure. Recent studies report positive links between increasing digital financial inclusion (DFI) and economic growth, influenced by the literacy levels, user trust, institutional quality, cost, and individual capabilities (Dias & Perera, 2026;

Meniago, 2025; Shahen & Sharaf, 2025). Thus, the challenges addressed in this study are: However, it can't be taken for granted that digital payments will necessarily contribute to sustainable economic progress without playing a meaningful, safe, and efficient part in the financial system.

1.2 Research Questions

1. Financial inclusion of the respondents in Delhi NCR is?
2. How well respondents are ready to embrace and utilise digital payment solutions?
3. How is the sustainable economic growth linked to the adoption of digital payment?
4. How do digital financial literacy and trust influence the use of digital financial services?
5. Which factors significantly predict perceived sustainable economic growth among respondents?

1.3 Research Objectives

1. To examine the level of financial inclusion among respondents in Delhi NCR.
2. To assess the adoption and usage pattern of digital payment systems.
3. To study the relationship between financial inclusion and sustainable economic growth.
4. To analyze the effect of digital financial literacy and trust on digital payment adoption.
5. To test the influence of financial inclusion, digital payments, digital financial literacy, and trust on perceived sustainable economic growth.

1.4 Significance of the Study

This research is very significant in understanding the financial inclusion and the mechanisms of digital payment, combined with the concept of sustainable economic development, within a compass of one analysis. The outcomes can provide decisionmakers with a broader understanding of the economic benefits being brought by digital financial services to users. The research can additionally assist banks, fintech companies, payment service providers, and development organizations in recognizing obstacles associated with literacy, trust, affordability, and consistent usage. The Scholars' research contributes to the ongoing discourse on digital financial inclusion, moving beyond simply the ownership of financial accounts to include issues of importance and impacts.

2. Literature Review

2.1 Financial Inclusion and Sustainable Economic Growth

Financial inclusion is widely recognised as one of the pillars for sustainable economic development with the ability to participate in the formal economy. The ability to save, credit facilities, insurance options, payment systems and remittances enable people to better respond to any financial shock, invest in education, enrich business operations and build economic stability. Menyelim et al. (2021) explored the linkage between financial inclusion, inequality, & sustainable economic growth for Sub-Saharan Africa. Their research shows that improving the issue of inclusion can promote growth by reducing the differential access to financial resources. Tay and colleagues (2022) defined digital financial inclusion as a roadto sustainable development since it can promote further developmental gains, such as increasing access to formal financial services. It is of special importance in developing countries with high informal economic activity, where the relationship with economic growth and financial inclusion is especially important. Without significant class participation in existing financial system, the economic expansion is more likely to be restricted and unbalanced. Shen, Hu, and Hueng (2021) discovered a correlation between digital financial inclusion and economic growth on a global scale, whereas Shen, Hueng, and Hu (2021) additionally demonstrated that digital financial inclusion exhibits both measurement and spillover effects. The implications of these spillovers indicate that the advantages of inclusion might reach beyond just individual participants, enhancing overall market efficiency and productivity on a broader scale. Likewise, Basnayake et al. (2024) found that the progress of financial inclusion through financial digitalization favourably improves the economic growth of Asian-Pacific countries. A recent study has turned from the basic access to the

sustainable economic remarks. The research carried out by Amaliah and colleagues (2024) showed that digital finance can guess sustainable economic progress in developing economy. Nguyen Van and Le Quoc (2024) conducted an analysis on how well financial inclusion in digital innovation supports the Sustainable Development Goals (SDGs) and found that the impact varies across levels of financial development of countries. In addition, Mashoene and Schaling (2026) found evidence of the impact of digital financial inclusion on inclusive growth and the prevalence of poverty in emerging and developing economies. All this research shows that financial inclusion is more than just about providing welfare: it is about making it possible to promote growth, productivity, diminish poverty, and establish economic stability.

Hypothesis 1: Financial inclusion has a positive and significant relationship with perceived sustainable economic growth in developing-country contexts.

2.2 Digital Payment Systems and Economic Participation

E-payment systems are a key way of improving financial access. They include mobile wallets, bank transfers, QR code payments, debit and credit cards, instant payment methods, point-of-sale payments, online banking services and payment apps developed through fintech. Electronic payment systems reduce the use of cash, making payments faster, easier and highly traceable. Ahmad et al. (2020) illustrated how mobile money has been instrumental in improving advances in Africa, especially in the areas where traditional banking structures were not present, allowing people to access financial services. Furthermore, Birigozzi et al. (2025) found that the adoption of digital payment systems with GDP growth, suggesting that they might affect the economic performance. The electronic payment methods help to extend economic participation by minimizing costs for transactions. For consumers, this means alternative channels of payment for settlement, payments and transactions, money saving, and remittance hassle-free. Electronic payment methods create transaction documentation, scale down cash management and offer retailers access to expanded marketplaces. According to Johri and colleagues (2024), the adoption of a digital financial service in micro-enterprises in India happens when consumers perceive it as being useful, easy and trustworthy. Kamboj and Sharma (2025) argue that the global progress towards advancing digital financial inclusion can improve the outcomes of micro-enterprises, provided it is accompanied by education and infrastructure investments and targeted policy interventions. Based on these findings, digital payment systems are no longer a mere provision of technology, they carry the potential to affect business efficiencies and market participation. Electronic payment systems also enable transactions between the government and the population in emerging countries, remittances and distribution of welfare benefits. Inoue (2024) found that improvements in digital financial inclusion can help to augment the poverty reduction effects of international remittances. The potential for leakages can be reduced when remittances and transfers are transferred electronically, so that recipients receive the money more quickly. This can increase the resilience of household consumption and contribute to consumption stabilization processes. When provided to the poor and marginalised, digital finance can bring about enduring change in Asia, as shown by Ng and colleagues (2025).

Hypothesis 2: Digital payment adoption has a positive and significant effect on perceived sustainable economic growth.

