Enterprise Development & Microfinance, 36:1, 275–292

FinTech-Driven Business Process Automation and Its Impact on Microenterprise Productivity in Emerging Economies

Jorge León Villegas Vargas, Juan Manuel Osorio Cano, Luis Enrique Ruiz, David Alberto García Arango, Claudia Marcela Montoya Escobar, Leidy Catalina Acosta Agudelo

Abstract: *Microenterprises form the economic core of the emerging economies and they are systemically under strain due to manual workflows, financial exclusion, and institutional credit. Automation of business processes via FinTech is fast changing this picture by putting artificial intelligence, mobile money systems, algorithmic lending, cloud computing and embedded finance directly into the operations fabric of micro-level businesses. This paper discusses the scopes, motivation, workflow effects, efficiency gains, and cross-country productivity trends related related to FinTech automation among microenterprises in selected evolving economies, including picked Latin American markets. The study makes use of a qualitative secondary research methodology to generalise evidence gathered by institutional reports, peer-reviewed scholarship, and industry datasets to form a comparative analytical framework. Among the findings of key importance are that automation of FinTech provides quantifiable productivity returns by shrinking the transaction processing time, lowering operational expenses, providing automated access to credit, and the ability to keep financial records in real-time. These gains are demonstrated through findings from selected digital payment systems such as fintech implementation cases in Latin American regions. The paper also determines that the effect of productivity is conditional on the quality of digital infrastructure, regulatory design, and platform usability. In cross-country evaluation of selected emerging regions, divergent and unifying models of FinTech diffusion are recorded, including telecom operator-led, government-anchored, and venture capital-driven ecosystems. The paper concludes that future productivity transformation in informal firms is likely to be shaped by improvements in artificial intelligence, open banking,*

Jorge León Villegas Vargas (jorgevillegas@melborp.co), MBP GROUP SAS
Juan Manuel Osorio Cano (juanosorio@melborp.co), MBP GROUP SAS
Luis Enrique Ruiz (luisruiz@melborp.co), MBP GROUP SAS
David Alberto García Arango (investigacion@amyc.com.co), Administrative Management Consultants S.A.S.
Claudia Marcela Montoya Escobar (talentohumano@amyc.com.co), Administrative Management Consultants S.A.S.
Leidy Catalina Acosta Agudelo (comercial@amyc.com.co), Administrative Management Consultants S.A.S

and regulatory technology. To make sure that automation benefits the microenterprise operators, who are most economically marginalised, in all the emerging economies, strategic policy alignment and inclusive design of FinTech are necessary.

Keywords: Microenterprises, fintech automation, artificial intelligence, financial inclusion, productivity, mobile money, algorithmic lending, digital infrastructure, open banking, regulatory technology.

Introduction

Background

The world economy is experiencing a convergence of financial services and digital technology on a scale that has never been witnessed before. This convergence, which is generally referred to as FinTech, includes artificial intelligence, cloud computing, blockchain and mobile payment infrastructure (Lăzăroiu *et al.,* 2023). This transformation has taken on new fronts in emerging economies in Africa, South Asia, and Latin America. The largest economic activity and employment is provided by microenterprises working in these regions. They have traditionally been excluded from the formal financial systems because of collateralization shortages and paperwork obstacles. Automation of business processes via FinTech is now providing these businesses with a viable avenue to operational efficiency (Vasquez, 2024). New mobile money services, automated lending applications, and digital payment rails are transforming how microenterprises operate their cash flows and transactions. The global FinTech market has undergone rapid growth in recent years, reflecting its increasing economic documented. This fast-paced growth causes FinTech to be among the most impactful forces that influence the productivity of microenterprises in the developing world currently.

Significance

The productivity implications of automation caused by FinTech on microenterprises has far-reaching policy and economic implications. In most emerging economies, microenterprises constitute more than 70 percent of the jobs, but they are systematically underproductive, as workflows are manual, and most do not have access to financial services. FinTech automation is a direct response to these limitations by making payment collection digital, automating access to credit, and allowing real-time record keeping of financial records. Digital payment systems such as mobile money platforms across Sub-Saharan Africa demonstrate large-scale adoption of FinTech-enabled transactions in microenterprise ecosystems. Recording this impact is important as it will inform regulatory design, digital infrastructure investment and financial inclusion policy in developing countries. It also offers evidence-based frameworks of maximizing productivity gains to the microenterprise owners and FinTech platforms by adopting deliberate automation adoption strategies.

Problem statement

Although the usage of FinTech tools in developing economies grows rapidly, systematic data on their direct effect on the productivity of microenterprises has yet to be developed in a systematic way and is limited in geographic scale. Current studies mostly accentuate financial inclusion and not operational workflow transformation at the micro-business level. The gap in the paper is that cross-country evidence on FinTech-initiated business process automation and its quantifiable productivity impacts on microenterprises will be synthesized.

Literature

Since 2018, the academic interest in FinTech and microenterprise productivity has increased significantly but still there are major gaps in conceptualization (Adbi and Natarajan, 2023). The initial literature focused on the adoption of mobile money and its impact on household welfare with a landmark study on payment platforms showing that digital payment services lower the transaction costs and open access to markets to small players. This framework was further applied by other studies to investigate other credit scoring which revealed that AI based underwriting minimizes the dependency on collateral and reduces loan approval times by as much as 40 percent (Moreira and Carvalho, 2024). The study carried out in China showed that the use of FinTech facilitates new productive forces of quality in businesses, through the diversification of the sources of finance and efficiency of investments. Latin American studies also reported that AI that incorporates FinTechs have huge operational savings and shorten application processing time. Australia's fintech sector is experiencing rapid growth, projected to rise from USD 11.78 billion in 2025 to USD 23.69 billion by 2030, a 15% CAGR. Nevertheless, the current body of research focuses on the case studies of individual countries or isolated FinTech verticals. There is a paucity of research that provides a cross-country comparison and synthesis of payment automation, algorithmic lending, embedded finance, and workflow transformation. The point of convergence between Robotic Process Automation, Banking as a Service, and microenterprise productivity is also not a well-developed field in existing literature, which is where this paper belongs in terms of theoretical and empirical space.

