

Fintech as a Bridge: How Digital Payment Infrastructure Accelerates Small Business Growth in Emerging Markets

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Abstract

The swift spread of financial technology, (Fintech) kinda really changed the economic picture for emerging markets, giving, at once, new openings for small and medium sized enterprises (SMEs) to move ahead. In this paper we look at how digital payment infrastructure works like a crucial link for SME growth between 2016 and 2020. Even though SMEs matter a lot for job creation and gross domestic product (GDP) in developing countries, they have long dealt with serious financial resistance, like scarce access to credit, expensive transaction frictions, and even being kept out geographically from mainstream banking. By combing through empirical evidence and academic studies released across 2016 to 2020, the work explains how digital payment systems ranging from mobile money platforms, to more unified digital wallets, helped ease those problems. The results suggest that when firms adopt digital financial services, it not only makes routine stuff smoother, such as payroll handling and day to day transactions, but it also builds reliable digital trails, sort of a verifiable footprint, which then opens doors to alternative credit channels. The paper also reviews the macroeconomic and institutional factors that pushed Fintech adoption during this timeframe, with particular attention to how mobile penetration and regulatory backing tended to reinforce each other. Overall, the findings point to the idea that digital payment infrastructure is not just there for transaction speed, it becomes a base ingredient for durable economic progress and stronger financial inclusion across the developing world.

Keywords: *financial technology, digital payment infrastructure, comprehensive review, operational payroll, digital footprints, digital payment etc*

I. Introduction

The period that was marked as a transformative epoch for emerging markets, was basically all about the aggressive push of digital financial services. In developing economies, the small and medium-sized enterprises, SMEs, are the backbone of the economic activity. They usually make up the vast majority of the businesses and they contribute quite a lot to employment and gross domestic product (GDP) too. Still there's been this persistent structural problem, a big financing gap plus that sticky friction you get in conventional banking models. For a long time, SMEs across Sub-Saharan Africa, Southeast Asia, and Latin America were kind of sidelined by formal financial institutions. It happened because the perceived risks were high, collateral was hard to come by, and the expenses were just prohibitive for keeping physical banking infrastructure running in rural or underdeveloped areas. (Suri & Jack, 2016). And then financial technology, Fintech, came along during that same stretch not only as a convenient substitute, but like a real connector that helped bring those previously marginalized players into the wider global and regional economies.

Fintech kind of covers this wide set of technological changes that aim to get financial services delivered more quickly, and yeah more inclusively, maybe. One of the clearest examples is the digital payment infrastructure, which spans mobile money, electronic wallets, and peer-to-peer (P2P) transfer platforms. Between 2016 and 2020, the worldwide growth of smartphones together with mobile internet connectivity made it easier for these systems to sidestep the usual banking routes. Like, as Gomber, Koch, and Siering (2017) mention, digital finance is a bit of a paradigm shift where information technology basically trims transaction costs down a lot and opens up access to financial services for more people. For SMEs, the change feels even stronger. Being able to send and receive payments digitally removes a bunch of the physical limits tied to cash management, lowers the exposure to theft, and speeds transactions up substantially. That lets small firms keep stronger liquidity, and move with more agility.

Furthermore, weaving digital payment infrastructure into everyday commerce really does feel like a basic starting point for wider financial inclusion and also steadier firm growth. When SMEs move away from cash based, informal routines, and instead lean on digital platforms, they end up creating ongoing and also checkable trails of activity. People sometimes call these "digital footprints", and in practice they become useful

collateral of a sort, like an alternative credit assessment tool for Fintech lenders, plus certain more future oriented traditional banks. In particular, Claessens, Frost, Turner, and Zhu (2018) argue that Fintech credit markets grew at a near exponential pace around this time, and that it lines up with the uptake of digital payment rails. So basically, digital payments end up being the main corridor through which SMEs in emerging markets can reach working capital that used to be out of reach, then they can broaden their inventory, put money into better equipment, and bring on extra staff.

Still, even with these improvements, getting to full digital financial inclusion isn't smooth sailing. In the years before 2020, the gaps were pretty visible, including digital divides, unclear regulatory boundaries, and very uneven levels of institutional readiness across different developing countries. Some places, like Kenya and its almost everywhere M-Pesa setup, or China with Alipay and WeChat Pay, managed to build stronger ecosystems. Other countries didn't keep up, often because their regulatory setup was thin or their technological infrastructure just wasn't ready enough (Lu, 2018; Asongu & Nwachukwu, 2018). Mapping and interpreting this uneven picture matter a lot for policymakers and industry players who want to support sustainable economic environments, not just quick wins.