2.3 Digital Financial Literacy, Trust, and Institutional Support

Digital financial literacy refers to people's ability to ensure that they can access and understand digital financial technologies and services in a safe and effective way. It includes an awareness of electronic payment systems, security codes, temporary passwords, how to protect them from fraud, service charges, securing accounts, reviewing transaction logs, resolving claims and handling credit wisely. Many developing countries have seen the surge of digital payment platforms and the reliance on digital payments has surpassed user readiness. This presents a risk where people can enter into digital platforms without having the knowledge needed to use them with confidence. Digital financial literacy plays a key part in advancing financial inclusion in the Global South as it affects digital system users' capacity to maximize benefits rather than be victim to fraud or manipulation, as emphasized by Jose and Ghosh (2025). Follies and knowledge about digital finance go hand-in-hand. Individuals are more inclined to embrace digital payment methods when they have confidence in the security of transactions,

assurance that their finances are safeguarded, privacy of their information is maintained, and that any grievances will be addressed effectively.

Al Khub and colleagues (2024) found that these golden ingredients of the developing world—such as institutional readiness, adoption of technology, and users'concept and trust—play a major role in driving the progress of digital financial inclusion in the Kingdom of Jordan. Institutions were further found to moderate the links between digital financial inclusion and economic growth in the SADC countries by Meniago (2025). This indicates that robust institutions have the potential to enhance the growth impact of digital finance by bolstering reliability, safeguarding consumers, and fostering trust. Institutional backing encompasses governance, digital frameworks, safeguarding financial consumers, cybersecurity measures, system compatibility, complaint resolution, and initiatives for public awareness. The possibilities of fintech to improve financial inclusion and sustainability depend on the legality and regulation of fintech that encourages innovation and protects consumers (Arner et al., 2020). Additionally, Dias and Perera (2026) affirm that the adoption of digital finance relies on overhauling several obstacles, including unequal access, weak infrastructure, disparities in literacy and regulatory challenges. The research in this report clearly points towards the need for digital finance to be viewed in greater terms not as a mere private sector innovation, but as a policy need.

Hypothesis 3: Digital financial literacy and trust in digital financial services have a positive and significant relationship with digital payment adoption.

2.4 FinTech Innovation, SMEs, Poverty Reduction, and Green Growth

Financial technology achievements have expanded the economic genome of monetary availability, and that is also transcending standard banking channels. Financial technology products include digital insurance, online lending, mobile payment systems, transaction processing, real time data application, savings applications, nontraditional credit assessment strategies, and blockchain-based documentations. According to Ha et al (2025), fintech and financial inclusion is a nascent and rapidly growing field of study, and fintech could create a more efficient way of delivering services and reduce service costs for the underserved. Similarly, Kishor and colleagues (2025) show how cohesive technological and policy frameworks can create opportunities for improving financial inclusion and enabling sustainable development through financial technology. SMEs are crucial when it comes to SMEs that generate income and jobs in developing countries. Small and medium sized businesses often face limited access to credit due to lack of proper financial records, weak managerial structure and short of assets. Electronic payment systems enable enterprises to establish transaction records that could aid in assessing creditworthiness. Kamboj and Sharma (2025) explain the growth of financial inclusion has the potential to shape microenterprises, especially when being financially included and financially literate are intertwined and the environments are conducive. Similarly, Johri et al. (2024) found that digital financial inclusion was not an inevitable outcome with micro-businesses in India as it required the perception of utility and preparedness. Implementing digital financial services, as suggested by these findings, could boost enterprise productivity and enable their more formalization. In recent literature, the topic of the development to be environment-friendly and sustainable appears. Ozturk & Ullah (2022) studied the importance of digital financial inclusion in economics and environmental sustainability in OBRI economies. Demirkale et al. (2025) created a relationship between fintech, financial inclusion, and sustainable development to the ASEAN-5 countries. In their study on "Digital financial inclusion, ecological sustainability, and regional development in China" by Becha and colleagues (2025), the authors explore the interactions between digital financial inclusion, ecological sustainability and regional development in the Chinese context. The research findings have shown how digital finance can positively contribute to good practice in sustainability outcomes, such as the reduction of paper-based processes, increased access to less impactful financing mechanisms, improved resource distribution and implementation of environmentally conscious investments. However, digital finance need energy and digital infrastructure, which makes it crucial to carefully measure the environmental impacts of digital finance.

Hypothesis 4: Fintech-enabled financial inclusion has a positive and significant effect on perceived sustainable economic growth.

2.5 Research Gaps

The existing literature provides strong evidence of the link between financial inclusion and digital finance and its association with economic growth, poverty alleviation and sustainable development. However, there are still many unfilled spaces. In the early phase, many research efforts focus mainly at the macro-level data related to countries, while there is a lack of research at the user-level data in the context of urban and semi-urban of developing countries such as Delhi NCR region. These studies by Shen et al. (2021), Basnayake et al. (2024) and Mashoene and Schaling (2026) provide broad and rich useful insights for the cross-national comparison, but there is a need for the localized investigations into behaviors. Furthermore, the current literature often focuses on singular aspects of financial inclusion, digital payments, education and trust. However, in the real world, all of these factors are related to each other. One user may hold resources, and have a low digital skills level, while another may have a high level of digital skills, but may not be confident in e-transactions. Likewise, a merchant might be willing to accept digital payments, but prefer cash because they may be afraid of payment settlement delays and/or other costs. These challenges are noted by Dias and Perera (2026), Jose and Ghosh (2025), and Shahen and Sharaf (2025), but there is a need for more integrated empirical models. Thirdly, it is crucial to establish the perception of sustainable economic development of digital payments and for individuals associations with the enterprises themselves. Many research projects focus on growth of GDP or other macroeconomic indicators, but the experience of people is sustainable development through regular income, build-up of savings, reduction of transaction costs, increase in business productivity, access to credit and financial security buffers. Access to impact is a crucial consideration as noted by Kattan-Rodriguez and Galindo-Manrique (2025), which this research aims to address.

3. Methodology

3.1 Research Design

This study has descriptive and explanatory research design. The descriptive part is employed to explain the demographic profile of the respondents, their financial inclusion and how they use digital payment systems. In the explanatory part, relationship between financial inclusion, adoption of digitised payment services, digitised financial literacy, trust, and fintech-mediated financial inclusion with perceived sustainable economic growth is tested. This study does not only intend to describe usage behaviour but also investigates whether some of the independent variables significantly affect the perceptions of sustainable economic growth. This design is appropriate because it will allow the researcher to investigate whether the independent variables affect sustainable economic growth perceptions.

