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Resilience and Reglobalization: Global Value Chain Trends and New Opportunities

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Overview

The current phase of reglobalization is less a reversal than a recalibration of production networks. Cross-border flows continue at near historic levels, but the logic of value creation is shifting toward resilience, technological capability and climate alignment. Supply chains are becoming shorter, more digital and regionally diversified as firms and governments seek reliability, resilience and lower-carbon competitiveness. The economies that will gain most are those that make trade corridors predictable, data and payment systems interoperable, and business environments transparent and investment ready.

Competitiveness in this new phase of globalization rests on five mutually reinforcing enablers.

- Digital infrastructure must deliver low-latency connectivity, secure internet exchange points, interoperable electronic identification and paperless-trade systems that reduce transaction costs and enable real-time visibility.
- Clean energy reliability is essential for removing barriers on energy-transition goods, scaling renewable power-purchase agreements and developing certified green industrial zones.

Note: The work on this chapter was led by Antoni Estevadeordal, Anthony Moncada, Robert B. Koopman, Victor Stolzenburg, and Michael Blanga-Gubbay

- Borders must move from control to facilitation through trusted-trader programs, pre-arrival processing and risk-based inspection that enhances predictability.
- Institutions and finance must de-risk investment via one-stop windows, standardized public–private partnership frameworks, and targeted credit guarantees that crowd in private capital.
- Firm-level capabilities and skills must rise so that micro, small and medium-sized enterprises (MSMEs) can integrate into higher-value global production tiers.

Progress everywhere can be tracked through a readiness scorecard combining indicators of corridor reliability, digital interoperability, grid stability, renewable energy penetration, customs efficiency and supplier upgrading. Implemented together, these measures reduce time, cost and uncertainty, increase domestic value capture and strengthen resilience across advanced, emerging and developing economies alike. They define the foundations of a more connected, sustainable and inclusive global economy – one where reliability, not retreat, shapes the next generation of globalization.

New evidence shows that post-2011 global value chain (GVC) integration has broadly slowed or plateaued, suggesting that reglobalization will reward economies that deliver reliability and digital trust, rather than those that merely add partners (see Figures 2.8–2.9). In Africa and parts of Latin America and the Caribbean (LAC), the affordability gap in fixed broadband remains a hard constraint on scaling data-driven services (Figure 2.4).

This chapter situates those global enablers within the shifting architecture of trade and production. It examines how geopolitical realignment, digital fragmentation and the energy transition are redrawing the map of comparative advantage and the rules of market access. While the world economy remains highly interconnected, its operating logic is being recorded around security, standards and resilience. Understanding how economies can adapt to this rewired landscape by converting connectivity into competitiveness is the central objective of the analysis that follows.

2.1 Introduction

Rather than collapsing, global trade is entering a new phase of reglobalization shaped by shifting centres of gravity and driven by technology, the energy transition and the search for reliability. The geography of production and exchange is being rewired as security, with resilience and standards moving to the centre of economic integration. Sanctions, export controls, investment screening and competing rulebooks now shape flows of semiconductors, shipping, finance and data. The outbreak of war in Ukraine and heightened geopolitical tensions have increased border frictions and redirected trade routes, yet they have not reversed globalization (WTO 2023). In parallel, debates over dedollarization signal a gradual reconfiguration of international finance, particularly for commodity exporters and highly indebted economies.

Climate imperatives are redefining comparative advantages across industries and regions. Fossil fuel assets face rising risks of stranding while demand surges for critical minerals, clean energy equipment and low-carbon logistics (IEA 2024; IRENA 2025). Artificial intelligence (AI) and general purpose technologies are transforming cost structures and market access, as choke points in computing power, semiconductors and data infrastructure increasingly determine who captures value (IMF 2024a). Divergent technical and digital standards are fragmenting markets and creating new layers of exclusion wherever domestic institutions cannot align with trusted, interoperable frameworks.

The result is selective and multipolar reglobalization. Production, finance and technology are reorganizing around politically aligned corridors and sector-specific standards regimes, while overall global connectedness remains near record highs (Altman and Bastian 2024). The new map of globalization is one of reliability-based integration, dense within trusted networks, thinner across contested ones. For all economies, this shift presents both opportunity and constraint. Earlier *Global Value Chain Development Reports* described LAC and Africa as peripheral yet promising, limited by shallow upgrading, low intra-regional trade and vulnerability to commodity shocks. Updated evidence confirms that many of these constraints persist. Diversification is often spurious – partner counts have increased but concentration and bottlenecks remain high, digital-infrastructure gaps restrict participation in scalable services, and climate and governance risks continue to weigh on investment and resilience.

Three datapoints frame the readiness challenge: first, participation, upgrading domestic firms in LAC/Africa remain concentrated in low-complexity tasks while foreign-controlled firms dominate high-value segments (Meng et al., 2024; Figure 2.5). Second, diversification quality matters, partner counts rose but concentration and bottlenecks remain elevated (Figures 2.1–2.3). Third, digital capacity binds, early submarine cable links raise cross-border banking positions with diminishing returns (Rubínová et al., 2024, Table 6), yet without affordable fixed broadband firms cannot scale services trade (Nordås & Xu, 2024; Figure 2.4). Building on the global baseline introduced in Chapter 1, this chapter applies a readiness lens to regional resilience, translating the report's global diagnostics into measurable regional capabilities and policy levers.

This chapter establishes the diagnostic foundation linking the global framework introduced in Chapter 1 with the sectoral and policy analyses developed in Chapters 3 and 5. It applies three analytical lenses: (1) structural versus spurious diversification, (2) participation versus upgrading, and (3) resilience versus vulnerability to assess whether economies can translate renewed connectivity into sustainable and inclusive integration. The assessment identifies readiness gaps and institutional levers across five core enablers: digital infrastructure and data regimes, clean energy and critical minerals standards, trade facilitation and logistics, financial deepening and risk management, and investment screening and partnership frameworks.

Building on the structural and geographic shifts outlined in Chapter 1, the following sections operationalize these dynamics through a readiness-based diagnostic. Whereas Chapter 1 examined what has changed in GVC geography, Chapter 2 evaluates how prepared economies are to convert these shifts into upgrading opportunities. The framework translates patterns of diversification, participation and resilience into measurable dimensions of technology and connectivity, trade and logistics, sustainability and energy, institutional and geopolitical conditions, finance and the business environment. Each dimension is benchmarked across LAC and Africa to measure how far domestic capabilities align with the emerging geometry of reglobalized production.

2.2 The Emerging Architecture of Geographic Reglobalization

Since the early 2000s, LAC and Africa have been characterized in global trade analysis as peripheral-but-promising participants in GVCs. The *2017 Global Value Chain Development* report highlighted their significant regional heterogeneity, limited intra-regional trade and persistent challenges in functional upgrading. Indicators like domestic value added (DVA) in exports and backward participation ratios demonstrated both regions' difficulties in moving into higher-value production segments and their underdeveloped regional production networks. However, the report also emphasized that integration alone was insufficient, as value capture, learning spillovers and structural transformation lagged, especially for domestic firms and small economies.

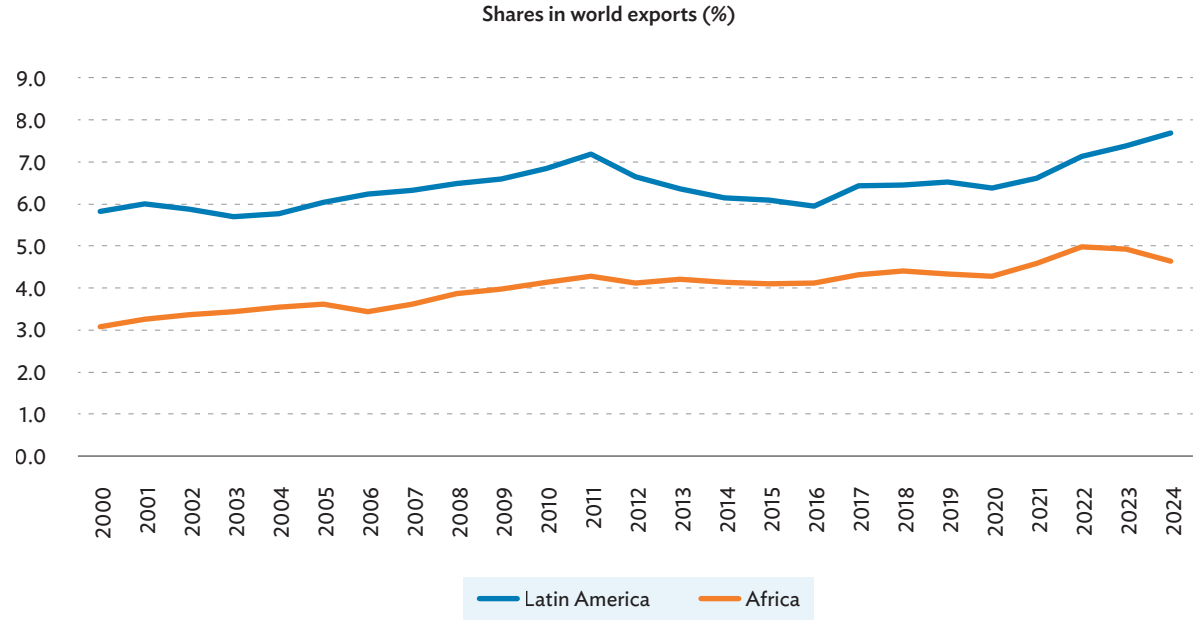
Today, in the wake of cascading shocks, from the trade tensions between the United States (US) and China, to COVID-19, the outbreak of war in Ukraine and intensifying digital fragmentation, the crucial question is not only whether these regions participate, but also if they are ready for the emerging architecture of geographic reglobalization. The term "reglobalization" has gained prominence, defined as the extension of global economic integration to more people, more economies and more issues. In this chapter we focus mainly on the geographical dimension, i.e. the extension of global trade to more economies. This reflects a world where the topology of trade is evolving-marked by declining concentration, increasingly regional configurations, yet still deeply interdependent.