The main goal of this paper is to look at how digital payment infrastructure helped SME growth in emerging markets speed up, during the important 2016-2020 stretch. In other words, by piecing together what the empirical literature says and by using data only from that same period, this study checks the pathways that explain how digital payments lower day to day operational barriers. It also explores how alternative credit data supports SME financing, and what the structural ingredients were for a successful Fintech uptake. After that, the next parts cover a careful literature review, then lay out the theoretical lenses that frame this shift, and they show empirical evidence about SME performance. Finally, the discussion turns to regulatory obstacles, those that really shaped this era.

II. Literature Review

The academic discourse around Fintech and financial inclusion kinda ballooned, largely because it mirrored how quickly digital payment technologies were actually taken up in the real world. One big thread in this literature is the shift in how mobile phones are seen, like they moved from just being communication gadgets to almost indispensable financial instruments. Suri and Jack (2016) gave some really solid empirical grounding in a long-run study of Kenya's M-Pesa. They showed that having mobile money access helped lift meaningful parts of the population out of extreme poverty, mostly because it made it easier to allocate resources and it also stimulated micro-entrepreneurship. In other words their work argued, that digital payment systems help households and smaller firms absorb economic shocks in a more stable way, so they can keep running even when there are localized financial downturns

After that poverty focused storyline, later studies then got more specific about SME activities and growth. Aker, Boumnijel, McClelland, and Tierney (2016) looked at mobile money efficiency in relation to cash transfers and informal business dealings in Niger. They reported that digital payment channels can sharply cut down the logistics related costs and also the time involved in distributing cash, and those benefits line up directly with day-to-day operations for SMEs. When small businesses use digital rails for B2B (business-to-business) or B2C (business-to-consumer) exchanges, they tend to get lower menu-type costs and also a wider market reach, even if the local environment is imperfect. That kind of efficiency matters a lot in places where infrastructural gaps slow down or block physical commerce, so the whole trading process becomes a bit more "fluid" than before.

The literature also extensively covers the macro-level drivers of Fintech adoption. Haddad and Hornuf (2019) conducted a comprehensive analysis of the economic and technological determinants fostering global Fintech markets. They posited that Fintech start-ups frequently emerge in economies where traditional financial systems are either highly inefficient or heavily concentrated. In developing countries, the 'unmet demand' for accessible financial services acts as a primary catalyst. When traditional banks fail to serve the SME sector due to rigid collateral requirements and high administrative costs, digital platforms fill the void. This substitution effect is a central tenet of the period's literature, explaining why emerging markets often 'leapfrog' traditional banking infrastructure directly into digital-first financial ecosystems.

However, the adoption of digital payments is not just some clean function of technological availability. It is really more knotted up with institutional quality and financial literacy, in a way that's kind of hard to separate. Tchamyou, Erreygers, and Cassimon (2019) pointed out this intersection between information and communication technology, and financial access across Africa. What they seemed to suggest was that yes, mobile penetration matters, but its effect on lowering financial inequality and helping SME growth is made stronger only when it is paired with educational initiatives and solid institutional frameworks, not when it stands alone. In a similar vein, Asongu and Nwachukwu (2018) showed that institutional quality strongly moderates the link between mobile phone usage and entrepreneurial success, so technology by itself is not enough without a supportive regulatory and business environment, period.

A key evolution in the literature near the end of the decade leaned more toward systemic steadiness and the wider macroeconomic implications of digital finance. Ozili (2018) argued that digital finance can improve financial inclusion by pulling the unbanked population and informal SMEs into the formal system yet it also brings its own set of threats to financial stability. You start seeing issues like cybersecurity hazards, data privacy worries and even the absence of consumer protection on these newer digital platforms, which then became notable regulatory concerns. So, the body of work from 2016 to 2020 basically pushes a balanced approach: innovation should be encouraged, but it also needs to be hemmed in by careful regulatory sandboxes, so they can safeguard both the financial system, and those SME consumers who are often the most vulnerable that the whole effort is supposed to reach.

