Financial Technology Adoption and Sustainable Performance of SMES in Nigeria: A Literature Review of the Roles of Financial Inclusion and Financial Literacy

Ogar A. Cassius[1]PhD, Egede, David Aganyi[2] Abiji, Emmanuel Abiji,[3] Diwa, Damian Odu[4],
[1]Department of Business Administration,
University of Cross River State, Calabar –
Nigeria, Email: cassiusogar@unicross.edu.ng, +2347031380171
[2]Department of Business Administration,
University of Cross River State, Calabar –
Nigeria, Email: aganyidavid1@gmail.com, +2347085866808
[3]Department of Business Administration,
University of Cross River State, Calabar –
Nigeria, Email: emmanuelabiji@tmit-ogoja.edu.ng,
Orcid: https://orcid.org/0009-0000-9537-4811, +2347045392008
[4]Department of Business Administration,
University of Cross River State, Calabar –
Nigeria, Email: diwadamian@gmail.com, +2348062825201
https://doi.org/10.56201/ijssmr.vol.12no10.2026.pg494.513

Abstract
Financial technology is reshaping how small and medium-sized enterprises obtain finance, receive payments, manage transactions and interact with customers. In Nigeria, where SMEs frequently encounter restricted credit access, high transaction costs, weak financial records and infrastructural constraints, fintech offers potentially valuable routes to inclusion and improved business performance. This article critically reviews the extent and patterns of fintech adoption among Nigerian SMEs, evaluates its relationship with sustainable performance, and examines the roles of financial inclusion and financial literacy in this relationship. A critical narrative approach was adopted, with Nigerian empirical studies forming the primary evidence base and research from other emerging economies used for comparison. The literature indicates that adoption is concentrated in mobile transfers, digital banking and point-of-sale payments, while the uptake of digital credit, crowdfunding, insurance technology and integrated financial-management platforms remains uneven. Fintech can improve transaction efficiency, access to finance, customer reach, cash-flow management, resilience and business survival. However, access to technology does not automatically produce sustainable outcomes. Financial inclusion determines whether SMEs obtain useful and affordable financial services, while financial literacy influences product selection, responsible borrowing, risk management and the productive use of digital finance. Evidence remains limited by cross-sectional designs, inconsistent SME classifications and narrow performance measures. The article concludes that fintech supports sustainable SME performance when accompanied by meaningful financial inclusion, adequate financial literacy, reliable infrastructure, consumer protection and institutional support. It recommends capability-centred fintech policies, affordable digital finance and stronger longitudinal research.

Keywords: *financial inclusion; financial literacy; financial technology; Nigeria; SMEs; sustainable performance*

1.0 Introduction

Financial technology has emerged as an integral part of the modern business framework. Online payment systems, digital banking, lending, accounting, crowdfunding, and point of sales services are revolutionizing the payment processes, recordkeeping, and financing (Effiom & Edet, 2022; Łasak, 2022; Otonne & Ige, 2023). The significance of the above-mentioned changes is particularly evident when considering the needs of small and medium enterprises (SMEs) which often lack proper financing and support from the traditional institutions (Abiodun et al., 2024; Kyari et al., 2024). While SMEs are responsible for employment, investments, and economic productivity, they still face the global problem of financing gap worth trillions of dollars (Gherghina et al., 2020; International Finance Corporation, 2024). SMEs create jobs, promote entrepreneurship, build supply chains and facilitate regional development (Gherghina et al., 2020; Olaore et al., 2021). However, in the Nigerian context, they face the problems of variable costs, poor infrastructure, insufficient managerial capacities, and inadequate access to credit facilities (Augustine, 2025; Kyari et al., 2024; Olaore et al., 2021). Furthermore, many SMEs lack sufficient collateral, audited accounts, and transactions' records (Abiodun et al., 2024; Kyari et al., 2024).

It can address these challenges by reducing the cost of transactions and increasing accessibility to financial services. Payment methods that do not require any cash as well as mobile banking increase efficiency of settlements, and POS services help smaller enterprises to adjust to changing customer demands (Adah & Ezekiel, 2024; Effiom & Edet, 2022). Digital lenders may use transaction history and alternative data to assess business without any collateral, and electronic accounting improves the quality of documentation and financial control (Abiodun et al., 2024; Okafor et al., 2021). Finally, crowdfunding and other sources of entrepreneurial finance provide new sources of funding (Kyari et al., 2024; Łasak, 2022; Okafor et al., 2021). As a result, the impact of fintech in Nigeria concerns financial inclusion, bank intermediation, and SMEs' performance (Abiodun et al., 2024; Adah et al., 2025; Akande, 2023).

Access to financial technologies does not mean that they will be used in any way. An SME can accept some electronic transactions but fail to incorporate fintech in its financial management. The adoption process can be viewed as a multi-stage one which includes awareness, usage, reuse, and integration (Coffie et al., 2021; Olagoke et al., 2025). It was demonstrated that the adoption of mobile payments and mobile banking services in Nigeria is easier than the adoption of sophisticated lending and financial management services (Adah & Ezekiel, 2024; Imasuen & Osaro, 2025; Olatunji et al., 2025). Thus, adoption requires financial literacy, capability, financial inclusion, and institutional support (Gbadebo, 2025; Kurniasari et al., 2025; Mahyuzar et al., 2026). Sustainable performance in terms of SMEs refers to more than short-term gains in terms of profitability or sales increases. It includes survival, financial viability, continuity, adaptability, innovativeness, sociability, and environmentalism (Agboola et al., 2023; Asad et al., 2025; Campanella et al., 2026; Elmi et al., 2025; Pizzi et al., 2021; Waqar et al., 2025). With regard to Nigeria, the existing literature demonstrates that fintech is linked with performance improvements, greater inclusion, resilience, transformation, and entrepreneurship (Abiodun et al., 2024; Adah et al., 2025; Effiom & Edet, 2022; Imasuen & Osaro, 2025; Tijjani et al., 2025; Usman et al., 2025). This has also been shown by research carried out in Abuja, Ekiti, Lagos, and Ilorin (Adah & Ezekiel, 2024; Akande, 2023; Olagoke et al., 2025; Oladele, 2024; Olatunji et al., 2025). However, the evidence base is still somewhat scattered. Different approaches to measuring both fintech

adoption and performance are used, and the sample often includes microenterprises together with SMEs despite the differences between them in terms of resources and technology (European Commission, 2020; Lagüera González et al., 2024; Lima & Silva, 2024). Moreover, most of the studies are cross-sectional and rely on perceptions, thus making it difficult to establish whether fintech improves performance or high-performing companies simply have better opportunities to adopt it. Other factors include differences in infrastructure, company size, financial resources.

Financial inclusion and financial literacy play a major role in this association. Through financial technology, payment, savings, and credits could become more accessible to the owners (Adah et al., 2025; Adah & Ezekiel, 2024; Gozie-Onu et al., 2024; Okafor et al., 2021); yet, without proper knowledge on cost assessment, risk management, and protection of digital accounts, access will have little value for the entrepreneurs. Financial literacy allows entrepreneurs to choose appropriate services and turn the access into effective practices (Babajide et al., 2023; Gbadebo, 2025; Ogunwale et al., 2024). Literature suggests that the interaction of financial literacy and access could serve as a mediator or moderator in the relationship between fintech and performance (Hidayat-ur-Rehman, 2025; Kurniasari et al., 2025; Lontchi et al., 2023; Mahyuzar et al., 2026). Thus, the resource provided by fintech has considerable potential; yet, its value depends on the way in which SMEs incorporate it through financial knowledge and managerial skills (Babajide et al., 2023). Against this background, the main purpose of the article under consideration is the investigation of the adoption of fintech and performance of SMEs in Nigeria. Specifically, it:

1. Examines the extent and patterns of fintech adoption,
2. assesses the influence of adoption on sustainable SME performance, and
3. evaluates the roles of financial inclusion and financial literacy in connecting adoption with performance.

