

Platformization and the Digital Transformation of Informal Retail in Emerging Markets: A Comprehensive Review

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Abstract:

The rapid permeation of digital platforms into the informal economies of the Global South is reshaping traditional retail landscapes. This comprehensive review synthesizes contemporary academic literature on the digital transformation of informal retail—encompassing nanostores, *kiranas*, and *warungs*. Examining the shifts in business-to-business (B2B) e-commerce distribution, logistics optimization, consumer patronage, and cross-border trade, the paper highlights the complex operational realities of these markets. Crucially, the review critically analyzes the socio-economic impacts of algorithmic governance, arguing that platformization does not necessarily formalize traditional retail but rather institutionalizes existing informality through digital control. Finally, the paper outlines vital policy implications concerning data sovereignty, digital inclusion, and the development of open network models.

Keywords: Global South, B2B, Digital Transformation, algorithmic governance & platformization

Introduction

The global retail landscape is undergoing a profound and accelerating digital transformation, fundamentally reshaping how goods are sourced, managed, and delivered to consumers. Historically, the academic discourse and industry literature surrounding retail digitalization have been overwhelmingly biased toward modern, organized retail formats in advanced economies, focusing heavily on the "retail apocalypse" facing traditional brick-and-mortar stores in the Global North (SG Analytics, n.d.). However, in the emerging markets of the Global South—spanning Sub-Saharan Africa, Latin America, South Asia, and Southeast Asia—the commercial reality is starkly different. In these regions, the vast majority of consumer commerce flows through the informal economy (FXC Intelligence, n.d.). Millions of micro-independent grocery retailers, known colloquially as *kirana* stores in India, *warungs* in Indonesia, *spaza* shops in South Africa, *bodegas* in Latin America, and *dukas* in Kenya, form the unquestionable economic backbone of these nations, frequently accounting for upwards of eighty percent of total grocery and fast-moving consumer goods (FMCG) sales (FXC Intelligence, n.d.).

Despite the sheer volume of trade executed through these fragmented channels, operational digitalization within the informal retail sector has historically remained negligible, often hovering below five percent adoption even in populations demonstrating high digital fluency and smartphone penetration (Dataintel, 2026). The advent of "platformization"—defined as the penetration of digital labor and commerce

platforms into existing economic structures—is rapidly altering this paradigm. The platformization of informality represents a critical turning point where global value chains, algorithmic governance, and local, trust-based commercial networks intersect (Surie & Huws, 2023). Rather than eradicating informality, these digital ecosystems are increasingly co-opting and institutionalizing it.

This comprehensive review examines the multifaceted dynamics of digital transformation within the informal retail sector. By synthesizing current research on business-to-business (B2B) e-commerce platforms, the reconfiguration of supply chain logistics, the sociological impacts of algorithmic labor control, the intersectional vulnerabilities of marginalized workers, and the shifting paradigms of consumer patronage, this paper provides a robust theoretical and empirical overview of the sector. The analysis reveals how digital platforms do not necessarily "formalize" the informal sector in the traditional regulatory sense, but rather leverage digital governance to generate highly efficient, algorithmically orchestrated supply webs that maintain the flexibility and low costs inherent to informality (Ai, 2026).

Theoretical Foundations of Informality and Platformization

To comprehend the impact of digital platforms on the Global South, it is essential to first deconstruct the theoretical evolution of the "informal sector." Since its conceptualization in the early 1970s, the term has been utilized to categorize hundreds of millions of workers operating outside standard labor protections and state regulatory frameworks (Rosaldo, 2021). For decades, economic theory treated the formal and informal sectors as a strict dichotomy, operating under the assumption that economic modernization and technological advancement would eventually absorb the informal economy into a fully regulated, formal apparatus (Surie & Huws, 2023).

Contemporary scholarship, however, problematizes this binary view. Informality is no longer viewed merely as the absence of the state or a symptom of underdevelopment; rather, it is recognized as a complex continuum of practices optimized by both citizens and state actors navigating spaces of un-regulation and de-regulation (Park et al., 2025). In emerging markets, informality acts as an adaptive strategy, offering resilience in the face of structural asymmetry, macroeconomic instability, and institutional voids ("Marketing for Local Brands," n.d.). Institutional voids refer to the absence of specialized intermediaries, regulatory frameworks, and contract-enforcing mechanisms that facilitate smooth market operations in developed economies ("Marketing for Local Brands," n.d.). In the absence of formal institutions, *kiranas* and *warungs* rely heavily on social capital, deep relational ties, and geographic embeddedness to enforce contracts and provide credit ("A Systemic Mapping of Nanostore Identities," n.d.).