III. The Mechanisms of Digital Payment Infrastructure

To comprehend how digital payment infrastructure accelerates SME growth, it is essential to dissect the specific economic and operational mechanisms at play. Digital payment systems, encompass a variety of technologies including mobile wallets (e.g., M-Pesa, Alipay), mobile banking applications provided by traditional financial institutions, and specialized B2B payment gateways. Beck, Pamuk, Ramrattan, and Uras (2018) provided a comprehensive theoretical framework detailing how payment instruments influence financial development and real economic activity. According to their analysis, digital payments reduce the frictions associated with spatial separation between buyers and sellers, which is particularly beneficial for SMEs looking to expand beyond localized, cash-reliant customer bases.

The primary mechanism of impact is the drastic reduction in transaction costs. In emerging markets, managing physical cash involves significant hidden costs, including transportation, security against theft, and the opportunity cost of time spent physically depositing funds at distant bank branches. Digital payment infrastructure digitizes these processes, enabling instantaneous, low-cost transfers. This immediacy of fund settlement improves the working capital cycle for SMEs. A small retailer, for example, can receive digital payments from customers and immediately use those funds to pay suppliers digitally, bypassing the delays inherent in cash clearing or traditional check processing. This velocity of money is a critical driver of SME growth, as it allows for faster inventory turnover and more efficient capital utilization.

A secondary, but honestly arguably more transformative mechanism is the generation of digital footprints. In the past, the main obstacle for SME credit access in developing economies was mainly information asymmetry. Conventional banks usually require audited financial statements and some form of tangible collateral to measure credit risk, yet assets that informal or semi-formal SMEs typically have are limited. As Frost (2020) pointed out, Fintech somehow resolves this information asymmetry by using alternative data. Every digital transaction an SME makes—like receiving payment from a customer, paying a utility bill, or buying raw materials—turns into a verifiable data point. Fintech lenders then use machine learning approaches to interpret these transactional data streams, to judge cash flow predictability and general business condition. So, when digital payments are adopted more widely, it tends to link with creditworthiness and that opens micro-loans and working capital that support business scaling.

Furthermore, digital infrastructure kind of facilitates operational formalization, and in practice it makes it easier to standardize day to day routines. When SMEs use digital payroll solutions, they can handle their workforce management more efficiently even if resources are limited. Breza, Kanz, and Klapper (2020) did an experimental study on the adoption of digital payroll accounts in emerging markets and they found that when workers move away from cash to digital wage payments it improves their saving habits and financial resilience. At the same time employers feel less administrative burden, which is, honestly, a big deal for smaller firms. So for an SME, formalizing payroll and transactions through digital means, does not only sharpen internal accounting and transparency but also boosts the firm's credibility when dealing with larger corporate clients, government agencies, or even potential investors.

Finally, there's also this architectural nature of these platforms, it often encourages ecosystem integration. Think of super-apps like China's Alipay or WeChat Pay, which between 2016 and 2020 shifted from being simple payment channels into broad digital ecosystems (Lu, 2018). Inside those ecosystems, an SME can coordinate payments, tap into micro insurance, arrange logistics services, and run targeted digital marketing activities. By bringing so many functions together, the threshold for carrying out more advanced business operations drops a lot. As a result, a small enterprise in a developing country gains access to tools that used to be practically exclusive to large, well-resourced corporate actors.

IV. Impact on SME Growth and Performance

The supposed benefits of digital payment infrastructure ended up turning into outcomes you can actually see in SME performance, and also into a noticeable uptick in regional economic growth across a bunch of emerging markets. What the data from this timeframe keeps showing, over and over, is a positive link between adopting digital financial services and a set of firm growth measures. These include higher revenue, improved

profitability, and even more jobs created. When you zoom in on specific places, though, the whole story starts to look more nuanced, and somehow more vivid at the same time.

In Sub-Saharan Africa, mobile money platforms acted like a kind of safety rope for SMEs, especially for firms operating in the informal space. Moving away from cash and into digital transactions allowed these businesses to extend their geographic footprint, more or less without the old constraints. A merchant didn't have to be standing there in person to receive payment anymore, so remote commerce began to grow in a very steady way. Also, being able to store money securely in digital form meant that owners could gather funds for lump sum type investments in their own operations, like buying a new machine or enlarging a storefront. Asongu and Nwachukwu (2018) said that this capacity to build capital, made easier by mobile platforms, became a meaningful push behind entrepreneurial momentum in the region.