There are indeed modest signs of geographic reglobalization, but the distribution of its benefits remains uneven. While some indicators point to broader participation, the evidence shows that the largest gains continue to accrue to economies already well-integrated into world trade, leaving many peripheral economies at the margins.

Focusing on trade participation first, we can examine the evolution of trade shares of regions that have often been at the margin. This presents a somewhat promising picture, the trade share of LAC and Africa (Sub-Saharan Africa and the Middle East

and North Africa, or MENA) has increased over the past 20 years, even when excluding mineral fuels and mineral oil. For LAC, the trade shares have increased by almost 32%, while for Africa the increase has been 51%, but from a much lower base. The two together represented less than 9% of global exports in 2000, and account now for 12.3%. This might suggest greater integration, but the relationship could be misleading without deeper analysis about diversification. Moreover, in absolute terms this remains a relatively low share given the two regions' share in the global population.

Figure 2.1: Shares of Africa and LAC in World Exports, Excluding Mineral Fuels and Mineral Oil

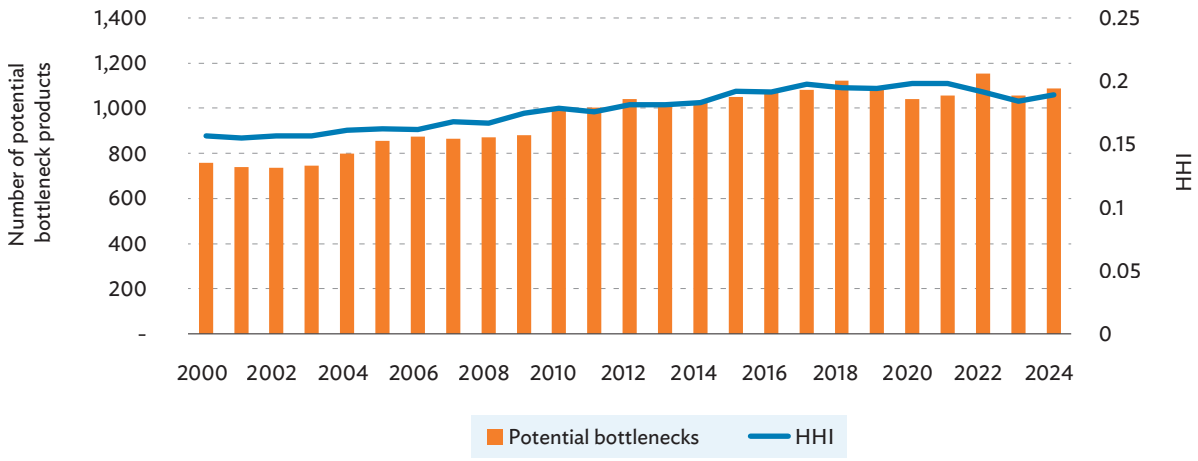


Note: Each region's share of total world merchandise exports excluding HS27 products.
Source: Blanga-Gubbay et al. (forthcoming).

Beyond trade shares, another lens on reglobalization is through diversification. On such measures of diversification are the number of trading partners. Recent data indicates a modest broadening of trade relations, even if the main gains accrue to economies that were already well-integrated into world trade. One way to see this is through the evolution of trade partners. The median number of trading partners per economy, product, and year has risen steadily from 17 in 2000 to 27 in 2024, with a somewhat faster acceleration after 2018. If we restrict the analysis to partners with more than 1% of trade shares in a specific product, the number remained flat at seven from 2000 to 2022 but increased to eight in the last two years. This shows that the geography of trade is gradually expanding, though the steep change in meaningful, large partners remains limited.

Yet, broader connections do not necessarily translate into meaningful diversification. A critical distinction is made between "structural diversification" and "spurious diversification" – temporary shifts driven by price shocks, as seen with liquefied natural gas after the outbreak of war in Ukraine. This distinction is particularly relevant for LAC and Africa. Recent analyses indicate that much of these regions' apparent integration into GVCs is either illusory or narrowly confined to commodities. Furthermore, cross-bloc trade is thinning, and "open bloc" dynamics – where new members join multiple production networks – are rare. In essence, inclusive reglobalization remains more promise than practice. Further evidence, using the Herfindahl-Hirschman Index (HHI) across the Harmonized Tariff System 6 digit categories, shows that nominal diversification has only marginally increased. These findings challenge the assumption that GVC fragmentation automatically creates new space for peripheral economies.

Figure 2.2: Index of Geographic Trade Diversification, 2000-2024



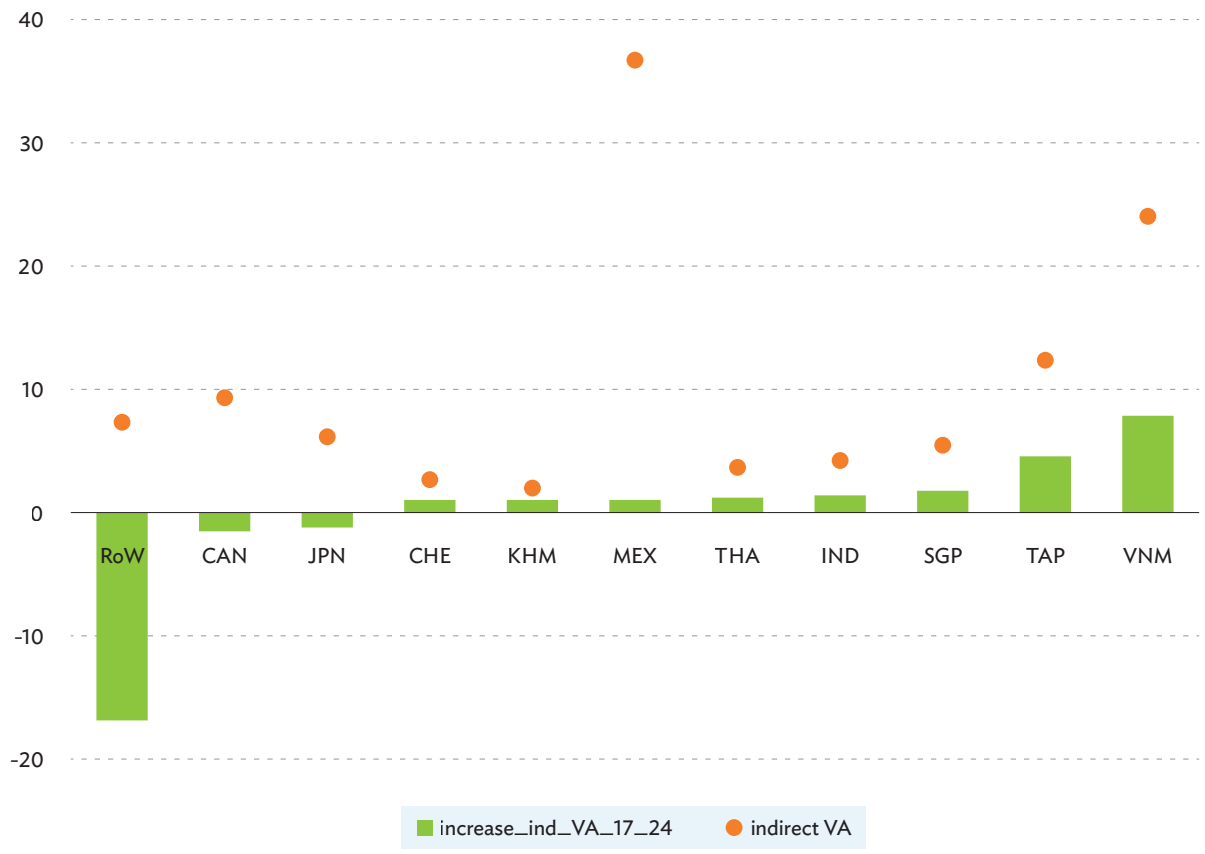
Note: Index captures the evolution of export-market diversification across partner economies, 2000-2024.
Source: Blanga-Gubbay et al. (forthcoming).

Additional evidence on import concentration and bottleneck products reinforces this diagnosis. The average concentration of imports fell in 2023 to its lowest level since 2015 but rose again slightly in 2024. A similar pattern holds for the number of bottleneck products, those with a highly concentrated market structure. The number of such products rose by nearly 10% from 1,057 in 2021 and to 1,153 in 2022, before easing back to 1,088 in 2024. This marginal improvement reflects both a compositional shift towards more diversified products, and a reduced concentration for the average product. However, the trend remains relatively weak and does not yet signal a substantial reduction in concentration.

These limits to diversification are mirrored in broader systemic shifts in global trade, most visibly in the reconfiguration of US-China trade relations, as previously discussed in Chapter 1. The tit-for-tat tariff increases since 2018 slowed bilateral trade flows between China and the US by about 30% relative to their trade with the rest of the world. Preliminary evidence points to trade diversion and rerouting of goods through "connecting" economies (Alfaro and Chor 2023).

The key issue is how much of this rerouted trade benefits peripheral economies. Using the Asian Development Bank's (ADB) multiregional input-output tables, an increase in Chinese indirect value added trade, value added embodied in third economies' exports to the US was observed. Chapter 1 demonstrates that this increase coincided with the decoupling period, suggesting some redirection of trade through intermediaries. However, indirect flows remain small relative to direct ones, and their growth has not compensated for the decline in direct value added.