Methodology

The paper follows a qualitative secondary research design to explore FinTech led automation and productivity among microenterprises in emerging economies. The type of analysis that should be used in this case is secondary analysis since there are already strong, longitudinal primary data on the adoption of microenterprise FinTech available in credible institutional sources (Schneider *et al.,* 2023). The reports by the World Bank, McKinsey Global Institute, Boston Consulting Group, GSMA and the World Economic forum present empirically based and cross-country data, which no single main survey could replicate in terms of scope and geographic coverage (Reverte, 2022). The quantitative benchmarks, along with the behavioral evidence, analyzed in the context of the present study are provided by industry databases such as Statista, BIS working papers, and peer reviewed journals in Springer and Emerald Publishing. Secondary methodology also allows making a systematic comparison of

divergent national FinTech models such as the telecom operator led model and the venture capital fuelled ecosystem model in Latin America (Gandhi and Kak, 2025). It is the most rigorous and practically viable methodology of generating generalizable conclusions on this multi-country, multi-sector phenomenon, and is based on the triangulated secondary sources.

Results

Scope and Coverage of FinTech-Driven Automation in Microenterprises

The microenterprise business process automation that has been propelled by FinTech has grown at an impressive rate in the emerging economies (Vasquez, 2024). It transforms the working context of informal and semi-formal business around the world. Such businesses customarily had no access to institutional financial infrastructure and systems.

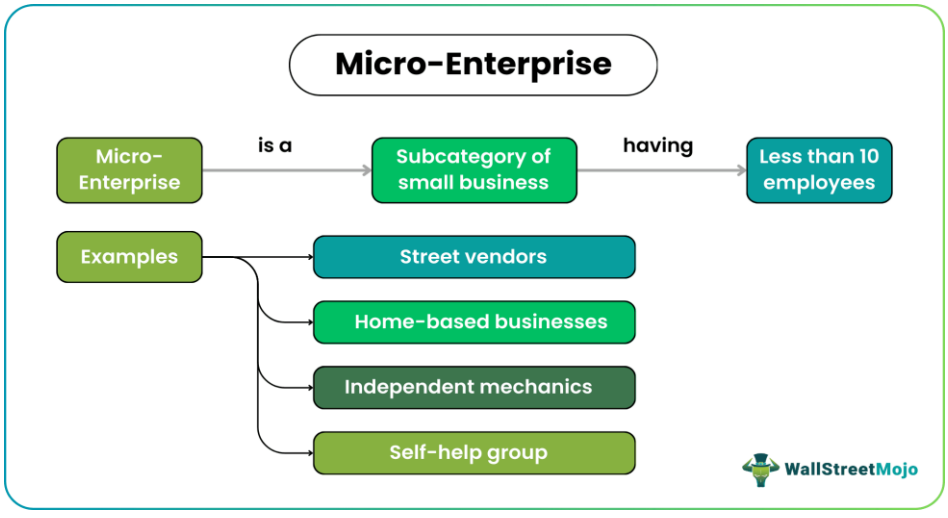

Figure 1: Micro-Enterprise Definition
(Source: Wallstreetmojo, 2023)

Automation is implemented in digital payments, automated bookkeeping, and algorithms used to lend money in a microscopic way. It also discusses the RegTech enabled compliance and cloud based inventory management solutions. The Financial Stability Board refers to the combination of big data and AI as FinTech. The same definitional framework is inherently based on cloud computing and blockchain. The global FinTech market share in 2024 was 36.8 percent AI segment only. It has particularly broken into micro-enterprise processes in sub-Saharan Africa. Microenterprise FinTech automation integration in South Asia and Southeast Asia is also becoming increasingly integrated (Zuan *et al.,* 2024).

FinTech automation coverage is extensive and rapidly expanding geographically. The number of unbanked adults in the world is over 1.4 billion, and they are located in Africa, Asia, and Latin America. These are the areas that are both the least served and the most open to FinTech transformation. The mobile money platforms today act as the main automation gateway in microenterprises. M-Pesa has more than 60 million customers and over five million

businesses linked in eight countries. It processes more than a billion dollar in transaction value daily. The collection of payments and the recording of cash flow can be automated using the same mobile money stack. US banks are studying low-cost model, which processes over 3,000 transactions per second, to improve their own real-time payment technologies, such as FedNow (PYMNTS.com, 2025). A big percentage of such transactions were microenterprise merchant collections through QR codes.

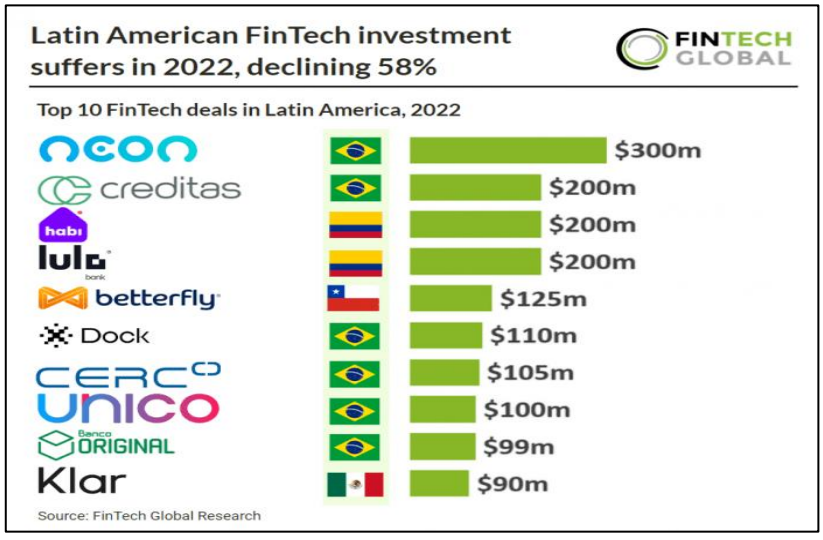

Figure 2: Latin American FinTech investment suffers in 2022
(Source: Fintech.global, 2023)