2.0 Literature Review

2.1 Conceptual Review

2.1.1 Concept of Financial Technology

FinTech refers to the application of digital technologies in designing, delivering, and managing financial services. The technologies refer to services offered by banks, fintech companies, telecommunication firms, and other digital platforms (Otonne & Ige, 2023; Sanga & Aziakpono, 2022). Fintech is more than mobile banking. It includes digital payment systems, online loans, crowdfunding platforms, electronic accounting, automated investments, blockchain technology, and credit scoring based on big data (Kyari et al., 2024; Łasak, 2022; Okafor et al., 2021). Fintech can improve the efficiency, accessibility, and cost of making financial transactions. It can also address the challenges that SMEs face under traditional financing because it usually demands collateral, audit statements, and long-standing credit histories. Digital platforms make it possible to automate payments and lending processes through the use of transaction history or alternative information for evaluating applicants (Abiodun et al., 2024; Augustine, 2025; Kyari et al., 2024).

2.1.2 Major Types of Fintech Used by SMEs

Digital payments can be considered the most popular fintech use by Nigerian SMEs. Bank transfers, mobile apps, USSD, payment gateways, and point-of-sale devices allow SMEs to receive payments and fulfill their obligations online. The adoption of the fintech use was increasing due to cashless transactions and increasing demand of consumers for easier ways to make payments (Damilola, 2022; Olagoke et al., 2025; Otonne & Ige, 2023). Digital payments usually become the first introduction of SMEs into fintech in sub-Saharan Africa (Coffie et al., 2021). However, one-

time usage needs to be differentiated from integration with the accounting system, stock control, and financial management software.

Digital banking allows entrepreneurs to get access to the account information, conduct transfers, and make bills payments without repeated trips to bank offices. It may save time and money for entrepreneurs, especially those from rural areas (Adah & Ezekiel, 2024; Damilola, 2022). Moreover, it creates records of transactions which may improve the visibility of the business and help to estimate its creditworthiness (Abiodun et al., 2024; Okafor et al., 2021). The contribution of digital banking to the issue of financial inclusion depends on its affordability, connectivity, relevance, and regular use (Adah et al., 2025; Gozie-Onu et al., 2024; Odumusor et al., 2024).

Digital credit platforms hold great promise in improving access to short-term credit through the use of electronic transactions and alternative data rather than collateral (Augustine, 2025; Kyari et al., 2024; Okafor et al., 2021). Access to credit could allow SMEs to purchase goods, settle debts and avoid disruption. Nevertheless, the cost of borrowing, short repayment periods, deduction of payment and penalties could affect cash flow. Hence, the usefulness of digital credit depends not only on its accessibility but on the cost of borrowing, purpose and repayment periods (Babajide et al., 2023; Hidayat-ur-Rehman, 2025). Digital credit platforms such as crowdfunding and peer-to-peer platforms could connect SMEs with investors other than banks (Łasak, 2022). There is little evidence on their usage in Nigeria and even less on insurance technology. However, the credibility of business information, the visibility of SMEs, investor confidence and regulation are important for their successful operation. Consequently, one should refrain from making any conclusions about their adoption rate.

Digital accounting platforms may bring about organizational effects by helping businesses invoice, plan budgets, track expenses, forecast cash flow and make reports. Continuous use of digital tools could improve financial management and the quality of information provided to banks (Abiodun et al., 2024; Babajide et al., 2023; Ogunwale et al., 2024; Okafor et al., 2021). However, all the above does not happen automatically. It requires consistent data input, good accounting skills and incorporation of accounting practices into the routine operations of the business. Financial literacy and organizational capability could define whether digital tools turn out to be helpful resources (Adebayo & Awosanya, 2026; Babajide et al., 2023; Gbadebo, 2025; Kurniasari et al., 2025).

2.1.3 Concept and Classification of SMEs in Nigeria

Typically, the SME definition refers to certain parameters, such as the number of employees, turnover, asset value, and a combination of the above-mentioned. Nonetheless, the threshold varies according to countries and institutions due to its particular goals related to the legal, statistical and other needs of the organization (European Commission, 2020; Lagüera González et al., 2024). The described variety affects sample selection and makes direct comparison of results impossible for researchers investigating microenterprises and larger firms (Lagüera González et al., 2024; Lima & Silva, 2024). Nigerian studies usually examine micro, small and medium-sized enterprises as a cluster without consideration of differences in resource endowments, management structure and technological development (Agboola et al., 2023; Imasuen & Osaro, 2025; Usman et al., 2025). Those make an impact on awareness, access, adoption and implementation of fintech in enterprises (Coffie et al., 2021; Olagoke et al., 2025). Therefore, it is necessary to emphasize that small businesses cannot be considered automatically as SMEs according to the officially adopted criteria (Lima & Silva, 2024). It can lead to the concealment of differences in access to funds, financial literacy, accounting practices and use of technologies. This may become one of the reasons why the relationship between the adoption of fintech and its impacts on the enterprise performance is

different for various studies (Agboola et al., 2023; Akande, 2023; Effiom & Edet, 2022; Imasuen & Osaro, 2025). For the purposes of this review, SMEs refer to independently managed enterprises that belong to small and medium-sized business categories according to the classification of Nigeria. In case when the studies unite SMEs with microenterprises, such methodology will be regarded as the limitation of the study. However, the terminology of "SME" and "MSME" will be kept when presenting each separate work as a conceptual one.

2.1.4 Fintech Adoption

Adoption of fintech is the adoption by the firm to begin using and gradually integrating financial digital services in their operations. The adoption goes beyond initial adoption or occasional use to incorporate frequency, regularity, range of services, and ease of incorporating the fintech into the processes (Coffie et al., 2021; Olagoke et al., 2025). Adoption will not result in performance improvement because of access, but by combining fintech with the relevant financial, management, and organizational competencies (Babajide et al., 2023).

The adoption process may progress from being aware and having access, use, continued use, and finally, to full integration. With integration, fintech will be used for purposes such as financial planning, payment services, customer service, accounting, credit management, and investment decision making (Abiodun et al., 2024; Olatunji et al., 2025). The progression from one stage to another will be influenced by suitability of technology, organizational readiness, infrastructure, regulation, and institutional influence (Coffie et al., 2021). This is what distinguishes incidental from the mature use of technology. Just having bank transfers or using a lending application cannot be considered evidence of a business having grown its digital financial capabilities. Further development of such practices depends on financial literacy, managerial expertise, and proper service access (Adebayo & Awosanya, 2026; Gbadebo, 2025; Hidayat-ur-Rehman, 2025; Kurniasari et al., 2025). Research in Nigeria shows that there are differences in the adoption of different services, regions, and sectors (Olagoke et al., 2025; Olatunji et al., 2025; Usman et al., 2025). Fintech is related to financial inclusion and business transformation and performance in the existing research (Adah et al., 2025; Akande, 2023; Imasuen & Osaro, 2025). Therefore, its depth depends on firm size, firm formalization, infrastructure, geographical region, and management capability (Coffie et al., 2021; Olagoke et al., 2025; Usman et al., 2025). Therefore, studies need to distinguish between awareness, access, initial, and continuing use and organization of adoption.