Figure 2.3: Changes in Chinese Indirect Value Added to the US from 2017 to 2024 and Gross Value of Chinese Indirect Value Added to the US in 2024.

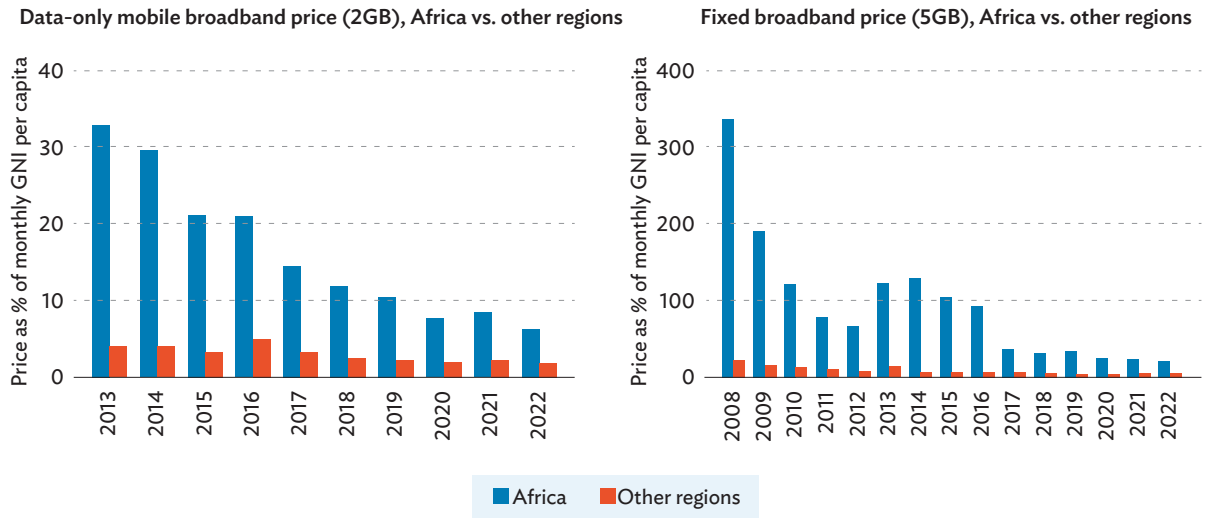


Note: Bars show change in Chinese indirect value added embodied in US imports (2017–2024), markers show gross indirect value added in 2024.
Source: Blanga-Gubbay et al. (forthcoming).

As the graph below illustrates, while there are some signs of diversification, the main benefits accrue to already well-established trading economies. Among the economies experiencing the highest increases in Chinese indirect value added trade to the US between 2017 and 2024 are Viet Nam, Chinese Taipei, Singapore, India, Thailand and Mexico. Among the ones experiencing the highest decrease are Japan and Canada, and the rest of the world, which includes most of the economies in Africa and some in LAC.

Digital connectivity is a foundational enabler for GVC services trade. Rubínová et al. (2024, Table 6) find that submarine-cable connections significantly increase cross-border banking positions, a proxy for financial services trade, rather than measuring direct export values. Their estimates indicate that most of the impact arises from the first connection, with diminishing marginal gains thereafter, and that the effect became statistically strong after 2004 and especially after 2012 as internet banking spread. For Africa, Nordås and Xu (2024) show that while mobile broadband penetration is high, it cannot substitute for fixed broadband, which is essential for stable, high-throughput service delivery. Fixed broadband remains prohibitively expensive, about 21% of monthly gross national income (GNI) per capita compared with 5% in other regions (Nordås and Xu, 2024) (Figure 2.5). Regulatory reforms alone have little impact where infrastructure is lacking, broadband policy effectiveness depends on expanding fixed line capacity and affordability. Without accessible fixed broadband, African and LAC firms remain constrained from entering data-driven segments of GVCs.

Figure 2.4: Fixed and Mobile Broadband Costs as Percentage of GNI per Capita, Africa vs. Other Regions



Note: Regional averages for fixed and mobile broadband costs as a share of GNI per capita.
Source: Nordås and Xu (2024), Global Value Chain Development Report 2025 Background Paper, Figure 5.

Regarding domestic firms' movement up the value chain, Meng et al., (2024), show that domestic-controlled firms in developing regions, including LAC and Africa, remain concentrated in low-complexity, low-margin stages of GVCs, while foreign-controlled

firms dominate value capture in high-technology sectors such as electronics. Their visualization for China's information and communications (ICT) sector (Figures 1.1 and 1.2) illustrates this dual structure: domestic firms contribute mainly at intermediate, assembly-intensive stages, whereas foreign-controlled firms capture most of the high-value design and downstream service functions. These results echo the 2017 Global Value Chain Development report's warning on "participation without upgrading", a challenge now compounded by the growing importance of digital and intangible capital. By contrast, Meng et al., (2024, Figure 1.3) show that US-based domestic-controlled ICT firms capture high value across the entire chain, underscoring how technological capability and firm ownership shape upgrading outcomes. Inomata's "who does what" framework further shows that domestic firms in many economies occupy isolated, low-productivity nodes within GVC networks. Collectively, these diagnostics confirm that formal participation alone does not equate to integration into high-value tasks.

Figure 2.5: Domestic vs. Foreign Firm Contribution to Value Added in Electronics GVCs, Selected Regions

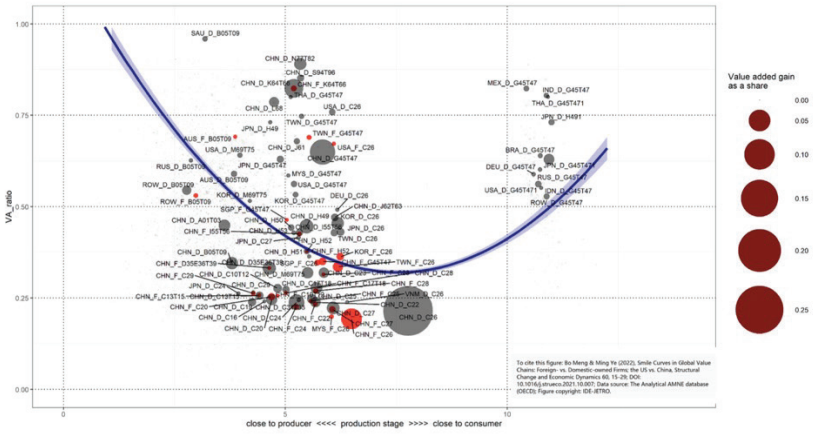


Figure 1.1. China-based domestic-controlled ICT firms' value chain (2019)

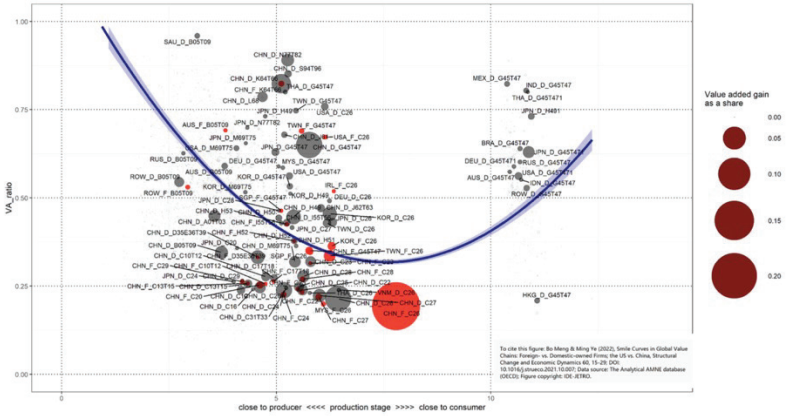
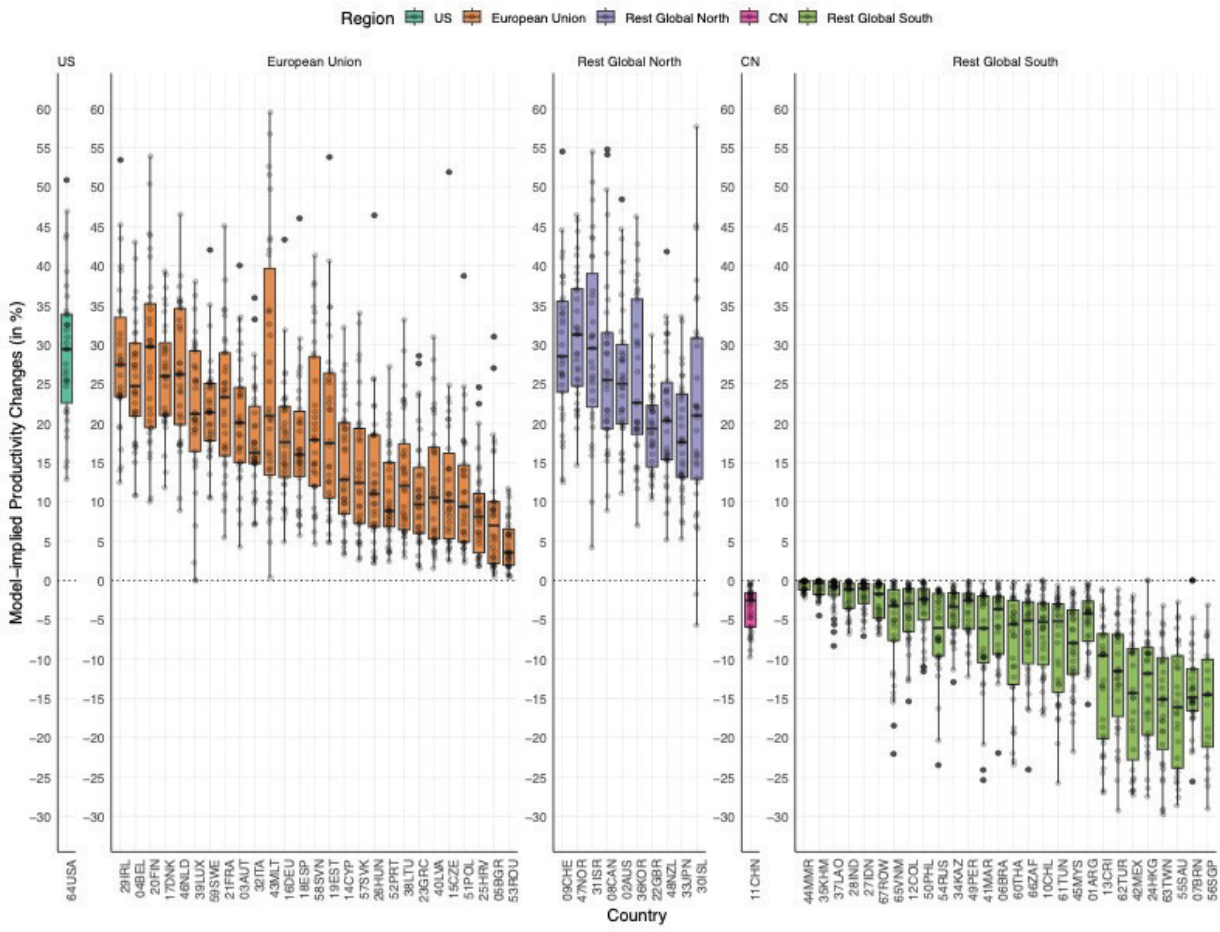