The approach of the study is quantitative and the method used in this study is structured questionnaire. The suitable method for quantitative research is the application of variables that can be gotten from the Likert scale, while statistical tools that can be used are mean, standard deviation, correlation, and regression. The responses are analysed only once and the design is therefore cross sectional.

3.2 Study Area and Sample Size

The study area is Delhi National Capital Region (NCR) and includes the adjoining urban and semi-urban areas like Noida, Gurugram, Ghaziabad, Faridabad etc., involved with Delhi. The population in Delhi NCR is having widespread digital payment transactions, dominant banking practices, huge informal and migrant segment, street vendors, salaried, students and micro business segment which makes it ripe for this study. This diversity enables the study to reveal various dimensions of financial inclusion and digital payment uptake.

A sample size of 300 respondents. 300 is a good sample size for descriptive statistics, correlation and multiple regression. The respondents comprise of the small merchants, informal workers, homemakers, students, self-employed, micro-enterprise owners, and salaried workers. Stratified convenience sampling method further ensures the representation based on gender, age groups, occupation, income level and location within Delhi NCR.

3.3 Variables of the Study

The major variables of the study are as follows:

Dependent Variable:

Perceived Sustainable Economic Growth: This includes whether respondents believe that digital financial inclusion and payment systems lead to income security, savings, that businesses are more efficient, that they do not use cash as much, that they have access to financial services more readily or that there were more economic opportunities.

Independent Variables:

- Financial Inclusion: Access and Use of Formal Financial Services (FFS) including banking accounts, savings, credit, insurance and remittance services.
- Frequency & comfort of digital payment system including UPI, mobile wallet, debit card, internet banking, QR payments, mobile banking etc.
- Digital Financial Literacy: Knowledge and understanding on how to protect digital payments, the management of digital transactions, preventing fraud, managing service charges, using passwords, and resolving complaints.
- Strength of Digital Financial Services: Trust in the security of digital payments, banking systems, fintech platforms, the protection of privacy and the resolution of disputes.
- Fintech-Enabled Inclusion: Any uses of fintech platform in payments, savings, credit, insurance, doing business and managing finances.

3.4 Data Collection Sources

Primary and secondary data sources are used in the study.

Primary Data: Questionnaires consisting of demographic questions and statement on 5 point Likert scale for 300 respondents in Delhi NCR.

Responses are scored on a 5-point likert scale 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree.

Secondary Data: Secondary sources are peer-reviewed journal articles, academic databases, financial institutions' reports, policy documents, development databases, financial inclusion, and sustainable economic growth research published.

3.5 Data Analysis Tools

The technique of statistical analysis applied is frequency distribution, percentage analysis, mean and standard deviation, Cronbach's alpha reliability test, Pearson correlation, and multiple regression analysis. Demographic characteristics are described by frequency and percentages. Chisquared value is used to analyze the degree of agreement between the respondents to statements with certainty values on Likert scale. Pearson correlation is employed to check out the relationship between variables in terms of strength and direction. The combined effect of financial inclusion, digital payment adoption, digital financial literacy, trust and fintech-enabled financial inclusion on perceived sustainable economic growth is tested using multiple regression.

4. Data Analysis

The Data Analysis of 300 Respondents from Delhi NCR has been provided in this section. Data analysis involves Demographic Profiling, Descriptive Statistics, Reliability analysis, Correlation analysis, Regression analysis and testing of Hypothesis.

4.1 Demographic Profile of Respondents

Demographic Variable	Category	Frequency	Percentage
Gender	Male	157	52.3
	Female	130	43.3
	Other / Prefer not to say	13	4.3
Age	18-25 years	69	23.0
	26-35 years	77	25.7
	36-45 years	64	21.3
	46-55 years	53	17.7
	Above 55 years	37	12.3
Education	Up to Higher Secondary	58	19.3
	Graduate	121	40.3
	Postgraduate	83	27.7
	Professional / Others	38	12.7
Occupation	Salaried	91	30.3
	Self-employed / Business	77	25.7
	Student	49	16.3
	Homemaker	31	10.3
	Informal worker / Others	52	17.3
Monthly Income	Below Rs. 20,000	67	22.3
	Rs. 20,001-Rs. 40,000	88	29.3
	Rs. 40,001-Rs. 70,000	81	27.0
	Above Rs. 70,000	64	21.3

Demographic profile indicates that the subjects are fairly distributed in terms of gender, age, educational level and occupation, across income levels. The 26-35 age group is the largest, comprising 77 (25.7 per cent of respondents) of the sample. Representing this age group is crucial as they tend to be more open to using financial services via digital platforms, mobile banking, and mobile applications. In addition the data have greater practical relevance, with outcomes for the salaried people, the self-employed, the students, the homemakers and the informal people being included in the occupational profile. The blend can help studying since digital financial inclusion is not perceived by all alike. In cases of hiring employees, a salaried employee can pay his/her bills and do shopping using digital payments, whereas in cases of self-employment, a self-employed respondent could pay his/her suppliers and customers via digital payments and keep informal records. This substantiates the point made by Johri et al. (2024), Kamboj & Sharma (2025) and Ng et al. (2025) that proposing research on digital payment systems should go beyond the formal banking population of customers.

4.2 Descriptive Analysis

The descriptive analysis is based on a five-point Likert scale, where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. The results are presented with frequency, percentage, mean, and standard deviation.

Table 4.2.1 Financial Inclusion

Statement	Strongly Disagree f (%)	Disagree f (%)	Neutral f (%)	Agree f (%)	Strongly Agree f (%)	Mean	SD
I have access to a formal bank account.	7 (2.3)	13 (4.3)	31 (10.3)	124 (41.3)	125 (41.7)	4.16	0.94
I regularly use my bank account for transactions.	11 (3.7)	23 (7.7)	53 (17.7)	136 (45.3)	77 (25.7)	3.82	1.02
I have access to savings, credit, or insurance services.	19 (6.3)	44 (14.7)	77 (25.7)	109 (36.3)	51 (17.0)	3.43	1.12
Formal financial services help me manage money better.	9 (3.0)	27 (9.0)	61 (20.3)	129 (43.0)	74 (24.7)	3.77	1.02

The financial inclusion table reveals that the extent of bank account access is relatively high, two-fifths of the respondents agree or strongly agree that they have a formal bank account. But wider financial services like savings, credit and insurance have weaker performance, with 77 respondents not differing from the position and 63 respondents not being in agreement or strongly disagreeing about it. It suggests that if people have bank accounts, financial inclusion isn't achieved. Being able to access a bank account (mean score 4.16) is significantly higher than the mean score (3.43) for people who have access to savings, credit or insurance. In addition, this aligns with the perspective that meaningful inclusion is not just about having an account, but also its regular use and access to various services (Tay et al., 2022; Kattan-Rodriguez & Galindo-Manrique, 2025).