The arrival of platform capitalism in these environments marks a significant departure from previous technological interventions. Digital platforms act as institutional intermediaries, introducing a form of re-regulation orchestrated not by the state, but by private algorithmic governance (Park et al., 2025). In the Global North, platformization has been extensively critiqued for the "informalization" of previously secure, regulated work, a phenomenon prominently observed in the gig economy (Ai, 2026). In contrast, the Global South experiences a distinct trajectory. Platforms penetrate economies where up to ninety percent of the workforce is already engaged in the informal sector (Park et al., 2025). Here, platformization serves to make the invisible visible, capturing previously untracked labor and commerce within digital infrastructures (Park et al., 2025). By providing digital identities and transaction trails, platforms enable informal retailers to establish creditworthiness, thus bridging the gap between the unbanked and formal

financial institutions(CGAP, n.d.). Yet, this systemic integration transforms the isolated micro-enterprise into a highly dependent node within a vast, data-driven ecosystem, raising critical questions about autonomy, exploitation, and the actual benefits of this pseudo-formalization(Ai, 2026).

The Operational Reality of Informal Retail: The Dimensions of Chaos

Understanding why early attempts to digitize the informal retail sector failed requires a granular examination of its operational realities. A striking paradox defines this sector: while the demographic operating and patronizing these stores exhibits high digital fluency—evidenced by massive smartphone penetration and the widespread use of mobile messaging and digital payment infrastructures like India's Unified Payments Interface (UPI)—the adoption of digital tools for operational business management remains low(Dataintelo, 2026).

The failure of traditional digitalization efforts stems from a fundamental category error in solution design. Historically, technology developers have attempted to superimpose Point of Sale (POS) systems engineered for organized, formal retail environments onto informal settings. Organized retail is characterized by predictable workflows, distinct role separation, and stable infrastructure(TapNGo Research, 2024). In contrast, informal retail environments are defined by what researchers term the "Dimensions of Chaos." These dimensions encapsulate the structural friction that occurs when formal software encounters informal reality.

Dimension of Chaos	Manifestation in Informal Retail	Contrast with Organized Retail Environments
Information Entropy	High-volume, high-noise environments cause rapid degradation of verbal orders. Manual recording introduces transcription errors, abbreviations, and reliance on memory, leading to high inaccuracy(TapNGo Research, 2024).	Relies on structured data capture via barcodes, standardized packaging, and orderly, sequential checkout lines(TapNGo Research, 2024).
Temporal Compression	Extreme concentration of business, with a majority of daily transactions often occurring in brief, ninety-minute peak windows. Systems adding even a few seconds per transaction create cascading queues(TapNGo Research, 2024).	Exhibits relatively spaced foot traffic with transactions measured in minutes, allowing ample time for structured data entry(TapNGo Research, 2024).

Role Fluidity	Collapse of job functions into a single operator who simultaneously takes orders, prepares goods, manages inventory, resolves disputes, and processes payments(TapNGo Research, 2024).	Distinct separation of roles across different personnel, including cashiers, stock clerks, store managers, and fulfillment staff(TapNGo Research, 2024).
Infrastructure Fragility	Daily occurrences of power outages, network failures, and device malfunctions. Resilience, fault tolerance, and offline capabilities are mandatory design considerations(TapNGo Research, 2024).	Assumes the stability of power and broadband internet; system failures are treated as rare edge cases requiring exception handling(TapNGo Research, 2024).

Attempting to digitize these chaotic environments by merely recreating existing manual processes in a digital format forces the retailer to optimize within current constraints, inevitably leading to operational friction and the swift abandonment of the technology(TapNGo Research, 2024). The emerging consensus in the literature indicates that successful digital transformation in this space requires a paradigm shift toward "workflow engineering"(TapNGo Research, 2024). Rather than building better tools to record degraded information, workflow engineering restructures the flow of information so that degradation cannot occur. For example, shifting the initiation of an order directly to the consumer via QR codes and browser-based interfaces eliminates the transcription errors inherent in verbal ordering and reduces the physical counter load on the operator by up to seventy percent(TapNGo Research, 2024). Systems modeled on this Convergence of Stakeholders (COS) approach demonstrate near-perfect order accuracy and reduce average transaction times to sub-second metrics, thereby respecting the unique temporal physics of the informal retail environment(TapNGo Research, 2024).

