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World Internet Conference

E-Commerce Development Practice Guide for Global South Economies

World Internet Conference Specialized Committee on E-Commerce

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Preface

The digital economy is reshaping the global economic landscape on an unprecedented scale. As one of the most dynamic and widely used applications of digital technology, e-commerce has evolved from a mere online retail channel into critical infrastructure linking production, distribution, consumption, and international trade. Consequently, it serves as a vital engine that propels economic growth, expands employment opportunities, improves living standards, and empowers small and medium-sized enterprises (SMEs) to participate more broadly in the market. Meanwhile, compared to advanced economies in the Global North, the Global South economies still face shortfalls of varying degrees in digital networks, power supply, payment systems, logistics infrastructure, digital skills, and institutional environments, making the digital divide a persistently prominent issue. According to research by the United Nations Conference on Trade and Development (UNCTAD)[1], the average annual growth rate of enterprise e-commerce sales in the Global South economies was generally higher than that in advanced economies between 2016 and 2024. However, most of these economies still lack a complete statistical system for online transactions, which constrains the precise formulation and effective implementation of relevant policies.

The Global South economies are primarily located in Asia, Africa, Latin America and the Caribbean, and Oceania. Encompassing approximately 157 countries and regions and accounting for roughly 85% of the global population, these economies possess vast market space and immense development potential. The global e-commerce landscape is now shifting at an accelerating pace. Global online retail sales accounted for approximately 20.5% of total retail sales in 2025 and are projected to reach 22.5% by 2028. Southeast Asia, Latin America, and other regions in the Global South continue to maintain rapid growth, increasingly emerging as key growth markets for global e-commerce development. New technologies and business models, ranging from artificial intelligence (AI) and livestream commerce to mobile payments and smart logistics, are reconfiguring the e-commerce industry chain. For the Global South economies, these advancements serve as new strategic tools to reduce market entry barriers and enhance the digital and operational capabilities of SMEs, ultimately enabling leapfrog development. Concurrently, they impose higher requirements on data governance, algorithmic transparency, consumer protection, and cross-border regulation.

Building on the earlier *Cross-Border E-Commerce Competitiveness Research Report --Country-Level Analysis*, this Guide centers on e-commerce development in Global South economies. Incorporating the new e-commerce pathways and governance challenges driven by AI, it introduces relevant concepts, development stages, and evaluation results, and proposes stage-specific development goals and policy recommendations. Ultimately, it offers guidance for the Global South economies to formulate policies and advance regional cooperation.

1.United Nations Conference on Trade and Development (UNCTAD), "Data Insights: Digital Economy and Technology—E-commerce Sales," UNCTADstat, data updated May 21, 2026, https://unctadstat.unctad.org/insights/theme/260.

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01

Overview: Concepts, Stages, and Evaluation Framework

(i) Conceptual Definitions and Scopes

(ii) Stages of E-Commerce Development in the Global South Economies

(iii) Evaluation System and Indicators

(iv) Overview of Evaluation Results

(i) Conceptual Definitions and Scopes

The Global South economies are not strictly defined by geography or a single income threshold; rather, they collectively refer to developing countries, emerging markets, and transition economies. These economies vary significantly in industrialization, infrastructure, digital capabilities, and global value chain integration. While facing common development constraints in these areas, they also benefit from substantial market size and population, along with opportunities to leverage digital technologies for accelerated development.

Geographically, the Global South economies are primarily distributed across Asia, Africa, Latin America and the Caribbean, and Oceania. However, development conditions vary considerably within each region. For instance, Asia includes both emerging economies with well-established digital industries and those where internet access and logistics still require improvement. Similarly, Africa, Latin America and the Caribbean, and Pacific island countries exhibit significant diversity, with marked differences in their e-commerce development levels and operational performance. Therefore, the Global South economies should not be treated as a single, homogeneous group.

E-commerce refers to commercial activities and related business operations for trading goods and services, based on digital technologies such as the Internet, the Internet of Things (IoT), and mobile communication networks. It is supported by enabling technologies including electronic data interchange (EDI), electronic payment, and electronic signatures. By overcoming time and geographical barriers, e-commerce lowers transaction costs and brings together the production, distribution, and consumption of goods and services. Based on its scope, e-commerce is categorized into two types: e-commerce in the narrow sense and e-commerce in the broad sense. **E-commerce in the narrow sense** refers to the transactions of goods or services completed via internet platforms, primarily consisting of consumer-to-consumer (C2C) and business-to-consumer (B2C) transactions. A typical transaction runs through product display, online ordering, payment and settlement, logistics and delivery, and after-sales service. **E-commerce in the broad sense** extends beyond B2C and C2C to include business-to-business (B2B) and online-to-offline (O2O) models, encompassing supporting activities such as digital services, supply chain coordination, and financial support.

This Guide adopts the broad definition of e-commerce and selects a sample of 67 economies for cross-country comparison. This sample serves as a quantitative evaluation set, not a complete list of the Global South economies. The selection balances regional and development-stage representativeness, economic and demographic weight, cross-country comparability of core indicators, and data coverage. Moderate trade-offs were made where necessary to ensure the representation of major sub-regions. The exclusion of an economy from this sample does not imply that the country or region concerned is not a Global South economy.

(ii) Stages of E-CommerceDevelopment in the Global South Economies

By identifying their stage of e-commerce development, the Global South economies can set their policy priorities and allocate their public resources rationally. This approach also helps avoid applying the complex regulatory rules or high-cost technological solutions of mature markets to markets where basic transaction processes are not yet fully established.

As the key issues to be addressed vary across stages, this Guide divides e-commerce development into five stages: **the nascent, take-off, growth, integration, and future stages.** These five stages reflect a typical evolutionary path of e-commerce capabilities, but they do not imply that every economy must progress through them sequentially. Some economies may leapfrog ahead by leveraging mobile internet, regional cooperation, or digital technologies tailored to national conditions. Furthermore, development within a single economy is rarely uniform; its regions, industries, and business entities may be at different stages. Therefore, governments should take differentiated measures targeting the most pressing weaknesses in e-commerce development. Figure 1 summarizes the primary development tasks and policy priorities for the five stages. Specifically, during the nascent and take-off stages, the policy focus is on improving network, payment, delivery, and transaction rule frameworks to support merchants in launching and stabilizing online operations. As economies reach the growth and integration stages, the focus shifts to increasing industrial efficiency, expanding cross-border trade, and deepening supply chain coordination. Finally, in the future stage, the emphasis is on developing trusted, inclusive, and intelligent e-commerce services.

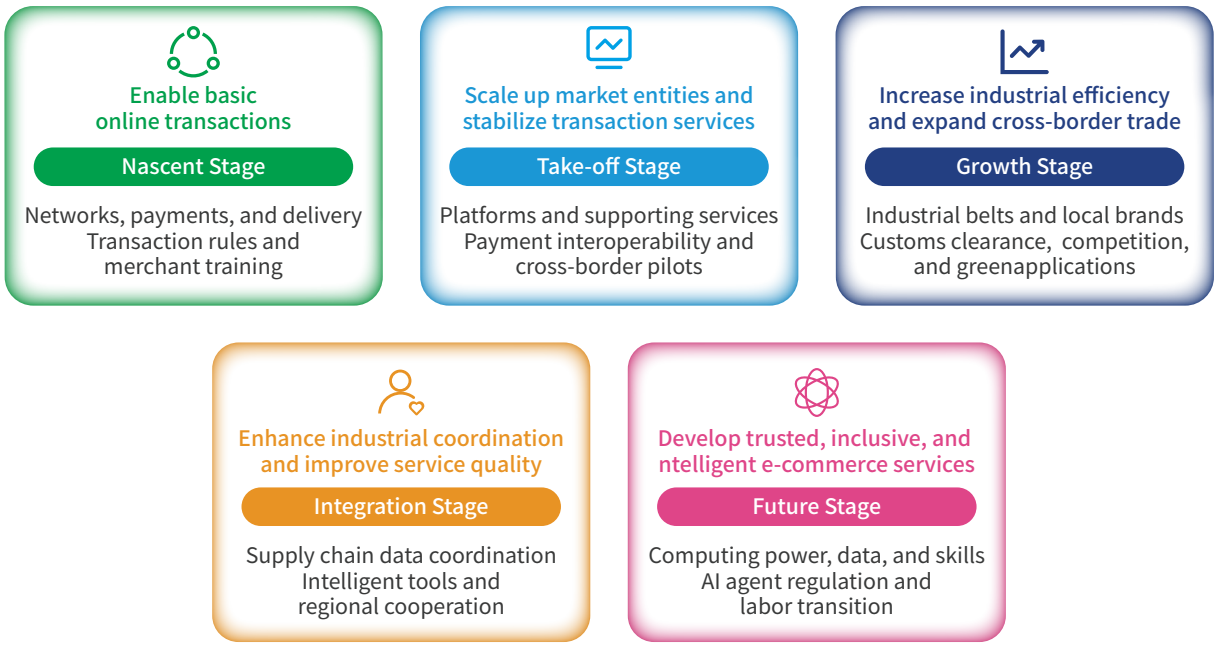
(iii) Evaluation System and Indicators

This Guide adopts a four-dimensional evaluation framework of **foundational enablers, development level, operational performance, and development potential**. It uses indicators with statistical definitions that are comparable across countries to assess the development conditions and performance of sample economies and determines their development stages in light of country-specific realities.

Specifically, building on the earlier *Cross-Border E-Commerce Competitiveness Research Report --Country-Level Analysis*, this Guide continues the analysis of industrial competitiveness and the business environment, adopting its country-level approach to evaluating development conditions and comparing differences across economies. Focusing on the overall development of e-commerce and stage-specific policy pathways, this Guide further expands its evaluation scope to include payment adoption, business activity, related industry development, and innovation capacity. Indicators are appropriately adjusted to align with the development characteristics, statistical scope, and data availability of the Global South economies, forming a four-dimensional evaluation system. By balancing current development conditions with medium-to long-term

capability foundations and combining indicator comparisons with country-level analysis, this system provides a practical reference for identifying development stages, setting policy priorities, and selecting measures tailored to national conditions.

Data for this report are primarily sourced from the World Bank's World Development Indicators (WDI, a compilation of cross-country development statistics), the Global Findex (a survey on individuals' use of financial services and digital payments), the Logistics Performance Index (LPI), the Enterprise Surveys, and the World Intellectual Property Organization (WIPO). The data were collected and compiled as of October 8, 2026.



Note: The figure outlines the priority tasks and policy focus for each stage; specific goals and measures are detailed in subsequent sections.

Figure 1 Policy Priorities for the Five Stages of E-Commerce Development in the Global South Economies

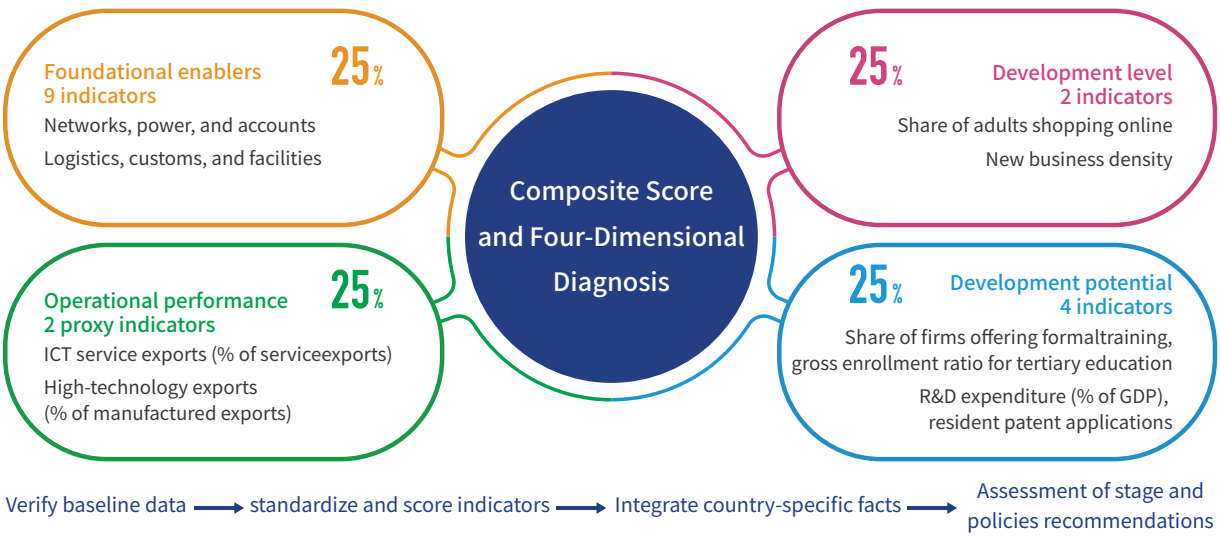


Figure 2 Four-Dimensional Evaluation and Diagnostic Process for E-Commerce Development in the Global South Economies

(iv) Overview of Evaluation Results

1. Distribution of Development Stages

Overall, the assessed Global South economies remain largely in the early stages of e-commerce development. The nascent and take-off stages together account for 46 economies (68.7%), while the growth stage includes 17 (25.4%) and the integration stage 4 (6.0%). None of the sample economies has fully entered the future stage. As the majority of the assessed economies remain in the stages of building basic transaction capabilities and expanding market reach, they must upgrade essential transaction services and scale up engagement among merchants and consumers. Figure 3 shows the detailed stage distribution along with the list and numbering of the economies. The stage classification in this Guide is based on indicator measurement and country-level analysis, serving primarily as a reference for policy choices. Individual economies may further assess their current stage by considering the latest developments, regional and sectoral differences, and key bottlenecks, and apply the analysis and policy recommendations for their respective stages as appropriate.

Nascent Stage	03 10 15 18 20 25 27 38 40 41 42 43 48 52 56 63 67	17 | 25.4%
Take-off Stage	04 05 06 12 13 16 17 19 23 24 26 28 29 30 31 32 34 35 37 46 47 49 50 54 57 58 59 64 65	29 | 43.3%
Growth Stage	02 08 09 11 21 22 33 36 39 44 45 51 53 55 60 62 66	17 | 25.4%
Integration Stage	01 07 14 61	4 | 6.0%
Future Stage	Under the forward-looking capability framework, no economy in the current sample has fully entered this stage	0 | 0.0%

Legend of Economy Numbers Economies follow the source Guide' s numbering. Disclaimer

01 Malaysia	18 Nepal	35 Azerbaijan	52 Mozambique
02 Türkiye	19 Nicaragua	36 Saudi Arabia	53 Thailand
03 Papua New Guinea	20 Nigeria	37 Kenya	54 Trinidad And Tobago
04 Pakistan	21 India	38 Tanzania	55 Philippines
05 Bahrain	22 Indonesia	39 Kazakhstan	56 El Salvador
06 Panama	23 Angola	40 Honduras	57 Botswana
07 Brazil	24 Dominican Republic	41 Cambodia	58 Cameroon
08 Ecuador	25 Democratic Republic Of The Congo	42 Zimbabwe	59 Sri Lanka
09 Mauritius	26 Kyrgyzstan	43 Côte D' Ivoire	60 Vietnam
10 Uganda	27 Laos	44 Kuwait	61 Chile
11 Uruguay	28 Guatemala	45 South Africa	62 Mongolia
12 Uzbekistan	29 Iran	46 Tunisia	63 Senegal
13 Jamaica	30 Jordan	47 Egypt	64 Lebanon
14 China	31 Algeria	48 Ethiopia	65 Morocco
15 Ghana	32 Argentina	49 Peru	66 Mexico
16 Qatar	33 UAE	50 Colombia	67 Zambia
17 Rwanda	34 Oman	51 Costa Rica	

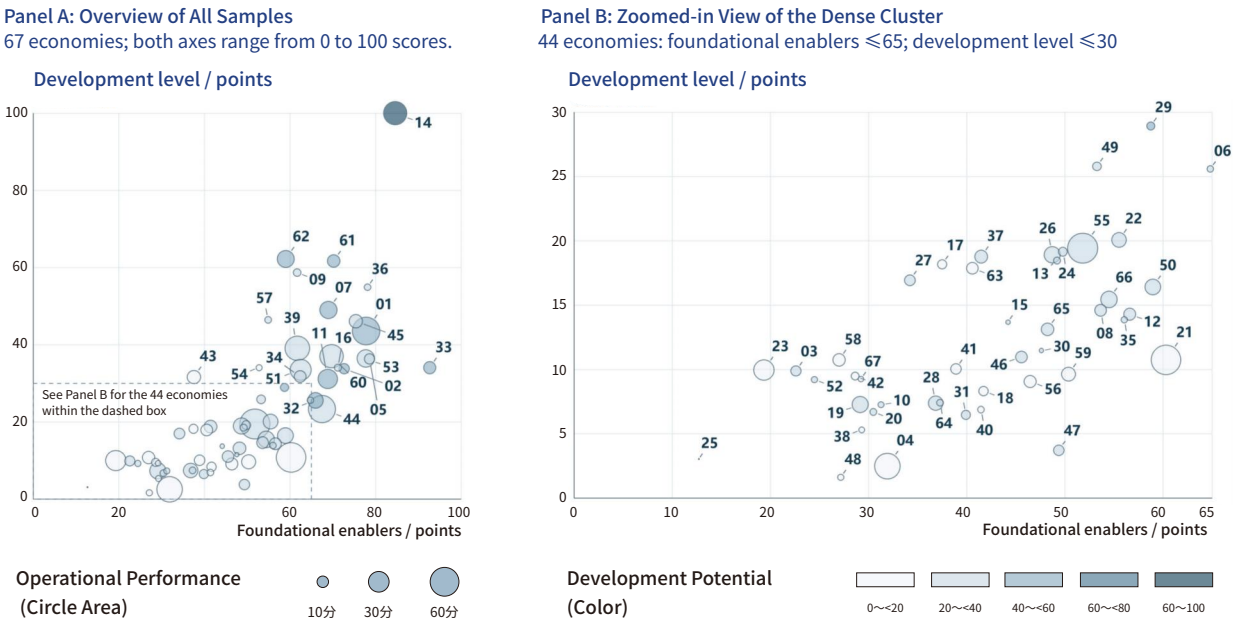
Note: Each square represents one economy, arranged in ascending numerical order within each stage. The stage classification is used to identify policy priorities rather than to assign a fixed rating; different regions, industries, and business entities within the same economy may be at different stages.