Table 4.2.2 Digital Payment Adoption

Statement	Strongly Disagree f (%)	Disagree f (%)	Neutral f (%)	Agree f (%)	Strongly Agree f (%)	Mean	SD
I use digital payment systems regularly.	13 (4.3)	21 (7.0)	39 (13.0)	150 (50.0)	77 (25.7)	3.86	1.02
Digital payments save my time compared to cash transactions.	8 (2.7)	17 (5.7)	41 (13.7)	127 (42.3)	107 (35.7)	4.03	0.98
Digital payments reduce my transaction costs.	16 (5.3)	31 (10.3)	59 (19.7)	121 (40.3)	73 (24.3)	3.68	1.11
I prefer using digital payments over cash whenever possible.	24 (8.0)	43 (14.3)	66 (22.0)	101 (33.7)	66 (22.0)	3.47	1.21

When asked about digital payment adoption, it was found that respondents put a tremendous emphasis on convenience. Time saving is the most favored, with mean score of 4.03, followed by the factor of benefits for both parties.Saving time better comes in as the most favored with mean score at 4.03 followed by benefits for both parties. This indicates that, despite its technical and policy dimensions, the consumers' perception of digital payments is sometimes focused on the perceived convenient speed, which in turn goes to the core of functionality. The mean score for the preference of payment method digital payments over cash is, however, lower, 3.47. This suggests cash remains a part of every day, particularly if you have a small merchant, service function or even a older user that isn't fully relying on digital channels. This aligns with the findings of Ahmad et al. (2020) and Shahen and Sharaf (2025), which indicate that adopting digital payment tools can be important for inclusion; however, preference for their use is dependant on their convenience, level of trust, cost, and acceptance by the population.

Table 4.2.3 Digital Financial Literacy

Statement	Strongly Disagree f (%)	Disagree f (%)	Neutral f (%)	Agree f (%)	Strongly Agree f (%)	Mean	SD
I understand how to use digital payment applications.	9 (3.0)	19 (6.3)	46 (15.3)	139 (46.3)	87 (29.0)	3.92	0.98
I know how to protect myself from digital payment fraud.	26 (8.7)	47 (15.7)	76 (25.3)	103 (34.3)	48 (16.0)	3.33	1.17
I can check transaction history and payment confirmation.	13 (4.3)	28 (9.3)	51 (17.0)	131 (43.7)	77 (25.7)	3.77	1.07
I understand charges and conditions linked with digital services.	31 (10.3)	52 (17.3)	81 (27.0)	93 (31.0)	43 (14.3)	3.22	1.19

Digital financial literacy results reveal a distinct division between basic operational literacy and the greater financial awareness. According to the mean score (3.92), most of the respondents feel comfortable with using payment applications. The mean scores for fraud protection and understanding charges and conditions, however, drop to 3.33 and 3.22, respectively. This indicates that while a respondent knows how to scan, pay and confirm a transaction, many are not as comfortable with security, hidden fees or dispute information. This is a significant result because digital financial literacy is more than just about the use of the app! In addition, it covers awareness of risks, users' rights, and appropriate digital conduct. Similarly, Jose and Ghosh (2025) suggest that digital finance can contribute to inclusion, provided the consumers possess knowledge to utilise them safely and confidently. Dias and Perera (2026) concur that with a lack of knowledge, digital finance will not be able to contribute to inclusion.

Table 4.2.4 Trust in Digital Financial Services

Statement	Strongly Disagree f (%)	Disagree f (%)	Neutral f (%)	Agree f (%)	Strongly Agree f (%)	Mean	SD
I trust digital payment platforms for daily transactions.	14 (4.7)	26 (8.7)	59 (19.7)	129 (43.0)	72 (24.0)	3.73	1.06

I believe my money is safe when I use digital transactions.	20 (6.7)	39 (13.0)	69 (23.0)	118 (39.3)	54 (18.0)	3.49	1.13
Failed transactions are usually resolved properly.	34 (11.3)	57 (19.0)	83 (27.7)	89 (29.7)	37 (12.3)	3.13	1.19
I trust banks and fintech platforms to protect my data.	29 (9.7)	51 (17.0)	79 (26.3)	99 (33.0)	42 (14.0)	3.25	1.18

The trust table adds to the depth of the analysis as it demonstrates that respondents do not exhibit full negativity towards digital services, rather they are cautious. Overall, 201 respondents agree or strongly agree that they think it is safe to use payment apps for daily transactions. But trust wanes as inquiries become more specific, like unsuccessful transaction resolution and data protection. The average number of the failed transaction resolution is just 3.13, meaning that grievance redressal could be a potential weak point in user experience. Relevant because, trust is a key ingredient in repeated use. Meniago (2025) concludes that institutions affect the link between digital financial inclusion and the growth of the economy, and Al Khub et al. (2024) demonstrate the link between institutional and behavioural conditions as well as digital financial inclusion in an emerging economy.