Embedded finance and Banking as a Service models have increased coverage in Latin America. Nubank is already the primary bank of 46% of the adult population in Brazil. The micro-retailers and informal vendors are directly targeted by Nubank with its automated credit scoring and instant loan disbursement. Banking as a Service increased by 70 percent annually due to SMEs and marketplaces. Equipment that was originally used in bigger companies are trickling down to the micro-level operators in practice (Prabowo *et al.,* 2024).
Also known that other some forign countries transactions using this method as international money transfer process free of around 2.5%, exchange rate markups of 2% and coversion as 3% to 5%. This automation integration is used by millions of micro-vendors built into super-app ecosystems every day. FinTech automation is not just a matter of technology but is highly systemic. It deals with the whole financial chain of microenterprises located in various continents.

Key Drivers and Purpose of FinTech Automation Adoption

The convergence of supply and demand forces leads to the adoption of automation among microenterprises which is fueled by FinTech. The forces of supply side encompass the rapid development of AI, cloud computing, and mobile connectivity. Demand side forces are based on structural weaknesses of the traditional financial systems in emerging economies. Financial exclusion of collateral deficient microenterprises has remained the most basic

motivator all over the world (Semillan Rosales *et al.,* 2025). In the case of microenterprises with documentation poor people, conventional banks are not able to serve them at commercially viable cost levels.

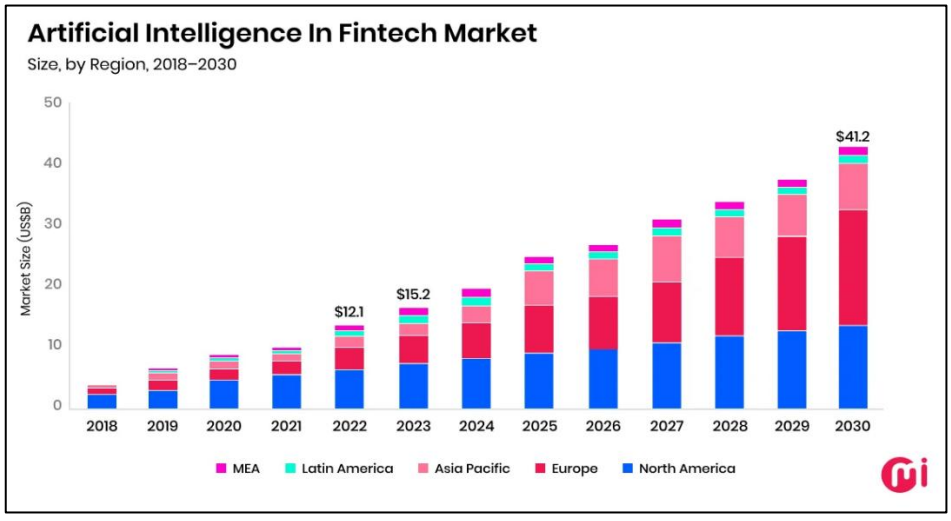

Figure 3: Artificial Intelligence in the Fintech Market (2022 – 2030)
(Source: Patel, 2025)

FinTech resolves this through alternative data underwriting using AI powered credit assessment models. These models evaluate credit worthiness based on mobile transaction history and e-commerce behavior information. Psychometric scoring also adds to the traditional credit bureau reliance in underserved microenterprise markets (Van Thiel *et al*., 2024) Ant Financial uses non financial data in helping to grant loan to micro enterprises that were initially ineligible. This will enhance the level of information transparency between the financial institutions and the micro-business entities.

The second key force is the prohibitive cost of operation of cash-based business models. In informal economies, microenterprises waste unproportional time doing manual cash handling and ledger keeping. Paperwork and face-to-face data gathering also cost-effective productive working time each day (Oyedokun *et al.,* 2025). Digital payment rails remove these systemic costs of friction effectively and at scale. The wider reach of the customer market is also reported to be significantly broad by SMEs making use of mobile money. The multi-step manual processes are instantly converted into the automation of payment receipt based on scanning QR codes. All the transactions are automated and reconciled automatically without any human intervention. In September 2024, the M-PESA Ratiba service was introduced, which automates business recurring payments. It makes sure that small business owners do not have to miss deadlines of payments and meet the late payments.

A third key push driver is regulatory push and government led Digital Public Infrastructure (Semillan Rosales *et al.,* 2025). The Pix instant payment system in Brazil also reduces the barrier of adoption of automation to almost zero. UNDP is the leading development agency within the United Nations and is uniquely positioned to support this transformation. With a presence in 170 countries and a global network of 22,000 experts to implement DPI

(UNDP, 2020). The formalization macroeconomic incentive also encourages micro-operators to voluntarily use FinTech tools.

Table 1: Key Drivers and Purpose of FinTech Automation Adoption in Microenterprises across Emerging Economies

Driver category	FinTech mechanism	Country / region	Empirical evidence	Key metric	Source year
Financial exclusion	Mobile money platforms replacing formal banking access	Sub-Saharan Africa	M-Pesa connects millions of microenterprises across countries and African economies, enabling unbanked operators to transact digitally	$1 bn+ processed daily	2024
Financial exclusion	Alternative credit scoring via AI and nonfinancial data	China / Global	Ant Financial uses behavioural and transactional data to improve credit access for collateral-deficient microenterprises	Credit approval lag cut by 40%	2023
Cash handling costs	QR code-based digital payment systems	Sub-Saharan Africa / Latin America	QR-enabled mobile payment systems across African and Latin American fintech ecosystems have reduced reliance on cash handling and improved reconciliation efficiency for informal merchants	Rapid merchant adoption at scale	2024
Cash handling costs	Automated recurring payment and subscription systems	Sub-Saharan Africa	Mobile money ecosystems enable automated bill payments and subscription handling, reducing reliance on cash-based transactions	Widespread adoption across mobile money platforms	2024