2.1.5 Financial Inclusion

Financial inclusion is the provision of affordable, appropriate, and accessible financial services including payments, savings, loans, insurance, and investments (Adah & Ezekiel, 2024; Gozie-Onu et al., 2024; Odumusor et al., 2024). The mere availability of financial services does not equate with financial inclusion because unused accounts, exorbitant interest rates, and inappropriate products fail to qualify. Regular utilization and the potential to benefit economically from financial services are key criteria for the meaningful inclusion (Adah et al., 2025; Akande, 2023). Fintech can help in fostering inclusion through elimination of geographical and documentation barriers, reduction of transaction costs, and creation of e-financial records. Payment transfers, mobile banking, and peer-to-peer lending allow small businesses to make transactions and borrow funds without being limited only to branch operations and collateral-based lending (Abiodun et al., 2024; Damilola, 2022; Kyari et al., 2024). Electronic transaction histories could also overcome the problem of asymmetric information regarding a firm's financial flows and activities (Abiodun et al., 2024; Okafor et al., 2021).

Studies carried out in Nigeria reveal that fintech positively affects financial inclusion of small businesses in Abuja, Ekiti State, and the informal sector (Adah et al., 2025; Adah & Ezekiel, 2024; Akande, 2023; Usman et al., 2025). National studies show similar associations despite variability of the population of studies, services provided, and measurement methods (Gozie-Onu et al., 2024; Odumusor et al., 2024). Technological innovations have also been found to be related to financial deepening and increased access to financing for SMEs across Africa (Coffie et al., 2021; Sanga & Aziakpono, 2022). However, the conditions under which inclusion takes place matter. Financial services need to match the cash flow cycle of a business, have clear pricing policies, and ensure reliable protection of consumers. Exorbitant fees, unsuitable terms of payment, malfunction of platforms, and fraudulent activity could turn digital access into mere inclusion (Adebayo & Awosanya, 2026; Babajide et al., 2023; Hidayat-ur-Rehman, 2025). Easy access to credit can also be detrimental to the sustainability of a business if one cannot evaluate its cost and match the repayments to income levels.

2.1.6 Financial Literacy and Digital Financial Literacy

In its turn, financial literacy refers to knowledge and skills which are necessary for understanding financial principles, analysis of financial products, management of finances and making decisions related to money (Babajide et al., 2023; Gbadebo, 2025; Ogunwale et al., 2024). Such abilities are especially significant in cases when one individual makes all important decisions and manages both personal and entrepreneurial finances. Digital financial literacy can be described as an ability to use technological products in a safe and efficient way. The comparison of fees of a platform, protection of personal data, detection of frauds, authentication of transactions and the analysis of potential risks associated with online payments and credits become the part of digital financial literacy (Adebayo & Awosanya, 2026; Coffie et al., 2021; Hidayat-ur-Rehman, 2025). In this context, digital financial literacy involves both financial literacy and technical skills.

Knowledge alone is not enough for entrepreneurs to make decisions about their financial management. For instance, an entrepreneur may have information about interest rates but he/she is unable to compare all expenses related to digital loans. At the same time, the ability to use a banking application effectively does not necessarily mean that an entrepreneur is able to make good decisions regarding borrowing (Babajide et al., 2023; Gbadebo, 2025).

Entrepreneurial financial literacy is able to define whether the result of fintech solutions will be positive or negative for entrepreneurs. Financially literate entrepreneurs are likely to be able to compare products and to detect hidden fees, choose the right repayment period and to use transactional records for budgeting and applications for credit (Adebayo & Awosanya, 2026; Hidayat-ur-Rehman, 2025; Kurniasari et al., 2025).

2.1.7 Sustainable Performance of SMEs

Performance sustainability for small and medium-sized enterprises refers to the ability of the enterprise to remain economically viable, operate consistently, be adaptive, and create value without jeopardizing its future chances. It goes beyond profitability or sales growth but rather includes financial sustainability, innovativeness, competitiveness, adaptability, and responsible enterprise conduct (Asad et al., 2025; Campanella et al., 2026; Elmi et al., 2025; Pizzi et al., 2021). The term financial sustainability entails making enough money, controlling expenses, retaining liquidity, and fulfilling financial obligations. Fintech might help achieve that through efficient transaction management and record-keeping and credit provision (Abiodun et al., 2024; Augustine, 2025; Kyari et al., 2024). Financial sustainability and competence of management in borrowing,

managing, and repaying borrowed money would decide how that will be done (Babajide et al., 2023; Gbadebo, 2025; Hidayat-ur-Rehman, 2025).

Operational sustainability entails effective business processes, delivery of services and products, and continuation of crucial activities. Digital payments and other fintech services can help achieve financial sustainability and access to vital services through effective financial management (Effiom & Edet, 2022; Olatunji et al., 2025; Otonne & Ige, 2023). The benefits of using fintech in operations are achieved in case of reliable infrastructure, consistency of usage, and integration of the technology in business processes. In addition, fintech has been connected to financial inclusion and operational resilience in Nigeria (Usman et al., 2025).

Strategic sustainability comprises innovation, learning, adaptability, and competitiveness. In terms of resources, fintech is viewed as an enabler rather than a self-evident basis of advantage. The value of fintech depends on its integration with financial knowledge, managerial skills, and organizational capabilities of SMEs (Babajide et al., 2023; Kurniasari et al., 2025; Ogunwale et al., 2024). Likewise, resilience implies ability to absorb disruptions, adjust to them, and recover after economic or technological shocks. Fintech can contribute to that process but also introduce new risks related to finances, safety, and infrastructure (Agboola et al., 2023; Asad et al., 2025; Usman et al., 2025). Social sustainability includes employment, workers' welfare, and social contribution. SMEs promote development at a local level by means of innovation, entrepreneurship, and job generation (Gherghina et al., 2020; Olaore et al., 2021). Fintech can improve such contribution through extending access to finances; however, any gains in inclusion or growth do not necessarily mean better-quality employment or well-being of workers (Akande, 2023; Odumusor et al., 2024).

Environmental sustainability involves proper use of natural resources and environmentally-friendly business practices. Fintech can contribute to promotion of green finance, circular economy and sustainable business models (Faloye & Adebanjo, 2025; Pizzi et al., 2021; Waqar et al., 2025). However, environmental effects are hardly ever measured in the context of Nigerian studies.

Dimensions discussed above should not be considered equivalent. Growth can take place without profits and resilience, whereas survival remains a bare minimum for sustainability (Agboola et al., 2023). Research in the field tends to evaluate financial and operational outcomes more consistently than social and environmental ones (Asad et al., 2025; Campanella et al., 2026; Pizzi et al., 2021; Waqar et al., 2025). Therefore, it is important to define the specific dimension when evaluating positive effects.

2.1.8 Extent and Patterns of Fintech Adoption among Nigerian SMEs

The adoption of fintech solutions by Nigerian SMEs is becoming more common but uneven. Payment technologies dominate due to the relevance of their functions, relative simplicity, and customer convenience (Damilola, 2022; Effiom & Edet, 2022; Olagoke et al., 2025; Otonne & Ige, 2023). For that reason, mobile transfers, digital banking, and point-of-sales are more attractive options than crowdfunding, insurance technology, and integrated financial management systems. Nonetheless, the current literature provides no representative results for fintech adoption levels.