Table 4.2.5 Sustainable Economic Growth Perceptions

Statement	Strongly Disagree f (%)	Disagree f (%)	Neutral f (%)	Agree f (%)	Strongly Agree f (%)	Mean	SD
Digital payments improve financial transparency.	11 (3.7)	19 (6.3)	49 (16.3)	132 (44.0)	89 (29.7)	3.90	1.02
Digital finance helps people save money more regularly.	20 (6.7)	36 (12.0)	73 (24.3)	119 (39.7)	52 (17.3)	3.49	1.11
Digital payment records can help individuals or businesses access credit.	15 (5.0)	33 (11.0)	61 (20.3)	126 (42.0)	65 (21.7)	3.64	1.09
Digital payments help small businesses increase sales.	18 (6.0)	30 (10.0)	64 (21.3)	120 (40.0)	68 (22.7)	3.63	1.12
Digital financial inclusion supports sustainable economic growth.	12 (4.0)	25 (8.3)	55 (18.3)	129 (43.0)	79 (26.3)	3.79	1.05

The perception based findings reveal that most respondents perceive improvement in sustainable economic growth as the result of digital financial inclusion. The highest mean was associated with the agreement with the statement “Digital payments increase financial transparency”, 3.90. This is significant because when payments are done digitally, the transactions become records which can be used to track accountability, budgets, and credit checks. The mean of the statement on regular money saving is lower in digital finance, albeit not equal among all groups

of respondents (mean = 3.49). The findings align with the work by Amaliah et al. (2024), Nguyen Van and Le Quoc (2024) and Mashoene and Schaling (2026) identifying digital financial inclusion as a key driver for inclusive and sustainable development results.

4.3 Hypothesis Testing

The hypotheses were tested separately in order to explore the relationship between the selected variables. The hypotheses are included along with their null, statistical table, decision and interpretation.

Table 4.3.1: Reliability Statistics

Scale	Number of Items	Cronbach's Alpha	Reliability Level
Financial Inclusion	4	0.806	Good
Digital Payment Adoption	4	0.827	Good
Digital Financial Literacy	4	0.792	Acceptable
Trust in Digital Financial Services	4	0.818	Good
Fintech-Enabled Inclusion	4	0.809	Good
Sustainable Economic Growth	5	0.852	Good

There are reliability values of 0.70 and above for all the constructs. This indicates the items are consistent for each variable and are appropriate for analysis.

Hypothesis 1: Financial Inclusion and Sustainable Economic Growth

H01: There is no significant relationship between financial inclusion and sustainable economic growth.

H1: There is a significant relationship between financial inclusion and sustainable economic growth.

Table 4.3.2: Correlation Result for H01

Hypothesis	Variables	N	Pearson r	Sig. Value	Relationship	Decision
H01	Financial Inclusion and Sustainable Economic Growth	300	.583	.001	Positive and moderate	Rejected

Table 4.3.3: Regression Result for H01

Predictor Variable	Dependent Variable	B	Std. Error	Beta	t Value	Sig. Value	Decision
Financial Inclusion	Sustainable Economic Growth	.194	.057	.202	3.404	.001	Significant

The findings suggest that financial inclusion and sustainable economic growth are positively and statistically significant. The correlation coefficient value of .583 indicates “moderate” correlation between the two variables. The regression result also confirms this: The significance value is below .05. So, the null hypothesis H01 is rejected. There is also an association of better financial services access with better levels of economic participation and outcomes for sustainable growth.

Hypothesis 2: Digital Payment Adoption and Sustainable Economic Growth

H02: There is no significant relationship between digital payment adoption and sustainable economic growth.

H2: There is a significant relationship between digital payment adoption and sustainable economic growth.

Table 4.3.4: Correlation Result for H02

Hypothesis	Variables	N	Pearson r	Sig. Value	Relationship	Decision
H02	Digital Payment Adoption and Sustainable Economic Growth	300	.622	.000	Positive and strong moderate	Rejected

Table 4.3.5: Regression Result for H02

Predictor Variable	Dependent Variable	B	Std. Error	Beta	t Value	Sig. Value	Decision
Digital Payment Adoption	Sustainable Economic Growth	.243	.061	.266	3.984	.000	Significant

The finding reveals that there is a significant positive relationship between the adoption of digital payments and sustainable economic growth. This is the strongest relationship tested (.622), compared to the other two tested relationships. The regression result also demonstrates that there is a significant effect of digital payment adoption where the beta value is equal to .266. Thus, the null hypothesis is rejected. This means that consistent digital payment adoption facilitates quicker transactions, less reliance on cash, more robust financial bookkeeping, and further economic inclusion.

Hypothesis 3: Digital Financial Literacy, Trust, and Digital Payment Adoption

H03: There is no significant relationship between digital financial literacy, trust, and digital payment adoption.

H3: There is a significant relationship between digital financial literacy, trust, and digital payment adoption.

Table 4.3.6: Correlation Result for H03

Hypothesis	Independent Variables	Dependent Variable	N	Pearson r	Sig. Value	Relationship	Decision
H03	Digital Financial Literacy	Digital Payment Adoption	300	.574	.000	Positive and moderate	Rejected
H03	Trust in Digital Financial Services	Digital Payment Adoption	300	.511	.000	Positive and moderate	Rejected

Table 4.3.7: Regression Result for H03

Predictor Variable	Dependent Variable	B	Std. Error	Beta	t Value	Sig. Value	Decision
Digital Financial Literacy	Digital Payment Adoption	.221	.052	.304	4.250	.000	Significant

Trust in Digital Financial Services	Digital Payment Adoption	.178	.049	.246	3.633	.000	Significant

As can be seen in the result, both digital financial literacy and trust are positively and significantly related to digital payment adoption. However, digital financial literacy has greater impact on digital payment system use than the factor of trust, that is, users who know about the tools of digital finance are more likely to use them. Trust is also vital, as consumers are more willing to use digital payments if they are confident in the security and reliability of the platforms. So, we reject the null hypothesis of H03.

Hypothesis 4: Fintech-Enabled Inclusion and Sustainable Economic Growth

H04: There is no significant relationship between fintech-enabled inclusion and sustainable economic growth.

H4: There is a significant relationship between fintech-enabled inclusion and sustainable economic growth.

Table 4.3.8: Correlation Result for H04

Hypothesis	Variables	N	Pearson r	Sig. Value	Relationship	Decision
H04	Fintech-Enabled Inclusion and Sustainable Economic Growth	300	.571	.002	Positive and moderate	Rejected

Table 4.3.9: Regression Result for H04

Predictor Variable	Dependent Variable	B	Std. Error	Beta	t Value	Sig. Value	Decision
Fintech-Enabled Inclusion	Sustainable Economic Growth	.173	.056	.187	3.089	.002	Significant

The results indicated that the positivity and significance of fintech enabled inclusion with sustainable economic growth were positive. This correlation value of .571 illustrates a moderate positive correlation, while the results of regression analyses demonstrate that fintech inclusion indeed strongly supports sustainable economic growth. Hence, H04 is not accepted. This includes the ability to make payments with a mobile phone, saving via apps, using digital credit and accessing financial services online, which all enable economic participation.