			and improving financial discipline among small enterprise		
Regulatory push / DPI	Zero-fee real-time payment infrastructure	Brazil / Sub-Saharan Africa	PIX in Brazil and M-Pesa ecosystem in Africa demonstrate how government-supported real-time payment systems enable high-volume low-cost transactions	Billions of annual transactions	2024
Regulatory push / DPI	Open banking and API integration frameworks	Brazil	Nubank serves a large share of Brazilian adults with automated credit scoring and instant micro-loan disbursement	46% adult penetration	2024
Formalization incentive	Digital transaction history for trade finance access	Latin America	AI-enabled fintech platforms in Colombia generate auditable financial records that improve access to formal credit and supplier networks	44% cost reduction reported	2025
Fintech-GDP linkage	Digital payment ecosystem expansion	Multi-country	Cross-country empirical studies show positive association between FinTech adoption and economic growth across emerging economies	8% GDP per 10% adoption (association)	2024

(Source: Self-Created)

Formalization opens up GST credit trails, trade finance and structured supplier networks. Empirically, growth in the use of FinTech by 10 percent has been associated with a 8 percent increase in economic growth. This systemic reversion encourages micro level adoption choices and national policy level encouragement plans (Oyedokun *et al.,* 2025). Digital financial ecosystems are being constructed by governments across Africa, Asia and

Latin America. These ecosystems will specifically be aimed at extending automation benefits to even the smallest economic units.

Impact on Workflow Transformation and Productivity Efficiency

FinTech driven automation has fundamentally re-engineered microenterprise workflows in emerging economies. The paper based and time consuming processes which are fragmented are being substituted by integrated digital pipelines. These are real-time pipelines which need minimal human intervention by business operators. The most noticeable workflow change can be observed in payment collection and reconciliation at the transaction layer (Zaidi *et al.,* 2022). A normal informal vendor used to take hours a day to count and record the cash before the use of FinTech. Bank deposits and the manual sales logging system took up to 25 percent of the working productive hours. This effort has been reduced to a tiny fraction by the use of digital wallets and point of sale systems based on QR codes. These records are automatically logged and automatically reconciled without the operator having to put any effort in bookkeeping.

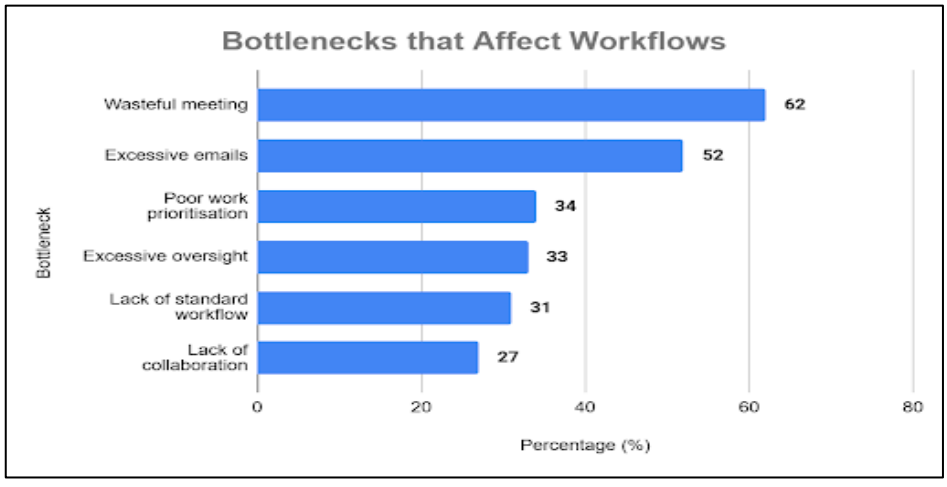

Figure 4: Workflow Optimization

(Source: Sagar, 2025)

In addition to payments, the FinTech automation is also changing the processes of inventory management and access to credit. Embedded finance and API integrations have become functionalities of single platforms to which a number of operational functions are embedded. Vertical SaaS solutions integrate payment acceptance, inventory management, and automated invoicing in one. These integrated platforms also include digital lending and automated tax compliance tools. The Spark Accelerator in Safaricom provides access to AI based tools of business automation to comply with tax requirements to startups. Intelligent supply chain management and inventory tracking tools are bundled within the same ecosystem. This bundling effect converts several workflow bottlenecks at once with one FinTech subscription. Robotic Process Automation installed on FinTech systems is used to do rule-based work autonomously. Reminders of payment, supplier reconciliation and generation of tax filing are processed with no human intervention (Oyedokun *et al.,* 2025). This inbuilt automation is most beneficial to microenterprises that lack dedicated finance personnel.

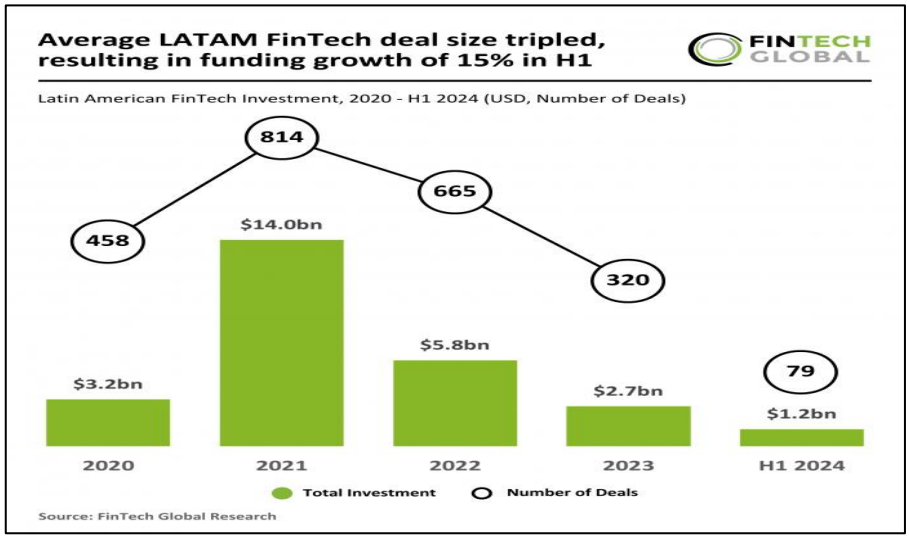

Figure 5: Average LATAM FinTech deal size tripled
(Source: Fintech.global, 2024)