Reconfiguring the Route-to-Market: E-B2B Distribution Strategies

Beyond the point of sale, the platformization of informality is driving a massive reconfiguration of the supply chains that feed these micro-enterprises. The traditional route-to-market (RTM) for fast-moving consumer goods in emerging markets relies on highly fragmented, multi-tiered distribution networks(IRE Journals, n.d.). Consumer packaged goods manufacturers depend on a long, opaque chain of exclusive regional distributors, wholesalers, and sub-wholesalers to reach neighborhood nanostores(Saragih & Ahmed, 2022). This structure is plagued by chronic inefficiencies: exorbitant cost-to-serve metrics, severe information asymmetry, frequent out-of-stock scenarios, and pervasive margin leakage(IJRASET, n.d.). To overcome these structural bottlenecks, a wave of Business-to-Business (B2B) e-commerce platforms has emerged as a disruptive force. Companies such as Udaan, JioMart, and FreshCart in India, Wasoko (formerly Sokowatch) and OmniRetail in Africa, and Bukalapak and Chipper in Latin America and

Southeast Asia, are fundamentally rewiring the FMCG supply chain(IJRASET, n.d.). By deploying API-driven architectures, these platforms disintermediate traditional supply chains, directly connecting manufacturers and large centralized wholesalers with informal retailers(IJRASET, n.d.). The adoption of digital procurement platforms introduces massive operational efficiency gains. Empirical research indicates that migrating from manual purchase orders to digital B2B platforms reduces order processing costs by forty to sixty percent, compresses cycle times from days to hours, and provides manufacturers with unprecedented real-time inventory visibility across distribution tiers(Dataintel, 2026).

Crucially, these platforms are overwhelmingly mobile-first. In emerging markets, over fifty percent of B2B FMCG transactions are conducted via mobile devices, capitalizing on WhatsApp-integrated ordering, vernacular language support, and progressive web apps(Dataintel, 2026). This mobile-native approach circumvents the lack of desktop infrastructure in traditional retail settings, allowing shopkeepers to order inventory dynamically based on real-time consumer demand(Park et al., 2025).

Logistics Optimization and the Cost-to-Serve Trade-off

For e-B2B platforms, the primary operational challenge lies in optimizing logistics to balance the cost-to-serve against the level of service provided to the retailer. Nanostores typically place small, highly frequent orders due to severe working capital constraints and limited physical storage space(Saragih & Ahmed, 2022). This dynamic creates a classic supply chain trade-off: if a distributor delivers too frequently, the small drop sizes obliterate profit margins; however, if deliveries are delayed to aggregate larger, more profitable loads, the nanostore risks stockouts and will swiftly shift its loyalty to a competing, traditional supplier(Saragih & Ahmed, 2022).

Advanced operations research methodologies, such as the two-echelon location-routing problem (2E-CLRP), have been applied to model and solve this dynamic in fragmented retail environments(Saragih & Ahmed, 2022). The 2E-CLRP model combines facility location optimization with complex vehicle routing problems, utilizing heuristic approximations to navigate the NP-hard nature of the mathematics(Saragih & Ahmed, 2022). Research establishes that non-exclusive e-B2B distributors can achieve optimal vehicle utilization and significant cost reductions only by reaching specific operational thresholds.

Strategic Logistics Driver	Impact on E-B2B Supply Chain Optimization
Market Penetration	Increasing the absolute number of onboarded stores within a specific geographic cluster increases drop density, thereby reducing the transit distance and fuel cost between delivery nodes(Saragih & Ahmed, 2022).
Wallet Share	Capturing a larger percentage of a specific store's total procurement spend increases the average order drop size per visit. Models indicate that achieving a baseline of a ten

	percent wallet share, combined with dense market penetration, maximizes vehicle utilization and unlocks foundational cost savings(Saragih & Ahmed, 2022).
Delivery Frequency	While higher frequency satisfies the working capital constraints of informal retailers, it exponentially strains logistics. Optimization algorithms must balance routing efficiency with the store's inventory carrying capacity to prevent margin erosion(Saragih & Ahmed, 2022).
Urban Circuitry	Navigating the congested, complex, and often unmapped road networks of emerging market cities requires dynamic routing algorithms and the establishment of hyperlocal fulfillment nodes(Saragih & Ahmed, 2022).

By reaching these critical thresholds, e-B2B platforms unlock profound economies of scale, allowing them to operate profitably while passing on margin benefits to the informal retailer, often in the form of bulk procurement discounts or embedded trade credit(CGAP, n.d.).

The Convergence and Phygital Models

The integration of informal retail into digital platforms is not limited to backend procurement; it extends into consumer-facing operations. Two dominant strategic paradigms have emerged to describe this transition: the "Phygital" model and the Convergence model(Observer Research Foundation, 2020).

The Phygital (physical plus digital) model refers to traditional brick-and-mortar stores autonomously adopting essential digital tools. This includes the integration of basic POS software for inventory management, the acceptance of digital payments, and the establishment of a rudimentary online storefront to serve the immediate neighborhood(Observer Research Foundation, 2020).