Figure 1.2. China-based foreign-controlled ICT firms' value chain (2019)

Note: Simulated differences in unit labor costs across major world regions under alternative global-trade scenarios.
Source: Meng et al. (2024), Global Value Chain Development Report 2025, Background Paper, Figures 1.1 and 1.2.

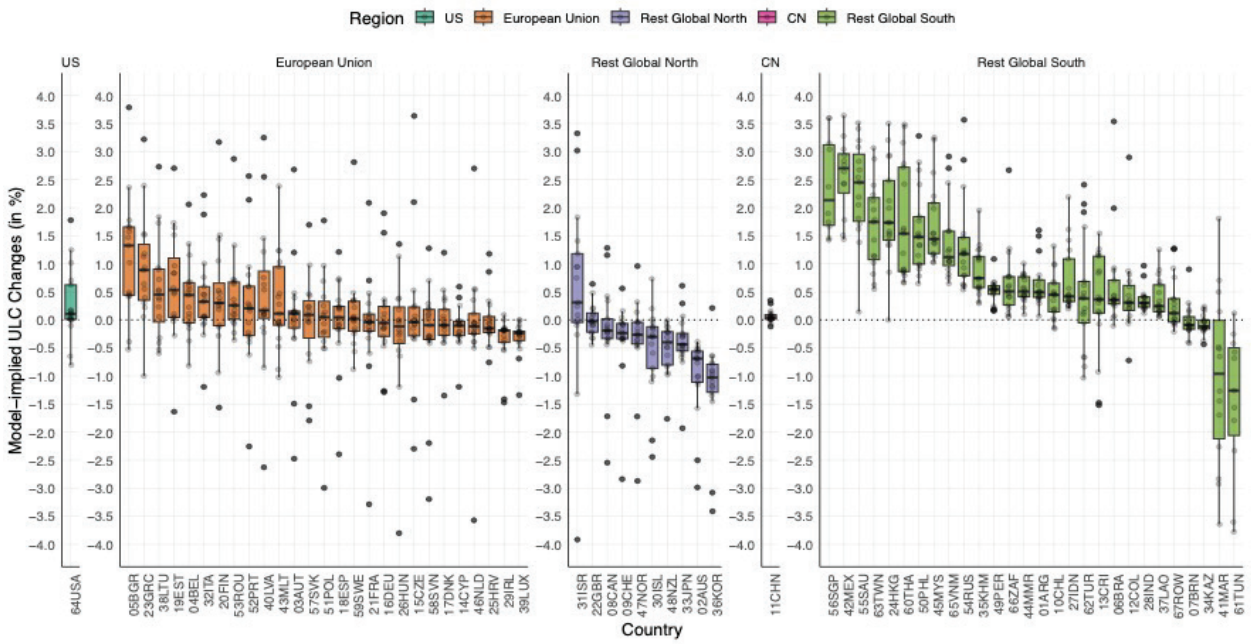
Geopolitical shocks are also shaping the landscape. Giammetti and Wirkierman (2025) models decoupling scenarios, finding that while North-South decoupling raises employment in the Global South (Figure 2.6), it does so in low-productivity roles, making these gains unsustainable without parallel upgrading (Figure 2.7). Gao, Zhang and Meng (2024) simulate friendshoring under conflict, demonstrating that multinationals shift investment toward politically aligned, strategically embedded regions – like the EU or Indo-Pacific – leaving less integrated areas behind. Stolzenburg confirms this in tracking foreign direct investment (FDI) trends, noting that US and Chinese firms now reallocate investment within existing networks, with few truly new entrants among peripheral economies. These insights suggest that fragmentation amplifies existing hierarchies unless latecomers rapidly build absorptive and infrastructural capacity.

Figure 2.6: Simulated Productivity Change under North-South Decoupling, By Region



Note: Simulated changes in regional productivity under a North-South trade-decoupling scenario.
Source: Giammetti and Wirkierman (2025)

Figure 2.7: Simulated Unit Labor Cost Differences, By Macro-Region and Scenario



Note: Simulated differences in unit labor costs across major world regions under alternative global-trade scenarios.
Source: Giammetti and Wirkierman (2025).

The simulated differences in productivity and labor costs highlight how fragmentation reshapes incentives and competitiveness across regions. Yet, model-based projections only capture potential outcomes. To understand how these dynamics have manifested in actual trade and production networks, Box 2.1 draws on Organisation for Economic Co-operation (OECD) trade in value added, or TiVA, (2022) data to trace the real-world evolution of GVC participation over the past three decades and its implications for developing-economy readiness.

2.3 Latin America and the Caribbean – Positioning for Reconfiguration

The global economy is undergoing a structural transformation with far-reaching implications for international trade, production networks and development strategies. LAC faces the urgent task of reassessing their position within GVCs. While rapid trade liberalization, technological change and a rules-based international system fuelled the expansion of GVCs in previous decades, the "hyper-globalization" model has slowed since the global financial crisis of 2008 (IMF 2025). A succession of economic and geopolitical shocks has exposed critical vulnerabilities, accelerating a shift towards supply chain resilience, diversification and strategic reconfiguration of sourcing (IMF 2024a).[1]

[1] This section draws on the background paper prepared by Antoni Estevadeordal for Chapter 2 of the *Global Value Chain Development Report 2025*, subsequently published as Estevadeordal, Kahn, and Werner (2024), *Latin America in the New Geometry of Global Supply Chains* (Georgetown Americas Institute and CAF – Development Bank of Latin America and the Caribbean).

Box 2.1: OECD-TiVA Integration Patterns (1995–2022)

Building on the preceding analysis of trade fragmentation and network decoupling, this section examines how patterns of GVC participation have evolved over the past three decades and what these shifts imply for developing economy readiness. Readiness hinges on institutional strength, digital and physical connectivity, and the ability to absorb, adapt and recover from external shocks. LAC and Africa serve as revealing test cases for this new geography of reglobalization.

The promise of broader integration remains uneven. While diversification rhetoric has intensified, structural indicators – from trade-concentration indices to cross-border investment flows – suggest that few new economies have entered the global GVC core. Blanga-Gubbay et al. highlights this disjunction, noting that headline trade growth often masks limited structural inclusion within the production networks of high-income and technologically advanced economies.

The *2017 Global Value Chain Development Report* chapter on LAC and Africa (World Bank et al., 2017) offered the first systematic framework for understanding these constraints. It emphasized:

- Weak domestic firm participation in high-value tasks
- Limited intra-regional trade and transport integration
- High DVA shares in commodities but low process upgrading
- The potential for services and regional value chains (RVCs) as steppingstones.

Since 2017, the expansion of available data, especially from the OECD TiVA 2022 update, has made it possible to revisit these dynamics across two distinct phases: 1995-2011, a period of rapid global production expansion, and 2011-2022, which was characterized by slower, regionally concentrated realignment.

Figure 2.8 compares average changes in backward, forward and total GVC participation across six macro regions – OECD, the US, China, ASEAN, LAC and Africa, over the two periods. Comparing the 1995-2011 and 2011-2022 periods using the OECD TiVA (2022 update) reveals a decisive slowdown in GVC integration. The first phase was characterized by broad-based gains across nearly all regions, reflecting the expansion and deepening of international production networks. The post-2011 decade, by contrast, shows stagnation and divergence. Several economies, including Morocco, Nigeria, Egypt, Brazil and Mexico, continued to strengthen their integration, while others such as Chile, Argentina and South Africa experienced slight declines. Backward linkages increased modestly, forward linkages flattened and aggregate participation remained broadly unchanged. This later period unfolded amid post-crisis stagnation, heightened geopolitical tensions and recurrent supply-chain disruptions, limiting the scope for new entrants and upgrading. Overall, the evidence points to a phase of consolidation rather than renewed globalization, with regional linkages stabilizing instead of expanding.