Figure 3 Stage Distribution and Numbering of the 67 Sample Economies

2. Evaluation Results by Dimension

The four-dimensional evaluation of the 67 sample economies highlights two key findings:

1) In most economies, basic e-commerce conditions are stronger than market outcomes and the operational performance of related industries. The mean score for the foundational enablers dimension is relatively high at 50.91 points, though scores vary significantly within each dimension, with 59.7% of economies scoring below 20 points on the development level dimension. Economies such as China, Chile, South Africa, and Brazil score relatively high on development potential indicators like innovation and talent, reflecting solid medium-to long-term capability foundations. E-commerce market growth prospects are also influenced by population size, the consumption base, and the e-commerce penetration rate. Economies such as Indonesia and Mexico, with their large populations, substantial consumer markets, and room for e-commerce penetration to grow, hold considerable potential for market expansion. Overall, the Global South economies still need to upgrade foundational infrastructure, including digital networks, power grids, and logistics facilities. Concurrently, they must optimize payment and platform services, build the operational capacity of merchants, and strengthen institutional support.



Note: This figure consists of two parts, Panel A and Panel B. Panel A shows the overall distribution of the 67 sample economies. Panel B provides a zoomed-in view of the dashed box in Panel A, highlighting 44 economies with a score of 65 or below on foundational enablers and a score of 30 or below on development level. This offers a clearer view of the samples where scores are highly concentrated. In both panels, the horizontal axis represents the foundational enablers score, and the vertical axis represents the development level score. Larger circles indicate higher operational performance scores, and darker colors indicate higher development potential scores.

Figure 4 Four-Dimensional Capability Distribution of the 67 Sample Economies

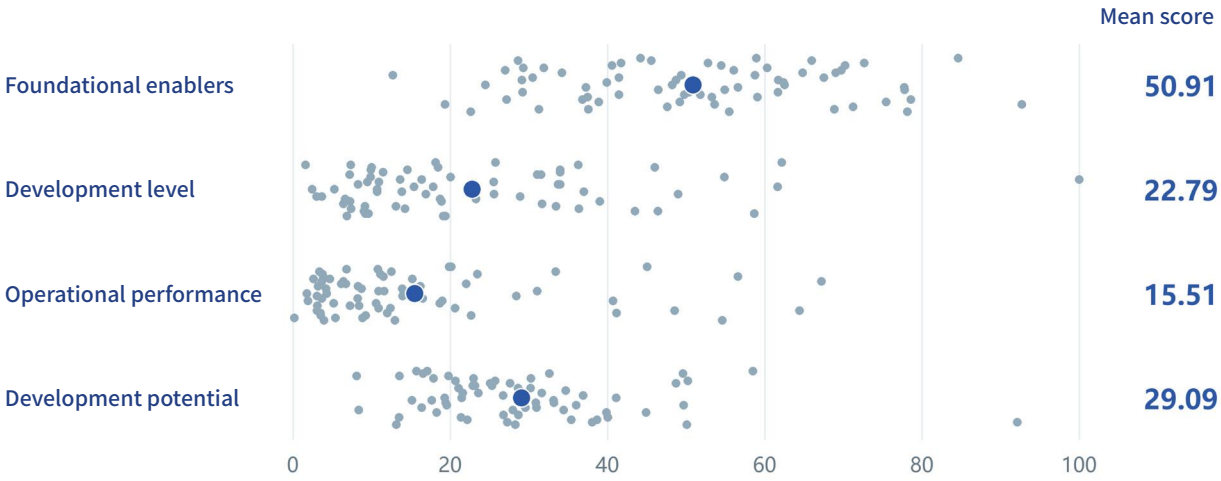
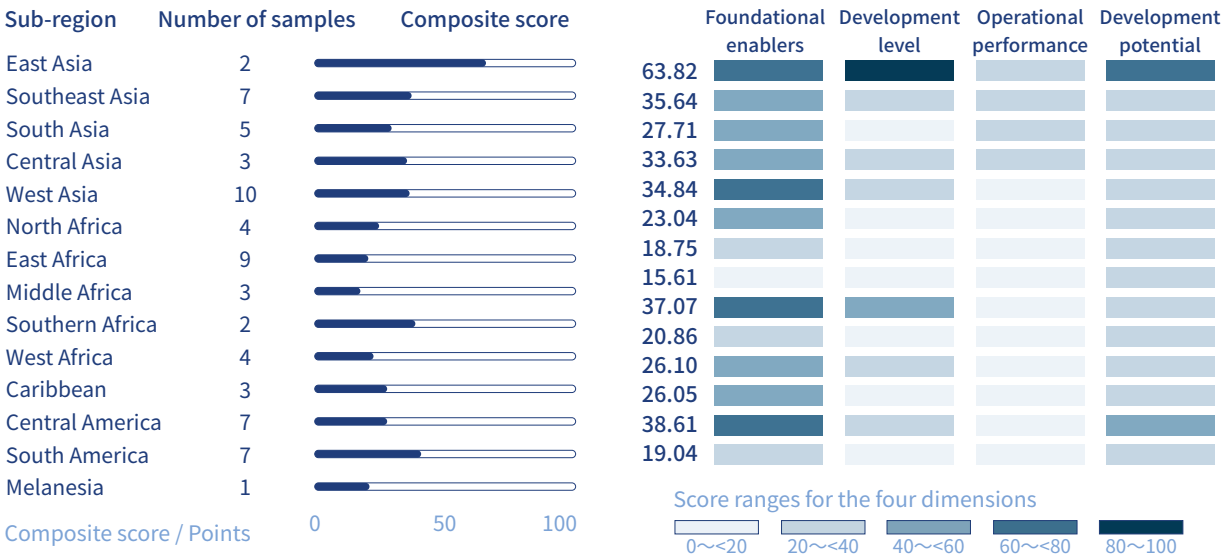


Figure 5 Four-Dimensional Score Distribution and Mean Values of the 67 Sample Economies

2) Basic conditions, market performance, and development potential differ markedly across sub-regions. East Asia achieves the highest composite score, while South America and Southern Africa also remain at relatively high levels. Middle Africa records thelowest score, and East Africa, West Africa, and Melanesia still need to prioritizeim provements in basic conditions. Across individual dimensions, South Americastands out in foundational enablers and development potential, while Southern Africa scores relatively high on development level. Development within sub-regions is uneven, with pronounced internal disparities.

The gap between the highest and lowest sub-regional means is the largest for development level, followed by foundational enablers and development potential, while the gap for operational performance is relatively small. Most sub-regions still have room to improve their market performance and the export capacity of related industries. See Figure 6 for details.



Note: Sub-regions follow the UN M49 geographic region standard and are grouped by major region in the order of Asia, Africa, Latin America and the Caribbean, and Oceania. Mean values represent only the samples included in this Guide.

Figure 6 Evaluation Results of the 67 Sample Economies by Sub-Region



02

Practice Guidelines for the Global South Economies at the Nascent Stage

(i) The Nascent Stage: From Information Exchange to Online Product Display

(ii) Development Goals

(iii) Development Strategies

(iv) Policy Recommendations

(i) The Nascent Stage: From Information Exchange to Online Product Display

The nascent stage marks the transition of e-commerce from online information exchange to online product display. Merchants typically use social media and instant messaging tools to display products and connect with customers, receive payments via personal transfers or cash, and deliver goods themselves or through individual couriers or community networks. Because the underlying digital networks, payment systems, logistics services, and transaction trust mechanisms are not yet fully established, sustaining stable and reliable transactions is often difficult. Therefore, priority should be given to resolving basic operational issues: ensuring buyers and sellers can connect, payments can be made conveniently, goods can be delivered as agreed, and disputes can be effectively handled. Only then can the market scale be gradually expanded.

Economies at the nascent stage vary in their principal constraints and market conditions and can be broadly categorized into the following four types. Notably, these categories highlight the most prominent development features of an economy, and a single economy may exhibit characteristics of multiple types.

First, infrastructure-constrained economies: These economies suffer from inadequate power supply, network coverage, and logistics nodes, leading to high cross-regional delivery costs. Governments should prioritize the use of universal service funds to improve communications in remote and underserved areas and upgrade rural base stations and power infrastructure in key areas. Another priority is to build public warehousing and distribution facilities and establish logistics nodes along trade corridors linking major production areas, cities, and ports of entry, while simultaneously rolling out basic address databases and parcel tracking systems to reduce logistics fulfillment costs.

Second, economies with demographic and market potential: These economies have large populations and urban markets, yet their digital payment and logistics systems have yet to achieve scale, and consumer trust in online transactions needs to be built. Within city clusters, populations and potential consumer markets are highly concentrated, and delivery distances are short. High-frequency demand for food and daily necessities is thus more likely to generate repeat purchases. Governments can focus on payment interoperability, simple registration for micro-merchants, stronger consumer protection, and community delivery in city clusters and markets for everyday goods, gradually turning population size into stable orders.

Third, economies with agricultural and small-commodity strengths: These economies have an established market base for specialty agricultural products, handicrafts, and small commodities but lack adequate supporting services for online and cross-border sales. The online sales of agricultural products are mainly constrained by standardiza-

tion, cold chain, and inspection and quarantine capabilities, while those of handicrafts and small commodities are primarily limited by packaging, branding, quality certification, and capacity for handling cross-border small parcels. Governments can launch pilot projects focusing on a few competitive categories, coordinating product standardization, origin consolidation, digital marketing, and e-commerce business training to develop replicable models for online operations.

Fourth, economies with regulatory and service instability: These economies suffer from unstable institutional enforcement and basic service provision, incomplete financial or logistics rules, low policy predictability, and low private-sector willingness to invest. As a first step, governments should refine the rules and protocols for merchant identity verification, payment vouchers, complaint handling, and basic delivery. They must also ensure that networks, payment systems, and logistics systems maintain continuous operation or recover promptly during emergencies. Together, these measures will gradually build consumer and merchant trust in online transactions.

(ii) Development Goals

For economies at the nascent stage, development goals should focus on enabling stable basic transactions. Without reliable digital networks, payment systems, logistics infrastructure, and basic transaction rules, platforms and merchants will struggle to generate sustained orders and repeat purchases, even if they have already launched their online operations. Each economy should set reference ranges based on its current baseline and actual conditions, rather than applying a one-size-fits-all approach to rigid targets. In the near term (defined in this Guide as one to two years, with the medium term as three to five years), the priority is to ensure that basic services, including digital networks, payment systems, and logistics services, are functional and operational; in the medium term, the focus shifts to expanding coverage and improving stability. Goals may be set in the following six areas:

1. Digital Access

In the near term, prioritize stable mobile broadband access in core cities, major trade corridors, commercial markets, postal outlets, and origin consolidation points. **In the medium term**, aim to raise the internet usage rate by 10–15 percentage points and gradually extend coverage to rural and border areas. Where internet usage rates are currently low, evaluation should focus primarily on the magnitude of increase and service availability, rather than requiring a uniform absolute level in the near term.

2. Payment Systems

In the near term, permit and regulate mobile

wallets, small-value payment services, and payment agent outlets, and expand digital payment acceptance by merchants in commercial markets and online. **In the medium term**, set a reference target of nearly 60% for the account ownership rate among the population aged 15 and above, ensuring that merchants in core cities accept at least one low-cost digital payment method. The focus of evaluation should be on merchant acceptance coverage, transaction success rate, and the security of funds.

3. Logistics Fulfillment

In the near term, coordinate with postal and logistics enterprises to build basic distribution points in the capital and two to three secondary cities, and pilot small-parcel delivery services. **In the medium term**, aim to achieve parcel delivery within 3–5 days in core cities and support origin consolidation pilots in major production areas for agricultural products, handicrafts, and small commodities. Policy actions should prioritize resolving issues such as unclear addresses, the lack of distribution facilities, and untraceable orders.

4. Market Entities

In the near term, establish simplified registration and identity verification systems for micro-merchants and provide registered merchants with supporting services such as business training, low-cost payment access, and complaint handling. **In the medium term**, foster the development of one or two local comprehensive platforms or vertical platforms serving specific industries or categories to build sustainable online business models for agricultural products, handicrafts, and daily necessities.

5. Legal Governance

In the near term, affirm the legal validity of electronic contracts, electronic signatures, and electronic payments through laws, regulations, or normative documents of equivalent legal effect, in a form consistent with the national legal system. **In the medium term**, further refine regulatory frameworks for electronic transactions, consumer protection, personal information protection, and cybersecurity, and establish low-cost, streamlined channels for complaints, mediation, and dispute resolution, ensuring that transactions are rule-based and disputes have clear avenues for redress.

6. Statistics and Evaluation

In the near term, establish an e-commerce sample survey system that clearly defines survey subjects, the statistical scope of transaction value, reporting entities, and annual data collection frequency. **In the medium term**, encourage major platforms to report quarterly data on transaction value, order volume, the number of active merchants, and complaint volume, which will then be consolidated into an annual e-commerce statistical bulletin. The definitions, calculation methods, and statistical scope of all indicators must remain consistent.

(iii) Development Strategies

At the nascent stage, governments should prioritize addressing weaknesses in digital networks, payment systems, logistics infrastructure, and transaction trust mechanisms, and then develop online markets based on local product supply and consumer demand. These three strategies can be implemented in combination. Economies with limited fiscal and technical capacity can lower infrastructure costs by leveraging regional cooperation and multilateral support.

1. Improving Basic Transaction Conditions

Upgrade digital networks, power infrastructure, payment systems, logistics services, and addressing systems around key cities, production areas, and trade corridors, ensuring that merchants can take orders, consumers can pay, and goods can be delivered reliably. When foundational enablers are not yet in place, prematurely subsidizing large platforms or imposing aggressive tax enforcement can drive up costs for merchants and impede market takeoff. Digital networks, payment systems, and logistics infrastructure should be developed in a coordinated manner, prioritizing the use of existing mobile networks, postal outlets, and community service facilities rather than building siloed systems that are difficult to integrate. Whether services remain usable over time is a more meaningful indicator of early-stage progress than the number of facilities built.

2. Supporting Low-Barrier Online Business

When consumer trust, platform investment, and purchasing power are limited, support merchants to operate low-cost online businesses by showcasing products on social media, taking orders via messaging apps, accepting mobile payments, and using community-based delivery services. Pilot programs should target sectors with proven local supply and demand, such as agricultural products, daily necessities, handicrafts, and local consumer services. For new merchants, provide simplified merchant registration procedures, basic training, and accessible complaint channels to keep entry costs low and lay the groundwork for future regulatory compliance and market data collection.

3. Building Transaction Trust and Promoting International Cooperation

Define fundamental responsibilities for online transactions and coordinate competent commerce authorities, telecommunications regulators, central banks, postal authorities, and consumer protection agencies to eliminate duplicative requirements and resolve regulatory conflicts. For economies in the nascent stage, straightforward rules paired with consistent enforcement drive down merchant entry costs and mitigate transaction risks for consumers. Furthermore, economies with limited fiscal and technical capacity can partner with international organizations, including the World Bank, regional development banks, the United Nations Conference on Trade and Development (UNCTAD), the International Trade Centre (ITC), and the Universal Postal

Union (UPU), to gain support in drafting electronic transaction legislation, managing cross-border small parcels, digitalizing postal networks, and training merchants. By engaging in regional shared services and South-South cooperation, they can avoid duplicative construction and minimize the costs of institutional pilots.

(iv) Policy Recommendations

Policy tools at the nascent stage should be characterized by **"targeted interventions, low costs, and effective implementation"** so that government departments can implement them, small and medium-sized merchants can accept them, and consumers can see tangible results. At this stage, economies should assemble a foundational policy package covering inter-agency coordination, digital access, payments, logistics, legal trust, and cultivating business entities (this Guide demonstrates how selected tools work through cases in practice). Each policy can then be translated into a concise task list specifying the lead department, coordinating departments, target areas, budget sources, completion deadlines, near-term outputs, and outcome indicators. Governments should prioritize a few projects deliverable within six months to one year, review results, and scale up only after confirming effectiveness.

1. Establishing a Lightweight Coordination Mechanism

Establish an e-commerce working group led by the government's general office or the competent commerce authority to incorporate key agencies, including telecommunications regulators, the central bank, customs and tax administrations, and postal authorities, into the annual action list. At the nascent stage, setting up large institutions is not a must. The priority is to clearly define responsibilities, budgets, timelines, and accountability for a small number of inter-agency projects.

2. Improving Digital Access in Key Areas

Utilize universal service funds and existing public facilities to first improve mobile broadband access and upgrade power supply infrastructure in core cities, major trade corridors, schools, and commercial markets. Before launching a project, map uncovered areas and areas with unstable service and tie fund disbursement to coverage, network availability, user pricing, and sustained operation. Assessment should focus on actual usage and end-user affordability rather than merely counting base stations.