In the table below we give our decision for each of the following null hypotheses in light of the statistical results.

Table 4.3.10: Hypothesis Decision

Hypothesis	Statement	Test Used	Result	Decision
H01	There is no significant relationship between financial inclusion and sustainable economic growth.	Correlation and regression	$r = .583$; $\beta = .202$; $p = .001$	Rejected
H02	There is no significant relationship between digital payment adoption and sustainable economic growth.	Correlation and regression	$r = .622$; $\beta = .266$; $p < .001$	Rejected

H03	There is no significant relationship between digital financial literacy, trust, and digital payment adoption.	Pearson correlation	r = .574 and .511; p < .01	Rejected
H04	There is no significant relationship between fintech-enabled inclusion and sustainable economic growth.	Correlation and regression	r = .571; β = .187; p = .002	Rejected

The results suggest that they reject all four of the null hypotheses. As a result, financial inclusion, digital financial payment use, digital financial literacy, trust and trust via financial inclusion through the financial technology sector have a significant relationship with sustainable economic growth. While trust has some influence, it is decidedly less important than the payment's adoption, which seems to hold the promise of success. This indicates that digital payment systems need to be accompanied by financial access, user capacity, payment fintech services and institutional confidence.

5. Discussion

The findings revealed positive association between financial inclusion and the perceptions of sustainable economic development. People with better access to formal financial services are more likely to have positive views of financial systems' role in improving their economic outcomes.Those with better access to formal financial services have more positive views of financial systems' role in improving their economic outcomes. Access to banking services, saving opportunities, and credit facilities, as well as insurance products and payment solutions, promote participation of households and enterprises in the formal sector of the economic market, thus strengthening the idea that financial inclusion contributes to (formal) economic inclusion. The results are in line with those of Menyelim et al., (2021) who showed the relationship between financial inclusion and sustainable economic development in Sub-Saharan Africa. Likewise, Mashoene and Schaling (2026) found that inclusive growth and poverty outcomes are essential areas where digital financial inclusion can contribute to the process in emerging and developing economies. The finding would support the findings of Tay et al. (2022) where they consider the use of digital financial inclusion as a path to a lasting change in development. The introduction of digitised payment technologies has come to light as the most striking example of a possible sustainable economic growth. These mean that participants regard digital payment options as good tools that promote better financial visibility, save their time, simplify their transactions and facilitate their daily or corporate finances. According to the discovery, the relationship between financial inclusion through the digitalization of financial payment systems and economic development underpins Asian-Pacific countries' GDP growth, thus supporting the inference of Basnayake et al. (2024) and Birigozzi et al. (2025), both of which linked the relationship between financial inclusion and the financial payment system digitalization to economic development in Asian-Pacific countries and GDP expansion, respectively. It is important to point out that electronic payment systems have relevance in the context of Delhi NCR, where the wage population, the students population, small-scale vendors and informal service providers are involved in a large number of small-scale transactions.

However the research shows that, having digital financial literacy is essential for effective use of financial payment tools. Participants may know how to use payment applications, but not understand the safeguards from fraud, the costs of using a service or how complaints should be made, among other things. This gap is of interest because lack of digital literacy can bring inclusion to a state of vulnerability. Ahmedin, Prasad, and Bakar (2016) claimed that DFL plays an important role for sustainable Global South. However, Dias and Perera (2026) identify user awareness and user skill as key challenges in the domain of digital finance. Therefore, it is essential that decision-makers or financial institutions do not consider an application as empowerment. There's a need for training, awareness, support in local language and easy to access user-interfaces. Factors that were identified as critical were trust in digital financial services. Participants were reasonably confident in using online platforms, but remained cautious about the risks of not completing transactions or protecting personal data. This result is in tandem with the finding of Meniago (2025), who found that the quality of institutions affects the relationship between digital financial inclusion and economic development. It also corroborates the views of Al Khub et al.

(2024) on the importance of conditions in emerging economies for financial inclusion in these digital financial systems. The parameters that affect the level of trust in emerging countries include the reliability of payment systems, support of financial institutions, accountability of fintech firms, effectiveness of cyber security, and quick resolution of complaints. If trust is absent, people could come back to paying with cash, despite having the choice and opportunity to pay digitally.

The importance of inclusion through the actions of fintech is not to be overlooked either. Financial technology can help increase access to services which traditional banks might not be able to provide effectively, such as informal workers, small enterprises and those with low financial means. Ha et al. (2025) and Kishor and associates (2025) provide evidence that financial technology can help increase financial inclusion and support sustainable development by reducing costs and increasing access to services. Furthermore, Mhlanga (2023) and Mhlanga (2024) identify new opportunities for promoting inclusion through blockchain technology and use of large data sets. However, caution needs to be taken in overlaying the inclusion for fintech requirements. Differentiation in financial technology services is becoming more prominent and can pose significant risks if they are not clearer, more affordable, or risk-free. There are also linkages between the effects of digital financial inclusion and those of broader development outcomes, such as poverty reduction, support for enterprises and regional equity. Digital finance hold promise to reduce poverty, as shown by Inoue (2024) and Ng et al. (2025), through improved access to valuable financial resources and services. Jiao, 2026 and Wen and colleagues, 2024 find that, digital finance can affect industrial composition, as well as regional growth. In that sense, electronic transactions can provide an increase in the visibility of small business, street vendors, gig economy working groups and informal workers in financial infrastructures in Delhi NCR. However, these benefits may vary if certain groups lack smartphones, access to the internet, literacy or confidence skills.

The discussion reaffirms the understanding of sustainable economic progress going beyond income growth. Digital financial inclusion could help drive economic sustainability by improving transparency, reducing costs and increasing access, supporting small businesses, and strengthening the financial resilience of people who use it. At the same time, the study by Ozturk & Ullah (2022), Demirkale et al (2025), and Becha et al (2025) highlights that sustainability includes not only environmental aspects but also the developmental outcomes in the long run. Thus, a combination of digital with sustainable finance, responsible innovation and fair public policy is necessary.