Figure 2.8: Total GVC Participation Regional Averages, 1995-2011 vs 2011-2022

Note: Average change in backward, forward and total GVC participation between 1995-2011 and 2011-2022, calculated as country means within each macro region. The analysis covers six regional groupings: OECD economies (Australia, Austria, Belgium, Canada, Chile, Colombia, Costa Rica, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, Switzerland, Türkiye and the United Kingdom (UK)); Latin America and the Caribbean (LAC) (Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico and Peru); ASEAN (Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore, Thailand and Viet Nam); Africa (Angola, Cameroon, Côte d'Ivoire, Democratic Republic of the Congo, Egypt, Morocco, Nigeria, Senegal, South Africa and Tunisia); China; and the US. The figure contrasts the earlier period of rapid integration (1995–2011) with the more uneven post-2011 phase, highlighting regional divergence in GVC participation trends.

Source: Authors' calculations based on OECD Trade in Value Added (TiVA) Database (latest edition).

continued on next page

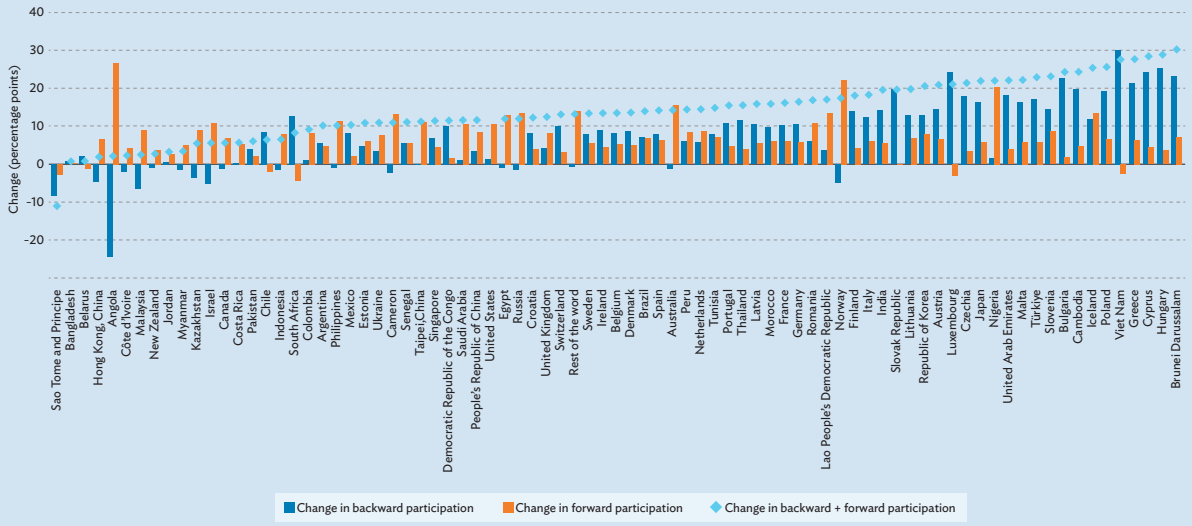
Box 2.1: continued

Country-level patterns reinforce the regional picture while highlighting persistent asymmetries in national trajectories (Figure 2.9). Overall, total GVC participation continued to expand between 1995 and 2022, but gains were uneven and highly concentrated.

- Europe and Central Asia recorded the strongest advances, driven by supply chain consolidation within the European Union (EU).
- East Asian economies, notably Korea, Japan and Viet Nam, maintained high participation through technological upgrading and production specialization.
- LAC and African economies achieved more modest progress, and several including Chile, Argentina and South Africa, registered slight declines.
- Backward participation (foreign value added in exports) expanded faster than forward participation (domestic value added re-exported by partners), underscoring continued reliance on imported intermediates.
- Resource-intensive exporters, such as Angola and Nigeria, increased forward linkages primarily through commodity trade rather than manufacturing diversification.

Taken together, these patterns indicate that globalization has not reversed but rewired. Production has become more concentrated around technologically advanced and regionally integrated hubs, while many late-integrating economies remain on the periphery of global production networks.

Figure 2.9: Country-Level Shifts in Global Value Chain Integration, 1995-2022



Note: Change in backward and forward GVC participation for 63 economies based on the OECD TiVA database. Economies included: São Tomé and Príncipe, Bangladesh, Belarus, Hong Kong (China), Angola, Côte d'Ivoire, Malaysia, New Zealand, Jordan, Myanmar, Kazakhstan, Israel, Canada, Costa Rica, Pakistan, Chile, Indonesia, South Africa, Colombia, Argentina, Philippines, Mexico, Estonia, Ukraine, Cameroon, Senegal, Chinese Taipei, Singapore, Democratic Republic of the Congo, Saudi Arabia, China, the US, Egypt, Russia, Croatia, the UK, Switzerland, Rest of the World, Sweden, Ireland, Belgium, Denmark, Brazil, Spain, Australia, Peru, Netherlands, Tunisia, Portugal, Thailand, Latvia, Morocco, France, Germany, Romania, Lao People's Democratic Republic, Norway, Finland, Italy, India, Slovak Republic, Lithuania, Korea, Austria, Luxembourg, Czechia, Japan, Nigeria, the United Arab Emirates (UAE), Malta, Türkiye, Slovenia, Bulgaria, Cambodia, Poland, Viet Nam, Greece, Cyprus, Hungary and Brunei Darussalam.
Source: Authors' calculations based on OECD TiVA Database (latest edition).

The new evidence underscores that the challenge for LAC and Africa is no longer entry into GVCs but effective participation and adaptation. Their resilience will depend on qualitative capabilities rather than participation volume. What the 2017 report could not capture, due to data and technology limitations, was a readiness framework encompassing:

- Digital infrastructure and services backbone capacity
- Ownership structures and task allocation inside GVCs
- Geopolitical and technological fragmentation as systemic constraints.

These dimensions collectively redefine competitiveness in the era of reglobalization. The diagnostics that follow therefore move beyond participation metrics to assess how effectively LAC and Africa can build resilience, upgrade industrial capabilities and reposition within a geographically fragmented production system. Figure 2.1 empirically maps this transition from diversification rhetoric to the tangible rewiring of production networks providing the quantitative foundation for the readiness framework elaborated in the next section.

Note: This box synthesizes evidence from the OECD TiVA 2022 update to show how GVC participation evolved between 1995 and 2022. The analysis highlights a post-2011 slowdown in international production integration and widening regional asymmetries, with participation gains concentrating in technologically advanced and regionally connected hubs.

Acknowledgements: The authors would like to thank Santiago Taborga of American University for his excellent analytical work with the OECD TiVA dataset, and Sébastien Miroudot of the OECD for his valuable guidance and insights on the use of the TiVA database.

This structural transformation is visible in trade data. As shown in Figure 2.1, LAC and Africa's shares in world exports have expanded since 2000, although from a low base. The region's participation rose by nearly one-third, but the pattern remains concentrated in a few economies and sectors. Likewise, Figure 2.2 shows that the apparent diversification of export partners often masks persistent concentration and limited structural change, evidence that integration has broadened more in scale than in depth.

In this evolving environment, GVCs are not vanishing but their logic is changing. Firms increasingly consider geopolitical risk, regulatory fragmentation, environmental performance and digital readiness in location decisions. New technologies like AI and automation are blurring manufacturing-services boundaries and reducing reliance on labor cost arbitrage. These shifts present both risks and opportunities for LAC (Aguilar et al., 2024). The region lags in GVC depth and diversification, with participation concentrated in a few sectors and economies, and weak regional integration. However, trade reconfiguration, particularly US-China decoupling, has opened nearshoring prospects. Mexico has already benefited, and other LAC economies could position themselves in strategic sectors. LAC's relatively clean energy mix, critical mineral reserves and improving digital infrastructure offer a comparative edge in a sustainability- and technology-intensive trade landscape.

Historical data confirm that the region's GVC participation plateaued after the Global Financial Crisis. Between 1995 and 2011, most LAC economies increased total GVC participation by 6 to 10 percentage points, but progress since 2011 has been modest and uneven (see Figures 2.8–2.9). Backward linkages strengthened slightly, forward linkages flattened and aggregate participation stabilized. These patterns mirror those in Africa and indicate that the challenge is no longer joining GVCs, but upgrading within them.

The following diagnostics apply the same readiness framework later used for Africa, benchmarking technology, logistics, sustainability, institutional, financial and business dimensions to evaluate LAC's capacity to convert renewed connectivity into inclusive upgrading.

2.4 LAC's Global Value Chain Preparedness and Capability

LAC's involvement in GVCs lags behind the EU and Asia. Figure 2.1 illustrates lower participation in backward and forward linkages, as well as reduced contributions from intraregional links, indicating weak regional value chains within LAC. A new index assesses LAC's preparedness based on three main subcomponents: technology, sustainability and geopolitics. The performance is compared to OECD (global benchmarks) and ASEAN (main competitor for investment).

Technology Readiness

Despite notable progress, LAC continues to trail behind OECD and ASEAN peers on all major technology readiness indicators, including digital infrastructure, human capital, regulation and innovation policy. These gaps directly constrain the region's competitiveness and its ability to move up the value chain networks. For governments, firms and investors, persistent deficits raise operational risks and increase the cost and complexity of integrating into advanced production networks. At the same time, continued digitalization presents a strategic opportunity for those able to capitalize on the region's untapped potential.

Closing these gaps demands coordinated action, expanding broadband access, accelerating digital and science, technology, engineering and mathematics (STEM) skills training, and aligning regulatory frameworks with global norms. Only through targeted investment and reform can LAC attract high-value firms, secure new digital FDI and move up the technology ladder. Without decisive progress, the region risks exclusion from the next wave of GVC integration.