In Asia, the scale and level of digital payments gave real, almost unexpected growth momentum, like it sort of pushed things forward, fast. The Chinese approach, basically driven by a duopoly—Alipay with WeChat Pay—showed how digital payments could reorganize retail commerce entirely (Lu, 2018). For Chinese SMEs, taking up these payment codes became a prerequisite for showing up in the market, not just a convenient choice. Then the information produced by these platforms gets used very intensely by linked Fintech lending units, to issue instant, uncollateralized credit lines to millions of micro and small firms. That kind of liquidity boost allowed small businesses to promptly restock when peak demand arrived, and also to tolerate short-lived revenue dips... which over time changed growth paths and survival chances compared to the earlier pre-digital period.

More broadly, the effect of digital infrastructure on SME credit access worldwide was measured by Claessens et al. (2018). In their work, they found that alternative credit markets, mostly powered by digital transaction trails, were expanding at extremely high rates across emerging economies. They also noted that Fintech credit per capita tended to be highest where banking density was lower, but mobile phone penetration was high. That pattern implied digital payments were effectively reaching the “missing middle,” meaning SMEs that are too big for traditional microfinance, but still too small, or too informal, for commercial banks. As soon as this targeted credit started flowing in, it helped inventory rollovers happen more often, encouraged market diversification, and supported local hiring, pretty directly. Moreover, the later part of this period (early 2020) provided a severe stress test for SMEs globally due to the onset of the COVID-19 pandemic. Literature evaluating the initial economic shocks of 2020 highlights the resilience of digitally integrated SMEs. Sahay et al. (2020) emphasized that the pre-existing adoption of digital payments allowed certain SMEs to pivot rapidly to e-commerce and contactless delivery models. Businesses that had already established digital payment rails and digital credit lines were significantly better equipped to survive localized lockdowns and supply chain disruptions compared to their cash-reliant counterparts. Benni (2020) further corroborated this, noting that digital finance was a critical shock-absorber for SMEs during the early months of the pandemic, maintaining vital economic lifelines when physical mobility was restricted.

V. Challenges and Institutional Barriers

The expansion of Fintech kind of surfaced structural, regulatory, and infrastructural obstacles that got in the way of smooth adoption, and in some instances, also started producing new economic fragilities. One big thing the literature points at is regulatory inconsistency. Since fintech changes tend to move faster than older financial supervision, many policymakers in emerging economies had trouble trying to encourage financial inclusion while still keeping the whole system stable. Ozili (2018) noted that the quick growth of unregulated digital lending along with digital payment services could trigger over-indebtedness, especially for fragile SME owners. In places where credit bureaus had limited or no visibility into digital loans, small firms could pile up several high interest digital loans, and that can slide into pretty harsh debt traps. Also, without solid consumer safeguards in the online financial world, early users were left exposed to predatory lending behavior and to unclear, sometimes hidden, fee arrangements.

Infrastructural deficits stayed a pretty serious blocker. Sure, mobile phone penetration went up everywhere, but the quality and reliability of mobile internet coverage—it varied in a really uneven way. In rural areas, or places that were deeply marginalized, the absence of steady connectivity made digital payment platforms kinda shaky, so SMEs end up turning back to cash, even if they didn't want to. And the digital divide wasn't just a technological issue, it was also about education. Tchamyou et al. (2019) made that point clearly, saying that when financial and digital literacy are low, Fintech solutions don't work as well as they should. A lot of SME owners in developing regions didn't have the “technical self-belief” to move through digital interfaces, and they also lacked the financial judgment to grasp the terms around algorithmic digital credit. So in practice, the available digital tools were underused, not because the tools were bad, but because the uptake was constrained.

Then there was interoperability, between the different payment service providers, which became another hard hurdle. In the 2016-2020 window, lots of digital payment platforms basically functioned as “walled gardens.” If an SME had one particular mobile wallet, it often couldn’t, or couldn’t do it easily and cheaply, receive payments from customers who used a rival wallet. That non-interaction drove market fragmentation. Small businesses had to keep multiple accounts and sometimes multiple devices, just to match different customer habits and preferences, and this slowly chipped away the efficiency gains that digital payments were meant to bring. Toward the end of the period, some regions started standardized national payment switches, but even then, the lack of smooth cross platform functionality stayed as a major friction point, not something that just disappeared.