The Convergence model represents a more systemic evolution, facilitating deep, structural collaborations between global technology conglomerates, modern organized retail chains, and the fragmented kirana network. A seminal example of this is the strategic partnership between Reliance Retail's JioMart and Meta's WhatsApp in India. Rather than investing solely in massive, centralized fulfillment centers, JioMart leverages the localized infrastructure of millions of existing kirana stores, effectively turning them into hyper-local micro-warehouses(CGAP, n.d.). In this ecosystem, the kirana acts as non-exclusive inventory and a last-mile delivery node for online consumer orders placed via WhatsApp. Simultaneously, the shopkeeper benefits from JioMart's aggregated B2B procurement discounts and incoming digital order revenue(CGAP, n.d.). This convergence allows digital platforms to achieve unprecedented scale without the heavy capital expenditure typically associated with last-mile logistics, while deeply integrating the

informal retailer into the formal digital economy.

Algorithmic Governance and the Reconfiguration of Labor

While the platformization of informal retail generates measurable efficiencies in supply chain logistics, it simultaneously exerts profound, often disruptive impacts on labor dynamics, algorithmic control, and the socio-economic status of marginalized workers. The prevailing industry narrative frequently posits that digital platforms seamlessly "formalize" and uplift the informal economy. However, an extensive body of sociological and political economy research vigorously contests this view, suggesting instead that platforms create novel modalities of precarious labor, eroding traditional autonomy through pervasive algorithmic dependency(Surie & Huws, 2023).

The "6 Rs" of Algorithmic Control

Platform capitalism operates fundamentally through data accumulation and algorithmic management. Unlike traditional bureaucratic or technical control utilized by industrial firms over the past century, algorithmic governance allows platforms to manage highly decentralized, outsourced, and fragmented networks of workers and micro-enterprises cohesively(Ai, 2026). Theoretical frameworks derived from labor process theory identify six primary mechanisms—termed the "6 Rs"—through which algorithms exert rational, pervasive control over labor and micro-entrepreneurs in the platform economy(Kellogg et al., 2020).

Mechanism of Control	Operational Definition within Platform Ecosystems	Impact on Informal Workers and Retailers
Restricting	Limiting the choices available to users within the digital interface(Kellogg et al., 2020).	Prevents operators from setting their own prices, choosing specific clients, or deviating from platform-mandated standard operating procedures.
Recommending	Subtly guiding decisions through personalized interfaces, dynamic pricing signals, and algorithmic nudges(Kellogg et al., 2020).	Directs delivery drivers to specific geographic zones or pushes specific inventory assortments to retailers, serving the platform's macro-efficiency goals over the individual's preference.
Recording	Continuous, real-time data extraction and surveillance of all digital and physical	Eliminates the operational privacy inherent in traditional informal work,

	actions mediated by the app(Kellogg et al., 2020).	transforming every action into a quantifiable data point for platform analytics.
Rating	The application of automated evaluation metrics based on recorded data, customer feedback, and speed(Kellogg et al., 2020).	Shifts disciplinary power to the consumer and the algorithm; survival on the platform becomes contingent upon maintaining near-perfect algorithmic scores.
Replacing	The automated deactivation, suspension, or suppression of visibility for underperforming nodes in the network(Kellogg et al., 2020).	Functions as instantaneous, algorithmically executed termination without human mediation, due process, or traditional labor protections.
Rewarding	The utilization of gamified financial incentives, tiered statuses, and visibility boosts to encourage strict compliance(Kellogg et al., 2020).	Manipulates behavior through variable compensation, forcing operators into continuous labor to maintain peak earning potential or platform prominence.

This algorithmic coordination replaces traditional, trust-based informal networks with quantifiable, data-driven forms of control. Under the guise of flexibility, decentralization, and micro-entrepreneurship, the platform effectively shifts the burden of fixed capital (e.g., the physical store premises, the delivery vehicle, fuel, and maintenance) and economic risk onto the informal worker. Meanwhile, the platform retains centralized control over the customer relationship, pricing architecture, and the immense value of the aggregated data(Ai, 2026).

The Institutionalization of Informality: The Shein Case Study

A critical examination of the informal garment sector in Southern China provides a stark, empirical illustration of how global platforms interact with deep-seated informality. The digital fast-fashion giant Shein operates a highly agile, technology-driven supply chain that relies not on massive formal factories, but rather on an expansive network of informal, low-wage, labor-intensive garment workshops located in urban villages(Ai, 2026).

Rather than utilizing its profound technological prowess to formalize these workshops—which would entail enforcing standard employment contracts, robust labor rights, and stringent safety regulations—the

platform actively tolerates and sustains these informal practices. Informality, in this context, is weaponized as a highly cost-efficient production strategy(Ai, 2026). The platform acts as an algorithmic mediator, coordinating a multi-tiered, outsourced production network where the degree of informality and precarity deepens the further one moves toward the periphery of the supply chain(Ai, 2026). In doing so, the platform does not eradicate informality; instead, it institutionalizes pre-existing dependencies and socio-economic inequalities through digital governance, seamlessly integrating the highly precarious informal sector into a lucrative global supply chain(Ai, 2026).