Logistics Performance Index

Chile and Panama stand out as regional leaders in logistics, approaching global best practices and serving as key benchmarks within LAC. However, most LAC economies continue to underperform on the World Bank's Logistics Performance Index (LPI), with structural inefficiencies in customs procedures, transport infrastructure and supply chain reliability (World Bank 2025c). Persistent bottlenecks, especially in landlocked and lower-income economies, raise transaction costs, undermine just-in-time manufacturing and limit export diversification. Structural weaknesses in logistics raise operational risks and diminish LAC's competitiveness relative to OECD and ASEAN, eroding the region's appeal for nearshoring and supply chain relocation. Without accelerated infrastructure upgrades, customs modernization and coordinated regulatory reform, LAC risks losing high-value FDI to more prepared peer regions. Decisive action is critical as global firms reconfigure value chains in response to geopolitical and technological shifts.

Mobile Connectivity Index

Despite rapid expansion in major urban centres, mobile penetration in cities such as São Paulo and Santiago now rivals OECD benchmarks, LAC continues to face pronounced connectivity gaps in rural and underserved regions (GSMA 2025b; ITU 2025). High data costs, limited network coverage and device affordability barriers exclude large population segments, particularly in remote and indigenous communities from the Amazon to Central America. For example, while Chile's urban mobile broadband coverage exceeds 95%, rural connectivity remains well below 60%, mirroring divides across much of the region.

Restricted access to essential digital services constrains firms' ability to leverage mobile technologies for productivity, innovation and deeper integration into value chain networks. Structural deficiencies in mobile connectivity directly weaken the region's digital competitiveness and investment appeal. Decisive action is required for targeted infrastructure investment, policy reforms to foster market competition and affordability initiatives, or LAC risks ceding ground to global peers and remaining a less compelling destination for digital economy investment. Closing these gaps is essential to foster inclusive growth and position the region as a credible, scalable player in the global digital landscape.

ICT Capital Goods Imports Index

Access to advanced ICT capital goods remains a significant bottleneck across most of the region. While certain economies such as Mexico and Costa Rica have established globally integrated electronics and ICT manufacturing clusters, high tariffs, fragmented supply networks and insufficient policy incentives continue to constrain broader regional access to semiconductors, robotics and next-generation machinery. Import volumes of these high-value ICT inputs lag well behind Asia and other advanced economies. These constraints directly impede the region's ability to modernize production lines, transition to "industry 4.0 standards" and compete for new roles in evolving GVCs. For governments and investors, addressing these barriers should be a priority, requiring action on tariff rationalization, integration with established Asian supply networks and targeted incentives to attract and anchor capital investment in advanced manufacturing.

Unlocking this potential is not only vital for regional productivity, but also for positioning LAC as an investment destination poised to capitalize on global shifts in supply chains and technology. Failure to act risks missing the spillovers and innovation-driven growth that will define the next decade of global manufacturing.

Human Capital – AI Readiness Index

AI readiness and digital transformation remain defining constraints on the region's long-term competitiveness. While leading OECD and ASEAN economies have scaled investment in STEM education, digital skills and talent retention, most of the region continues to grapple with persistent underinvestment in human capital and limited capacity building (IMF 2025). This gap leaves much of the workforce unprepared to adopt and scale advanced technologies, such as AI, machine learning and data analytics, across both manufacturing and services. Recent national initiatives in Brazil, Colombia and Uruguay have begun to address these deficits through targeted digital skills programs, but results are uneven and coverage remains limited.

Strengthening AI-ready human capital must become a policy and investment priority. Building a robust digital talent pipeline requires stronger collaboration between the

public and private sectors in education, increased regional knowledge sharing and the alignment of training standards. Advancements in these areas will be crucial for the region to attract high-value investments, foster innovation ecosystems and achieve productivity improvements through next-generation technologies. The region risks falling further behind global peers in technology-driven growth and value chain integration.

Digital Services Trade Restrictiveness Index

The region's regulatory environment for digital trade stands out as a relative advantage. On the OECD's Digital Services Trade Restrictiveness Index (DSTRI), several LAC economies – most notably Chile, Colombia and Mexico – outperform other emerging markets, narrowing the gap with advanced economies (OECD 2025c). Proactive measures, such as streamlining licensing regimes, liberalizing cross-border data flows and participation in forward-looking agreements like the Digital Economy Partnership Agreement, have positioned parts of the region as leaders in digital commerce liberalization. However, momentum is at risk. Fragmented regulations across economies, combined with ongoing debates around data privacy, digital taxation and local content requirements, create policy uncertainty and the potential for future restrictions. These challenges, if unresolved, could slow investment and innovation. Gaps in licensing procedures, standards interoperability and regulatory predictability continue to limit the scalability of digital business models and the region's ability to capture value from digital trade expansion.

For governments and firms alike, the path forward is clear: advancing harmonized digital trade rules and strengthening regional regulatory cooperation are essential. Only by ensuring a stable, open and predictable regulatory environment can the region attract sustained investment and fully participate in the next wave of digital value chain integration, especially as global firms diversify their operations in response to geopolitical and technological shifts.

Digitally Deliverable Services Index

LAC's underdeveloped digitally deliverable services (DDS), including software, IT, financial and professional business services, have slowed the region's ability to compete in production networks. LAC's DDS exports, as a share of total services trade, remain well below OECD and ASEAN averages, highlighting significant underperformance despite notable exceptions such as Uruguay and Costa Rica. Structural impediments curtail the region's digital services growth. Fragmented digital infrastructure restricts seamless connectivity, while limited access to venture capital and financing stifles innovation and scale-up opportunities. Additionally, persistent skills shortages and an immature startup ecosystem hinder the emergence and expansion of competitive homegrown digital firms. Together, these barriers suppress the region's integration into global digital service chains and constrain its ability to capture value from the ongoing

digital transformation. Addressing these challenges is critical for attracting investment, fostering innovation and positioning LAC as a meaningful player in the expanding digital economy.

Government Promotion of Investments in Emerging Technologies Index

Public policy support for emerging technology investment, across AI, robotics, cloud computing and related fields, remains a critical constraint in LAC. Unlike OECD and ASEAN, where coordinated innovation strategies, sustained research and development (R&D) funding and strong public-private partnerships (PPAs) drive sectoral growth, most LAC governments provide only fragmented and under-resourced support (OECD 2025a). Notable cases such as the Brazilian Agency for Research and Industrial Innovation (Embrapii) and Chile's economic development agency (Corfo) highlight potential but these efforts are isolated, not systemic.

This lack of a unified, well-funded approach creates uncertainty for investors and impedes the scaling of domestic technology champions, limiting the region's ability to attract high-value FDI in advanced industries. Regulatory unpredictability and slow adoption cycles heighten investment risk. At the same time, these gaps present a strategic entry point for early movers both firms and multilateral partners to help shape nascent innovation ecosystems and unlock LAC's untapped potential. Targeted policy reform and strategic capital allocation could catalyze technology-driven growth, generate outsized returns and position the region as a credible hub for digital innovation.

Global Cybersecurity Index

Cybersecurity remains a critical operational and investment risk as digital connectivity accelerates across LAC. While OECD and ASEAN economies lead the International Telecommunication Union's (ITU) Global Cybersecurity Index, most economies in the region lag behind, with persistent gaps in legal frameworks, institutional capacity and technological readiness (ITU 2025). Only a handful of economies – including Brazil, Mexico and Colombia – have established national cybersecurity agencies or strategies, while the majority face chronic underfunding, talent shortages and fragmented regional coordination. These deficiencies undermine confidence in digital infrastructure, hinder cloud adoption and increase exposure to cyber threats, raising risk profiles and mitigation costs for firms and investors. The cybersecurity gap also threatens to slow digital transformation and limit the region's appeal as a destination for technology-driven FDI and digital business hubs.

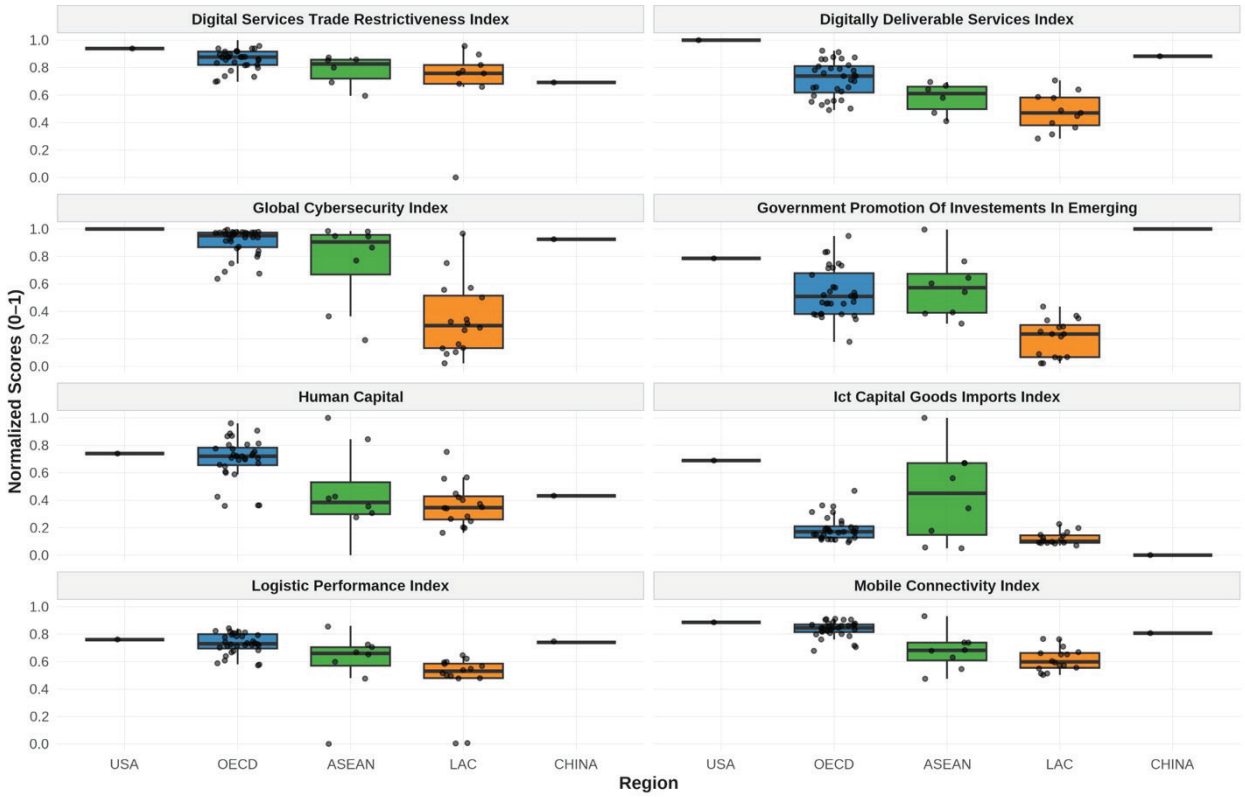
Yet, these vulnerabilities also create opportunities for targeted investment in cybersecurity solutions, skills development and regional collaboration. Prioritizing robust policy frameworks, workforce training and improved coordination will be essential to build resilience, attract investment and position LAC as a credible, secure node within global digital value chains.