Finally, the cybersecurity landscape put forth some daunting challenges. As SMEs digitized how they work, they were increasingly considered targets for cyber-attacks, fraud and data breaches, all at once. Unlike big corporations that often have dedicated IT security teams, SMEs in emerging markets usually do not have the funds or manpower needed to fend off even the more sophisticated digital threats. One single case of digital fraud, or maybe a compromised mobile wallet, could wipe out a micro-enterprise’s working capital. So, getting trust for digital payment systems wasn’t a onetime thing. It took continuous efforts from Fintech providers AND regulatory authorities, to make sure transactions stay secure, and that dispute resolution stays dependable (Haddad & Hornuf, 2019).

VI. Conclusion

The critical era in the economic evolution of emerging markets, with the rise of Fintech as this kinda key engine for more inclusive growth. If you look at both the literature and the empirical data for that period it is pretty clear that digital payment infrastructure worked like a bridge, connecting marginalized small and medium sized enterprises to the wider financial ecosystem. It lowered transaction costs in a big way, reduced geographic barriers, and also moved things away from informal cash handling toward efficient digital ledgers, so SME operations got improved, fundamentally.

And maybe even more importantly, the move toward digital payments cracked open the hardest lock on SME growth: access to formal credit. New streams of alternative data and digital footprints made it possible to run a different style of lending, more or less algorithmic, where risk is judged from cash flow rather than old school collateral. That change broadened access to working capital, which then supported entrepreneurial expansion, job creation, and economic resilience... and those are exactly the features that turned out to be indispensable during the first big shocks around early 2020.

However, realizing the complete potential of digital financial infrastructure takes more than just putting the tech in place. The problems that became visible in this period starting with regulatory lag and cybersecurity threats, and also those stubborn digital and educational divides kinda point to why you need policy that is actually holistic, not only bits and pieces. So, for digital payment systems to work as stable engines for SME growth, governments and other institutional stakeholders have to put resources in at the same time: solid digital literacy programs, interoperable networks with standardized rules, and regulatory frameworks that can bend without breaking, meaning they protect consumers but still allow innovation to move. In the end, the 2016-2020 experience shows that, with the right institutional quality behind it, digital payment infrastructure can be a major catalyst that helps small businesses thrive and supports sustainable economic development across emerging markets.

Tables

Table 1: Key Benefits of Digital Payment Infrastructure for SMEs in Emerging Markets (2016-2020)

Operational Area	Traditional Mechanism (Pre-Fintech)	Digital Infrastructure Advantage (2016-2020)
Transaction Efficiency	Cash-based, slow clearing, high manual effort.	Instant settlement, zero geographical barriers.
Credit Access	Requires physical collateral and audited statements.	Uses transaction data (digital footprints) for algorithmic credit scoring.
Security & Risk	High risk of theft, physical loss, and counterfeit cash.	Encrypted transactions, reduced physical handling.
Payroll Management	Cash distribution, manual ledger tracking.	Automated digital disbursements, formalizing employee income.
Market Reach	Restricted to local, physical foot traffic.	Enables regional e-commerce and remote B2B transactions.

Table 2: Institutional and Macroeconomic Determinants of Fintech Adoption

Determinant Factor	Impact on SME Digital Payment Adoption	Key Literature Support (2016-2020)
Mobile Network Penetration	Provides the essential physical infrastructure required for SMEs to access mobile money and e-wallets.	Suri & Jack (2016); Tchamyou et al. (2019)
Banking Sector Inefficiency	High costs and limited reach of traditional banks drive SMEs to seek alternative Fintech solutions.	Haddad & Hornuf (2019)
Regulatory Flexibility	Sandboxes and progressive legislation allow Fintech firms to offer tailored, low-cost services to SMEs.	Lu (2018); Ozili (2018)
Financial Literacy	Educated business owners are more likely to adopt, trust, and effectively utilize digital payment tools.	Asongu & Nwachukwu (2018)
Data Alternative Availability	Availability of transaction data enables credit scoring without collateral, drastically boosting SME funding.	Frost (2020); Claessens et al. (2018)

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