Intersectional Vulnerabilities: Gender, Migration, and Care Work

The permeation of platformization into the informal economy does not affect all demographics equally; it possesses distinctly gendered and migratory dimensions that exacerbate existing intersectional vulnerabilities. A substantial portion of the informal retail and service sector—including urban food dealers, domestic care workers, artisanal producers, and sanitation workers—is comprised of women, rural-to-urban migrants, and other marginalized populations(Cristofari, 2022).

While technology platforms frequently promote narratives of empowerment and the democratization of market access, critical feminist analyses reveal that the incentive models, algorithmic architectures, and systemic designs of these ecosystems are rarely centered on the lived realities of women(Cristofari, 2022). For example, in the artisanal and informal production sectors of Bangladesh and India, the logic of "self-entrepreneurship" promoted by digital marketplaces often forces individuals to aggressively brand themselves. This dynamic dramatically increases the emotional labor required to secure sales, effectively commodifying the producer's identity alongside their physical goods(Cristofari, 2022). Similarly, the platformization of care work and domestic labor often reproduces historical inequalities under a digital veneer, offering a "catalogue" of workers to clients while intensifying the invisibility and precarity of the labor itself(Cristofari, 2022). Even within the digital sex work economy, platforms extract immense value while offering minimal protection or structural support to marginalized creators(Cobarrubias et al., 2026). Migrant laborers operating within platform-mediated delivery and retail networks face compounded vulnerabilities. Research characterizes this dynamic as "bridled labor," wherein a worker's precarious legal or migratory status intersects with intense algorithmic surveillance(Cobarrubias et al., 2026). This intersection severely limits their capacity for collective bargaining, resistance, or mobility. Migrant workers in urban environments often lack the local social capital that traditionally buffers informal workers against sudden economic shocks. Consequently, while platforms undeniably create essential, low-barrier livelihood opportunities, they concurrently necessitate a critical re-evaluation of social protection frameworks. Policymakers must develop robust grievance mechanisms and labor rights paradigms that are explicitly tailored to the realities of platformized informality, rather than retrofitting outdated industrial-era labor laws(Surie & Huws, 2023).

Consumer Patronage Dynamics: The Coexistence of Retail Formats

The accelerated digital transformation of commerce naturally raises profound questions regarding the long-term viability of traditional, physical retail spaces. Will the digitization of the supply chain and the rise of e-commerce inevitably lead to the eradication of the informal street vendor and the neighborhood nanostore? Despite the explosive growth of online shopping, quick commerce (Q-commerce), and modern corporate supermarkets, empirical evidence indicates that traditional informal retail formats persist and,

in many cases, thrive alongside their formal counterparts in emerging markets(Rajaguru et al., 2024). Current projections suggest that while the absolute market share of traditional retail may dilute as the overall market expands, it will remain the dominant force in grocery and FMCG distribution in the Global South for the foreseeable future(Observer Research Foundation, 2020).

The sustained coexistence of Formal Retail Formats (FRFs) and Informal Retail Formats (IRFs) can be elucidated through the lens of consumer shopping orientations and spatial patronage behaviors(Rajaguru et al., 2024). Consumers in emerging markets do not strictly loyalize themselves to a single format; rather, they frequently utilize both formats complementarily, depending on their chronic shopping orientations and immediate situational goals(Rajaguru et al., 2024).

A critical differentiator that ensures the survival of the informal retail sector is the mediating role of salesperson consultation(Rajaguru et al., 2024). In the highly localized context of a *kirana* or *warung*, the shopkeeper possesses intimate, granular knowledge of the customer's financial situation, brand preferences, and family dynamics. This deep relational capital translates into tangible benefits for the consumer, such as flexible micro-credit (e.g., the traditional *khata* system in India), highly tailored product recommendations, and deep-seated community trust. These are elements that purely digital platforms or highly formalized, impersonal retail environments struggle to replicate authentically("A Systemic Mapping of Nanostore Identities," n.d.).

Conversely, task-focused shoppers—those prioritizing efficiency, standardized store layouts, precise inventory search, and rapid checkout—gravitate toward Formal Retail Formats and digital platforms, which excel in satisfying these specific needs(Rajaguru et al., 2024). Meanwhile, experiential-focused shoppers, who value social interaction, community embeddedness, and the tactile inspection of goods, continue to patronize informal retail spaces(Rajaguru et al., 2024).