2.5 Strategic Imperatives for Global Value Chain Upgrading in LAC

OECD economies continue to lead with more advanced infrastructure, strong skilled labor force and robust innovation ecosystem. In contrast, LAC and ASEAN both demonstrate moderate but uneven performance, with substantial internal disparities and persistent structural barriers. China remains broadly competitive but faces distinct gaps in digital trade restrictiveness and investment promotion. As Figure 2.10 illustrates, these patterns highlight the limitation of LAC's technology-driven GVC integration.

Seizing the next wave of supply chain opportunities demands that LAC economies act with urgency, expanding digital infrastructure, cultivating advanced workforce skills and advancing regulatory harmonization with global standards. Targeted investment and bold policy reforms are indispensable to attract transformative capital and position the region within the new geometry of global production.

Figure 2.10: Technology Readiness Regional Performance Distributions



Source: Authors' calculations; see Estevadeordal, Kahn & Werner (2024), Latin America in the New Geometry of Global Supply Chains (CAF-Georgetown Americas Institute).

Inattention to these imperatives risks LAC losing competitiveness and FDI to more prepared economies. Strategic reforms and sustained leadership are essential if the region is to shift from a peripheral participant to a credible competitor in GVCs.

Closing structural gaps in technology readiness, logistics and human capital will be decisive for governments, investors and firms seeking to upgrade LAC's position in the global economy (World Bank 2025c; Estevadeordal et al., 2024).

2.6 Sustainability Readiness

LAC's sustainability profile offers a clear comparative advantage in the shifting landscape of GVC integration, yet persistent vulnerabilities threaten to erode this lead. The region's clean energy matrix, anchored by hydropower and renewables, along with significant reserves of critical minerals and unique biodiversity, positions LAC as a natural leader in low-carbon and nature-based value chains (OECD 2024). However, structural barriers remain. LAC imposes the highest tariffs on energy transition goods among peer regions, curbing market access and creating obstacles to scaling green value chains and attracting sustainable investment (OECD 2025a; WTO 2023). Even as middle-income economies like Brazil, Costa Rica and Uruguay achieve very high shares of clean electricity, fragmented policy frameworks and limited downstream processing capacity continue to constrain broader value capture across LAC and the Caribbean.

Climate hazards, including recurrent floods and droughts, and uneven adaptation planning, weigh on corridor reliability and investor certainty, with pronounced vulnerabilities in parts of the Andes and Central America. Converting renewable leadership into diversified GVC participation will require predictable, region-coherent rules, targeted incentives for components, storage and services, and practical adaptation plans aligned with logistics and compliance bottlenecks.

Low Carbon Intensity Index

LAC's production structure is characterized by comparatively low-carbon intensity, a result of its reliance on hydropower and renewables (Energy Institute 2025; IEA 2025). Emissions per unit of output are substantially below global averages, reinforcing the region's position as a credible partner in decarbonized supply chains. Sustaining this edge calls for expanded investment in renewable infrastructure, greater access to climate finance and regulatory alignment with international best practices to enable deeper integration into low-carbon production networks.

Renewable Energy Consumption Index

Brazil, Costa Rica and Uruguay rank among the world's leaders in renewable energy use, supported by extensive hydropower, wind and solar capacity (IRENA 2025). This clean energy base underpins LAC's low-carbon advantage and contributes to energy security and sustainable growth. The region's early adoption of renewables, combined with large endowments of lithium and cobalt, creates a strategic platform for

supplying inputs essential to electric vehicle (EV) batteries, storage systems and green hydrogen production. To fully realize this potential, governments must ensure coherent regulation, harmonized standards and open trade in renewable energy goods to attract sustainable investment and promote local value added activity.

Trade in Energy Transition Goods Index

Exports of energy transition goods are emerging as a new pillar of economic diversification. Several LAC economies now manufacture components for solar panels, wind turbines and other clean technology systems, signaling growing specialization within green GVCs (González et al., 2024). Consolidating this momentum will depend on targeted industrial policies that strengthen linkages with international clean tech networks and foster innovation ecosystems supportive of green manufacturing. Coordinated public-private investment, streamlined trade procedures and consistent standards are key to attracting sustainable FDI and positioning the region within rapidly expanding low-carbon supply chains.

Protectionism in Energy Transition Goods Index

High tariffs on clean energy technologies continue to limit competitiveness across the region. These protectionist measures raise production costs, constrain technology diffusion and discourage the formation of regional industrial clusters. Aligning trade and sustainability objectives through tariff reduction, technical standard harmonization and simplified customs procedures would lower transaction costs and strengthen LAC's appeal as a destination for sustainable investment.

Critical Minerals Index

LAC's substantial reserves of lithium, copper, cobalt and rare earth elements provide a strong foundation for participation in the global energy transition economy. Yet much of this wealth is still exported in raw form, resulting in limited domestic value added capture. Strengthening sustainable mining practices, expanding processing capacity and harmonizing regional regulations are essential to transform mineral endowments into durable industrial and technological capabilities. These steps would enable LAC to position itself as a reliable, value added supplier within low-carbon GVCs.

Biodiversity and Habitat – Environmental Performance Index

Home to the Amazon Basin and other ecosystems of global importance, LAC holds exceptional natural capital that supports climate resilience and nature-based solutions (OECD 2024). However, performance in biodiversity protection and habitat management remains uneven. Deforestation, land degradation and weak enforcement

continue to erode environmental assets and long-term competitiveness. Integrating ecosystem services into trade and industrial strategies, while aligning national targets with international sustainability frameworks, will be critical for turning biodiversity strength into sustained participation in green value chains.

Exposure and Vulnerability to Natural Disasters Index

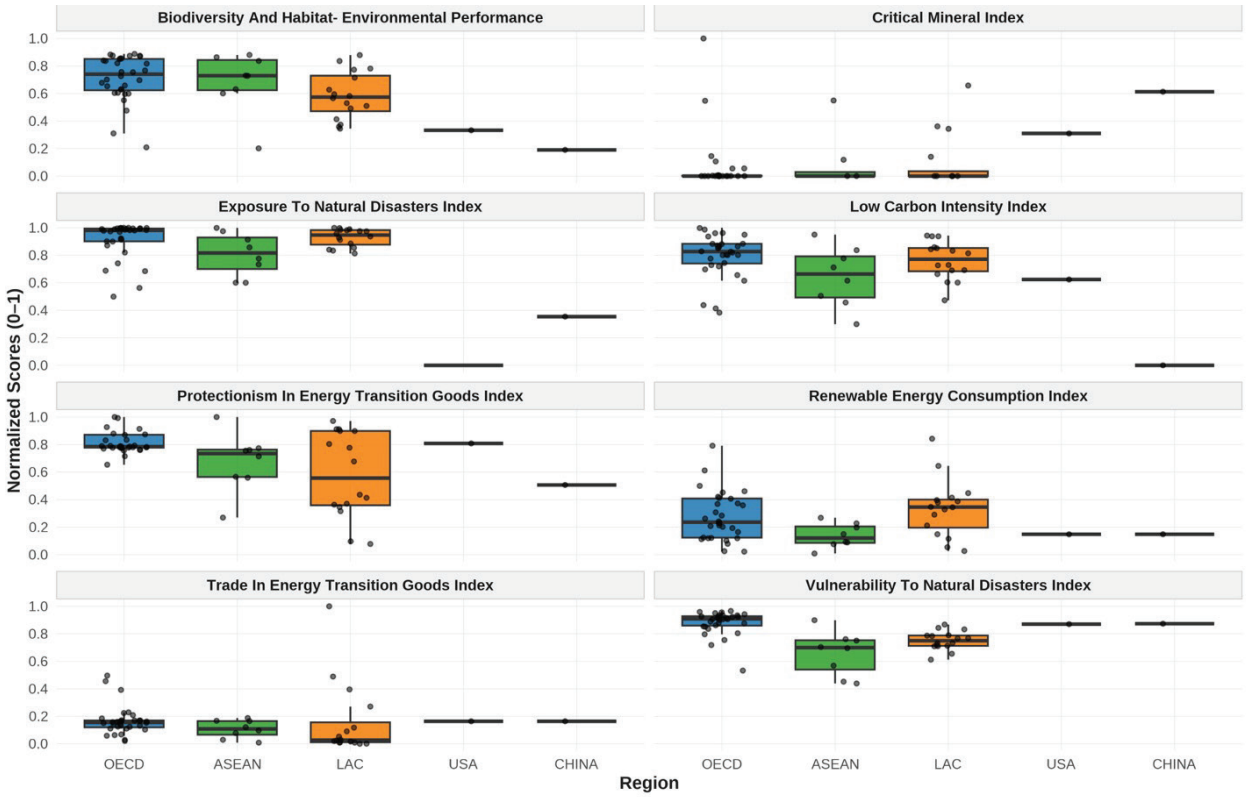
High exposure to hurricanes, floods and other natural hazards continues to constrain LAC's sustainable integration into GVCs (World Bank 2025a; UNECA 2025). Disruptions to infrastructure and trade routes elevate operational risks and discourage long-term investment. Closing the adaptation gap through investment in resilient infrastructure, improved risk assessment systems and stronger emergency response capacity will be essential for maintaining the region's attractiveness as firms increasingly prioritize resilience in their location decisions.