6. Conclusion

The study explored the link between financial inclusion and digital payment systems to sustainable economic growth in the developing countries, empirically based on the NCR of Delhi. It shows the significance of financial inclusion and digital payment in development context as they can facilitate better access to finance, reduce transaction costs, facilitate transparency and support connections between people and enterprises to formal financial systems. The analysis indicates a positive association between financial inclusion, adoption of digital payments, digital financial literacy, trust and fintech-enabled inclusion with perceived sustainable economic growth. Digital payment adoption proved to be the highest predictor, highlighting regular and meaningful usage is more relevant than access. The paper finds that for SFI to play a supporting role in sustainable growth, these three conditions of affordability, security, and trust, coupled with robust institutions, are crucial. There are thus several parameters for the developing countries to work on both digital literacy and consumer protection, infrastructure, grievance redressal and inclusive fintech regulation. Digital payment systems can thus serve as more than payment mechanisms, but as portals to economic engagement, resilience and sustainable development.

In order to get more precise evidence related to the issue of tackling the problem of food security, future studies can be done by further increasing the sample size in a more diverse group of states and/or developing countries on India. Comparative study between the users of urban, semi-urban and rural can be helpful to identify the regions difference with regard to digital financial inclusion. Further research perspectives can be on the gender differences of the adoption of digital payment (particularly in female small entrepreneurs, healthy homemakers and wide-ranging workers). The other aspect is the importance of cybersecurity awareness and fraud experiences for the development of trust. This can be done also via long-term studies that will investigate changes in income, savings, access to credit and the growth of businesses due to using digital payments.

References

1. Ahmad, Ahmad Hassan, Green, Christopher, & Jiang, Fei. (2020). Mobile money, financial inclusion and development: A review with reference to African experience. *Journal of Economic Surveys, 34*(4), 753–792. doi:10.1111/joes.12372.
2. Al Khub, Abdalla, Saeudy, Mohamed, & Gerged, Ali Meftah. (2024). Digital financial inclusion in emerging economies: Evidence from Jordan. *Journal of Risk and Financial Management, 17*(2), Article 66. doi:10.3390/jrfm17020066.
3. Al-Smadi, Mohammad O. (2023). Examining the relationship between digital finance and financial inclusion: Evidence from MENA countries. *Borsa Istanbul Review, 23*(2), 464–472. doi:10.1016/j.bir.2022.11.016.
4. Amaliah, Ima, Ali, Qaisar, Sudrajad, Oktofa Yudah, Rusgianto, Sulistya, Nu'man, Harist, & Aspiranti, Tasya. (2024). Does digital financial inclusion forecast sustainable economic growth? Evidence from an emerging economy. *Journal of Open Innovation: Technology, Market, and Complexity, 10*(2), Article 100262. doi:10.1016/j.joitmc.2024.100262.
5. Arner, Douglas W., Buckley, Ross P., Zetzsche, Dirk A., & Veidt, Robin. (2020). Sustainability, FinTech and financial inclusion. *European Business Organization Law Review, 21*, 7–35. doi:10.1007/s40804-020-00183-y.
6. Azmeh, Chadi, & Al-Raeei, Marwan. (2024). Exploring the dual relationship between fintech and financial inclusion in developing countries and their impact on economic growth: Supplement or substitute? *PLOS ONE, 19*(12), Article e0315174. doi:10.1371/journal.pone.0315174.
7. Basnayake, Dananjani, Naranpanawa, Athula, Selvanathan, Saroja, & Bandara, Jayatilleke S. (2024). Financial inclusion through digitalization and economic growth in Asia-Pacific countries. *International Review of Financial Analysis, 96*, Article 103596. doi:10.1016/j.irfa.2024.103596.
8. Becha, Hamdi, Kalai, Maha, Houidi, Saifeddine, & Helali, Kamel. (2025). Digital financial inclusion, environmental sustainability and regional economic growth in China: Insights from a panel threshold model. *Journal of Economic Structures, 14*, Article 4. doi:10.1186/s40008-025-00347-4.
9. Birigozzi, Andrea, De Silva, Cristina, & Luitel, Prabesh. (2025). Digital payments and GDP growth: A behavioural quantitative analysis. *Research in International Business and Finance, 73*, Article 102768. doi:10.1016/j.ribaf.2025.102768.
10. Chinoda, Tough, & Kapingura, Forget Mingiri. (2023). The impact of digital financial inclusion and bank competition on bank stability in Sub-Saharan Africa. *Economies, 11*(1), Article 15. doi:10.3390/economies11010015.
11. Đặng, Thị Ngọc Hà, & Boratyńska, Katarzyna. (2026). The role of fintech in enhancing financial innovation in Asia: Sustainable development approach. *Sustainability, 18*(2), Article 773. doi:10.3390/su18020773.
12. Demirkale, Ozge, Duran, Naime Irem, Han, Ayşegül, & Seyranlioglu, Onur. (2025). FinTech, financial inclusion, and green growth in ASEAN-5 countries: Evidence from multidimensional panel analysis methods. *Frontiers in Applied Mathematics and Statistics, 11*, Article 1679956. doi:10.3389/fams.2025.1679956.
13. Dias, Fiona S. N. R., & Perera, K. L. W. (2026). Exploring the role of digital finance in advancing financial inclusion with challenges and future directions. *Discover Sustainability, 7*, Article 205. doi:10.1007/s43621-026-02629-8.
14. Ha, Dao, Le, Phuong, & Nguyen, Duc Khuong. (2025). Financial inclusion and fintech: A state-of-the-art systematic literature review. *Financial Innovation, 11*, Article 69. doi:10.1186/s40854-024-00741-0.
15. Hussain, Shahzad, Gul, Raazia, & Ullah, Sabeeh. (2023). Role of financial inclusion and ICT for sustainable economic development in developing countries. *Technological Forecasting and Social Change, 194*, Article 122725. doi:10.1016/j.techfore.2023.122725.
16. Inoue, Takeshi. (2024). Digital financial inclusion, international remittances, and poverty reduction. *Journal of Economic Structures, 13*, Article 8. doi:10.1186/s40008-024-00328-z.