There is considerable interest in fintech at the regional level as well. The works on the subject conducted in Abuja are concerned with digital financial inclusion (Adah & Ezekiel, 2024; Adah et al., 2025). In Ekiti, the link between fintech/inclusion and the performance of SMEs is discussed (Akande, 2023; Oladele, 2024). In Lagos, scholars focus on the digitalisation of financial services, technological change, and financial literacy (Adebayo & Awosanya, 2026; Olatunji et al., 2025; Olorunnisola et al., 2024). There is some research on Benin City, Ilorin, and the north-eastern part

of Nigeria (Imasuen & Osaro, 2025; Olagoke et al., 2025; Tijjani et al., 2025). The differences in geography, sample, enterprise classification, and adoption metrics prevent the development of generalisable nationwide results.

Moreover, fintech adoption differs depending on applications. Mobile payments require low entry barriers and provide fast returns. Digital credit involves the necessity of building trust and evaluating costs and repayment (Augustine, 2025; Babajide et al., 2023; Kyari et al., 2024). Crowdfunding requires online visibility and trust of investors, and digital accounting is dependent on regular bookkeeping and basic knowledge of accounting (Łasak, 2022; Ogunwale et al., 2024). For that reason, an SME can start using digital payments without implementing an integrated financial management system.

Financial literacy explains the differences in the degree of fintech adoption. Business owners who understand fees, credit terms, accounting, and financial risk management are in a better position to leverage more fintech products (Babajide et al., 2023; Gbadebo, 2025; Hidayat-ur-Rehman, 2025). Financial literacy can also determine how adoption translates into growth and sustainability (Adebayo & Awosanya, 2026; Kurniasari et al., 2025; Lontchi et al., 2023).

The enterprise size is another factor affecting adoption. Micro-firms often use personal accounts and informal accounting, while medium firms use dedicated staff and more formal accounting systems. Grouping micro-firms and small- and medium-sized enterprises as one category of MSMEs ignores diversity in terms of their preparedness, financing needs, and behavior during adoption (Agboola et al., 2023; Imasuen & Osaro, 2025; Lima & Silva, 2024). Moreover, each industry has its needs: retailers need payment systems, manufacturers require working capital finance and accounting, and agricultural businesses face issues with seasonality and poor connectivity. Unfortunately, current research evidence from Nigeria does not provide a basis for making specific comparison across sectors.

Another shortcoming is the lack of distinction between awareness, registration, adoption, usage, and institutionalization (Akande, 2023; Olagoke et al., 2025; Olatunji et al., 2025). Further studies must adopt a view of the adoption process as maturation, which includes awareness and access, trial, sustained use, institutionalization, and finally strategic use of technology. This will help researchers to find out if more substantial adoption leads to better results and will consider the fact that technology becomes useful only when it is combined with financial literacy, well-established business practices, and other resources (Babajide et al., 2023).

2.1.9 Fintech Adoption and Sustainable SME Performance

However, despite growth, the use of fintech innovations is quite uneven. The most common ones are the fundamental payment instruments as they help resolve immediate problems, provide convenience, and correspond to the clients' demands (Damilola, 2022; Effiom & Edet, 2022; Olagoke et al., 2025; Otonne & Ige, 2023). For this reason, mobile money transfer and payment, digital banking, and point-of-sales are more popular than crowdfunding, insurtech, and integrated finance management systems. However, there is no information about nationally representative adoption rates.

The regional research shows that the use of fintech innovations in Nigeria is rather extensive and heterogeneous. The research conducted in Abuja focuses on digital financial inclusion (Adah & Ezekiel, 2024; Adah et al., 2025), while studies carried out in Ekiti connect fintech with the performance of the SMEs (Akande, 2023; Oladele, 2024). In Lagos, the focus is made on the digitization of financial services, financial literacy, and enterprise performance (Adebayo & Awosanya, 2026; Olatunji et al., 2025; Olorunnisola et al., 2024). The research also includes

studies devoted to Benin City, Ilorin, and the north-eastern region (Imasuen & Osaro, 2025; Olagoke et al., 2025; Tijjani et al., 2025). It is important to note that due to the variations in sampling, classification of enterprises, and measurement, national comparison becomes challenging. The variation in adoption is observed depending on the application. The adoption of the digital payment is characterized by low entry barrier and immediate benefits while the digital credit is dependent on the trust and ability to calculate cost and repayments (Augustine, 2025; Babajide et al., 2023; Kyari et al., 2024). The crowdfunding depends on the digital presence and investment confidence while digital accounting depends on the constant record-keeping and the basic accounting skills (Łasak, 2022; Ogunwale et al., 2024). Hence, the adoption of the payment instruments may occur without integration into the digital financial system. Financial literacy may influence the degree of the adoption because entrepreneurs, who understand the cost, the terms of credit, record-keeping, and possible risks, are able to use fintech products effectively (Babajide et al., 2023; Gbadebo, 2025; Hidayat-ur-Rehman, 2025).

There are further differentials that exist based on enterprise size. Microenterprises are known to use personal accounts, while medium-sized enterprises are likely to use formal structures and professionals. Bringing together all such types of MSMEs under one banner masks the differentials in terms of readiness, financial needs, and adoptions (Agboola et al., 2023; Imasuen & Osaro, 2025; Lima & Silva, 2024). There are also varying requirements for sectors since retailers might be interested in payments systems, manufacturers need working capital loans and accounting systems, and agricultural enterprises deal with seasonal cash flows and lack of connectivity.

The key limitation that characterizes previous studies is ignoring the distinction between different levels of adoption, which include awareness, registration, initial usage, continual usage, and organizational adoption (Akande, 2023; Olagoke et al., 2025; Olatunji et al., 2025). In future studies, it would be necessary to consider different levels of maturity of adoptions, starting from awareness and access, through trials, organizational adoption, and strategic use. This is important because fintech only brings about value when coupled with financial literacy and other resources.

2.1.10 Role of Financial Inclusion

Financial inclusion provides a critical avenue whereby fintech impacts the success of SMEs. Technology reduces reliance on conventional brick-and-mortar banks and could extend the provision of accounts, payments, savings, loans, and other financial services (Adah & Ezekiel, 2024; Damilola, 2022; Gozie-Onu et al., 2024; Sanga & Aziakpono, 2022). However, inclusion entails more than just service provision – the services have to be affordable, suitable, dependable, and frequently used.

Digital payments create transaction records that increase transparency of business transactions. These records may lower the information asymmetry between SMEs and financial institutions and make it easier to conduct a credit check especially where there is no collateral or formal accounts available (Abiodun et al., 2024; Okafor et al., 2021). Transaction records could also contribute to increased accountability by separating business transactions from undocumented cash flows. As a result, digital lending companies can use the transaction history and alternative data when assessing loan applications.

In Nigerian literature, the relationship between fintech and financial inclusion is often mentioned. According to empirical research conducted in Abuja, fintech contributes to digital financial access by SMEs (Adah & Ezekiel, 2024; Adah et al., 2025), while research in Ekiti focuses on its connection to inclusion and performance (Akande, 2023). Further research addresses fintech inclusion in the context of Nigeria's SME sector and its wider economic sphere (Damilola, 2022;

Gozie-Onu et al., 2024; Odumusor et al., 2024). On a regional scale, technological innovations have been associated with financial deepening and SME financing (Sanga & Aziakpono, 2022). The implementation of fintech-based transaction banking and digital lending might help to facilitate growth and financial inclusion (Okafor et al., 2021), and there is evidence regarding the connection between adoption of fintech services and inclusion and business resilience in the informal sector of Nigeria (Usman et al., 2025). However, these connections show more associations rather than causation.