However, the recent intrusion of "quick commerce"—rapid delivery platforms offering ten-to-twenty minute grocery fulfillment—presents a severe competitive threat to the spatial monopoly historically held by the neighborhood nanostore. These platforms have been shown to reduce foot traffic and cause declining sales for traditional outlets that fail to adapt("Impact of Quick Commerce on Traditional Kirana Stores," n.d.). To ensure their long-term survival, informal retailers must adopt a hybrid, adaptive posture. By leveraging B2B platforms for superior inventory management, digitizing their payment acceptance, and participating as localized fulfillment nodes in larger B2C delivery networks, nanostores can effectively combine their inherent strengths of proximity, community integration, and trust with the speed and efficiency of modern digital infrastructure("A Systemic Mapping of Nanostore Identities," n.d.).

Cross-Border E-Commerce (CBEC) and Global Value Chain Integration

The digitization of the informal and traditional retail sector does not occur in a localized vacuum; it is deeply intertwined with macro-level shifts toward cross-border e-commerce (CBEC) and the broader digitization of global trade("Visual Analysis of Research Hotspots and Frontiers in Cross-Border E-Commerce," n.d.). Digital platforms serve as the primary conduits through which small and medium-sized enterprises (SMEs) and informal micro-enterprises in emerging markets integrate into complex global value chains("Visual Analysis of Research Hotspots and Frontiers in Cross-Border E-Commerce," n.d.). Historically, international trade was almost exclusively dominated by large multinational corporations that possessed the capital and expertise necessary to navigate complex customs regulations, opaque international logistics, and cross-border information asymmetries("Digital Trade as a Catalyst for SME

Competitiveness in South Asia," n.d.). The advent of digital platforms has fundamentally flattened this transaction chain. B2B and B2C cross-border platforms—such as Alibaba International, Amazon Global, and AliExpress—allow localized manufacturers and traditional retailers in emerging markets to directly access global consumer bases without relying on traditional intermediary trading houses ("Visual Analysis of Research Hotspots and Frontiers in Cross-Border E-Commerce," n.d.).

This systemic integration drastically reduces transaction costs and barriers to entry. Digitalization enhances the probability of a firm exporting by mitigating geographical distance, enhancing market visibility, and lowering the financial threshold required for international market entry ("Digital Trade as a Catalyst for SME Competitiveness in South Asia," n.d.). Furthermore, the evolution of modern digital trade agreements plays a pivotal role in this expansion. These agreements, which govern cross-border data flows, prohibit aggressive data localization mandates, and mandate the mutual recognition of e-signatures and digital invoicing standards, provide the necessary institutional and legal frameworks to foster trust and security in cross-border digital transactions ("From Customs to Clicks," n.d.).

Environmental, Social, and Governance (ESG) Dynamics

An emerging and highly complex frontier in the platformization of trade is the imposition of Environmental, Social, and Governance (ESG) standards onto historically fragmented and informal supply chains. Digital platforms are increasingly requiring participating firms to adhere to strict supply chain transparency and green innovation standards (Zhang et al., 2025). For instance, algorithmic visibility and premium placement on major e-commerce platforms are frequently tied to verifiable eco-certifications, sustainable packaging metrics, and carbon-neutral logistics routing ("Visual Analysis of Research Hotspots and Frontiers in Cross-Border E-Commerce," n.d.).

While these mandates are essential for driving the global green transition, they pose acute, structural challenges for informal and traditional enterprises in emerging markets. These micro-enterprises often lack the capital, digital maturity, and administrative capacity to implement sophisticated traceability tools, such as blockchain-enabled supply chain tracking or Internet of Things (IoT) quality control sensors ("Digital Trade as a Catalyst for SME Competitiveness in South Asia," n.d.). Consequently, there is a significant risk that the platform-driven push for sustainability could inadvertently widen the digital divide. By setting compliance costs too high, global platforms may systematically exclude lower-tier informal producers and retailers from international markets, neutralizing the democratizing potential of cross-border e-commerce ("Digital Trade as a Catalyst for SME Competitiveness in South Asia," n.d.).

Policy Implications and the Decentralized Future

The rapid, largely unregulated expansion of platform capitalism into the informal economies of the Global South necessitates robust strategic, regulatory, and policy interventions. If left entirely to laissez-faire market forces, platformization risks exacerbating data monopolies, eroding worker autonomy, and accelerating margin compression for the smallest, most vulnerable retail players (Ai, 2026).

Data Sovereignty and the Open Network Model

As digital platforms orchestrate the informal economy, they harvest unprecedented, granular volumes of localized consumer data, predictive behavioral trends, and financial histories (Ai, 2026). This profound data asymmetry grants platform sponsors overwhelming market power, allowing them to dictate pricing,

extract exorbitant commissions, and impose unilateral terms on captive informal retailers and gig workers(Cristofari, 2022).