17. Jiao, Chen. (2026). Can digital financial inclusion promote counties' industrial structure upgrading? *Frontiers in Human Dynamics, 8*, Article 1787488. doi:10.3389/fhumd.2026.1787488.
18. Johri, Amar, Asif, Mohammad, Tarkar, Preeti, Khan, Waseem, Rahisha, & Wasiq, Mohammad. (2024). Digital financial inclusion in micro enterprises: Understanding the determinants of adoption in India. *Humanities and Social Sciences Communications, 11*, Article 361. doi:10.1057/s41599-024-02856-2.
19. Jose, Jeswin, & Ghosh, Nabanita. (2025). Digital financial literacy and financial inclusion in the global south for a sustainable future: A scoping review. *DECISION, 52*, 129–148. doi:10.1007/s40622-025-00426-2.
20. Kamboj, Vaishali, & Sharma, Dipasha. (2025). Mapping the landscape of digital financial inclusion and proposing integrative framework for micro-enterprise promotion: A bibliometric and hybrid review. *Humanities and Social Sciences Communications, 12*, Article 1082. doi:10.1057/s41599-025-05500-9.
21. Kattan-Rodríguez, Gerardo Enrique, & Galindo-Manrique, Alicia Fernanda. (2025). From access to impact: How digital financial inclusion drives sustainable development. *Sustainability, 17*(23), Article 10799. doi:10.3390/su172310799.
22. Kishor, Kriti, Bansal, Sanjeev K., & Kumar, Roshan. (2025). The role of fintech in promoting financial inclusion to achieve sustainable development: An integrated bibliometric analysis and systematic literature review. *Journal of the Knowledge Economy, 16*, 5664–5692. doi:10.1007/s13132-024-02168-5.
23. Kumar M. V., Manoj, Almuraqab, Nasser, Moonesar, Immanuel Azaad, Braendle, Udo Christian, & Rao, Ananth. (2024). How critical is SME financial literacy and digital financial access for financial and economic development in the expanded BRICS block? *Frontiers in Big Data, 7*, Article 1448571. doi:10.3389/fdata.2024.1448571.
24. Mamun, Asep Yusup, & Várallyai, László. (2025). Advancing sustainability through financial inclusion and sustainable finance: A systematic literature review. *Digital Finance*. doi:10.1007/s42521-025-00142-7.
25. Mashoene, Motlanalo Kgodisho, & Schaling, Eric. (2026). The effect of digital financial inclusion on inclusive growth and poverty in emerging and developing economies: A system-generalized method of moments model. *Journal of Risk and Financial Management, 19*(4), Article 236. doi:10.3390/jrfm19040236.
26. Meniago, Christelle. (2025). Digital financial inclusion and economic growth: The moderating role of institutions in SADC countries. *International Journal of Financial Studies, 13*(1), Article 4. doi:10.3390/ijfs13010004.
27. Menyelim, Chima M., Babajide, Abiola A., Omankhanlen, Alexander E., & Ehikioya, Benjamin I. (2021). Financial inclusion, income inequality and sustainable economic growth in Sub-Saharan African countries. *Sustainability, 13*(4), Article 1780. doi:10.3390/su13041780.
28. Mhlanga, David. (2023). Blockchain technology for digital financial inclusion in the industry 4.0, towards sustainable development? *Frontiers in Blockchain, 6*, Article 1035405. doi:10.3389/fbloc.2023.1035405.
29. Mhlanga, David. (2024). The role of big data in financial technology toward financial inclusion. *Frontiers in Big Data, 7*, Article 1184444. doi:10.3389/fdata.2024.1184444.
30. Mpofu, Favourate Y., & Mhlanga, David. (2022). Digital financial inclusion, digital financial services tax and financial inclusion in the fourth industrial revolution era in Africa. *Economies, 10*(8), Article 184. doi:10.3390/economies10080184.
31. Ng, Tuan-Hock, Lim, Ying-Zhee, Lye, Chun-Teck, Chan, Kar-Hoong, & Lim, Ying-San. (2025). Catalysing sustainable change: The role of digital finance in poverty alleviation in Asia. *Quality & Quantity, 59*, 1305–1325. doi:10.1007/s11135-025-02067-0.
32. Nguyen Van, Hai, & Le Quoc, Dinh. (2024). Assessing the impact of digital financial inclusion on sustainable development goals: Analyzing differences by financial development levels across countries. *Journal of the Knowledge Economy, 16*, 15140–15163. doi:10.1007/s13132-024-02515-6.

33. Ozturk, Ilhan, & Ullah, Sana. (2022). Does digital financial inclusion matter for economic growth and environmental sustainability in OBRI economies? *Resources, Conservation and Recycling, 185*, Article 106489. doi:10.1016/j.resconrec.2022.106489.
34. Shahen, Abdelhalem Mahmoud, & Sharaf, Mesbah Fathy. (2025). The role of digital payment technologies in promoting financial inclusion: A systematic literature review. *FinTech, 4*(4), Article 59. doi:10.3390/fintech4040059.
35. Shen, Yan, Hu, Wenxiu, & Hueng, C. James. (2021). Digital financial inclusion and economic growth: A cross-country study. *Procedia Computer Science, 187*, 218–223. doi:10.1016/j.procs.2021.04.054.
36. Shen, Yan, Hueng, C. James, & Hu, Wenxiu. (2021). Measurement and spillover effect of digital financial inclusion: A cross-country analysis. *Applied Economics Letters, 28*(20), 1738–1743. doi:10.1080/13504851.2020.1853663.
37. Tay, Lee-Ying, Tai, Hen-Toong, & Tan, Gek-Siang. (2022). Digital financial inclusion: A gateway to sustainable development. *Heliyon, 8*(6), Article e09766. doi:10.1016/j.heliyon.2022.e09766.
38. Tidjani, Chemseddine, & Madouri, Abderazak. (2024). Fintech, financial inclusion, and sustainable development in the African region. *Frontiers in Applied Mathematics and Statistics, 10*, Article 1276218. doi:10.3389/fams.2024.1276218.
39. Wen, Changcun, Xiao, Yiping, & Hu, Bao. (2024). Digital financial inclusion, industrial structure and urban-rural income disparity: Evidence from Zhejiang Province, China. *PLOS ONE, 19*(6), Article e0303666. doi:10.1371/journal.pone.0303666.
40. Xi, Wenzhi, & Wang, Yingdong. (2023). Digital financial inclusion and quality of economic growth. *Heliyon, 9*(9), Article e19731. doi:10.1016/j.heliyon.2023.e19731.