Case in Practice

Nigeria: Building Rural Broadband and Community Nodes with the Universal Service Provision Fund[2]

Nigeria established the Universal Service Provision Fund (USPF) to subsidize telecom opera-

2.Universal Service Provision Fund (USPF), "Connectivity Programme," https://uspf.gov.ng/programmes/connectivity; "Community Resource Centres," https://www.uspf.gov.ng/projects/crc.

tors in deploying networks across rural and semi-urban areas through the Connectivity Programme. The country also set up community resource centers to offer local residents shared services such as access to devices, internet connectivity, digital skills training, and e-commerce support.

Key Takeaway: When allocating public funds, governments should assess coverage, network stability, user pricing, and the sustained operation of community nodes. This ensures that projects drive actual adoption rather than merely building network infrastructure.

3. Developing Low-Cost, Inclusive Payments

Central banks and financial regulators should permit and regulate mobile wallets, payment agent outlets, and small-value electronic payments, while promoting interoperability and mutual acceptance across different payment tools and QR codes. Pilots can begin in two to three high-frequency scenarios, such as commercial markets, trading of agricultural commodities, and daily-necessity retail. Relevant authorities should uniformly disclose fees, settlement times, and refund timelines, while monitoring payment failures, fraud, and complaints. As usage expands, the security of consumer funds must be safeguarded.

Case in Practice

Ethiopia: Expanding Digital Payment Use Through Interconnected Payments and High-Frequency Scenarios[3]

Ethiopia's National Digital Payments Strategy (2021–2024) prioritizes expanding payment access points, achieving interoperability across channels and institutions, and developing payment gateways and real-time payments.

Key Takeaway: Economies with limited account coverage can simultaneously advance payment agent outlets, payment interoperability, and digital payment acceptance by merchants. By piloting in markets or for goods with high transaction frequencies, they can evaluate implementation results based on transaction success rates, payment acceptance costs, and refund timeliness.

4. Building Basic Addressing and Fulfillment Networks

Starting with national addressing system pilots, postal outlet digitalization, urban distribution, and community pickup points, assign unified address codes to buildings, merchants, and public service points; require logistics providers to record parcel status at key nodes such as collection, sorting, and delivery to enable parcel tracking and ensure successful delivery to recipients.

3.National Bank of Ethiopia, "National Digital Payments Strategy 2021–2024," https://nbe.gov.et/wp-content/uploads/2023/04/National-Digital-Payment-Strategy.pdf; "National Digital Payments Strategy," https://nbe.gov.et/ndps/.

5. Establishing Baseline Rules for Online Transactions

Affirm the basic legal validity of electronic transactions and electronic signatures and establish foundational rules for consumer returns and exchanges, platform information disclosure, personal data protection, and cybersecurity. Regulators can concurrently issue a one-page merchant compliance checklist specifying mandatory information disclosure, refund conditions, complaint channels, and handling timelines. Gradually introduce digital identity, electronic authentication, and secure, verifiable payment systems to reduce transaction risks between unfamiliar parties and build transaction trust.

6. Cultivating the First Cohort of Sustainable Business Entities

Apply simplified registration procedures and low-cost compliance measures for micro-merchants and launch online trading pilot programs for agricultural products, handicrafts, and daily necessities. Link training directly to registration, product listing, payment collection, delivery, and fulfillment of first orders, and then track merchants' performance three to six months later. Micro-merchants typically operate as individuals, families, or small teams, representing the smallest category within micro-small and medium-sized enterprises (MSMEs). Therefore, evaluation should focus on active merchants, order completion rates, and repeat purchases, rather than merely the number of registered merchants on platforms.

Three Key Considerations for Policy Implementation at the Nascent Stage

First, avoid prioritizing tax collection too early. The e-commerce tax base is weak at the nascent stage, and excessive enforcement can easily increase the burden on micro-merchants and discourage them from participating in online transactions.

Second, avoid subsidizing platforms while neglecting public infrastructure. Without the support of payment systems, logistics infrastructure, and trust mechanisms, platform subsidies are unlikely to yield lasting effects.

Third, avoid wholesale adoption of the complex rules of mature markets. At the nascent stage, the priority should be to reduce registration and compliance costs for merchants, establish accessible dispute resolution channels, and strengthen consumer protection.



03

Practice Guidelines for the Global South Economies at the Take-off Stage

(i) The Take-off Stage: Gradual Stabilization of Online Transactions

(ii) Development Goals

(iii) Development Strategies

(iv) Policy Recommendations

(i) The Take-off Stage: Gradual Stabilization of Online Transactions

The take-off stage marks the transition from online presence to stable transactions, with ordering, payment, delivery, and after-sales service gradually integrated on a stable basis. At this stage, although network and payment infrastructure have improved, it has not yet fully translated into stable orders and steady business income. The primary bottlenecks have gradually shifted from insufficient network access to merchants' difficulty in securing stable orders, unstable delivery and after-sales service, and inadequate professional services. Economies at the take-off stage can be grouped into four types.

First, economies with robust foundations but limited scale: These economies possess relatively sound foundational enablers, such as digital networks and payment systems, but the scale of online transactions, local platforms, and service provider ecosystems has yet to take shape, with an insufficient number of merchants and a limited supply of goods. Governments should focus on bringing merchants online, creating high-frequency consumption scenarios for daily necessities, agricultural products, and local consumer services, and increasing the supply of professional services such as outsourced store management, photography, warehousing and distribution, and payment services.

Second, economies with large offline markets shifting online: These economies have large populations and relatively active offline retail markets, leaving considerable room for offline commerce to move online. However, merchants lack sufficient online operational capabilities, and logistics networks are unevenly distributed, while regional development remains unbalanced. Governments should prioritize the orderly migration of supermarkets, wholesale markets, local retailers, and industrial belts to online channels within city clusters. In parallel, they should enhance fulfillment capabilities in remote areas through cooperation between postal and express delivery providers, joint distribution, and order consolidation and joint shipping.

Third, economies driven by payment adoption: These economies have a robust foundation in mobile payments or broad-based access to financial accounts, but their logistics infrastructure, merchant services, consumer protection, and after-sales systems lag behind. While the payment hurdle has been cleared, trust mechanisms are still lacking. Governments should convert the advantage of payment adoption into actual online transactions and sustained repeat purchases. They should promote cooperation between merchants accepting digital payments and e-commerce platforms, expand online payment acceptance among merchants, and improve dispute-handling mechanisms for refunds and complaints.

Fourth, economies building up their foundations: In these economies, digital networks, payment systems, and logistics infrastructure have

improved; however, the main constraints remain insufficient network coverage in rural and remote areas, a lack of logistics nodes, and inadequate digital skills. Governments should continue to optimize basic services and lead e-commerce pilot programs centered on competitive goods and key consumer markets to generate sustainable orders.

(ii) Development Goals

For the Global South economies at the take-off stage, development goals shift from **"facilitating transactions" to "stabilizing the market."** The e-commerce ecosystem should gradually evolve from sporadic online transactions into a robust market that supports continued operation, ensures reliable fulfillment, and drives repeat purchases. Goal assessment should focus on the transaction value of e-commerce goods, combined with indicators such as the number of active merchants, repeat purchase rate, order completion rate, payment and logistics efficiency, regulatory enforcement, employment, and tax revenue. At the take-off stage, reference ranges for these goals should be set in light of national conditions, including the market base, statistical capacity, and urban-rural differences. The immediate focus should be on consolidating the transaction foundation and enhancing the business activity level. Governments can then expand market coverage step by step, refine the service ecosystem, and accumulate institutional and practical experience for the development of cross-border e-commerce (CBEC).

1. Market Size

In the near term, set double-digit average annual growth in online retail sales or e-commerce transaction value and an e-commerce penetration rate of 5%–10% as reference targets. The e-commerce penetration rate refers to the share of online retail sales in total retail sales, and its statistical scope should be standardized. **In the medium term**, increase this penetration rate to 10%–15% to promote category expansion and growth in repeat purchases. Economies with a limited online transaction scale should focus on increases in active users, order counts, and transaction frequency, rather than pursuing total transaction value alone.

2. Platforms and Market Entities

In the near term, in line with national market size and industrial characteristics, develop local comprehensive platforms or vertical platforms for agricultural products, tourism, and handicrafts, and improve mechanisms for simplified merchant registration, low-cost onboarding, and basic training for micro-merchants. **In the medium term**, set an SME online sales participation rate of 20%–30% as a reference target. This rate measures the proportion of SMEs within the statistical scope that actually generate sales revenue via websites, platforms, or other digital channels over a given period. Gradually foster professional service providers in payments, logistics, marketing, outsourced store management, software services, and talent training. The focus of evaluation should shift from the sheer number of platforms to the number of active merchants, business survival rate, repeat purchase

levels, and the completeness of the service ecosystem. Economies should avoid sole reliance on external platforms or the duplicative construction of low-activity platforms.

3. Payment Systems

In the near term, expand digital payment acceptance by merchants on major platforms and in key commercial districts, and monitor transaction success rates, settlement times, and refund timeliness. **In the medium term**, advance payment interoperability among major tools to reduce payment acceptance costs for small and medium-sized merchants; under prudential regulation, develop merchant-oriented digital credit, insurance, and supply chain finance services. The priority is to convert account adoption into sustained transaction capacity and guard against excessive lending and data misuse.

4. Logistics Fulfillment

In the near term, upgrade warehousing, distribution, and last-mile delivery networks in core cities, aiming for parcel delivery within 2–3 days in these areas and basic parcel tracking capabilities in second-tier cities and major agricultural production areas. **In the medium term**, expand the national addressing system to major cities, promote coordinated operations among the postal network, private express delivery companies, transport hubs, and community service points, and gradually extend coverage to rural and border areas. Assessment should focus on the on-time delivery rate, parcel tracking coverage, goods damage and return rates, and unit fulfillment cost, rather than merely counting the number of logistics outlets.

5. Institutional Governance

In the near term, based on existing complaint and mediation channels, explore online dispute resolution methods such as online mediation and arbitration to improve the efficiency of cross-platform dispute handling, and establish clear timelines and a clear division of responsibilities; refine general rules into enforceable requirements, specifically clarifying those rules regarding platform onboarding review, product information disclosure, merchant fund settlement, goods returns and exchanges, complaint handling, and personal data use. **In the medium term**, establish joint enforcement and electronic information-sharing mechanisms among competent commerce authorities, market regulators, tax administrations, customs authorities, financial regulators, and data management agencies; improve systems for platform compliance reporting, risk monitoring, and low-cost dispute resolution; and specify transition periods appropriate to the business scale of SMEs.

6. Cross-Border Pilots

In the near term, economies that have already established a customs single window may expand system capabilities to include electronic declaration for cross-border small parcels, tax payment, return processing, and logistics tracking. Economies without a single window should first implement electronic declaration, basic inter-agency data sharing, and simplified customs clearance

procedures for small parcels before launching cross-border pilots. **In the medium term**, in line with national industrial strengths, establish CBEC pilot zones, bonded warehouses, or public service centers, and align rules on digital identity, electronic signatures, electronic documents, payments, and customs with regional cooperation mechanisms. Instead of pursuing the sheer number of zones or short-term transaction scale, these pilot projects should focus on testing customs clearance efficiency, enterprise participation, compliance costs, and cross-border fulfillment stability.

7. Statistics and Evaluation

In the near term, build on the basic reporting system to unify the statistical scope for platforms and merchants, and enhance the completeness and timeliness of data on transactions, merchants, payments, delivery, and after-sales services. Record pre-implementation baselines for subsidies, training, and pilot programs, and set annual tracking indicators to monitor whether online transactions are sustained, merchants remain active, and services are stable. **In the medium term**, gradually improve inter-agency statistical coordination. When conditions permit, strengthen data integration across platforms, payment systems, logistics systems, customs, and complaint channels to track repeat purchases, fulfillment failures, and cross-border activities. Regularly evaluate the impact of policies on merchant operations and service efficiency, and adjust project and policy arrangements accordingly.

(iii) Development Strategies

At the take-off stage, existing foundational enablers in digital networks, payment systems, and initial transactions should be converted into stable operational capabilities. Establishing institutional safeguards is a common requirement across all economy types. Governments in **economies with robust foundations but limited scale**, as well as in **economies with large offline markets shifting online**, should focus on fostering merchants and professional services. Meanwhile, **economies driven by payment adoption** and **those building up their foundations** should first improve logistics infrastructure, after-sales services, and transaction trust mechanisms. The following three strategies should be implemented in combination, tailored to each economy's primary constraints.

1. Improving Systems and Stabilizing Market Expectations

At the take-off stage, clarify basic rules on electronic transactions, platform responsibilities, consumer protection, data use, and payment security to reduce uncertainty for market entities. Ensure these rules cover actual business processes and remain proportionate to the scale and risk profile of merchants. For new business forms such as new payment models, social commerce, and cross-border small-parcel delivery, launch pilot programs with safeguards for funds, data, and consumer safety in place, and refine regulatory requirements

based on pilot performance.

2. Fostering Merchants and a Supporting Service Ecosystem

To ensure coordinated service delivery among e-commerce platforms, payment processors, logistics operators, marketing agencies, customer service providers, and compliance consultants, reduce the cost for small and medium-sized merchants to access professional services, support the growth of local service providers, and minimize dependence on any single platform. Prioritize support for SMEs, women, youth, and rural merchants. Organize training around practical tasks such as store opening, product listing, payment collection, delivery arrangement, and handling after-sales requests; connect this training with platform onboarding, financing, and order opportunities; and assess training effectiveness based on the merchants' business activity level and continued operation status.

3. Enhancing the Stability of Delivery and After-Sales Services

A common bottleneck at the take-off stage is that rapidly growing transaction demand outpaces delivery and after-sales service capabilities. Sustained consumer participation in e-commerce hinges on on-time parcel delivery, order traceability, and convenient goods returns and exchanges. Building on existing address databases and distribution nodes, economies should integrate intercity transport, last-mile delivery, and goods return services. Economies with large markets can expand their logistics networks around city clusters and industrial belts; island, mountainous, and landlocked economies can reinforce cooperation among postal operators, private express delivery companies, and community pickup points.

(iv) Policy Recommendations

At the take-off stage, policy tools should focus on **"scaling up transaction volume, strengthening fulfillment capabilities, and fostering the service ecosystem." Scaling up transaction volume** means expanding online transaction scenarios and increasing the number of active merchants. **Strengthening fulfillment capabilities** means enhancing the stability of payment systems, logistics infrastructure, and after-sales services. **Fostering the service ecosystem** means developing local platforms, service providers, and professional talent to enhance the self-development capacity of the e-commerce sector.

At this stage, the Global South economies may form a policy mix covering top-level design, legal frameworks, platform ecosystems, payments and finance, logistics and customs clearance, inclusive talent development, and statistics and evaluation. During implementation, they should specify the lead department, near-term outputs, and outcome indicators for each policy.

1. Forming an Actionable National Implementation Mechanism

Establish an inter-agency coordination mechanism under the leadership of the cabinet or the commerce department to integrate commerce departments, ICT regulators, central banks, customs authorities, tax administrations, and postal regulators into a unified annual action plan. Format this annual plan as a clear matrix specifying tasks, lead departments, budgets, and outcome indicators. Closely track the progress of key projects each quarter, promptly address inter-agency issues through coordination, and adjust subsequent plans based on implementation effectiveness.

2. Refining Relevant Legal Frameworks

Building on existing legal frameworks, publish a responsibility list for platforms and merchants that specifies requirements for identity verification, product information disclosure, settlement cycles, goods returns and exchanges, complaint channels, and handling timelines. Prioritize regulatory inspections on high-volume platforms and product categories, and refine detailed rules based on data from complaints, refunds, and fraud cases to ensure regulations are genuinely enforced at the transaction level.

3. Fostering an Ecosystem Integrating Platforms and Service Providers

Shift policy support from subsidizing individual platforms to fostering an ecosystem that integrates "platforms, service providers, and merchants." Design digital service vouchers (subsidy vouchers for purchasing qualified digital services) with a list of qualified service providers, moderate merchant co-payment, and criteria for verifying service delivery. These vouchers can only be redeemed after merchants list products, integrate payment systems, or set up order management and should be evaluated for the number of active merchants, retention rates, and service usage 3–6 months later.

4. Converting Broad-based Access to Payment Services into Transaction Capacity

Promote interoperability among different payment tools and QR codes, so that merchants can accept multiple payment methods via a single payment QR code. Meanwhile, require service providers to clearly display fee rates, settlement times, and refund progress. Regulate online lending and other financial services to safeguard consumer funds; pilot new models in selected regions or industries first, and determine whether to scale up based on payment success rates, merchant acceptance coverage, and fraud and complaint records, thereby steadily building transaction capacity.

Case in Practice

Kenya: Incorporating Payment Advantages into the National E-Commerce Action Framework[4]

Kenya's National E-Commerce Strategy (2023) identifies six pillars: legal and regulatory frameworks, information and communications technology (ICT) and electricity, trade facilitation and logistics, payments, skills, and financ-

4.Ministry of Investments, Trade and Industry of Kenya, "Kenya National E-commerce Strategy (2023)," https://www.industrialization.go.ke/sites/default/files/2023-12/E-Commerce%20Strategy%2061123%20(1)%20Nov2023.pdf.

ing, and establishes implementation and monitoring mechanisms. The national payment strategy focuses on interoperability, security, and user-centric services.

Key Takeaway: Economies with well-established payment systems should advance payment adoption alongside merchant onboarding, order management, logistics, consumer protection, and enforcement indicators to foster stable transactions.

5. Closing Gaps in Logistics, Addressing Systems, and Customs Clearance

Improve the national addressing system, postal digitalization, regional distribution, and goods return networks. Economies with an established customs single window should integrate functionalities for small e-commerce parcels, taxes and fees, goods returns, and expedited customs clearance. Those without one should first establish electronic declaration procedures and inter-agency data sharing mechanisms. Large-market and archipelagic economies should set distinct delivery time and cost targets for city clusters, industrial belts, and remote areas.