Therefore, financial inclusion could be considered an intermediary variable which mediates the relationship between fintech and performance and sustainability. Through fintech, companies get access to services necessary for investments, liquidity management, transactions, and risk management (Adah et al., 2025; Akande, 2023; Kurniasari et al., 2025). Without financial inclusion, the usage of fintech may be limited only to simple transactions, while other restrictions connected to financial issues such as savings and insurance may remain untouched. In addition, comparative studies view financial inclusion and financial literacy as intermediaries which connect fintech and SME performance and sustainability (Kurniasari et al., 2025; Mahyuzar et al., 2026). However, such an intermediary function should be empirically tested rather than presupposed.

Financial inclusion should be measured not through indicators connected to ownership of accounts or platforms but through indicators of the quality of service provision and its use. Even though the products are available, they may be unavailable, inappropriate, and not comprehended (Babajide et al., 2023; Hidayat-ur-Rehman, 2025). Availability of easy-to-obtain digital credit can motivate overborrowing or disrupt working capital because of short deadlines and automatic deduction. Financial literacy helps SME owners to evaluate costs, terms, and risks (Adebayo & Awosanya, 2026; Babajide et al., 2023; Gbadebo, 2025). Thus, the evaluation of fintech should be based on its ability to enable SMEs to use safe, appropriate, and affordable financial services effectively.

2.1.11 Role of Financial Literacy

Financial literacy influences both fintech adoption and outcomes thereof. Before adoption, financial literacy helps SME owners realize the importance of maintaining financial accounts, allows comparing products and identifying the cost and risks related to digital services. During usage, it facilitates budgeting, borrowing, managing cash flow, and, in general, financial decision-making (Babajide et al., 2023; Gbadebo, 2025; Hidayat-ur-Rehman, 2025). As a result, financial literacy affects fintech being used just as a means of payment or becoming a part of a larger business strategy. More financially literate entrepreneurs are capable of calculating the cost of borrowing money, compare their repayment conditions and understand whether the returns on their investment justify obtaining financing. They are also able to use digital accounting to manage their liquidity, create budgets, and keep apart business expenses and personal consumption (Babajide et al., 2023; Kurniasari et al., 2025; Ogunwale et al., 2024). Such skills become especially important for small and informal businesses known for poor record-keeping practices. Finally, digital financial literacy expands the possibilities to evaluate the cost of using a platform, identify fraud, protect one's login details, and understand risks of transferring the data online. Despite a greater emphasis made by the literature on financial literacy as compared to cybersecurity skills, there is a consistent evidence that knowledge impacts the productive use of fintech (Adebayo & Awosanya, 2026; Coffie et al., 2021; Gbadebo, 2025). The ability to use an application does not mean using it properly from the financial point of view.

Nigerian scholars have found connections between financial literacy, sustainable business practices, technology adoption, and the development of SMEs (Babajide et al., 2023; Gbadebo,

2025; Ogunwale et al., 2024). The combination of fintech and financial literacy has also been linked with the sustainability of SMEs in Lagos State (Adebayo & Awosanya, 2026). These studies suggest that simply having access is not enough because the SME owners need to choose proper products, understand their responsibilities, and make use of financial information (Babajide et al., 2023; Gbadebo, 2025). Still, most of the available evidence is only correlative and cannot prove causality. From the international literature, different functions of financial literacy can be derived. It is considered as a mediator between fintech and SME performance in Cameroon (Lontchi et al., 2023), as a mediated moderation effect for the pathway to sustainable performance (Hidayat-ur-Rehman, 2025), and as a variable associated with fintech, financial access, and sustainability (Kurniasari et al., 2025; Mahyuzar et al., 2026). Some other researchers view fintech as a mediator for the influence of financial literacy on the sustainability of small firms (Goyal et al., 2025). As a result, financial literacy may act as an antecedent, mediator, or moderator. However, these concepts differ from each other and should be analyzed separately (Gbadebo, 2025; Goyal et al., 2025; Hidayat-ur-Rehman, 2025; Lontchi et al., 2023).

2.2 Theoretical Framework

2.2.1 Technology–Organisation–Environment Framework

The TOE model developed by Tornatzky and Fleischer (1990) explains technology adoption in organizations in terms of technological, organizational, and environmental conditions. It would be suitable for the adoption of fintech services in SMEs as it goes beyond the intentions of the individual and takes into account the enterprise and its environment.

Among the relevant factors from the technological dimension, one can list perceived usefulness, costs, complexity, compatibility, security, and reliability. In Nigeria, the SMEs are more likely to adopt the fintech service that solves a problem related to their business needs, is compatible with current devices, and is affordable. On the other hand, unstable networks, the risks of fraud, and complicated user interfaces hinder adoption.

As for the organizational dimension, it includes the financial capabilities of the firm, the competence of the owner-manager, employees' skills, firm's size, and managers' readiness. In smaller businesses, the attitude and competency of the owner play a significant role since all the decisions are made by a single person. Financial literacy is partially contained in the organizational dimension because it determines product evaluation and the use of technologies in financial decisions. The environmental dimension contains competitive pressure, customers' demands, suppliers, legal frameworks, financial institutions, infrastructure, and government assistance. The customers' preference for money transfer or card payments may push SMEs to adopt new means of interaction. Digital infrastructure and legal framework may assist the adoption process while inadequate consumer protection and poor connectivity are obstacles. The main limitation of the theory is in the fact that it explains well the phenomenon of adoption but not performance. It is possible to understand the reasons why an SME adopted some technology but not why it became a valuable asset for the organization.

2.2.2 Resource-Based View

In the case of explaining performance differences, RBV offers the identification of resource and capabilities, which create value and cannot be easily imitated (Barney, 1991). Fintech apps are unlikely to be unique, since competitors will have similar platforms at their disposal. Hence, sustainable competitive advantage is not possible through the possession of one specific

application but through the combination of fintech capabilities and the firm's financial knowledge, customer relations, transactional data, managerial skills, and learning capabilities.

From this standpoint, financial literacy represents a complementary capability, as it allows managers to evaluate available information, choose the best solutions, control debt and use digital data to plan. In addition to financial inclusion, which opens up access to financial resources, the firm should incorporate them into productive activities. An SME able to use transaction data for inventory management and to demonstrate its creditworthiness may get more value from the same payment platform than the company that only processes transfers.

However, RBV faces a drawback in its focus on internal capabilities and insufficient consideration of external barriers. Despite financial literacy, the firm may face unreliable networks, expensive credit or poor regulation. The incorporation of RBV into TOE helps solve this problem. The integrated model suggests that the external environment influences the decision about technology adoption, while firm-specific resources affect sustainability of the outcomes of adoption process.

3.0 Methodology

The present research uses a critical narrative literature review methodology. The study does not make claims to procedural comprehensiveness that is inherent in systematic reviews and does not utilize screening statistics and meta-analysis procedures. The literature reviewed is classified according to four analytical perspectives: fintech use, sustainability and performance of SMEs, financial inclusion, and financial literacy. Research focused on Nigeria is given more attention; literature from other African countries and emerging economies is employed to explain mechanisms, test the generalizability of the Nigerian research, and find alternative explanations.

More weight was given to peer-reviewed empirical studies that deal directly with fintech in the context of SMEs, those with clearly defined variables and methods, and those that address recently emerging issues of financial inclusion, financial literacy, and sustainability. While dissertations, institutionally published papers, theoretical articles, and book chapters were consulted more selectively due to their importance in terms of providing context, defining terms and concepts, explaining mechanisms, developing theory, posing new research questions, and so forth, they are not considered equivalent to the empirical studies. Thematic synthesis is preferred to a study-by-study listing of evidence. The evidence was compared according to various dimensions including geographic setting, type of business, fintech implementation, types of outcomes, and analytical approach. In this way, the review allows highlighting the areas where scholars agree and disagree.