Automation of credit also is a significant productivity shift to microenterprises. The old system of loan applications involved visiting the branches several times and waiting weeks before one could be granted a loan. Even the process of physical documentation compilation was a considerable loss of productive working time. Algorithms have now reduced the time spent on credit approvals to a few minutes (Oyedokun *et al.,* 2025). Colombian Artificial Intelligence-based FinTechs claim that the time taken to process applications has reduced by 56 percent. The turnaround time of customer service has also been reduced by half using AI driven automation tools. Also, the global AI marketing market projected to reach USD 47.32 billion in 2026 and growing at a CAGR of over 36%. According to McKinsey, generative AI is expected to create 200-340 billion dollars of financial services value every year. This increase in productivity is passed on via FinTech platforms to the microenterprise clients of the latter. Such workflow changes are the transition towards proactive financial management. Microenterprises are shifting to automated and integrated management of the financial processes instead of manual and fragmented operations (Semillan Rosales *et al.,* 2025).

Benefits and Strategic Outcomes for Microenterprises

Strategic results and measurable efficiency gains of microenterprises are brought by FinTech-based automation. These are results in the reduction of costs, increase in revenues and better cash flow management abilities. The improved access to the market and formalization of business are also important strategic outcomes of adopting automation. Automation on the cost side does away with the cost of manual financial intermediation altogether. Remittance services using block chains have reduced transaction fees by half around the world (Oyedokun *et al.,* 2025). This has a direct impact of enhancing the net margins of micro enterprises that depend on supplier and cross-border payments. Financial fraud has been minimized by more than 90 percent worldwide because of AI driven fraud prevention tools. Marketing teams are realizing a 20–40% reduction in time spent on content creation. They are also seeing up to 50–77% in

technology cost savings through platform consolidation (Algrim, 2025). This cut deals with the hidden operation expenses that skew heavily on cash dependent micro-businesses. The industry analysis estimates competition with no AI infrastructure to be 30-50% more expensive to operate. FinTech automation thus generates an immediate cost leadership edge in favor of embracing microenterprises.

In revenue, FinTech automation opens up new customer groups, and greater volumes of transactions. The adoption of M-Pesa is a major boost to the growth of SMEs as it helps operators to gain more markets. Mobile money businesses experience more profits and more clients on a regular basis. Automated credit access is also a strategic approach to facilitate the growth of revenues of the microenterprises. Micro-lenders that employ alternative credit scoring lend working capital within 24 hours always (Zaidi *et al.,* 2022). Through this speed, microenterprises are able to utilize time-sensitive procurement and bulk discount opportunities within a short period. Credit lag opportunities that were hitherto unreachable are now within reach of operation. Colombia AI adopting FinTechs report a 44% decline in operational expenses of their clients. This standard is reflective of efficiency dividends that can be availed to downstream micro-business users of platforms. Latin America is rapidly emerging as a significant market for artificial intelligence, with an AI market valued at US$12.7 billion and growing at a 28.1% annual rate, largely driven by adoption in Mexico, Brazil, and Colombia (Gerosa and Hermansen, 2025). The potential of revenue is proportional to the removal of friction in every process of the business workflow through automation.

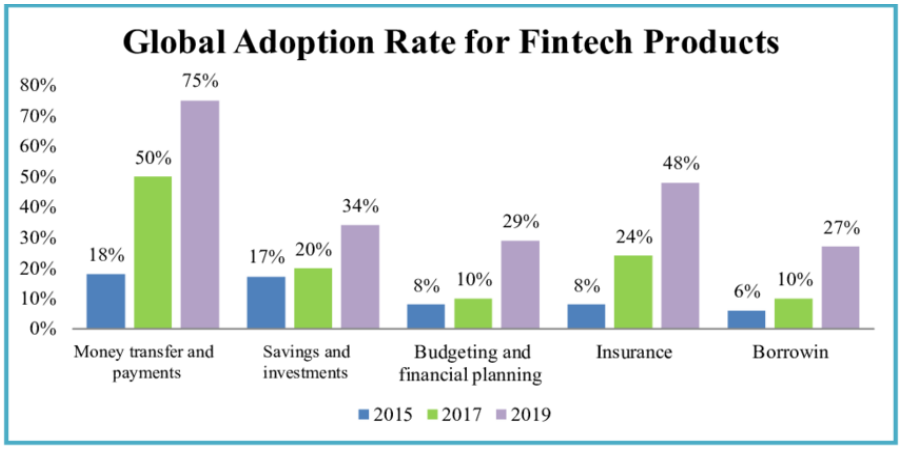

Figure 6: Global Fintech adoption rate
(Source: Kumar *et al.,* 2023)

A transformative strategic impact of the adoption of FinTech automation is its cash flow management. Microenterprise failure in emerging economies across the world is mostly caused by irregular revenue cycles (Zaidi *et al.,* 2022). Latin America has trailed significantly behind global benchmarks and its previous year productivity ranged as only 0.4% annual growth over the past 25 years (2000 to 2024). Earned Wage Access and Buy Now Pay Later tools used in procurement of inventory are available in FinTech, which easily smooths volatility. Microenterprises are able to stabilize their cash flow through automated receivables management because of varying earners periods (Oyedokun *et al.,* 2025). By 2030, it is

estimated that the embedded finance market will be 320 billion dollars around the world. It is projected that SMB segment will take a share of about 150 billion dollars. This shows that the biggest embedded finance opportunity is the provision of needs to micro and small businesses. The other lasting result of long-term FinTech automation adoption is strategic formalisation. Records of transactions generated with FinTech produce auditable financial records of hitherto informal operators. Such histories allow access to formal trade finance, government procurement contracts and supply chain financing. Thus, McKinsey estimates suggest that, by 2053, over 25% of the region's population will be aged 60 or older on labor component for fixed weak productivity (Madgavkar *et al.,* 2025).