Case in Practice

Case in Practice | Indonesia: Integrating Logistics Processes and Data Via the National Logistics Ecosystem[5]

Indonesia is advancing its National Logistics Ecosystem under Presidential Instruction No. 5 of 2020. This initiative connects government and enterprise logistics systems through the national single window to enable data exchange, process streamlining, and single submission, while gradually integrating services such as electronic bills of lading, container release, and cargo tracking.

Key Takeaway: Large archipelagic markets should first integrate data and information flows across port operations, customs clearance, transportation, and warehousing, and then set distinct time and cost targets for city clusters, islands, and remote areas.

6. Building Tiered Talent and Inclusive Support Systems

Governments, platforms, industry associations, and vocational colleges should jointly organize tiered training courses to prioritize support for women, youth, rural merchants, and SMEs. For these training courses, completing practical business tasks, such as listing a product, integrating a payment system, fulfilling a delivery, and handling

5.Coordinating Ministry for Economic Affairs of Indonesia, "Sustaining the Acceleration of Implementation and Development of the National Logistics Ecosystem," January 24, 2023, https://ekon.go.id/publikasi/detail/4878/tingkatkan-daya-saing-perekonomian-nasional-implementasi-dan-pengembangan-national-logistic-ecosystem-terus-diakselerasi.

an after-sales service request, should be a requirement for course completion. Training outcomes should also be linked directly to financing, logistics discounts, and order opportunities. Finally, policymakers should evaluate business activity levels, income changes, and continued operation status 3–6 months after training to assess effectiveness.

7. Establishing Statistical Systems and Rolling Evaluation

Statistical authorities should, based on existing reporting systems, unify merchant identifiers across platforms, payment systems, and logistics data and establish data quality checks and correction mechanisms. They should set pre-implementation baselines for subsidies, training, and cross-border pilot projects and track quarterly changes in active merchants, repeat purchases, fulfillment, complaints, and cross-border transactions to determine whether to continue, adjust, or withdraw specific policies.

The Key Balance in Regulation at the Take-off Stage

Economies at the take-off stage need to strike a balance between regulating market order and preserving the vitality of innovation. On the one hand, insufficient regulation can easily lead to counterfeits, fraud, privacy breaches, and payment risks, which weakens consumer trust in online transactions. On the other hand, excessive regulation raises compliance costs for platforms and small and medium-sized merchants, hindering market expansion and business model innovation. A more prudent approach is to establish a tiered regulatory framework with clear priorities: applying simplified registration procedures and low-cost compliance requirements to micro and small merchants, while imposing strict information disclosure, consumer protection, and fund and data security requirements on e-commerce platforms, payment institutions, and cross-border sellers.

04

Practice Guidelines for the Global South Economies at the Growth Stage

(i) The Growth Stage: Traffic Surge and Scale Expansion

(ii) Development Goals

(iii) Development Strategies

(iv) Policy Recommendations

(i) The Growth Stage: Traffic Surge and Scale Expansion

During the growth stage, e-commerce evolves from a mere sales channel into a key driver of production and trade. At this stage, foundational digital networks, payment systems, logistics services, and trading platforms are relatively solid. Policy priorities should gradually shift from expanding transaction scale to improving operational efficiency, boosting industrial development, safeguarding fair competition, and improving governance. Based on their primary strengths and development constraints, economies at the growth stage can be categorized into the following four types.

First, economies with growing platform ecosystems. These economies have built a large user base and a robust local platform foundation. A high proportion of merchants are online, mobile payment and major logistics services have reached initial scale, and e-commerce has become a significant industry. The policy priority is to: expand the supply of supporting services in payments, logistics, marketing, and compliance; lower participation costs for SMEs; and prevent platforms from gaining excessive market dominance or imposing non-transparent commission and traffic allocation rules that undermine the bargaining power of small and medium-sized merchants.

Second, economies driven by cross-border manufacturing. Building on manufacturing clusters and a traditional foreign trade base, these economies are transitioning from contract manufacturing and general trade toward developing cross-border brands, overseas fulfillment capabilities, and compliance services. Their defining feature is a complete industrial chain but low brand premiums. The policy priority is to enhance the capabilities of small and medium-sized manufacturers in brand building, overseas marketing, customs clearance, international logistics, tax compliance, and after-sales service, and upgrade cross-border public services centered around industrial belts.

Third, economies with strong foundations but small markets. These economies possess sound infrastructure and institutional conditions, and their local platforms and digital services are reasonably well-developed, though their domestic markets are limited in size. The policy priority is to expand into regional markets, export digital services such as Software as a Service (SaaS, software delivered over the internet, typically via subscription) and logistics technologies, and align rules on electronic signatures, e-invoices, and cross-border data.

Fourth, economies driven by specialty industries. These economies are endowed with unique resources, giving their specialty goods, such as agricultural products, handicrafts, and processed goods, a distinct competitive edge. The policy priority is to: design policies tailored to specialty industries; build capabilities in production standardization, quality certification, cold-chain transportation, origin consolidation, traceability, and brand-

ing; and deeply integrate e-commerce with production, processing, warehousing, logistics, and sales to cultivate leading enterprises and regional public brands.

(ii) Development Goals

At the growth stage, the Global South economies must shift their development goals from "expanding transaction scale" to "pursuing high-quality development." While maintaining reasonable market growth, they should prioritize operational efficiency, industrial integration, fair competition, cross-border capabilities, employment quality, and consumer protection.

Set reference ranges for these goals based on national market foundations, industrial structures, and statistical scopes. In the near term, close gaps in platform services, industrial coordination, and governance while managing scale expansion. In the medium term, foster a development landscape characterized by multi-platform competition, multi-industry integration, multi-region participation, and synergy between domestic and international markets, thereby laying the groundwork for the integration stage.

1. Transaction Scale

In the near term, set average annual growth in e-commerce transaction value of around 15% (or consistently above total retail sales growth), alongside an e-commerce penetration rate of 15%–25%, as a reference target. **In the medium term**, expand product categories, service scenarios, and regional coverage while maintaining reasonable growth to build a stable market. Evaluation should be based on transaction growth, active users, repeat purchase rates, order completion rates, and urban-rural service gaps.

2. Platforms and Supporting Service Ecosystem

In the near term, develop local platforms and professional service providers with national or key regional coverage, and promote the coordinated development of platforms alongside payment, logistics, finance, marketing, SaaS, and talent services. **In the medium term**, build a diversified competitive landscape involving local, regional, and cross-border platforms to guard against excessive market dominance and over-reliance on a single platform. Governments should promote the opening of platform APIs, safeguard merchant data portability and fair market access, and reinforce competitive scrutiny to improve ecosystem efficiency. Evaluation should focus on tracking the number of active merchants on platforms, SMEs' business survival rates, the number of service providers, market concentration, the proportion of merchants operating across multiple platforms, and platform switching costs.

3. Industrial Integration

In the near term, select manufacturing clusters, agricultural production areas, tourist destinations, and local consumer services comparative advantag-

es; build a public e-commerce service system and support enterprises in online sales, digital marketing, quality certification, supply chain coordination, and brand building. **In the medium term**, deeply integrate e-commerce with manufacturing, agriculture, tourism, local consumer services, and digital services; utilize order, inventory, and consumption data to optimize production planning, product design, and logistics operations, enabling e-commerce to go beyond sales and help enterprises plan production, manage inventory, and coordinate distribution. Evaluation should focus on the number of e-commerce enterprises, transaction value within industrial belts, inventory turnover days, added value of products, and improvements in employment and business income.

4. CBEC

In the near term, build CBEC pilot zones, bonded warehouses, overseas warehouses, and e-port service windows in cities with well-developed industrial bases, port facilities, and logistics networks, providing SMEs with public services for customs clearance, taxation, payments, logistics, intellectual property, and overseas compliance. **In the medium term**, align rules on digital identity, electronic signatures, electronic documents, payments, customs, and goods return with major trading partners and regional cooperation mechanisms, and gradually establish secure, verifiable trade data exchange and cross-border dispute resolution mechanisms, to make CBEC a key channel for foreign trade growth and market diversification. Evaluation should focus on enterprise participation in CBEC, customs clearance times, fulfillment costs, and goods return efficiency.

5. Governance Capacity

Unlike the nascent stage, which focuses on establishing basic transaction rules, governance at the growth stage should shift to addressing the competition, algorithmic, data, and cross-border risks arising from platform expansion. **In the near term**, implement tiered regulation based on platform scale, degree of control, and risk level; require large or high-risk platforms to assume stricter responsibilities for advance notice of rule changes, data reporting, algorithmic transparency, intellectual property protection, and dispute handling; and maintain simplified requirements proportionate to business scale for small and medium-sized merchants. **In the medium term**, establish inter-agency issues regulatory data interfaces, risk early-warning systems, and algorithmic audit mechanisms. Evaluate effectiveness based on complaint-handling timeliness, the handling of counterfeiting and infringement cases, outcomes of merchant appeals, and regulatory consistency across departments.

6. Green Development and Inclusion

In the near term, establish pilot mechanisms for green packaging, packaging reduction, reuse, reverse logistics, and waste recycling, and support SMEs, women, youth, farmers, and rural business entities in participating in e-commerce by providing targeted training, access to finance, subsidized logistics rates, and digital service vouchers. **In the**

medium term, advance the standardization of green packaging, warehousing, transportation, and goods return management, and gradually build a green responsibility system covering platforms, merchants, logistics enterprises, and consumers, ensuring that all regions and communities can equitably share the benefits of e-commerce growth. Evaluation should focus on packaging reduction, energy consumption per order, goods return and recycling rates, the online business activity level of SMEs, the participation of women and rural actors, and employment quality, to prevent scale expansion from creating new environmental and social problems.

7. Statistics and Evaluation

In the near term, refine data reporting mechanisms across platforms, payment systems, logistics networks, customs administrations, and market regulation authorities to set up a core indicator system covering transaction scale, active merchants, repeat purchases, fulfillment, cross-border trade, employment, and consumer complaints. **In the medium term**, establish monitoring and policy evaluation mechanisms for high-quality e-commerce development, gradually add indicators for industrial integration, market competition, green development, and inclusion, and publish annual or quarterly reports regularly. Conduct baseline surveys and impact evaluations for major pilot programs, fiscal subsidies, and platform support policies, and dynamically adjust policies based on actual results, thereby shifting the policy focus from inputs and scale to efficiency, quality, and long-term impact.

(iii) Development Strategies

At the growth stage, development strategies should focus on building industrial and trade capabilities while expanding the market. **Economies driven by cross-border manufacturing and with strong foundations but small markets** may first expand cross-border business; **economies driven by specialty industries** may center on enhancing production-sales coordination; and **economies with growing platform ecosystems** should advance competition governance and service quality. Furthermore, intelligent tools and green technologies should be gradually introduced in line with specific industrial needs.

1. Expanding Cross-Border Markets on the Strength of Competitive Industries

Build on the relatively robust digital networks, payment systems, and logistics infrastructure already in place to develop CBEC by capitalizing on competitive industries and targeting major trading partners. Enhance customs clearance, payment settlement, delivery, and compliance services to enable SMEs to enter overseas markets sustainably. Economies driven by cross-border manufacturing may emphasize brand building, overseas marketing, and after-sales service capabilities; economies driven by specialty industries may focus on quality certification, product traceability, origin consolidation, and international delivery suited to their specific categories. Public services should be aligned with the actual export needs of enterprises.

2. Promoting the Integration of E-Commerce with Industries

As e-commerce gradually extends from the sales end into production and distribution, enterprises can leverage order data, consumer feedback, and logistics information to improve production planning, inventory management, and product supply, thereby raising their market responsiveness. The manufacturing sector can draw on order data to develop flexible manufacturing, dynamically adjusting product categories and production batches in response to demand. The agricultural sector can upgrade origin warehouses and cold-chain logistics systems, and strengthen quality traceability. The services sector can further integrate the online and offline operations of tourism, dining, and local consumer services. Ultimately, government policies should help SMEs integrate their online sales with the management of their production, inventory, and delivery systems.

3. Safeguarding Fair Competition and Improving Development Quality

As platforms grow in scale, they should assume greater responsibility for product information, consumer complaint resolution, merchant rules, data security, and intellectual property protection, thereby safeguarding the business choices of SMEs and consumer rights. Cross-border platforms should also comply with local tax, product safety, and after-sales service requirements. Governments can advance risk-based management in line with their regulatory capacity to reduce duplicative compliance costs and guard against exclusive dealing, counterfeiting, infringement, and non-transparent platform rules. Alongside improvements in governance and services, enterprises can gradually adopt tools such as AI-powered customer service, demand forecasting, warehouse scheduling, packaging reduction, and return recycling to raise operational efficiency and reduce resource consumption.

(iv) Policy Recommendations

At the growth stage, policymakers should design a coordinated package of measures focusing on cross-border paperless trade and customs clearance facilitation, industrial belt digitalization, platform governance, tax compliance, financial support, and talent development. While maintaining market growth, policy efforts should focus on promoting the integration of e-commerce with manufacturing, agriculture, and services, and refining rules on platform competition, data use, consumer protection, and cross-border regulation. Comprehensive evaluations should measure online consumer engagement, SMEs' online sales penetration rates, the capacity to drive industrial development, cross-border customs clearance efficiency, employment and income growth, and green development outcomes. Ultimately, all measures must be designed to simultaneously expand transactions and exports while improving industrial efficiency, ensuring fair competition, and delivering tangible benefits to SMEs.

1. Advancing Cross-Border Paperless Trade and Customs Clearance Facilitation

Integrate e-port services, e-commerce modules of the single window, returned-goods resale, cross-border payments, and tax and fee services within CBEC pilot zones, and establish a mechanism for mutual recognition of electronic trade documents with international trade partners. As a standard requirement, enterprises shall submit core information on a single occasion for shared use by all relevant departments. Pilot zone authorities must ensure the public disclosure of application materials, processing timelines, fee schedules, and goods return procedures. Customs authorities, commerce departments, tax bureaus, and central banks should first pilot these measures across key ports of entry, industries, and trading partners, and then scale up proven practices, guided by performance metrics such as customs clearance times, return efficiency, compliance costs, and SME participation.

Case in Practice

Vietnam: Connecting Cross-Border Processes Through National Planning and Single Windows[6]

In 2020, Vietnam approved its National E-Commerce Development Master Plan for 2021–2025 and advanced a management scheme for import and export e-commerce, proposing to receive and process e-commerce cargo information through the National Single Window and the ASEAN Single Window.

Key Takeaway: Cross-border pilots should integrate declaration, tax and fee processing, risk management, and logistics tracking into interconnected workflows. At initial phases, pilot administrators should test customs clearance timeliness and enterprise compliance costs at key ports of entry and for key categories before deciding whether to scale up.

2. Promoting Industrial Belt Digitalization

Select one or two industrial belts around manufacturing clusters and agricultural production areas for pilot programs. Organize platforms, logistics companies, financial institutions, and technology service providers to offer services including origin warehouses, flexible manufacturing, quality traceability, branding, and supply chain finance. Record inventory turnover, delivery lead times, and return rates prior to project initiation, and verify service delivery at each stage. Evaluation should focus on the continued operation of onboarded enterprises, fulfillment rates, delivery efficiency, and value-added gains.

3. Strengthening Platform Governance

Establish a platform responsibility list and a tiered compliance system. Mandate large platforms to

6.Prime Minister of Vietnam, "Decision No. 645/QD-TTg: Approving the Master Plan for National E-commerce Development for the 2021–2025 Period," 2020, https://vanban.chinhphu.vn/default.aspx?docid=200038&pageid=27160; Vietnam Government Portal, "Information on the Direction and Administration of the Government and Prime Minister," March 31, 2020, https://baochinhphu.vn/thong-tin-chi-dao-dieu-hanh-cua-chinh-phu-thu-tuong-chinh-phu-102270382.htm.

provide advance notice of major changes to fees, search rankings, and merchant management rules, and to offer clear explanations and appeal channels for delisting, store suspension, and traffic throttling. Shorten complaint resolution and counterfeiting case-handling times by deploying regulatory data interfaces, fast-track intellectual property protection, online dispute resolution, and third-party assessments, thereby preventing platforms from exploiting data, traffic, payment systems, or logistics networks to build exclusive advantages.

4. Reducing Compliance Costs and Safeguarding Tax Fairnessn

Advance the adoption of e-invoices, platform tax-related information reporting, and clear tax and fee rules for small cross-border parcels. Provide micro-merchants with simple, unified filing forms, clear thresholds, and fixed filing calendars, and implement focused oversight on large platforms and high-risk cross-border sellers. Eliminate redundant information requests among tax bureaus, platforms, and customs administrations. Design policies to prevent duplicative tax burdens and excessively high fixed costs, ensuring compliance requirements match business scale.

5. Reducing Payment Collection and Financing Costs for SMEs

First, streamline payment collection and improve cash flow for SMEs through low-cost digital payments with timely settlement. Then, with merchants' explicit authorization and strict privacy protection, leverage order and fulfillment information to expand access to supply chain finance, order financing, and export credit insurance. Financial institutions should clearly explain overall financing costs, data usage, and repayment arrangements to merchants. Governments (via guarantee schemes), development finance institutions, and market-based institutions can share early-stage risks. Concurrently, policymakers should assess payment collection costs, financing access rates, non-performing loan ratios, and the survival rates of beneficiary enterprises by industry and enterprise size.

Case in Practice

Brazil: Reducing Payment Collection Costs for Small Merchants with Pix[7]

The Central Bank of Brazil has built and operates Pix, the national instant payment infrastructure. Operating under unified rules with open access, Pix links a wide range of financial and payment institutions and provides merchants with instant settlement, payment collection via QR codes, and standardized interfaces.