It is important to note that research on microenterprises, informal firms, and officially registered SMEs do not study the same population. It is appropriate to use a narrative approach in order to analyze a diverse set of literature that includes surveys, time-series analysis, qualitative research, theorizing, institutional documents, and so on. The downside of using narrative review is that the choice of sources and their interpretation depend on the researcher's judgment. Not using any formal meta-analysis means that it is impossible to calculate any effect size. Therefore, the results of the review should be seen as a synthesis of the existing literature.

4.0 Literature Discussion

4.1 Critical Discussion

According to the literature, fintech has a potential for improving the environments of payments, information exchange, and financing of Nigerian small and medium-sized enterprises (SMEs). Digital technologies can overcome geographical obstacles, make transactions quicker and more diversified, especially in those situations when traditional banking system is characterized by

slowness, unavailability, or collateral-based requirements and extensive documentation (Damilola, 2022; Effiom & Edet, 2022; Otonne & Ige, 2023). Therefore, transaction banking and alternative lending can be beneficial for disadvantaged companies (Augustine, 2025; Kyari et al., 2024; Okafor et al., 2021). The studies that have been conducted in Nigeria revealed positive relationships between fintech and performance, financial inclusion, transformation, and digital entrepreneurship of SMEs (Abiodun et al., 2024; Adah et al., 2025; Akande, 2023; Imasuen & Osaro, 2025; Tijjani et al., 2025). Financial inclusion and resilience in the informal sector have also been found to be positively affected by the adoption of fintech (Usman et al., 2025). However, the differences in geography, type of enterprise, and outcomes prevent making conclusions about the presence of common pattern for the whole country. In addition, issues arise as to the sustainability of performance after implementing fintech technologies. Most studies concentrate on such performance metrics as sales, growth, transformation, or perceptions of the owners (Effiom & Edet, 2022; Oladele, 2024; Olatunji et al., 2025). Sustainable performance represents a multi-faceted concept that embraces such criteria as liquidity, sound indebtedness, sustainable viability, flexibility, robustness, and ethics (Asad et al., 2025; Campanella et al., 2026; Pizzi et al., 2021). An acceleration of transaction speed or sales growth does not necessarily mean that the organization is able to resist shocks. Most of the empirical studies to date are cross-sectional and regionalized in their nature, thus preventing causal claims about either fintech improving performance or stronger companies being more likely to adopt fintech technologies. Such problems are further aggravated by considering microenterprises and small to medium-sized enterprises as a homogenous group regardless of the significant differences in resource endowment and technological competencies (Lima & Silva, 2024). Longitudinal researches are needed to understand whether the achieved results are sustainable. Financial inclusion could be one of the reasons for fintech's impact. Fintech may connect SMEs to payment systems, savings accounts, loans, and other services that were expensive or difficult to access before (Adah & Ezekiel, 2024; Adah et al., 2025; Gozie-Onu et al., 2024). Moreover, digitized data could reduce information asymmetries and help evaluate the creditworthiness of the clients (Abiodun et al., 2024; Okafor et al., 2021). Similarly, interconnected technological innovations, financial deepening, and access to financial products by SMEs are seen in the African continent as well (Sanga & Aziakpono, 2022). Hence, comparative researches consider financial inclusion as one of the mediators in the relation between fintech adoption and sustainability (Kurniasari et al., 2025; Mahyuzar et al., 2026). However, this indirect relationship should be verified using empirical evidence.

True financial inclusion implies low cost and regular use of services. Account ownership or registration may not mean sufficient inclusion if businesses still work mainly in cash and do not have access to digital loans (Adah et al., 2025; Akande, 2023). Financial literacy explains the different impacts of the same technological innovation used by SMEs because it helps owners to estimate costs and choose proper financial products and responsibly manage the information about the business (Adebayo & Awosanya, 2026; Babajide et al., 2023; Ogunwale et al., 2024). The literature suggests that financial literacy may act as a moderator, antecedent, mediator, or additional capability depending on the considered causal model (Gbadebo, 2025; Goyal et al., 2025; Hidayat-ur-Rehman, 2025; Kurniasari et al., 2025; Lontchi et al., 2023).

The existing problems related to infrastructures, informal economy, and the transaction cost sensitivity of SMEs in Nigeria also affect these connections (Coffie et al., 2021). Hence, fintech is expected to be viewed as a potentially important resource for SMEs rather than a channel to sustainability. Similarly, to the resource-based theory, fintech provides benefits depending on how effectively it was integrated with financial knowledge, organizational capability, and favorable

environment. In the case of Nigerian SMEs, the results would be determined by financial inclusion, financial literacy, product design, infrastructure, and institutional governance (Asad et al., 2025; Babajide et al., 2023; Kurniasari et al., 2025).

4.2. Research Gaps

4.2.1 Geographic Gap

Geographical disparities in research into Nigerian fintech have been evident. Most studies revolve around Lagos, Abuja, Ekiti, Edo, Ilorin, the South East, among others (Adah & Ezekiel, 2024; Adah et al., 2025; Akande, 2023; Imasuen & Osaro, 2025; Olagoke et al., 2025; Oladele, 2024; Olatunji et al., 2025; Olorunnisola et al., 2024). While Tijjani et al. (2025) have contributed data from the north-eastern part of Nigeria, rural areas and areas experiencing conflicts have not received enough focus. Considering the fact that the state of infrastructure, access to finances, security issues, and businesses is different in various parts of the country, results from specific locations cannot be generalized for the entire nation

.

4.2.2 Methodological and Causal-Inference Gap

The majority of the Nigerian fintech literature can be considered confined geographically and temporally, cross-sectional research on adoption, financial inclusion, and the effect of fintech on the performance of small and medium-sized enterprises (Adah et al., 2025; Akande, 2023; Gbadebo, 2025; Oladele, 2024; Olatunji et al., 2025). This approach has a limitation when it comes to proving if fintech improves performance or whether those businesses that are more successful anyway choose to adopt fintech. Besides, using owner-managers' information may introduce subjectivity and common-method bias.

4.2.3 Fintech-Adoption Measurement Gap

The use of fintech continues to be defined and measured inconsistently. Scholars examine different dimensions of fintech such as innovation, digitalization, lending, payment solutions, and other aspects related to the use of fintech (Abiodun et al., 2024; Effiom & Edet, 2022; Olagoke et al., 2025; Olatunji et al., 2025; Otonne & Ige, 2023). A binary measure cannot differentiate between users who use fintech occasionally and companies which have made fintech an integral part of the decision-making process through payments, lending, accounting, and analytics.

4.2.4 Sustainable-Performance Measurement Gap

The sustainable performance of SMEs is assessed in relation to sales, profitability, growth, and business performance (Abiodun et al., 2024; Effiom & Edet, 2022; Imasuen & Osaro, 2025; Oladele, 2024). Although these measures are relevant, they do not include aspects like liquidity, sustainability of debt, survival, sustainability, resilience, innovation, quality of employment, resource management, and environmental performance (Asad et al., 2025; Campanella et al., 2026; Pizzi et al., 2021). There is a lack of environmental performance indicators in the current studies on Nigerian fintech although there is increased awareness about green finance and circular economy (Faloye & Adebanjo, 2025; Pizzi et al., 2021; Waqar et al., 2025). Future studies can investigate digital expenses, indebtedness, frauds and interruptions in services.