Cross-Country Productivity Patterns and Future Development Strategies

Cross-country analysis shows different but converging FinTech-driven microenterprise productivity patterns across selected emerging economies. These trends are determined by the mobile penetration levels, regulatory framework, and the maturity of FinTech ecosystems. The quality of digital infrastructure is also a determinant of the level of productivity effects in various economies (Semillan Rosales *et al.,* 2025). Mobile money adoption at scale drives productivity gains in selected sub-Saharan African economies. Mobile money transactions in sub-Saharan Africa surpassed 800 billion dollars in value in 2022 (Gilbert, 2023). The productivity pattern in Africa indicates a telecom operator-led model of FinTech diffusion.

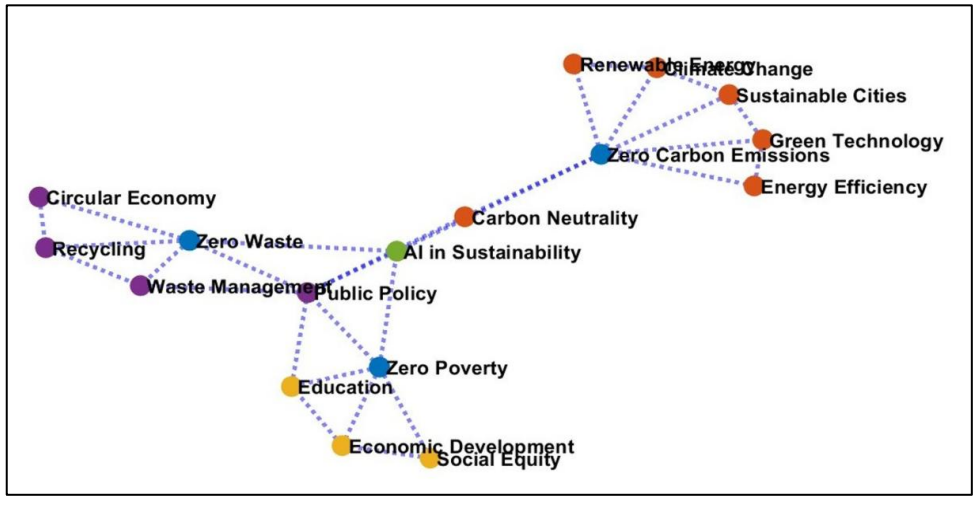

Figure 7: A network visualization of the Three Zeros Method
(Source: Musa *et al.,* 2025)

The trend in countries is the indication of a government-based Digital Public Infrastructure model of FinTech automation diffusion. Latin America is an example of venture capital-driven start up ecosystem model of FinTech growth. In Q3 2025 Brazil regained its leadership in FinTech investment with 692 million dollars in major deals (Azevedo, 2025). In 2024, Colombia recorded the best investment growth in the region with 36.3%. The Brazilian adult market share of 46 percent of Nubank shows that neobanking is a concomitant financial inclusion process. It can also serve as a productivity automation engine of millions of informal

micro-vendors (Oyedokun *et al.,* 2025). The benefits of micro-vendors are productivity benefits obtained as a by-product of participation on the super-app platform.

Future development plans should deal with the structural constraints that have continued to be a problem to further productivity growth. Infrastructure gaps and digital illiteracy, as well as regulatory fragmentation are still critical issues in the world. The most relevant development priority in the next five years according to 70% of FinTechs was AI. The next productivity frontier will be agentic AI, predictive cash flow management, and automated compliance (Semillan Rosales *et al.,* 2025). AI native FinTechs have a chance to spearhead this subsequent round of microenterprise automation revolution.

RegTech integration will ease compliance friction and formalization of microenterprise operators will be lowered. The enlargement of Open Banking APIs will facilitate the interoperability of pre-existing FinTech platforms and systems that are siloed. Public Private Partnerships should be expanded into rural areas of microenterprise clusters to cloud based FinTech infrastructure.

Table 2: Cross-Country FinTech Productivity Patterns and Future Development Strategies for Microenterprises

Country / region	**FinTech diffusion model**	**Dominant platform / tool**	**Key productivity outcome**	**Quantitative evidence**	**Future strategy priority**
Africa	Telecom-led mobile money ecosystem	Financial inclusion enabling microenterprise digital payments, savings mobilisation, and cashless transaction efficiency	Payment automation, savings mobilisation, and automated bill management for microenterprises	Financial inclusion increased from 26% (2006) to 84.8% (2024); mobile money transactions exceeded $800 bn (2022)	Cloud-native scaling and real-time transaction optimisation
Brazil / Latin America	Government-supported instant payment + neobank ecosystem	Pix, Nubank, MercadoLibre embedded finance	Automated credit scoring and instant payments enabling micro-retailers to access working capital without traditional banking	Nubank serves ~46% of Brazilian adults; Pix processes billions of transactions annually	AI-driven credit expansion; embedded finance scaling for micro and small businesses

Colombia / Latin America	AI integration-led fintech efficiency model	AI-enabled fintech platforms, digital lending, RegTech tools	Operational cost reduction and faster loan processing improving microenterprise financial access	44% operational cost reduction; 56% faster loan processing; rising AI adoption in fintech sector	Expansion of AI adoption and strengthened RegTech for compliance automation
Southeast Asia	Super-app-led embedded finance model	GrabPay, GoPay, SeaMoney, Mynt (Philippines)	Payment reconciliation, inventory financing, and working capital access for micro-vendors within digital ecosystems	FinTech investment reached ~$3.7 bn (2024); regional growth ~28% annually	Expansion into insurance, micro-credit, and embedded financial services for informal sector
Global emerging markets	AI + Open Banking + RegTech convergence model	GenAI fintech platforms, Banking-as-a-Service, API ecosystems	Predictive cash flow management, automated compliance, and interoperable payment systems enhancing productivity	AI in fintech market growing ~25% YoY, reaching multi-billion-dollar valuation in 2025	Public-private digital infrastructure expansion; Open Banking interoperability frameworks

(Source: Self-Created)

The improvement in productivity should not be limited to the urban centers but extend to rural operators. The coming decade will be characterized by infrastructure anchored, inclusive, and AI powered FinTech strategies to transform productivity in microenterprises in emerging economies (Oyedokun *et al.,* 2025).