Key Takeaway: Support for SMEs should not rely solely on loan subsidies. Open, low-cost public payment infrastructure can also improve cash flow and operational efficiency, provided that security, complaint handling, and risk management requirements are implemented concurrently.

7.Central Bank of Brazil, "Pix and businesses," https://www.bcb.gov.br/en/financialstability/pixbusinesses; "Participants," https://www.bcb.gov.br/en/financialstability/pixparticipants.

6. Building Talent and Innovation Systems

Policymakers should incorporate cross-border operations, data analysis, brand building, compliance management, and fit-for-purpose AI technologies into vocational education and in-company practical training programs. Trainees should be evaluated on their completion of real-world business tasks, such as creating multilingual product listings, calculating cross-border order costs, or filing compliance declarations. After course completion, their employment outcomes, new store openings, and business performance should be tracked. Furthermore, policymakers should develop industry knowledge bases (repositories compiling information on products, standards, processes, and compliance) and application demonstration projects tailored to competitive industries to help SMEs lower the barriers to adopting new technologies.

Policy Evaluation at the Growth Stage: Shifting from Transaction Value to Comprehensive Benefits

While economies at the growth stage must still monitor the growth of e-commerce transaction value, the evaluation system must expand to encompass comprehensive benefits. Specifically, the evaluation system must measure: (1) the meaningful participation of SMEs, rural areas, women, and the youth; (2) the extent to which e-commerce drives employment, tax revenue, exports, and industrial upgrading; (3) the fairness and orderliness of platform competition; (4) improvements in the efficiency of handling consumer complaints and disputes; (5) the transition of logistics, packaging, and delivery systems toward greener, lower-carbon models. Only by incorporating scale, efficiency, fairness, and sustainability into the evaluation system can economies avoid low-quality expansion and build long-term competitiveness at the e-commerce growth stage.



05

Practice Guidelines for the Global South Economies at the Integration Stage

(i) The Integration Stage: Supply-Demand Synergy and Deep Integration

(ii) Development Goals

(iii) Development Strategies

(iv) Policy Recommendations

(i) The Integration Stage: Supply-Demand Synergy and Deep Integration

At the integration stage, e-commerce plays a broader role in enterprise production, commodity circulation, and consumer services, driving tighter collaboration across industrial segments. Digital technologies are increasingly embedded in R&D and design, production and manufacturing, brand marketing, and after-sales services, which closely links consumer demand with industrial supply. Governments should further prioritize industrial collaboration efficiency, open platform services, benefits for SMEs, and cross-border operational capabilities. Depending on their market foundations and primary development directions, economies at this stage fall into two categories.

First, market-deepening economies. These economies have built large online markets supported by mature platforms, payment systems, and logistics services, which continuously deepen the integration of e-commerce with production, circulation, and consumption. To drive further development, they must enhance collaboration among various enterprises and service segments. Specifically, policymakers should: connect order, inventory, production, and distribution data to raise supply chain efficiency; refine rules on platform fees, data usage, and merchant services to reduce cross-platform operating costs for SMEs; and ensure that the gains from industrial collaboration benefit a broader range of business entities.

Second, economies seeking cross-border expansion. These economies have built solid e-commerce and professional service foundations, prioritizing expansion into regional and international markets. As enterprises engage in cross-border trade, their operational needs increasingly extend to logistics fulfillment and after-sales services, demanding deeper service collaboration and rule alignment. Policymakers should: focus on upgrading cross-border business services for SMEs and fostering collaboration among e-commerce platforms, payment and logistics service providers, and export support agencies; and integrate the e-documentation system, customs clearance procedures, and goods return processes to lower ongoing operational costs and enhance enterprise capabilities to engage in regional supply chains and international markets.

(ii) Development Goals

At the integration stage, governments should set development goals to balance quality, efficiency, resilience, and sustainability. They should prioritize enhancing the capacity of the e-commerce sector to link production, distribution, and consumption, expanding SME participation, and upgrading cross-border services while raising resource efficiency. Policymakers should tailor these goals to the national industrial structure, market size,

governance capacity, and technological foundations. In the near term, the priority is to integrate data and information flows across order, inventory, production, and delivery systems. In the medium term, governments should scale up industrial coordination and the coverage of open services while refining relevant governance. Each goal should correspond to capabilities in market development, operations, talent, and innovation, with policy outcomes evaluated using national business and project data.

1. Industrial Integration

In the near term, integrate data and information flows for orders, inventory, production, and delivery across key industrial belts and boost digital tool adoption among SMEs. **In the medium term**, expand the use of flexible manufacturing, on-demand production, and agricultural traceability to forge industrial clusters with enduring competitiveness. Evaluation should focus on production efficiency, inventory turnover, delivery lead time, and added value of products.

2. Platform and Service Ecosystem

In the near term, upgrade open platform APIs and merchant services, ensure data portability, and refine dispute resolution mechanisms to lower cross-platform operating costs for merchants. **In the medium term**, align payment, logistics, marketing, and other services under common standards, enabling merchants to freely choose service providers. Evaluation should focus on indicators reflecting merchants' operational choices, such as fee transparency and cross-platform migration costs.

3. AI Applications

In the near term, promote affordable AI tools in scenarios such as customer service, translation, demand forecasting, and warehouse scheduling. **In the medium term**, enrich local-language resources and industry data, and expand shared services to provide sustained support for SMEs. Evaluation should balance usage costs, industry efficiency gains, data security, employment impacts, and the effectiveness of human review.

4. Cross-Border Coordination

In the near term, select key trading partners to promote the interoperability of electronic signatures, e-documentation, cross-border payments, and customs data, and to streamline goods return processes. **In the medium term**, expand the scope of mutual recognition of rules and data exchange through regional cooperation. Evaluation should focus on customs clearance times, compliance costs, cross-border goods return efficiency, and SMEs' export participation.

5. Governance Capacity

In the near term, refine inter-agency oversight and platform responsibilities to promptly address issues related to competition, data, and consumer protection. **In the medium term**, enhance the consistency of rule enforcement and establish

mechanisms for continuous monitoring, early risk warning, and dispute resolution. Evaluation should focus on resolution time, duplicative compliance costs, and outcomes of merchant appeals.

6. Inclusive Development for Shared Benefits

In the near term, provide tools, financing, and logistics support to rural merchants, women, youth, and micro-enterprises. **In the medium term**, narrow e-commerce service gaps across regions and demographic groups, and upgrade employment conditions for platform workers. Evaluation should focus on the share of active merchants, income changes, business survival rate, and employment security.

7. Green Development

In the near term, launch pilots on packaging reduction, reusable packaging, returns recycling, and energy-efficient warehousing. **In the medium term**, establish a management system covering procurement, warehousing, delivery, and equipment recycling. Gradually incorporate energy consumption per order, packaging usage, recycling rates, and carbon emissions into the evaluation framework.

8. Statistics and Evaluation

In the near term, unify the core statistical scope for data across platforms, payments, logistics, and regulation to develop comparable industrial and operational indicators. In the medium term, regularly evaluate public investment, platform policies, and AI application projects, and adjust policies based on industrial efficiency, merchant returns, governance, and environmental performance.

(iii) Development Strategies

At the integration stage, governments should prioritize industrial coordination, open services, cross-border operations, and green development. Each economy should select projects based on its industrial foundations. Policymakers should first integrate existing supply chains and services before scaling up AI applications and regional cooperation.

1. Deepening Digital Coordination Across the Industrial Chain

Translate consumer orders and reviews into product improvements and production plans. Integrate enterprise management, inventory, delivery, and platform order systems within key industrial belts to ensure online demand reaches the production end in a timely manner.

In manufacturing, develop "small-batch quick-response" production to rapidly fulfill orders; **in agriculture**, enhance supply stability by leveraging origin warehouses, cold chains, and traceability systems; **in services**, seamlessly link online booking and payment systems with offline service delivery. Governments should prioritize support to reduce the costs for SMEs to participate in industrial coordination.

2. Optimizing Open Services and Scaling Up the Application of AI Tools

Integrate payment, logistics, identity authentication, and e-invoice services under common standards to enable merchants to migrate their data and choose freely among platforms and service providers, thereby enhancing cross-platform operational convenience.

For AI applications, first address practical business challenges in customer service, cross-border translation, and demand forecasting. Governments can support SMEs by providing shared data, tool directories, and professional services, while refining requirements for fee transparency, data protection, and human review.

3. Enhancing Cross-Border Coordination and Green Operational Capabilities

With a focus on branding, product quality, compliance, and overseas delivery in CBEC, advance rule alignment with major trading partners on customs clearance, payments, and goods return. Develop shared services tailored to industries and market conditions to prevent enterprises from bearing duplicative compliance and logistics costs.

Governments should gradually incorporate green requirements into operational processes such as warehousing, packaging, delivery, and equipment management. They should drive continuous enterprise improvement through unified standards, information disclosure, and appropriate incentives, and jointly evaluate enterprises' supply chain stability and environmental performance.

(iv) Policy Recommendations

At the integration stage, governments should translate industrial efficiency, platform fairness, applications of AI tools, cross-border coordination, and green development into concrete projects. Policymakers should prioritize industrial clusters with existing order volumes and enterprise bases. They should clearly define service content, participating actors, budgets, and acceptance conditions, and subsequently expand coverage based on continued operation status and efficiency gains.

1. Promoting Industrial Integration

Authorities responsible for commerce, industry, and agriculture, together with local governments, should organize platforms, service providers, and SMEs to implement the digital transformation of industrial clusters. Before pilot launch, record data on inventory turnover, delivery lead times, and goods return; procure services for order management, product traceability, and brand building in stages; and compare efficiency and income changes after implementation of these services to ensure project acceptance is not based solely on the number of enterprises brought online.

Case in Practice

China: Connecting Rural E-Commerce with Origin Logistics Systems[8]

China has continuously advanced the comprehensive demonstration program for e-commerce in rural areas, using central fiscal funds to support demonstration counties in improving rural e-commerce public services and the county-township-village logistics distribution system. Through measures such as purchasing services and providing performance-based grants, it encourages private investment to complement market-oriented investments by enterprises. In 2024, China's Ministry of Commerce and eight other departments jointly released the Implementation Opinions on Promoting High-Quality Development of Rural E-Commerce. The Opinions further propose supporting a model that integrates "e-commerce, origin warehouses, and express logistics" to link origin consolidation, processing, delivery, and online sale of agricultural products together.

Key Takeaway: Economies should select pilot programs aligned with local industrial and logistics foundations, prioritizing public funds for shared facilities and services where market investment is insufficient, and introducing enterprise participation in operations. They should evaluate implementation results based on logistics costs, delivery lead times, and income changes, and clarify responsibilities for the subsequent maintenance and management of these facilities.

2. Maintaining an Open and Fair Platform Ecosystem

Promote platform fee transparency, data portability, and the opening of necessary platform APIs, and conduct competitive scrutiny on mergers and acquisitions, exclusive dealing, and self-preferencing. Regulators should require key platforms to submit annual compliance reports and undergo tiered audits. They should measure governance effectiveness using indicators such as market concentration, merchant complaint volume, cross-platform migration costs, and consumer choice.

3. Promoting Inclusive Access to AI Applications

Provide SMEs with affordable shared computing power, local-language tools, and professional services. Utilize AI tool vouchers and catalogs of qualified service providers to support specific applications in customer service, translation, demand forecasting, and warehousing. Evaluate subsidy claims based on actual usage, time saved, and tangible business results, while maintaining human review and appeal channels.

8.Ministry of Commerce and 8 Other Departments, "Implementation Opinions on Promoting High-quality Development of Rural E-commerce," SLTH [2024] No. 39, March 5, 2024, https://www.mofcom.gov.cn/zcfb/gnmygl/art/2024/art_bcd035118a9145b9a86526a80318ce12.html.

4. Raising the Level of Cross-Border Facilitation and Mutual Recognition

Upgrade the functions of single windows for small e-commerce parcels, goods returns, tax processing, and data interfaces, and advance the mutual recognition of digital identity, electronic signatures, electronic authentication, electronic documents, and cross-border payments. Prioritize trade corridors or key partners for pilots, and evaluate the level of cross-border facilitation and mutual recognition based on customs clearance time, payment costs, goods return efficiency, and SMEs' export participation.

Case in Practice

Chile: Providing CBEC Coaching for SMEs[9]

ProChile's E-Commerce Exporta program provides enterprises with guidance on selecting international digital channels, along with training and business coaching. This initiative targets enterprises that already have domestic digital sales channels and are preparing to expand into overseas markets. In 2023, the program also launched a CBEC export model for micro-enterprises and provided them with personalized coaching.

Key Takeaway: Economies should tailor coaching content to the operational foundations of each enterprise and evaluate outcomes based on tool adoption, order generation, and continued operation status. This approach offers practical insights for designing training and platform support for MSMEs.

5. Building a Green E-Commerce System

Government departments responsible for the environment, transport, postal services, and commerce should coordinate to advance packaging reduction, reusable packaging, green warehousing, low-carbon delivery, and reverse logistics. To this end, combine standards, green procurement, financial incentives, and information disclosure into a policy tool mix. Over time, gradually monitor key metrics such as packaging usage per order, recycling rates, energy consumption, and carbon emissions.

6. Safeguarding Inclusive Participation and Quality of Employment

Incorporate women, youth, rural merchants, and platform workers into the scope of industrial upgrading policies. Coordinate the provision of training, financing, platform onboarding, logistics, and order support, while closely monitoring income changes, employment security, business survival, and the share of active rural merchants.

9.ProChile, "E-Commerce Exporta," program page, https://www.prochile.gob.cl/herramientas/prochile-ecommerce; "E-Commerce Exporta 2023: ProChile presenta programa para potenciar las exportaciones a través de las plataformas digitales," April 11, 2023, https://www.prochile.gob.cl/noticias/detalle-noticia/2023/04/11/e-commerce-exporta-2023-prochile-presenta-programa-para-potenciar-las-exportaciones-a-trav%C3%A9s-de-las-plataformas-digitales.

Core Dimensions of Policy Evaluation at the Integration Stage

Policy evaluation at the integration stage should focus on five dimensions: **first**, whether e-commerce raises the operational efficiency of the real sector; **second**, whether the platform ecosystem becomes more open, fair, and predictable; **third**, whether SMEs, rural communities, and disadvantaged groups continue to benefit; **fourth**, whether CBEC drives the upgrading of branding, service, and governance capabilities; and **fifth**, whether sustained progress is made in green development. Policymakers should simultaneously incorporate industrial efficiency, market fairness, inclusive development for shared benefits, and green development into their assessments to accurately reflect the true quality of e-commerce development.

06

Practice Guidelines for the Global South Economies at the Future Stage

(i) The Future Stage: Intelligence-driven Development and Trusted Governance

(ii) Development Goals

(iii) Development Strategies

(iv) Policy Recommendations

(v) Forward-looking Cases and Scenarios

(i) The Future Stage: Intelligence-driven Development and Trusted Governance

The future stage represents a forward-looking phase in the evolution of e-commerce towards intelligence, trustworthiness, sustainability, and global collaboration. No economy in the current sample has fully entered this stage, yet some economies and enterprises have begun exploring areas such as AI agents, AI-generated content, and automated supply chains. The changes discussed for the future stage involve transaction organization, industrial collaboration, and related liability rules.

AI may play a broader role in demand identification, product design, transaction negotiation, delivery scheduling, and after-sales service. An AI agent is a software system capable of accessing data, using tools, and executing tasks based on authorized goals, assisting consumers and businesses with e-commerce transactions. Its application scope should align with identity verification, payment authorization, process recording, and human confirmation mechanisms.

Meanwhile, risks including algorithmic bias, deep-fake fraud, data monopoly, worker displacement, and high energy consumption will also rise. The Global South economies that passively accept technology imports may develop new forms of digital dependence. Therefore, the future-stage policy should be guided by the fundamental principles of self-reliance, openness and cooperation, controllable risks, and inclusive development for shared benefits.

When scaling up AI applications, it is necessary to clearly define who is responsible at each stage of a transaction. Figure 7 illustrates the alignment between applications and governance across search, order placement, delivery, and after-sales service. Necessary human confirmation shall be retained for important decisions, such as payment.