4.2.5 Enterprise-Classification Gap

Small and medium-sized enterprises (SMEs) and microenterprises have been considered together within the broader category of “MSMEs” without acknowledging substantial dissimilarities

between them in terms of resources, organizational structure, and accounting methods (Agboola et al., 2023; Imasuen & Osaro, 2025; Usman et al., 2025). A subsistence firm that uses personal accounting is less likely to be technologically ready compared to a medium-sized firm that has a formal accounting system in place and trained personnel. Following this line of thought, Lima and Silva (2024) recommend against treating small firms the same way as SMEs by definition. Future research needs to distinguish between different types of firms based on size, formality, industry, ownership, and technological readiness.

4.2.6 Failed and Discontinued Adoption Gap

There is very little information about the non-adoption of the use of fintech technology. All available evidence focuses on the current users, the intentions to adopt, or those who are currently using fintech (Coffie et al., 2021; Olagoke et al., 2025; Olatunji et al., 2025). Such a focus creates the problem of survivorship bias because some firms have been left out of the analysis as they dropped the technology due to expensive fees, fraud, complicatedness, lack of connectivity, or poor services.

4.3 Implications

The review shows theoretically the significance of the combination of the adoption perspective and the capability approach. The TOE framework sheds light on the adoption context, while the RBV shows why similar technologies result in different performance of the firms. Financial inclusion and financial literacy are used as a means to link the hierarchies.

The SME owners are required to examine fintech services in terms of their potential to solve certain problems of their enterprises. The factors to be taken into account when deciding about the adoption are the cost, safety, reliability, integration, and expected value. The records need to be used in budgeting and loan applications, not just to reflect transactions.

Fintech companies and banks have to develop products according to the SME cash cycles. Clear pricing policy, easy repayment scheme, good support, and proper ways of complaint handling are essential. Fintech providers must not think that the quickness of the money transfer is equal to inclusion. The regulators have to find a balance between innovations and consumer protection. The responsible digital lending, data transparency, cybersecurity and interoperability of payment systems have to be constantly discussed. It is important to differentiate commercial SMEs from microenterprises in regulation. Programmes of financial literacy have to be practical and product-specific. They have to include knowledge about the cost of borrowing, planning the cash flow, digital fraud, data privacy, and keeping the records. General education does not change the SMEs' practices without application. SME development organizations should embed digital capability into finance programmes. Credit without capability can be ineffective, whereas training without appropriate products cannot bring inclusion. Therefore, joint intervention is required.

4.4 Conclusion

In this paper, fintech adoption as well as sustainable performance of Nigerian SMEs through financial inclusion and financial literacy was analyzed. Adoption seems to be increasing but only in terms of payment and transfer, digital banking and point of sale and no significant usage of fintech is noted.Fintech can help SMEs to improve their transactions, financing, bookkeeping and increase their resistance and survival chances. However, high cost of borrowing, cyber-crime problems, poor infrastructure and lack of consumer protection may limit the effectiveness of fintech. To be able to reach its full potential, financial inclusion and financial literacy are needed,

although financial literacy alone is not enough. Therefore, fintech can be considered only as an enabler for sustainable performance of Nigerian SMEs. Further research must use longitudinal research design, distinguish between different types of businesses, measure the level of fintech adoption and analyze different effects.

IJSSMR

References

Abiodun, S. T., Ebenezer, A. M., Yinusa, G. O., & Asogba, I. O. (2024). Financial technology, bank intermediation, and performance of small and medium scale enterprises in Nigeria. *Journal of Management: Small and Medium Enterprises (SMEs), 17*(3), 869–886. https://doi.org/10.35508/jom.v17i3.18486

Adah, O. D. E. H., Daniel, D., & Abdullahi, N. (2025). Impact of financial technology on small and medium enterprises financial inclusion in Abuja, Nigeria. *Abuja Journal of Business and Management, 3*(1), 169–183. https://doi.org/10.70118/ajbam-01-2025-96

Adah, O. D. E. H., & Ezekiel, R. (2024). Financial technology as a catalyst for digital financial inclusion among SMEs in Abuja, Nigeria. *Abuja Journal of Business and Management, 2*(2), 1–12.

Adebayo, A. A., & Awosanya, A. B. (2026). Fintech companies and financial literacy as factors fostering the attainment of SMEs sustainability in Lagos State, Nigeria. *Kontagora Journal of Education, 1*(2), 300–308. https://doi.org/10.5281/zenodo.21967320

Agboola, O., Adelugba, I. A., & Eze, B. U. (2023). Effect of financial technology on the survival of micro-enterprises. *International Journal of Entrepreneurial Knowledge, 11*(1), 1–13. https://doi.org/10.37335/ijek.v11i1.188

Akande, K. M. (2023). Financial inclusion, financial technology and performance of small and medium scale enterprises in Ekiti State. *International Journal of Research and Innovation in Social Science, 7*(7), 1826–1842.

Asad, M., Ghazalat, A., Mansour, A. A. Z., Asif, M. U., & Campbell, A. C. (2025). Fintech adoption and sustainable performance of SMEs: Moderated mediated analysis of technological turbulence and competitive advantage. *Management & Sustainability: An Arab Review*, 1–22. https://doi.org/10.1108/MSAR-10-2024-0183

Augustine, S. H. (2025). *Fintech adoption and access to finance: Implications for SMEs growth in Nigeria* [Doctoral dissertation, University of Benin].

Babajide, A., Osabuohien, E., Tunji-Olayeni, P., Falola, H., Amodu, L., Olokoyo, F., & Ehikioya, B. (2023). Financial literacy, financial capabilities, and sustainable business model practice among small business owners in Nigeria. *Journal of Sustainable Finance & Investment, 13*(4), 1670–1692. https://doi.org/10.1080/20430795.2021.1962663

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99–120. https://doi.org/10.1177/014920639101700108

Campanella, F., Ferri, L., Serino, L., & Zampella, A. (2026). Driving sustainability: How fintech transforms SDG performance in SMEs. *Journal of Global Responsibility, 17*(2), 322–342. https://doi.org/10.1108/JGR-01-2025-0015

Coffie, C. P. K., Hongjiang, Z., Mensah, I. A., Kiconco, R., & Simon, A. E. O. (2021). Determinants of fintech payment services diffusion by SMEs in Sub-Saharan Africa: Evidence from Ghana. *Information Technology for Development, 27*(3), 539–560. https://doi.org/10.1080/02681102.2020.1840324

Damilola, A. O. (2022). Fintech and financial inclusion in West Africa: Nigeria's SMEs market. *International Journal of Multidisciplinary and Current Educational Research, 4*, 210–218.

Effiom, L., & Edet, S. E. (2022). Financial innovation and the performance of small and medium scale enterprises in Nigeria. *Journal of Small Business & Entrepreneurship, 34*(2), 141–174. https://doi.org/10.1080/08276331.2020.1779559

Elmi, M. A., Abdulkadir, F. O., Mohamud, A. M., Osman, N. H., & Abdi, I. A. (2025). Exploring the effect of financial technology on the sustainability of small and medium enterprises in

Mogadishu, Somalia. *Cogent Business & Management, 12*(1), 2460624. https://doi.org/10.1080/23311975.2025.2460624

European Commission. (2020). *User guide to the SME definition*. Publications Office of the European Union.

Faloye, D. O., & Adebanjo, T. O. (2025). Examining the link between green financing and sustainable performance of SMEs in South-West Nigeria. *International Journal of Business, Economics and Entrepreneurship Development in Africa, 13*(13), 28–37.