Discussion

The aggregate result of the findings of this paper is that FinTech-enabled automation is generating quantifiable and systemically relevant productivity increases in microenterprises across selected emerging economies. These benefits are not automatic and even. They depend on the level of maturity of the FinTech ecosystems in each country, the nature of digital

infrastructure and regulatory architecture (Zaidi *et al.,* 2022). Mobile money services such as M-Pesa have automatized the underlying financial processes in sub-Saharan Africa such as payment receipt, supplier payments and savings accrual by millions of microenterprises. In East Africa, mobile-based payment systems have digitized merchant transactions at scale, improving cash flow management among informal retailers and small vendors. In Latin America, neobanks and embedded finance platforms powered by AI have provided cost savings and credit access benefits that were by definition unachievable within the traditional banking framework.

The fact that such gains in productivity are layered is equally important. FinTech automation does not just speed up the processes that already exist. It changes the strategic positioning of microenterprises by formalizing them, opening the doors to trade finance, and providing auditable financial histories. All these secondary outcomes add to the direct efficiency benefits and develop long-lasting competitive advantages to automation adopting operators. An acute tension between the rate of FinTech innovation and the absorptive capacity of microenterprises in low digital literacy settings is also shown in the evidence. Those which combine several automation capabilities into easy-to-use interfaces have greater adoption and greater productivity benefit than those whose functionality depends on a high level of technical skill. This contradiction makes human-centric FinTech design significant in the new markets (Zaidi *et al.,* 2022). In the future, agentic AI, Open Banking APIs, and RegTech integration will further automate things. To achieve this potential, coordinated governmental policy will be necessary to facilitate FinTech access to the most marginalised microenterprise operators in rural and peri-urban economic geographies so that gains are distributed to them (Fowowe *et al.,* 2025).

Conclusion

Automation of business processes through the FinTech initiative is one of the most impactful productivity interventions that can be offered to microenterprises operating in the emerging economies today. It has been illustrated in this paper that automation of payment, credit, compliance, and inventory processes will provide quantifiable benefits in cost reduction, revenue increase, cash stability, and market penetratio. Different foreign countries (Indonesia, China) proves that different national FinTech schemes have a similar result, microenterprises using automation tools are more efficient and competitive than those using manual procedures. AI, embedded finance, and Banking as a Service are all bringing the productivity frontier into rapid growth. To spread these benefits equally, policymakers need to invest in digital infrastructure and regulatory frameworks. Inclusive design should be a priority of FinTech platforms. These forces combined can transform automation into a ubiquitous microenterprise productivity engine throughout the developing world.

Reference

Adbi, A. and Natarajan, S., 2023. Fintech and banks as complements in microentrepreneurship. *Strategic Entrepreneurship Journal*, *17*(3), pp.585-611. Available at https://sms.onlinelibrary.wiley.com/doi/abs/10.1002/sej.1470

Available at https://www.prohance.ai/blog/workflow-optimization-guide/

Azevedo, M., A., 2025. Brazil Back On Top In Q3 When It Comes To Venture Funding In Latin America. Available at https://news.crunchbase.com/venture/latin-america-funding-brazil-leads-q3-2025-data/#:~:text=Startups%20%E2%80%A2%20Venture-,Brazil%20Back%20On%20Top%20In%20Q3%20When%20It%20Comes%20To,over%20year%2C%20Crunchbase%20data%20shows.

Fintech. global, 2024. Average LATAM FinTech deal size tripled, resulting in funding growth of 15% in H1. Available at https://fintech.global/2024/10/14/average-latam-fintech-deal-size-tripled-resulting-in-funding-growth-of-15-in-h1-2/

Fintech.global, 2023. Latin American FinTech investment suffers in 2022, declining 58% . Available at https://fintech.global/2023/03/15/latin-american-fintech-investment-suffers-in-2022-declining-58/

Fowowe, O.O., Nnajiofor, C.M. and Phyllis, E.A., 2025. The Role of FinTech in Expanding Access to Finance for Underserved Communities: A Policy-Focused Study Linking Digital Financial Services to Economic Inclusion. Available at https://www.tradebusinessjournal.com/uploads/archives/20251125185355_FTB-2025-1-003.1.pdf

Gandhi, V. and Kak, R., 2025. India's DPI Experiment and Digital Finance Revolution. In *Sustainable Digital Finance* (pp. 419-443). Cham: Springer Nature Switzerland. Available at https://link.springer.com/chapter/10.1007/978-3-032-02983-6_27

Gerosa, M., and Hermansen, A, 2025. Economic and Workforce Impacts of AI in Latin America. Available at https://www.linuxfoundation.org/hubfs/Research%20Reports/Economic_Workforce_Impacts_AI_LatAm_Report.pdf?hsLang=en#:~:text=AI%20is%20a%20significant%20economic%20force%20in,expanding%20at%20an%20annual%20rate%20of%2028.1%25%2C.