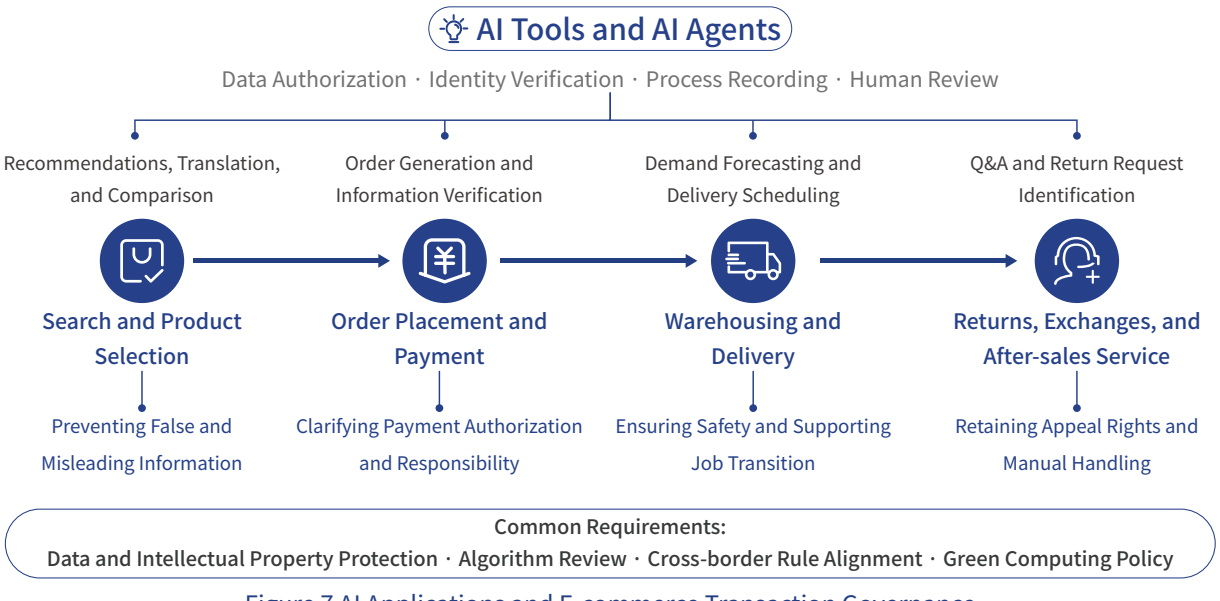


Figure 7 AI Applications and E-commerce Transaction Governance

(ii) Development Goals

Development goals at the future stage should focus on five key areas: **"self-reliant and accessible AI capabilities, open and trusted digital trade, efficient and collaborative industrial ecosystems, broadly shared technological dividends, and resource and environmental sustainability."** Given the significant differences in technological foundations, industrial structures, and governance capabilities across countries, it is inappropriate to establish unified targets for computing power, the number of models, or AI penetration rates. Instead, a phased approach should be adopted: laying a solid foundation and piloting low-risk applications in the near term; developing systematic applications and governance capabilities in the medium term; and building an open, trustworthy, inclusive, and green intelligent e-commerce ecosystem in the long term.

1. Fundamental Capabilities

In the near term, improve cloud services, data governance, and cybersecurity for e-commerce businesses; **in the medium term**, develop affordable shared computing power, local-language data, and identity verification services; **in the long term**, establish a stable and open intelligent e-commerce infrastructure. The evaluation focuses on service accessibility, reliability, and cost of use.

2. Industrial Applications

In the near term, pilot AI applications in low-risk scenarios, such as customer service, translation, marketing, product selection, and logistics; **in the medium term**, promote the development of smart supply chains in key industries that cover demand forecasting, production planning, transactions, and fulfillment, and provide low-cost AI tools for SMEs; **in the long term**, achieve real-time coordination among demand, production, transactions, and logistics. Human review mechanisms should be retained for critical business operations and high-risk decision-making processes.

3. Innovation Ecosystem

In the near term, foster local e-commerce technology service providers and industry solution providers; **in the medium term**, build a group of e-commerce platforms, model providers, and digital service exporters with regional competitiveness; **in the long term**, strive to establish international influence in competitive industries, local languages, or specialized application areas. Policy support should prioritize practical application and commercial viability, while avoiding duplicative construction and external technology dependence.

4. Governance Rules

In the near term, establish foundational systems for AI, data protection, platform responsibility, and consumer protection, and study applicable rules for emerging issues such as digital assets and data property rights in accordance with domestic legal

frameworks; **in the medium term**, improve mechanisms for algorithmic audit, risk-tiered classification of high-risk applications, labeling of AI-generated content, and cross-border regulatory collaboration; **in the long term**, actively participate in formulating regional and global governance rules for digital trade and AI. Governance should strike a balance between risk prevention and room for innovation, avoiding a "one-size-fits-all" approach.

5. Inclusive Development and Green Growth

In the near term, ensure that SMEs, rural areas, and vulnerable groups have access to AI tools, skills training, and public services; **in the medium term**, establish policies for labor transition, employment security, green computing power, and equipment recycling; **in the long term**, promote the broad sharing of the benefits from intelligent technologies, and effectively control the environmental costs associated with computing operations, logistics and transportation, as well as equipment manufacturing, use, and disposal. The evaluation should focus on tool affordability, income and employment improvement, energy efficiency, and resource recycling rates.

(iii) Development Strategies

At the future stage, we can focus on advancing three strategies: **"fundamental and innovative capabilities, trustworthy transactions, and digital services and green transition."** Countries should prioritize applications that are in demand, affordable, and measurable in effectiveness, while advancing governance capabilities in step with the expansion of technology application.

1. Strengthening the Foundation for AI Applications and Fostering Local Services

Address the operational needs of e-commerce by coordinating the development of digital networks, computing power, data, and skills. Public or shared resources should prioritize support for SMEs, fostering specialized service providers focusing on local languages, product knowledge, and logistics needs, while reducing duplicative construction and reliance on a single supplier. Economies with limited fiscal resources and market size can opt for small, purpose-built models, open-source tools, and regional shared services, complemented by data authorization, security management, and personnel training. The decision to scale up investment should be based on enterprises' actual use and business outcomes.

2. Clarifying Responsibilities in AI Agent Applications and Improving Risk Governance

When AI agents participate in search, order placement, and after-sales service, their identity, scope of authorization, transaction records, error-correction channels, and liability should be clearly defined. Applications involving payment, credit granting, or other important decisions should incorporate necessary human confirmation and independent review. Platforms should clearly label AI-generated product information, marketing

content, and automated customer service, and guard against false advertising and anomalous transactions. Regulatory authorities may establish requirements for testing, auditing, and incident reporting based on application risks, and continuously assess the actual impact.

3. Expanding Digital Services and Supporting Employment and Green Transition

Support digitally delivered services such as software, design, marketing, and remote technical services, and improve cross-border payment collection, intellectual property protection, and statistical standards. Traditional products can be combined with services such as traceability and remote operation and maintenance to increase their added value; relevant partnerships should be based on real market demand. On-the-job training and career transition support may be organized to address the impact of AI on e-commerce customer service, warehousing, and marketing roles. The development of computing power and data infrastructure should take into account energy consumption, equipment recycling, and power capacity to avoid burdens on employment and resources caused by the deployment of new technologies.

(iv) Policy Recommendations

Three principles must be adhered to in the implementation of future-stage policies: **First**, technological advancement should not substitute for development quality, and all intelligent projects must comprehensively assess productivity, inclusiveness, security, and environmental impact; **second**, over-reliance on a single platform or supplier should be avoided, and resilience should be strengthened through open standards and diversified procurement; **third**, complex regulatory systems of developed economies should not be adopted wholesale; instead, phased and implementable regulations should be adopted in light of national capacities.

The future-stage policies could begin by establishing rules for shared services, talent, and accountability, and then pilot initiatives focusing on tools for SMEs, supply chain applications, and digital service exports. Regional cooperation can be advanced simultaneously to reduce costs and harmonize rules. The actual effectiveness and risk controls should be verified before scaling up a project; see Figure 8 for details.

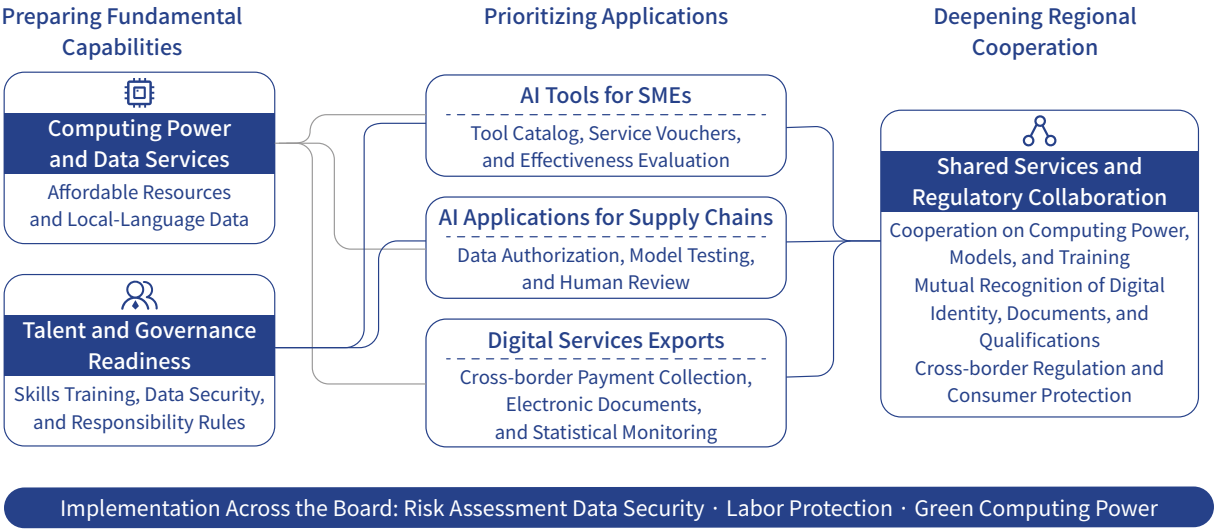


Figure 8 Implementation Pathways for Future-stage Policies

(v) Forward-looking Cases and Scenarios

China: AI Tool Applications for Merchants. China has already deployed AI applications in areas such as e-commerce customer service, demand forecasting, content generation, and warehouse scheduling. These explorations can serve as a reference for assessing the suitability and risks of such tools. Other economies can start with specific business scenarios based on the needs of local enterprises, and assess the costs of tool use, business outcomes, and their impact on employment and data security.

Southeast Asia: Multilingual Services and AI Applications for SMEs. Social commerce and content commerce have experienced rapid growth, supported by a young population and the mobile internet. Future upgrades should be evaluated based on whether SMEs can afford, use, and benefit from them. The region should collaboratively develop AI tools for multilingual customer service, content production, and cross-border operations, distribute AI tool vouchers, and establish a directory of service providers, while linking training with platform onboarding, financing, logistics, and order opportunities. At the same time, regional coordination on electronic documents, consumer protection, and digital skills certification should be advanced, and changes in the job structure should be tracked to facilitate labor transition.

Africa: Trust in Cross-border Transactions and Shared Intelligent Services. Some economies have established distinctive foundations in mobile payments and digital identity. A more realistic path is to establish digital identity, electronic authentication, interoperable payments, and traceable electronic documents as the trust infrastructure for cross-border transactions; through regional cooperation mechanisms such as the African Continental Free Trade Area (AfCFTA), these systems would enable the mutual recognition of rules while reducing the costs of duplicative construction. On this basis, regionally shared computing power and

open-source models can be leveraged to develop fit-for-purpose AI applications for agriculture, logistics, and credit assessment, while simultaneously conducting baseline evaluations of data center energy consumption and cybersecurity.

These scenarios are intended to illustrate application choices under different conditions and do not represent actual policy outcomes. Large-market economies can prioritize industrial chain collaboration; regional markets can focus on shared services and rule alignment; small and low-income economies should give priority to low-cost AI tools that help address operational bottlenecks.



07

Conclusions and Action Roadmap

(i) Key Conclusions

(ii) Overall Policy Recommendations

(iii) Phased Action Roadmap

(i) Key Conclusions

First, the development of e-commerce in the Global South economies is characterized by distinct stages and unevenness. The nascent and take-off stages combined account for 68.7%. The average score for foundational enablers exceeds that for development level and operational performance, indicating that fundamental conditions have not yet been fully translated into online participation and industrial outcomes. There are also differences in the capability portfolios of the four sample economies at the integration stage, so policy design should be tailored to the specific stage and particular shortcomings.

Second, e-commerce development requires coordination among digital networks, power supply, payment systems, logistics infrastructure, business entities, and regulatory frameworks. In the early stage, priority should be given to ensuring the reliable completion of order placement, payment, delivery, and after-sales service, while gradually expanding the participation of merchants and consumers. Subsidizing platforms or traffic alone cannot compensate for insufficient basic services.

Third, the policy focus typically shifts with rising capacity from "strengthening infrastructure" to "establishing systems and cultivating market players," "scaling up and improving quality," "promoting integration and strengthening governance," and "advancing intelligent applications and ensuring trustworthiness." Countries can adjust their development priorities based on key bottlenecks and comparative advantages, and achieve leapfrog development by leveraging mobile payments, regional cooperation, and new technologies.

Fourth, the core value of e-commerce lies not only in expanding consumption, but also in boosting productivity, lowering market entry barriers for SMEs, optimizing supply chains, creating jobs, and expanding trade in services. The evaluation system should reduce its reliance on transaction value and platform valuation, and place greater emphasis on dimensions such as enterprise efficiency, quality of employment, regional balance, and environmental performance.

Fifth, while AI offers opportunities for leapfrog development in the Global South economies, it may also give rise to new digital divides in computing power, data, language, and platforms. We must treat connectivity, computing power, data, and skills as a unified foundation, focus on developing fit-for-purpose AI tailored to local contexts, and simultaneously establish systems for data security, algorithmic fairness, and consumer protection.

Sixth, regional cooperation and South-South cooperation serve as key pathways to reducing costs, expanding coverage, and enhancing regulatory influence. Regional mutual recognition in areas such as electronic documents, digital identity, payments, and customs can significantly lower cross-border transaction costs for SMEs; disadvantaged economies can reduce duplicative construction through shared computing power and joint talent development.

Seventh, high-quality development of e-commerce must balance inclusiveness and sustainability. A lack of policy arrangements targeting rural areas and vulnerable groups will exacerbate inequality, while ignoring environmental impacts will lead to resource constraints. Inclusiveness and sustainability must be integrated into policy instruments and assessment systems at every stage, rather than treated as add-on objectives.

(ii) Overall Policy Recommendations

Establish a phased and categorized policy system: Periodically identify development stages and core shortcomings based on the foundational enablers, development level, operational performance, and development potential, and set phased goals and annual targets. Different domestic regions may adopt zoned and categorized policies to avoid raising the compliance threshold for low-income areas through uniform standards.

Continue to strengthen investment in digital public infrastructure: Improve infrastructure such as broadband, electricity supply, digital identity, instant payments, postal logistics, e-invoices, and single windows, uphold open standards and inclusive access, and prevent the lock-in of public systems to a single commercial platform.

Build a whole-chain institutional governance framework: Trusted rules themselves constitute transaction infrastructure. Countries should confirm the legal validity of electronic contracts, electronic signatures, electronic authentication, and electronic documents in a phased manner; promote digitization of customs single windows and cross-border trade documents; and advance mutual recognition of digital identity, payments, documents, and customs clearance rules at the bilateral and regional levels. As the market expands, we should further refine platform responsibility, competition policy, taxation, data protection, and risk-tiered governance, and establish mechanisms for inter-agency joint enforcement and data sharing.

Lower the barriers to e-commerce participation for SMEs and key groups: Lower the costs of online market access for MSMEs, farmers, women, and youth through simplified registration, digital service vouchers, financing guarantees, logistics subsidies, and tiered skills training. Tools, training, platform onboarding, financing, logistics, and order opportunities should be seamlessly integrated, and effectiveness should be measured by business activity, revenue growth, and business survival rates.

Strengthen synergy among industrial clusters, platforms, and public services: Focusing on manufacturing clusters, agricultural production areas, and service sector strengths, we should establish a public service system for e-commerce in industrial belts, and support quality certification, branding, supply chain finance, and cross-border compliance; encourage platforms to use data lawfully to inform production decisions, thereby improving the responsiveness and added value of industrial chains.

Proactively foster R&D and application capabilities for fit-for-purpose AI, and refine the governance

system: Formulate a roadmap that aligns with fiscal capacity and industrial demand; reduce usage costs through regionally shared computing power, open-source models, local-language data, and industry knowledge bases; prioritize support for SMEs in using AI tools in low-risk scenarios, such as customer service, translation, content creation, marketing, and order management; and pilot AI-enabled CBEC cooperation initiatives centered on competitive industries. AI-enabled "one-person companies" (OPCs) can lower the barrier to entry, but should not be treated as a uniform legal category under the corporate laws of various countries. Systems should be established simultaneously for labeling of AI-generated content, algorithmic audit, risk-tiered classification of high-risk applications, and human review.

Deepen regional cooperation and multilateral capacity building: Leverage cooperation mechanisms such as the Regional Comprehensive Economic Partnership (RCEP), the African Continental Free Trade Area (AfCFTA), and the Asia-Pacific Economic Cooperation (APEC) to promote alignment of rules regarding electronic signatures and electronic documents, and foster cooperation on cross-border payments, customs clearance, and consumer protection. At the same time, we can build on APEC's cooperative agendas—such as the Internet and the digital economy, CBEC, and trade digitization—to strengthen the alignment of digital standards and the exchange of best practices. In Southeast Asia, efforts can focus on advancing multilingual tool applications, capacity building for SMEs, and cross-border fulfillment coordination; in Africa, priority can be given to improving the foundation of trust in transactions—such as digital identity and electronic authentication—and sharing digital public services. International organizations and development finance institutions should strengthen long-term support for digital infrastructure, policy design, and talent development in low-income economies, and help MSMEs use digital platforms and appropriate AI tools to narrow the digital divide.

Establish a continuous evaluation and adjustment mechanism: Encourage statistical agencies, platforms, payment providers, logistics operators, and customs authorities to establish a standardized data reporting mechanism, and track indicators covering e-commerce transactions, merchants, employment, cross-border trade, and environmental impact. For major policies, baseline surveys and impact evaluations should be conducted to adjust subsidies, regulatory measures, and investment priorities based on actual outcomes. The specific implementation process is shown in Figure 9.