Gbadebo, A. D. (2025). Moderating role of financial literacy on the relationship between financial technology and SMEs' growth in Nigeria. *Journal of Accounting and Finance in Emerging Economies, 11*(4), 499–512. https://doi.org/10.26710/jafee.v11i4.3508

Gherghina, Ș. C., Botezatu, M. A., Hosszu, A., & Simionescu, L. N. (2020). Small and medium-sized enterprises: The engine of economic growth through investments and innovation. *Sustainability, 12*(1), 347. https://doi.org/10.3390/su12010347

Goyal, M., Aggarwal, R., & Goyal, K. (2025). Financial literacy and the sustainability of small firms: Fintech as a mediator. *Sustainable Development, 33*(6), 8669–8681. https://doi.org/10.1002/sd.70114

Gozie-Onu, A., Ilo, A., & Duru, A. (2024). Nexus between financial technology and financial inclusion in Nigeria. *Research Journal of Financial Sustainability Reporting, 7*(1), 1–12.

Hidayat-ur-Rehman, I. (2025). The role of financial literacy in enhancing firm's sustainable performance through fintech adoption: A moderated mediation analysis. *International Journal of Innovation Science, 17*(4), 754–785. https://doi.org/10.1108/IJIS-03-2024-0056

Imasuen, O. F., & Osaro, O. F. (2025). Effects of financial technology on micro, small and medium scale enterprises transformation in Benin City, Edo State, Nigeria. *Management Sciences Review, 16*(2), 83–97.

Kurniasari, F., Abd Hamid, N., & Lestari, E. D. (2025). Unravelling the impact of financial literacy, financial technology adoption, and access to finance on small and medium enterprises' business performance and sustainability: A serial mediation model. *Cogent Business & Management, 12*(1), 2487837. https://doi.org/10.1080/23311975.2025.2487837

Kyari, A. K., Gulani, M. G., & Waziri, B. Z. (2024). Financial technology: An alternative for financing small and medium-sized enterprises in Nigeria. *International Journal of Technological Learning, Innovation and Development, 15*(3), 307–328. https://doi.org/10.1504/IJTLID.2024.137484

Lagüera González, J., Di Bella, L., & Katsinis, A. (2024). *Analysis of the SME definition: A pilot approach using firm-level data*. Publications Office of the European Union. https://doi.org/10.2760/135901

Łasak, P. (2022). The role of financial technology and entrepreneurial finance practices in funding small and medium-sized enterprises. *Journal of Entrepreneurship, Management and Innovation, 18*(1), 7–34.

Lima, J. B., & Silva, A. B. (2024). Small businesses are not necessarily "small and medium-sized enterprises." *Journal of Small Business and Enterprise Development, 31*(1), 1–30. https://doi.org/10.1108/JSBED-03-2023-0135

Lontchi, C. B., Yang, B., & Shuaib, K. M. (2023). Effect of financial technology on SMEs performance in Cameroon amid COVID-19 recovery: The mediating effect of financial literacy. *Sustainability, 15*(3), 2171. https://doi.org/10.3390/su15032171

Mahyuzar, H., Abid, A., & Pamungkas, C. P. B. (2026). Financial technology and MSME sustainability: The mediating role of financial literacy, financial inclusion, and moderating government support. *INVEST: Jurnal Inovasi Bisnis dan Akuntansi, 7*(1), 242–266.

Odumusor, C. J., Sackey, J. A., & Abiji, E., (2024). Financial Inclusion and its Effect on Economic Growth in Nigeria. *International Research Journal of Economics and Management Studies 3*(2), 231-244.

Ogunwale, O., Areghan, I. S. I. B. O. R., Alalade, Y., & Omosebi, T. (2024). Use of technology and financial literacy on SME practices and performance. *International Journal of Social Sciences and Management Review, 7*(5), 234–243. https://doi.org/10.37602/IJSSMR.2024.7519

Okafor, C. M., Osuji, V. C., & Dako, O. F. (2021). Fintech-enabled transformation of transaction banking and digital lending as a catalyst for SME growth and financial inclusion. *International Journal of Multidisciplinary Research and Growth Evaluation, 2*(6), 485–504.

Okere, K. I., Ibe, G. I., Muoneke, O. B., & Nwaeze, N. C. (2023). Environmental sustainability, small and medium enterprises, and finance in Africa: A triplicate relationship. *Environmental Science and Pollution Research, 30*(14), 41359–41378. https://doi.org/10.1007/s11356-022-25012-2

Olagoke, K. C., Ajimati, A., Jubril, T. S., & Bamidele, O. M. (2025). The adoption of fintech solutions by small and medium enterprises in Ilorin. *ESUT Journal of Social Sciences, 10*(2), 1–12.

Olaore, G. O., Adejare, B. O., & Udofia, E. E. (2021). The gains and pains of small and medium-scale enterprises: The way forward for entrepreneurship development in Nigeria. *Rajagiri Management Journal, 15*(1), 53–68. https://doi.org/10.1108/RAMJ-09-2020-0056

Oladele, O. S. (2024). The impact of financial technology on the performance of small-scale enterprises in Ekiti State, Nigeria. *FUOYE Journal of Accounting and Management, 7*(2), 322–338.

Olatunji, F., Sajuyigbe, A. S., Tella, R. A., Oke, O. D., Babalola, O. A., & Adebayo, W. (2025). Assessing the impact of financial service digitalisation on SME businesses in Lagos, Nigeria. *Journal of Entrepreneurship & Business, 6*(1), 94–118. https://doi.org/10.24123/jeb.v6i1.7212

Olorunnisola, A. O., Aruwaji, A. M., Nyakundi, A., Ogunmola, S. O., & Olaiya, S. P. (2024). Effect of technological change on performance of SMEs in Lagos, Nigeria. *FUOYE Journal of Management Science, 2*(1), 235–245.

Otonne, A., & Ige, O. T. (2023). Exploring the influence of financial technology on banking services in Nigeria. *International Journal of Financial, Accounting, and Management, 5*(3), 323–341. https://doi.org/10.35912/ijfam.v5i3.1513

Pizzi, S., Corbo, L., & Caputo, A. (2021). Fintech and SMEs sustainable business models: Reflections and considerations for a circular economy. *Journal of Cleaner Production, 281*, 125217. https://doi.org/10.1016/j.jclepro.2020.125217

Sanga, B., & Aziakpono, M. (2022). The impact of technological innovations on financial deepening: Implications for SME financing in Africa. *African Development Review, 34*(4), 429–442. https://doi.org/10.1111/1467-8268.12668

Tijjani, H. A., Mohammed, M. R., Uthman, M. A., & Sadiq, H. A. (2025). Impact of financial technology on digital entrepreneurship growth: Evidence from SMEs in North East

Nigeria. *International Journal of Financial Research and Business Development, 10*(7), 1–12. https://doi.org/10.70382/mejfrbd.v10i7.080

Tornatzky, L. G., & Fleischer, M. (1990). *The processes of technological innovation*. Lexington Books.

Usman, A. Y. U., Halidu, S. I., & Mohammad, S. W. (2025). Impact of fintech adoption on operational resilience and financial inclusion among small and medium enterprises in Nigeria's informal sector. *International Journal of Multidisciplinary and Innovative Research, 2*(5), 140–149. https://doi.org/10.58806/ijmir.2025.v2i5n02

Waqar, M., Sohail, A., Bashir, Z., Cai, Z., Ahmad, M., & Mehak, G. (2025). Fintech revolution and sustainability: Unveiling the impact on SMEs through circular economy and green innovation practices. *Sustainable Futures, 9*, 100714. https://doi.org/10.1016/j.sftr.2025.100714

IJSSMR