Gilbert, P., 2023. Mobile money transactions hit $1.26T in 2022 - GSMA. Available at https://www.connectingafrica.com/mobile-money/mobile-money-transactions-hit-1-26t-in-2022-gsma

Jha, A., 2024. Digital Lending Guide: A Journey Into Quick, Paperless Loans. Available at https://decentro.tech/blog/digital-lending/

Kumar, P., Taneja, S., Kaur, A., and Özen, E., 2023. Fintech emergence – an opportunity or threat to banking. Available at https://www.researchgate.net/figure/Global-Fintech-adoption-rate-see-online-version-for-colours_fig2_376687378

Lăzăroiu, G., Bogdan, M., Geamănu, M., Hurloiu, L., Luminița, L. and Ștefănescu, R., 2023. Artificial intelligence algorithms and cloud computing technologies in blockchain-based fintech management. *Oeconomia Copernicana*, *14*(3), pp.707-730. Available at https://bibliotekanauki.pl/articles/19901187.pdf

Madgavkar, A., Noguer, M., C., Bradley, C., and White, O., 2025. Dependency and depopulation? Confronting the consequences of a new demographic reality. Available at https://www.mckinsey.com/mgi/our-research/dependency-and-depopulation-confronting-the-consequences-of-a-new-demographic-reality

Moreira, T. and Carvalho, L., 2024. AI-Enabled Process Optimization in Financial Operations: Enhancing Efficiency in Loan Origination, Underwriting, and Processing Workflows. *Journal of Applied Computational Science, Numerical Methods, and Scientific Computing in Engineering*, *14*(12), pp.1-17. Available at https://soloncouncil.com/index.php/JACSNMSCE/article/view/2024-JULY-04

Musa, M., Rahman, t., Deb, N., and Rahman, P., 2025. Harnessing artificial intelligence for sustainable urban development: advancing the three Zeros method through innovation and infrastructure. https://www.nature.com/articles/s41598-025-07436-1

Oyedokun, G.E., Anyahara, I.O. and Oyedokun, P.O., 2025. Harnessing FinTech and Artificial Intelligence for Financial Inclusion and Entrepreneurial Growth: An Empirical Review. *Journal of Economics, Finance and Management Studies*, *8*(7), pp.4741-4749. Available at https://www.academia.edu/download/123922589/2025_Harnessing_FinTech_and_Artificial_Intelligence_for_Financial_Inclusion_and_Entrepreneurial_Growth.pdf

Patel, S., 2025. AI in Fintech: How Artificial Intelligence Is Revolutionizing Finance. Available at https://www.mindinventory.com/blog/ai-in-fintech/

Prabowo, D.A., Tariazela, C. and Birgithri, A., 2024. An examination of the impact of using marketplaces to promote the growth of micro, small, and medium enterprises (msmes) in indonesia. *Startupreneur Business Digital (SABDA Journal)*, *3*(1), pp.26-33. Available at https://journal.pandawan.id/sabda/article/view/483

PYMNTS.com, 2025. In the News: FedNow Head Watches Banks Race to Catch Nonbanks as Growth Surges. Available at https://explore.fednow.org/explore-the-city?id=3&building=news-center&postId=100&postTitle=in-the-news%3A-fednow-exec-watches-banks-race-to-catch-nonbanks-as-growth-surges#:~:text=In%20the%20News:%20FedNow%20Head,demand%20is%20driving%20the%20growth.

Reverte, C., 2022. The importance of institutional differences among countries in SDGs achievement: A cross-country empirical study. *Sustainable Development*, *30*(6), pp.1882-1899. Available at https://onlinelibrary.wiley.com/doi/abs/10.1002/sd.2354

Sagar, A., 2025. What Is Workflow Optimization? Definition, Benefits, Strategies & Best Practices (2026)

Schneider, A., Wagenknecht, A., Sydow, H., Riedlinger, D., Holzinger, F., Figura, A., Deutschbein, J., Reinhold, T., Pigorsch, M., Stasun, U. and Schenk, L., 2023. Primary and secondary data in emergency medicine health services research–a comparative analysis in a

regional research network on multimorbid patients. *BMC Medical Research Methodology*, *23*(1), p.34. Available at https://link.springer.com/article/10.1186/s12874-023-01855-2

Semillan Rosales, Y.P., Troncos Martinez, K.Y. and Reto Gomez, J., 2025. The Role of Artificial Intelligence in Transforming Micro and Small Enterprises in the Commerce Sector: A Systematic Review. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=6036914

UNDP, 2020. Unpacking DPI: Storytelling and knowledge-sharing. Available at https://www.undp.org/digital/digital-public-infrastructure#:~:text=DPI%20is%20a%20set%20of%20foundational%20digital,free%20courses%20for%20policymakers%20and%20public%20officials

van Thiel, D., Elliott, K., Goedee, J. and Leenders, R., 2024. Responsible access to credit for sole-traders and micro-organizations under unstable market conditions with psychometrics. *The European Journal of Finance*, pp.1-33. Available at https://www.tandfonline.com/doi/abs/10.1080/1351847X.2024.2357569

Vasquez, J.H., 2024. Assessment of the impact of automation implementation in the context of business agility in a transnational Fintech company. Revista Investigación en Desarrollo y Gerencia Integral de Proyectos. ISSN en línea 2619-1830, 7(1), pp.54-73. Available at http://revistas.escuelaing.edu.co/index.php/idgip/article/view/215

Vasquez, J.H., 2024. Assessment of the impact of automation implementation in the context of business agility in a transnational Fintech company. *Revista Investigación en Desarrollo y Gerencia Integral de Proyectos. ISSN en línea 2619-1830*, *7*(1), pp.54-73. Available at http://revistas.escuelaing.edu.co/index.php/idgip/article/view/215

Wallstreetmojo, 2023. Microenterprise. https://www.wallstreetmojo.com/micro-enterprise /

Zaidi, M.A.N.M., Sapuan, N.M. and Kusairi, S., 2022. The business survival of micro-enterprises in facing economic uncertainty. *Journal of Governance and Integrity*, *5*(3), pp.328-335. Available at https://journal.ump.edu.my/jgi/article/view/8913

Zuan, H., Abd Razak, M.F. and Ramli, I.M., 2024. *Empowering Micro Businesses in Southeast Asia: Addressing Challenges and Harnessing Opportunities for ASEAN Economic Integration* (No. PB-2024-03). Available at Available at https://www.academia.edu/download/118791135/Empowering_Micro_Businesses_in_Southeast_Asia_2.pdf