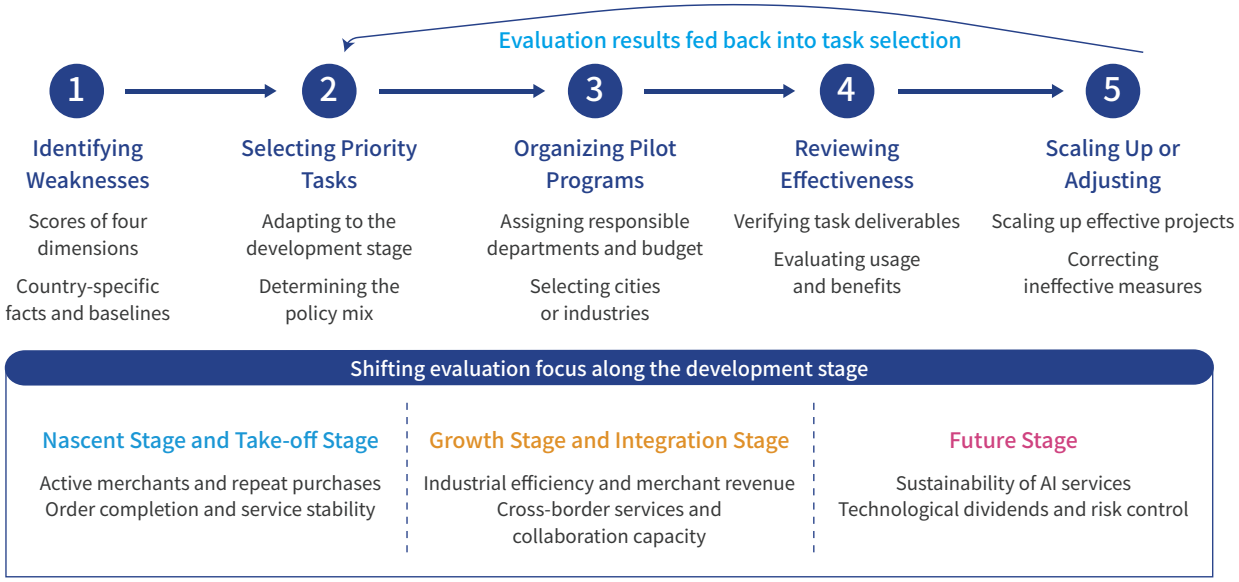


Figure 9 Policy Implementation and Effectiveness Feedback

(iii) Phased Action Roadmap

The foundations for e-commerce development and the main constraints vary across different economies. Policy objectives, action priorities, and the pace of implementation should be adapted to each country's specific conditions. Figure 10 sets out the development goals, priority actions, progress indicators, and key risks for the five stages, and lists the common project implementation steps for each stage. When fundamental conditions are weak, priority should be given to ensuring the smooth completion of transactions and the continued operation of merchants. As the market expands gradually, efforts should focus on enhancing industrial and cross-border operating capabilities and improving the competitive environment. Once e-commerce becomes more deeply integrated with industries, further steps should be taken to promote collaboration, inclusive growth, and green development, while exploring trusted AI services. Each economy can identify its priority tasks based on its own weaknesses and, in areas where conditions permit, proactively adopt applicable measures from later stages.

During implementation, small-scale pilots may first be launched in a limited number of industries or regions. After the lead department, budget, completion deadline, and pre-implementation baseline are clearly defined, the effectiveness and risks should be evaluated based on the corresponding progress indicators. Projects delivering stable outcomes at an affordable cost can be scaled up gradually; adjustments should be made in a timely manner if results fall short or risks rise. Policy evaluation should focus on tangible improvements in business operations and services, and avoid measuring outcomes solely by the investment amount, the number of services launched, or short-term transaction values.

Overall, there is no single optimal model for e-com-

merce development in the Global South economies. Each economy should build on its own conditions and market demand to enhance domestic capabilities through openness and cooperation; reduce operating costs and strengthen trust in transactions through infrastructure and institutional development; and support long-term growth through industrial collaboration, inclusive participation, and green development.

Phase Performance and Goals	Priority Actions	Outcomes and Risks

1 Nascent Stage

Fragmented Online Transactions
Weak Foundational Services

Development Goals

Secure Stable Ordering, Payment, and Delivery

Key Policies

- Improve Network Access and Power Supply
- Develop Low-cost Payment and Delivery
- Establish Basic Transaction Rules

Progress Monitoring

Order Completion Rate
Active Merchants

Risks Requiring Prevention

Premature Taxation
Emphasizing Platform Subsidies While Neglecting Infrastructure Development

Sample Number 03 10 15 18 20 25 27 38 40 41 42 43 48 52 56 63 67

2 Take-off Stage

Expansion of Online Operations
Unstable Supporting Services

Development Goals

Sustain Merchant Operations
Drive Consumer Repeat Purchases

Key Policies

- Clarify Responsibilities of Regulatory Authorities and Platforms
- Cultivate Merchants and Professional Service Providers
- Improve Delivery and After-sales Service Quality

Progress Monitoring

On-time Delivery
Repeat Purchase Rate

Risks Requiring Prevention

Inconsistent Requirements Across Departments
Inadequate Delivery and After-sales Follow-Up

Sample Number 04 05 06 12 13 16 17 19 23 24 26 28 29 30 31 32 34 35 37 46 47 49 50 54 57 58 59 64 65

3 Growth Stage

Rapid Growth in Users and Transactions
E-Commerce Driving Industrial and Trade Growth

Development Goals

Improve Industrial Efficiency
Strengthen Cross-border Operating Capabilities

Key Policies

- Pilot Programs Based on Competitive Industries
- Promote Supply Chain Digitization
- Improve Platform Competition and Compliance Rules

Progress Monitoring

Improvement in Delivery Lead Time
Increased Export Participation of SMEs

Risks Requiring Prevention

Excessive Platform Concentration
Rising Infringement and Compliance Costs

Sample Number 02 08 09 11 21 22 33 36 39 44 45 51 53 55 60 62 66

4 Integration Stage

Deep Integration of E-Commerce into Production and Circulation
The Growing Importance of Cross-segment Collaboration

Development Goals

Improve Industrial Synergy Efficiency
Extend Benefits to More SMEs

Key Policies

- Integrate Order Data and Supply Chain Information
- Open Platform Services and Promote AI Tools
- Deepen Cross-border Collaboration and Green Transition

Progress Monitoring

Inventory Turnover Improvement
Operational Benefits for SMEs

Risks Requiring Prevention

Data Lock-in and Algorithmic Injustice
Inadequate Participation of SMEs

Sample Number 01 07 14 61

5 Future Stage

Accelerated Exploration of Intelligent Services
No Sample Fully Entering This Stage

Development Goals

Develop Trusted and Inclusive ntelligent Services
Balance Employment and Environmental Impacts

Key Policies

- Build Affordable Computing Power and Local Services
- Define Authorized Scope and Liability for AI Agents
- Support Digital Services and Workforce Transformation

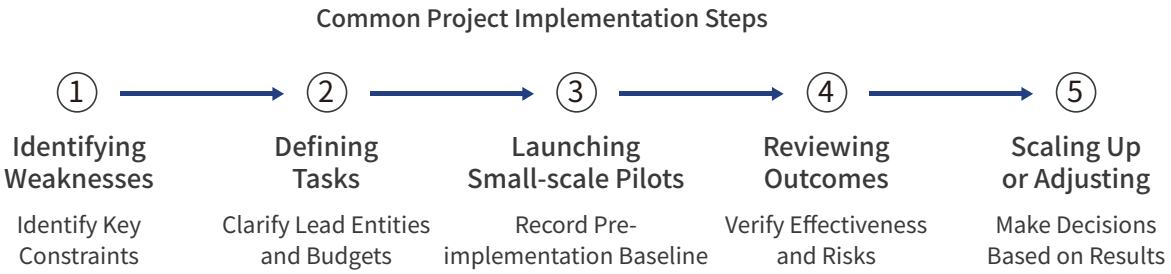
Progress Monitoring

Actual Effectiveness of Tool Utilization
Effective Control of Risks

Risks Requiring Prevention

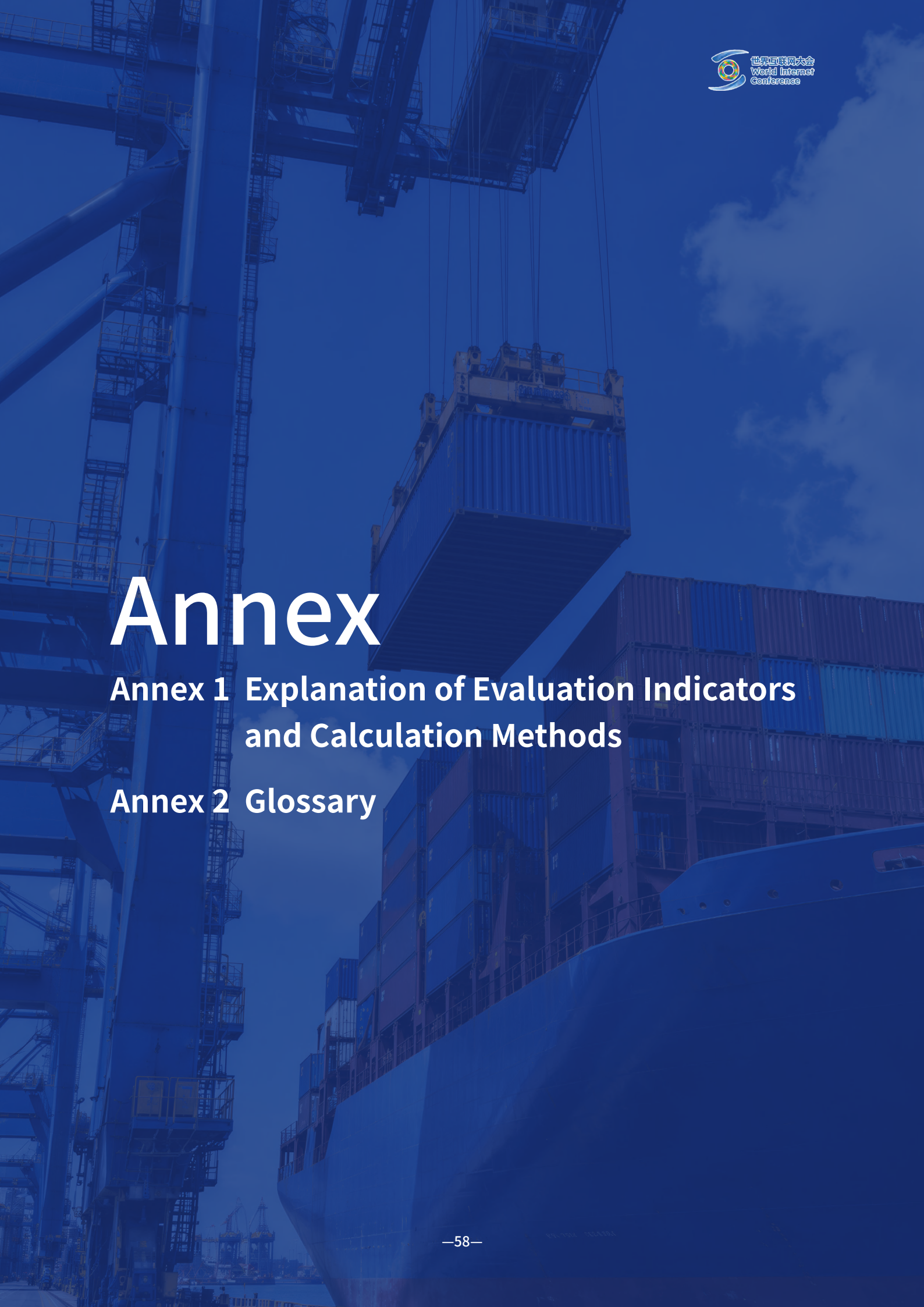
Technological Dependency and Automated Fraud
Employment Adjustment and Energy Strain

Sample Number No economy has fully entered this forward-looking stage



Note: Numbers follow Figure 3 and do not indicate ranking.

Figure 10 Phased Action Roadmap for E-commerce Development in the Global South Economies



Annex

Annex 1 Explanation of Evaluation Indicators and Calculation Methods

Annex 2 Glossary

Annex 1 Explanation of Evaluation Indicators and Calculation Methods

This annex sets out the definitions of indicators, data processing, weightings, and interpretation of results. The technical methods used are intended solely for the research purposes of this Guide and should not be construed as the sole basis for ranking countries by their development levels.

(i) Evaluation Purpose

The evaluation system is used to compare the transaction foundation, online participation, export capacity in related industries, and conditions for innovation and talent development, and helps identify policy shortcomings. Samples were selected based on a comprehensive consideration of regional representativeness, economic and demographic impact, and data availability. Some indicators only reflect e-commerce-related conditions indirectly, and should not be used to estimate transaction values, operating revenue, or policy effectiveness.

(ii) Evaluation Indicators

Table A1 lists the 17 scoring indicators used for cross-national comparisons. The **"Foundational enablers" dimension** measures digital networks, payment systems, and logistics conditions; the **"Development level" dimension** incorporates the share of adults shopping online and new business density; the **"Operational performance" dimension** uses proxy indicators such as ICT service exports and high-tech product exports; the **"Development potential" dimension** reflects corporate training, education, R&D, and innovation.

Table A1 Scoring Indicators

Dimension	Indicator	Unit	Purpose	Data Source
Foundational enablers	Access to electricity	% of population	Reflects the basic electricity conditions for residents and businesses using digital services.	World Development Indicators (WDI), World Bank
Foundational enablers	Internet usage rate	% of population	Reflects the actual penetration rate of Internet use among residents.	International Telecommunication Union (ITU)
Foundational enablers	Mobile cellular subscriptions	per 100 people	Reflects the availability of mobile connectivity.	International Telecommunication Union (ITU)
Foundational enablers	Fixed broadband subscriptions	per 100 people	Reflects the availability of stable, high-capacity connectivity.	International Telecommunication Union (ITU)
Foundational enablers	Secure internet servers	per 1 million people	Reflects the security foundation of online transactions. log(1+x) transformation is applied before scoring.	Netcraft Secure Server Survey

Dimension	Indicator	Unit	Purpose	Data Source
Foundational enablers	LPI: overall	1–5 points	Reflects the overall efficiency of cross-border logistics.	Logistics Performance Index (LPI), World Bank
Foundational enablers	LPI: customs efficiency	1–5 points	Reflects customs clearance efficiency and border management capacity.	Logistics Performance Index (LPI), World Bank
Foundational enablers	LPI: infrastructure	1–5 points	Reflects the quality of transportation and trade infrastructure.	Logistics Performance Index (LPI), World Bank
Foundational enablers	Account ownership rate	Share of the population aged 15 and above (%)	Refers to the proportion of people who have an account at a financial institution or mobile money service provider, and reflects the foundation of payment inclusion.	Global Findex Database, World Bank
Development level	Share of adults shopping online	Share of the population aged 15 and above (%)	Reflects the extent of online shopping participation among adults; uses comparable survey data.	Global Findex Database, World Bank
Development level	New business density	Number of newly registered limited liability companies per 1,000 people aged 15–64	Reflects market entry and entrepreneurial vitality.	Entrepreneurship Database, World Bank
Operational performance	ICT service exports	% of service exports	Reflects the capacity for digital services trade (trade activities involving the cross-border delivery of services via the internet).	International Monetary Fund (IMF)
Operational performance	High-technology exports	% of manufactured exports	Reflects industrial technology and export structure.	UN Comtrade; World Integrated Trade Solution (WITS), World Bank
Development potential	Share of firms offering formal training	%	Reflects a company's capacity for ongoing training and skills upgrading.	Enterprise Surveys, World Bank
Development potential	Gross tertiary enrollment ratio	%	Reflects the long-term supply of digital talent.	UNESCO Institute for Statistics (UIS)
Development potential	R&D expenditure	% of GDP	Reflects innovation input.	UNESCO Institute for Statistics (UIS)
Development potential	Resident patent applications per 1 million people	per 1 million people	Reflects innovation output.	Intellectual Property Statistics, World Intellectual Property Organization (WIPO); World Development Indicators (WDI), World Bank

(iii) Statistical Years

Update cycles vary across databases. This Guide uses 2021 as the earliest year for statistical purposes. Priority is given to the latest available data. For indicators where the original observations predate 2021 and could not be updated to 2021 or later from the same or a comparable authoritative source, they were treated as missing values and imputed as follows: First, the valid observations were standardized; then, the median score for the same indicator within the same World Bank income group was used to impute the missing values. If the valid sample size for that income group was less than 5, the median score for that indicator across the entire sample was used instead. According to the observations included in the calculations, data from 2025 accounted for 6.59%, 2024 for 63.77%, 2023 for 6.99%, 2022 for 17.17%, and 2021 for 5.49%. Another 137 records lacked valid observations meeting the specified criteria and were not used as raw data. In the baseline scenario, median imputation was applied based on standardized indicator scores.