To counter these monopolistic tendencies, governments and policymakers in emerging markets are actively exploring decentralized digital public infrastructures. A prominent, pioneering example is India's Open Network for Digital Commerce (ONDC). ONDC is not an application, but an interoperable network protocol designed to unbundle the e-commerce value chain. By standardizing the APIs for cataloging, inventory management, logistics, and payment routing, ONDC allows informal retailers to be discoverable across multiple, competing buyer applications without being locked into the proprietary ecosystem of a single tech giant(IJRASET, n.d.). Such open-source, protocol-driven approaches democratize access to digital markets, ensuring that the foundational technological infrastructure acts as a neutral public utility rather than a private, rent-seeking toll road(IJRASET, n.d.).

Empowering the Human Element: Training and Digital Inclusion

The ultimate success of any digital transformation strategy, regardless of its technological sophistication, hinges on user adoption and organizational alignment. In the informal retail sector, cultural resistance to new technologies, low levels of baseline digital literacy, and deeply entrenched traditional workflows act as significant barriers to entry and sustained usage(Yadav, 2024).

Successful B2B platforms and government policy initiatives must therefore invest heavily in change management and capability building. Providing localized, vernacular training programs, utilizing trusted community mediators to bridge the gap with low-resource users, and ensuring that digital interfaces are highly intuitive—such as incorporating voice-assisted interactions or low-text user interfaces—are critical strategies for fostering digital inclusion("Digital Trade as a Catalyst for SME Competitiveness in South Asia," n.d.). Furthermore, financial inclusion remains a strict prerequisite for digital commerce. Governments must aggressively foster digital payment ecosystems that minimize transaction fees for micro-transactions, ensuring that the migration from physical cash to digital ledgers does not inherently penalize the lowest-margin operators in the economy(Yadav, 2024).

Conclusion

The digital transformation of commerce in emerging markets is far more complex than a straightforward narrative of modern e-commerce inevitably replacing traditional, brick-and-mortar retail. Instead, it represents an intricate, ongoing process of platformization, wherein digital intermediaries penetrate, map, and orchestrate the pre-existing informal economy. By restructuring supply chain logistics, enabling B2B procurement optimization, and facilitating new consumer-facing omnichannel strategies, digital platforms offer unprecedented tools for operational efficiency and market expansion to millions of traditional nanostores and informal workers.

However, this transformation is inherently double-edged. The imposition of algorithmic governance frequently replaces traditional, community-based social contracts with stringent, data-driven surveillance. As evidenced by global supply chains and platform labor dynamics, this process often institutionalizes the precarious conditions of informal work rather than elevating workers into a formalized, protected economic status. To harness the immense developmental potential of digital platforms while actively mitigating their extractive tendencies, stakeholders must move beyond mere technological deployment. The future of commerce in the Global South relies on the deliberate design of context-sensitive digital

architectures—such as open network protocols and workflow-engineered interfaces—that respect the chaotic reality of informal retail, empower the micro-entrepreneur, and ensure equitable, sustainable integration into the global digital economy.

REFERENCES:

1. A Systemic Mapping of Nanostore Identities in Traditional, Informal Retail through Multi-dimensional Archetypes. (n.d.). Preprints.org.
https://www.preprints.org/frontend/manuscript/36f30b82666bd1e2ad9e470a4c0923c3/download_pub
2. Ai, R. (2026). Platformization of the informal garment sector in Southern China: Shein and global fast fashion. *International Journal of Sociology and Social Policy*, 46(5–6).
<https://www.emerald.com/ijssp/article/46/5-6/705/1329923/Platformization-of-the-informal-garment-sector-in>
3. CGAP. (n.d.). Can JioMart and Facebook revolutionize traditional retail in India?
<https://www.cgap.org/blog/can-jiomart-and-facebook-revolutionize-traditional-retail-india>
4. Cobarrubias, S., Casas-Cortés, M., de Miguel, P. S., & Grado, M. M. (2026). Strapped to the app? Bridled labor at the crossroads of platform delivery and migration regulation. *International Journal of Sociology and Social Policy*, 46(5–6).
5. Cristofari, G. (2022, February 3). On platformization permeation: Intersectional perspectives from India. Institute of Network Cultures. <https://networkcultures.org/blog/2022/02/03/on-platformization-permeation-intersectional-perspectives-from-india/>
6. Dataintel. (2026). FMCG B2B e-commerce market report 2025–2034.
<https://dataintel.com/report/fmcg-b2b-e-commerce-market>
7. Dataintel. (2026). Global instant retail e-commerce platform market report 2025–2034.
<https://dataintel.com/report/global-instant-retail-e-commerce-platform-market>
8. Digital Trade as a Catalyst for SME Competitiveness in South Asia: A Systematic Literature Review. (n.d.). TIJER. <https://tijer.org/jnrid/papers/JNRID2602001.pdf>
9. From Customs to Clicks: How Digital Trade Agreements Are Transforming Trade Facilitation in Emerging Economies. (n.d.). ResearchGate.
https://www.researchgate.net/publication/394889532_From_Customs_to_Clicks_How_Digital_Trade_Agreements_are_Transforming_Trade_Facilitation_in_Emergi
10. FXC Intelligence. (n.d.). B2B ecommerce startups in Africa: Digitising informal retail.
<https://www.fxcintel.com/research/analysis/b2b-ecommerce-startups-in-africa-digitising-informal-retail-and-opening-new-payment-opportunities>
11. IJRASET. (n.d.). FreshCart: A scalable B2B web platform for digitizing local retail supply chains. <https://www.ijraset.com/best-journal/freshcart-a-scalable-b2b-web-platform-for-digitizing-local-retail-supply-chains>
12. Impact of Quick Commerce on Traditional Kirana Stores in India. (n.d.). Scribd.
<https://www.scribd.com/document/1012404749/Impact-of-Quick-Commerce-on-Traditional-Kirana-Stores-in-India>
13. IRE Journals. (n.d.). Route-to-market architecture as a core business development lever in emerging and multi-regional economies.