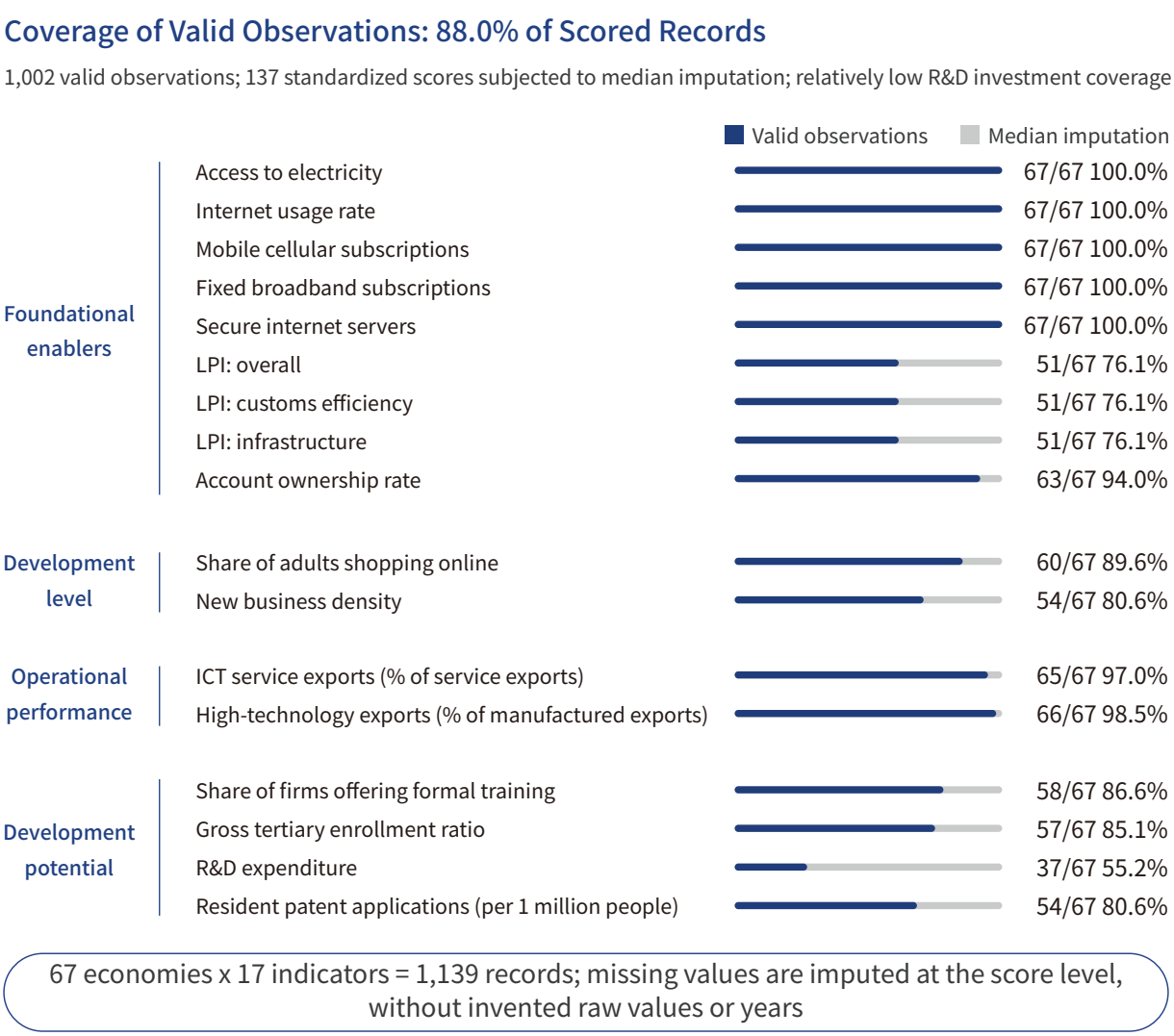


Figure A1 Data Coverage for Scoring Indicators

Valid observations and median imputations should be recorded separately. Indicators such as R&D investment have relatively low coverage. Interpretations of relevant dimensions and stage boundaries should build on country-specific data and refer to the "no imputation" and "conservative imputation" scenarios.

(iv) Data Processing

To eliminate differences in the units and numerical ranges of indicators, this Guide uses the evaluated economies as the sample and applies min-max normalization on a scale of 0 to 100 to each indicator. Let x be the raw value of the economy j for indicator i, and y be the standardized score. The larger the value of a positive indicator, the higher the standardized score:

$$y_{ij} = \frac{x_{ij} - \min\limits_{j} x_{ij}}{\max\limits_{j} x_{ij} - \min\limits_{j} x_{ij}} \times 100$$

If subsequent evaluations include negative indicators such as cost and duration, data should be processed in the opposite manner:

$$y_{ij} = \frac{\max\limits_{j} x_{ij} - x_{ij}}{\max\limits_{j} x_{ij} - \min\limits_{j} x_{ij}} \times 100$$

The secure internet servers reflect the security foundation of online transactions, and resident patent applications reflect the conditions for innovation; both indicators exhibit a clearly right-skewed distribution in the sample. To mitigate the impact of extreme values on relative positions, a log transformation is first applied, followed by min-max normalization of the transformed values.

The above indicators represent supporting conditions for e-commerce development, not direct statistics on CBEC transaction values.

$$z_{ij} = \ln\left(1 + x_{ij}\right)$$

(v) Weightings

Scoring is based on a two-tier equal-weighting system. Under the median baseline scenario, the arithmetic mean of the indicator scores within each dimension (including scores imputed according to the rules in this annex) is first calculated, and then a 25% weight is assigned to each of the four dimensions: foundational enablers, development level, operational performance, and development potential. The results for "no imputation" and "conservative imputation" scenarios are used solely for sensitivity comparisons.

Let c denote the set of indicators for dimension k, n the number of indicators in that dimension, and $\tilde{y}_i$ the standardized score of economy j for indicator i. The dimension score for the main result is then:

$$B_{\mathrm{kj}} = \frac{1}{n_k} \sum_{i \in C_k} \tilde{y}_{\mathrm{ij}}$$

When the four dimensions are equally weighted, the composite score is:

$$E_j = \frac{1}{4} \sum_{k=1}^{4} B_{kj}$$

(vi) Dimension Score

The dimension score is used to identify relative weaknesses in foundational enablers, development

level, operational performance, and development potential, while the composite score is used for cross-sectional comparison based on the same criteria. A higher score indicates better overall performance of an economy on the comparable indicators, but does not equate to e-commerce transaction volume, policy quality, or actual economic benefits. The classification of development stages is further subject to country-level review based on market size, transaction and fulfillment conditions, industrial integration, and governance characteristics, rather than relying on a single score threshold.

(vii) Scope of Application

The primary purpose of this evaluation is to identify relative weaknesses, support country-specific diagnostics, and inform the selection of a policy tool mix. It should not be directly used as a financing threshold or the sole basis for performance assessment.

Annex 2 Glossary

(Listed in alphabetical order)

Account Ownership Rate: The percentage of the population aged 15 and above who hold an account at a financial institution or with a mobile money service provider. It reflects the foundation of payment inclusion and should not be equated with account activity rates or transaction volumes.

African Continental Free Trade Area (AfCFTA): A free trade arrangement under the African Union framework to advance the integration of goods, services, and investment across the African continent, aimed at promoting regional synergy in payments, documentation, customs, and digital rules.

AI Agent (also known as Intelligent Agent): A software system capable of accessing data, using tools, and executing search, analysis, or transaction tasks based on authorized goals. It must have a clearly defined identity, authorized scope, process logging, human review, and responsibilities of relevant entities.

AI-enabled One-Person Company (OPC): A lean organizational structure in which a single entrepreneur leverages AI and digital services to handle operational tasks that would otherwise require a team. This term describes the trend of technology lowering the entry barriers for organizations, and should not be treated as a uniform legal category under the corporate laws of various countries.

Algorithmic Audit: A systematic examination of an algorithm's data, underlying logic, outputs, risk control mechanisms, and actual impacts for identifying discrimination, manipulation, security vulnerabilities, and compliance risks.

Baseline: The initial state and indicator values measured prior to the implementation of a project or policy, used for comparison with post-implementation results.

Bonded Warehouse: A customs-approved storage facility within the customs territory where goods with pending import duties and taxes are stored. It is suited for cross-border import stocking and centralized customs clearance.

Business-to-Business E-commerce (B2B): Transactions conducted between businesses or organizations, typically applied in raw materials, wholesale, supply chain, and industrial internet scenarios.

Business-to-Consumer E-commerce (B2C): Transactions where businesses sell goods or services directly to individual consumers, commonly seen on general retail platforms and brand-owned online stores.

Cold Chain: A logistics system that maintains a specified temperature throughout production, storage, transportation, and sales, primarily used for fresh agricultural products, food, and pharmaceutical products.

Consumer-to-Consumer E-commerce (C2C): Transactions where individuals trade directly with one another through platforms or social tools, commonly seen in second-hand trading and

small-scale personal businesses.

Cross-Border E-Commerce (CBEC): An economic activity where trading entities belong to different customs territories, with transactions concluded through digital channels followed by cross-border payments, customs clearance, and fulfillment, involving the coordination among customs, taxation, payments, logistics, and consumer protection.

Data Portability: The ability of users or merchants to obtain and transfer their own data in a commonly used format, which helps mitigate platform lock-in and reduce cross-platform operational costs.

Data Property Rights: Institutional arrangements regarding the rights to hold, use, share, and benefit from data.

Digital Assets: Resources and rights that exist in digital form, possess economic value, and can be legally controlled or utilized.

Digital Identity: A digitized credential and authentication framework used to verify the identity of individuals, enterprises, or devices online, providing foundational support for account opening, contract signing, payments, customs clearance, and public services.

Digital Port: A digital platform that connects key entities including customs administration, taxation authorities, ports, logistics providers, financial institutions, and trading enterprises, enabling the online processing of declarations, document submissions, tax payments, customs status inquiries, and cargo tracking.

Digital Public Infrastructure (DPI): Foundational digital systems or services built on open standards and accessible to diverse entities, such as digital identity, payment networks, and data exchange facilities. It supports authentication, receipts and payments, and business collaboration in e-commerce.

Digital Service Vouchers: Subsidy vouchers issued by the government to eligible enterprises for purchasing cloud, marketing, data, or compliance services, aimed at reducing the digital transformation costs for SMEs through a framework of certified service providers and outcome evaluations.

E-commerce Penetration Rate: For the purpose of this guide, this metric refers to online retail sales as a percentage of total retail sales. When making cross-country or cross-period comparisons, calculation criteria such as the scope of goods and services and the statistical period must be fully aligned.

E-commerce Service Providers: Entities that provide merchants with professional services such as storefront development, marketing, customer service, data analytics, logistics, payments, and compliance, serving as a vital backbone for fostering local ecosystems and helping SMEs transition online.

Electronic Authentication: The process of verifying the authenticity of digital identities, electronic signatures, or credentials through technical and institutional means. It serves as a critical founda-

tion for trusted transactions and cross-border mutual recognition.

Electronic Data Interchange (EDI): The automated transmission of commercial data—such as orders, invoices, and waybills—between information systems based on uniform standards, helping reduce manual data entry and improve processing efficiency.

Electronic Documents: Trade documents generated, transmitted, and verified in electronic form, such as contracts, invoices, bills of lading, and certificates of origin, helping shorten the customs clearance time and reduce cross-border compliance costs.

Electronic Payment: The transfer and settlement of funds completed through electronic means, such as bank accounts, payment cards, and mobile wallets.

Electronic Signature: Data in electronic form that indicates the signatory's identity and their approval of the document's content. Its legal validity is established by law, with clear rules governing authentication and liability.

Flexible Manufacturing: A manufacturing model capable of dynamically adjusting product categories, production volumes, and schedules in response to changing orders and market demands.

Fulfillment: The process by which a merchant completes order preparation, dispatch, delivery, and related after-sales obligations as specified in the order.

Generative AI: An AI technology capable of generating text, images, and other content based on inputs. It can be utilized for e-commerce product listings, translation, marketing, and customer service; however, the generated content must still be verified.

High-Risk AI Applications: AI applications that have a significant impact on finance, healthcare, employment, fundamental rights, or major transactions, typically requiring impact assessments, rigorous testing, human review, and incident reporting.

Information and Communications Technology Services Exports (ICT Services Exports): Refers to the revenue earned by domestic resident enterprises from providing telecommunication, computer, and information services to non-resident entities abroad. It primarily covers communication services, software and computer services, data processing, and information services, and is typically compiled on a balance of payments basis.

Informal Delivery: Delivery activities carried out by merchants, individual riders, or community networks that are not yet integrated into a standardized express delivery system. In the early stages, a system for registration should be established alongside safety, tracking, and complaint handling mechanisms.

Industry Knowledge Base: A curated collection of sector-specific terminology, standards, products, workflows, and compliance knowledge, providing foundational support for vertical AI applications, including customer service, translation, design, and operations.

Instant Payment: A payment service that processes funds and makes them available to the payee shortly after payment initiation, with specific time limits and service scope defined by the relevant system rules.

Interoperability: The ability of different systems, platforms, or institutions to exchange and utilize information or services based on common standards, applicable to payments, digital identity, documentation, logistics, and regulatory collaboration.

Internet of Things (IoT): A technology that connects physical objects or devices to the network through sensors, positioning equipment, and other devices to automatically collect and transmit information. In e-commerce, it can be applied to inventory monitoring, smart warehousing, logistics tracking, cold chain temperature control, and supply chain management.

Lightweight E-commerce: A low-cost online business model that leverages social media, messaging tools, mobile payments, and flexible delivery options without the need to build a comprehensive proprietary platform, serving as a way to help develop the market at the nascent stage.

Local Consumer Services: Services that are locally supplied and fulfilled offline—such as catering, housekeeping, repairs, and ride-hailing—making them highly suitable for creating early-stage, high-frequency transaction scenarios via the O2O model.

Micro, Small and Medium-sized Enterprises (MSMEs): A collective term for micro, small and medium-sized businesses categorized according to country-specific criteria for employee headcounts, annual revenue, or asset size, with an emphasis on lowering their barriers to digital transformation and cross-border operations.

Micro-merchants: Business entities operated primarily by individuals, households, or a small number of employees, typically characterized by small operational scale and a low level of formalization. They represent the smallest segment within MSMEs and can be supported through simplified registration and low-cost compliance measures.

Mobile Communication Network: A communication network that provides voice and data connectivity for mobile terminals like smartphones via infrastructure such as base stations, serving as a critical foundation for mobile e-commerce, mobile payments, and digital access in remote areas.

Mobile Wallet: A tool that stores funds or payment information through a mobile application or a mobile communication account to complete services such as transfers, payment receipts, and bill payments.

Online-to-Offline Commerce (O2O): Transactions where information sourcing, booking, or payments are completed online, while the services are delivered offline. It is applied in catering, housekeeping, ride-hailing, repairs, and local retail.

Open-Source Model: An AI model whose model weights or underlying code are provided under an

open license, allowing users to utilize and adapt it under the specified license conditions; users remain obligated to comply with requirements for data protection, intellectual property rights, and security.

Order Completion Rate: The proportion of valid orders that are successfully paid, delivered as agreed, and not cancelled within a given statistical period. The statistical scope must explicitly state whether post-purchase refunds are excluded.

Overseas Warehouse: A storage facility established in the destination country or region of product sales, used for stocking, distribution, delivery, and returns. It can significantly shorten the cross-border fulfillment time, but requires an evaluation of inventory risks and local compliance costs.

Payment Agent Outlet: An offline point of service authorized by a bank or payment institution to provide users with basic financial services, such as account top-ups, withdrawals, and transfers.

Payment Interoperability: The ability to transfer funds and accept transactions across different banks, wallets, QR codes, or clearing networks, helping reduce merchant acceptance costs and mitigate market fragmentation.

Platform APIs: Access points provided by a platform for data exchange or function calls with external systems, which can be utilized to integrate orders, payments, inventory, logistics, and merchant services.

Platform Enterprises: Business entities that provide merchants and consumers with services such as transaction matchmaking, technology, payments, logistics, or marketing. They shall assume corresponding platform responsibilities commensurate with their operational scale and control capacity.

Public Computing Power: Computing resources provided by governments, public institutions, or collaborative networks and made affordable for SMEs and research institutions, aimed at reducing the foundational costs of AI applications.

Regional Comprehensive Economic Partnership (RCEP): An Asia-Pacific free trade agreement under which members carry out rule-based cooperation in areas such as trade in goods, services, investment, and e-commerce, providing an institutional foundation for CBEC and regional mutual recognition in Southeast Asia.

Regulatory Sandbox: A regulatory mechanism for testing innovative products or rules with specified participants, time limits, and risk controls, applicable to new types of payments, digital credit, and low-risk AI applications.

Reverse Logistics: The flow of goods returning from consumers back to merchants for maintenance, resale, recycling, or disposal, serving as a critical component of returns and exchanges, reusable packaging, and green e-commerce.

Single Window: A platform that enables enterprises to submit trade and transport information to multiple government authorities through a single entry point, integrating functions such as e-commerce

small parcels, taxes and fees, returns, and risk management.

Small-Batch Quick-Response Production: A production model characterized by manufacturing small initial batches to respond rapidly to market orders, followed by adjustments to subsequent production schedules based on sales feedback.

Small-Value Payment: A low-value payment service designed for daily consumption and micro-business activities, with a focus on cost, convenience, and security of funds.

Social Commerce: An e-commerce model that leverages social networks, chat groups, digital content, or relationship networks to display, recommend, and transact products, with a focus on false advertising, payment handling, and after-sales obligations.

Software as a Service (SaaS): A software delivery model provided over the internet and typically available via on-demand subscriptions, eliminating the need for enterprises to deploy an entire system locally. It is applicable to the management of e-commerce stores, orders, customers, and inventory.

Trade Corridor: A transport and customs clearance route that connects major production hubs, consumption centers, ports, and border checkpoints, typically aggregating highways, railways, warehousing, logistics, and port facilities.

United Nations Commission on International Trade Law (UNCITRAL): The core body of the United Nations dedicated to promoting the harmonization and modernization of international trade law; its model laws on e-commerce and electronic signatures serve as legislative references for countries worldwide.

United Nations Conference on Trade and Development (UNCTAD): The United Nations body responsible for trade and development issues, providing tools such as e-commerce policy support, capacity building, and the Global Cyberlaw Tracker.

Universal Service Fund: A dedicated fund mobilized by governments or regulatory authorities in accordance with the law, used to support the deployment of telecommunications infrastructure and services in remote areas, low-income groups, or underserved regions.

Vertical Platform: An e-commerce platform that offers transaction execution and supporting services tailored to a specific industry, product category, or service scenario.

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