- <https://www.irejournals.com/formatedpaper/1714970.pdf>
14. Kellogg, K. C., Valentine, M. A., & Christin, A. (2020). Algorithms at work: The new contested terrain of control. *Academy of Management Annals*, 14(1), 366–410.
<https://doi.org/10.5465/annals.2018.0174>
 15. Marketing for Local Brands. (n.d.). Marketing for local brands: A strategic and data-driven perspective. <https://advancedscienti.com/index.php/AJEL/article/download/3643/7169/7188>
 16. Observer Research Foundation. (2020). Digitising Indian retail: Analysing challenges and exploring growth models. <https://www.orfonline.org/research/digitising-indian-retail-analysing-challenges-and-exploring-growth-models>
 17. Park, M., Foster, C., & Heeks, R. (2025). Conceptualising urban informality in the platform economy: Regulation, legitimisation, value extraction and collective agency. *International Development Planning Review*, 47(3), 283–308. <https://doi.org/10.3828/idpr.2025.10>
 18. Park, M., Gandhi, A., Budiman, N. J. A., Suchayo, Y. G., Foster, C., & Heeks, R. (2025). Contextualising digital platforms in the informal economy: Policy and reality in Jakarta, Indonesia (GDI Digital Development Working Paper No. 114). Global Development Institute, University of Manchester.
<https://www.tandfonline.com/doi/full/10.1080/07352166.2026.2671762>
 19. Rajaguru, R., Matanda, M., & Siaw, C. A. (2024). Drivers of formal and informal retail patronage in emerging markets. *International Journal of Retail & Distribution Management*, 52(5), 509–531. <https://doi.org/10.1108/IJRDM-04-2023-0205>
 20. Rosaldo, M. (2021). Problematizing the “informal sector”: 50 years of critique, clarification, qualification, and more critique. *Sociology Compass*, 15(9), e12914.
<https://doi.org/10.1111/soc4.12914>
 21. Saragih, A. I., & Ahmed, S. T. (2022). E-commerce business-to-business (e-B2B) distribution strategy and network design for nanostores. Massachusetts Institute of Technology, Center for Transportation and Logistics. <https://ctl.mit.edu/publications/e-commerce-business-business-e-b2b-distribution-strategy-and-network-design-nanostores>
 22. SG Analytics. (n.d.). Is digitization just a myth or the real game changer?
<https://www.sganalytics.com/blog/is-digitization-just-a-myth-or-the-real-game-changer/>
 23. Surie, A., & Huws, U. (Eds.). (2023). Platformization and informality: Pathways of change, alteration, and transformation. Palgrave Macmillan.
 24. TapNGo Research. (2024). White paper: The informal retail digitization gap.
<https://tapngo.in/whitepaper/informal-retail-digitization.html>
 25. Visual Analysis of Research Hotspots and Frontiers in Cross-Border E-Commerce Based on WoS. (2026). Preprints.org. <https://www.preprints.org/manuscript/202602.0249>
 26. Yadav, J. (2024). Digital transformation of Varanasi’s unorganised retail: A systematic review of barriers and prospects. *Management Insight*, 20(2), 56–61. <https://doi.org/10.21844/mijia.20.2.6>
 27. Zhang, S., He, L., & Zhang, Y. (2025). Cross-border e-commerce and enterprise green innovation. *Frontiers in Sustainability*, 6, 1664916. <https://doi.org/10.3389/frsus.2025.1664916>