2.7 Regional Benchmarking and Strategic Priorities for LAC

Regional benchmarking (see Figure 2.11) highlights sharp contrasts in sustainability readiness across LAC, ASEAN, China, and OECD economies (OECD 2024). LAC demonstrates clear comparative strengths in biodiversity, low-carbon intensity and renewable energy deployment, but continues to lag in disaster resilience and climate adaptation. OECD economies set the benchmark across most indicators, while internal disparities and climate vulnerability remain persistent challenges within the LAC region. Detailed country-level results in Annex Table 2.A.2 further illustrate these variations, showing that higher-income and more diversified economies perform better on energy transition and environmental indicators than smaller, climate-exposed economies.

To sustain and build on its advantages, LAC must prioritize decisive policy and investment action. Embedding climate resilience into trade, investment and industrial strategies should become a central priority for both governments and firms. Reducing trade barriers on green goods, harmonizing standards and expanding climate-resilient infrastructure investment are essential steps to close the region's readiness gap. Without coordinated implementation, the region risks losing competitiveness as global capital and production increasingly favor economies with stronger sustainability and resilience credentials.

Figure 2.11: Sustainability Readiness Regional Performance Distributions



Source: Authors' calculations; see Estevadeordal, Kahn & Werner (2024), Latin America in the New Geometry of Global Supply Chains (CAF–Georgetown Americas Institute).

2.8 Geopolitics Readiness

As the global geopolitical environment grows more complex, the ability of economies to manage uncertainty and mitigate external risks has become a central determinant of value chain competitiveness (WTO 2024). Figure 2.12 illustrates how LAC has so far remained largely insulated from the most disruptive effects of US-China trade fragmentation, providing a degree of resilience and flexibility not observed in many other emerging regions (IMF 2025). Yet the region's moderate performance across core indicators, export similarity with China, exposure to sanctions, internal security and diplomatic alignment reveals both opportunity and persistent vulnerability.

LAC's limited exposure to direct US and Chinese trade restrictions, along with its relatively low share of commerce with sanctioned economies, has preserved business continuity and reduced compliance risks for firms operating in the region (World Bank 2025a). This has supported LAC's appeal as a "safe harbor" location for supply chains seeking diversification away from geostrategic choke points. However, high levels of organized crime, uneven institutional capacity and periodic social unrest continue to weigh on investor confidence and the reliability of logistics corridors (World Bank 2025b). Annex table 2.A.3 presents country-level results, showing considerable intra-

regional variation: several Caribbean and Central American economies outperform on governance and security metrics, while larger markets remain more exposed to institutional and safety risks.

Diplomatic non-alignment and moderate political proximity to major trading partners have enabled LAC to maintain diversified economic ties and avoid deep entanglement in "great power" rivalries. As GVC configurations increasingly reflect security, regulatory and political criteria, the stakes for effective risk management are rising. Strengthening governance, deepening regional coordination and enhancing economic diplomacy will be essential for building resilience, attracting sustainable investment and securing the region's role in the next phase of GVC integration.

Institutional readiness reflects the strength and predictability of domestic governance – how well rules, regulations and enforcement mechanisms support credible participation in GVCs. Yet the stability of participation increasingly depends not only on what happens inside national borders but also on how economies navigate shifting external conditions. Geopolitical readiness therefore extends the diagnostic outwards: it gauges each region's capacity to manage exposure to trade and investment fragmentation, aligns with new strategic partners and remains reliable nodes in a multipolar trading system. This transition from institutional to geopolitical readiness marks a shift from internal enablers of competitiveness to external buffers of resilience.

Export Structure and China Similarity Index

Export baskets across most of the region remain heavily weighted toward primary commodities, resulting in a persistent gap in export similarity with China compared to OECD and ASEAN peers. This structural profile constrains the region's ability to position itself as a competitive manufacturing hub for firms diversifying away from China, limiting prospects for advanced manufacturing FDI and value chain deepening. Mexico and several Central American economies stand as outliers, with export patterns closely integrated into North American and global manufacturing networks, particularly in automotive, electronics and medical devices, demonstrating the benefits of nearshoring and supply chain realignment (Aguilar et al., 2024). For the wider region, however, realizing opportunities from global production shifts will require targeted industrial policy, investment in productive capacity and concerted efforts to move up the value chain. If such reforms are absent, marginalization within the new industrial geography remains a tangible risk.

Exposure to Geopolitical Trade Restrictions Index

Despite rising global trade restrictions, LAC has thus far remained relatively insulated from direct US and Chinese export controls, bans and licensing requirements. This relative immunity has allowed LAC firms and governments to avoid some of the severe disruptions and compliance burdens that have afflicted other emerging markets heavily

embedded in geopolitically sensitive supply chains. Nonetheless, the evolving nature of global trade fragmentation demands proactive risk management. As US and Chinese trade policies increasingly focus on strategic sectors and extend extraterritorially, LAC economies must strengthen monitoring and early warning systems to anticipate indirect spillovers. Enhanced diplomatic engagement and diversified trade partnerships will be essential to mitigate exposure to escalating geopolitical tensions and to safeguard the region's access to critical markets and inputs.

Security and Institutional Stability Index

Security conditions across LAC present mixed challenges that bear directly on GVC participation and investor confidence. Security remains a "critical road blocker" for LAC's integration into the supply chain productions and sustain investment in the long-term. The region's average security threat index score continues to lag behind both OECD and ASEAN benchmarks (see Annex table 2.A.6), reflecting persistent exposure to organized crime, social unrest and institutional weakness in law enforcement.

These security pressures increase operational costs, disrupt logistics and erode investor confidence, even in the absence of large-scale armed conflict. Middle-income economies such as Uruguay and Chile ranked higher on security and institutional stability, while several Central American and Caribbean economies face elevated risk and ongoing governance challenges. Security risk shapes site selection and supply chain reconfiguration. Only economies making measurable progress in institutional capacity, rule of law and social inclusion can improve their security environment and attract investment. Investors, firms and government partners demand transparency and stability. Jurisdictions that close security gaps gain a clear advantage in GVCs dependent on reliability and trust.

Trade Exposure to Sanctioned Economies Index

Engagement with sanctioned markets presents rising risks for GVCs as international sanctions regimes, become more complex and far-reaching. LAC's trade exposure to sanctioned economies is lower than OECD levels and comparable to ASEAN, reflecting a generally cautious approach to sensitive trade relationships. This positioning reduces risks of secondary sanctions, reputational harm and compliance burdens for firms operating in the region. Maintaining rigorous customs enforcement, transparent financial oversight and strong due diligence is essential to preserve this advantage. As sanctions regimes continue to evolve, LAC must strengthen cross-border cooperation and regulatory alignment to prevent inadvertent violations and sustain trust with key trading partners. Building capacity in compliance and enforcement remains critical for resilient GVC integration.

Diplomatic Alignment and Nonalignment Index

In a period of heightened geopolitical fragmentation, diplomatic alignment and nonalignment increasingly influence trade access, investment flows and regulatory outcomes. LAC's middling score on these indicators reflects a pragmatic strategy balancing ties across major powers without deep entanglement in their rivalries. This approach supports diversified economic relationships and cushions the region from the risks of polarization. However, as political alignments become more consequential for GVC participation, LAC faces growing pressure to navigate complex partnerships with agility. Sustaining diplomatic flexibility, engaging with the US, China and the EU, while remain active in multilateral forums, will be paramount. This adaptability not only protects current market access but positions the region to capitalize on new GVC opportunities shaped by global contestation.

Social Cohesion and Demographic Readiness Index

Demographic and social cohesion are foundational to economic resilience and GVC competitiveness (UN DESA 2024). LAC's diverse social fabric yields varied outcomes: economies with high ethnic cohesion and a growing workforce benefit from greater stability, labor market dynamism and investment appeal, supporting inclusive, sustainable GVC integration. Conversely, economies experiencing social fragmentation, ethnic tensions or demographic slowdowns face heightened risks of instability and diminished growth potential. These dynamics can erode investor confidence and complicate the implementation of structural reforms necessary for upgrading in GVCs. Addressing social inclusion, fostering equitable economic opportunities and harnessing demographic potential through targeted policies are essential to ensuring long-term competitiveness and stability.

2.9 Geopolitical Readiness and Regional Positioning

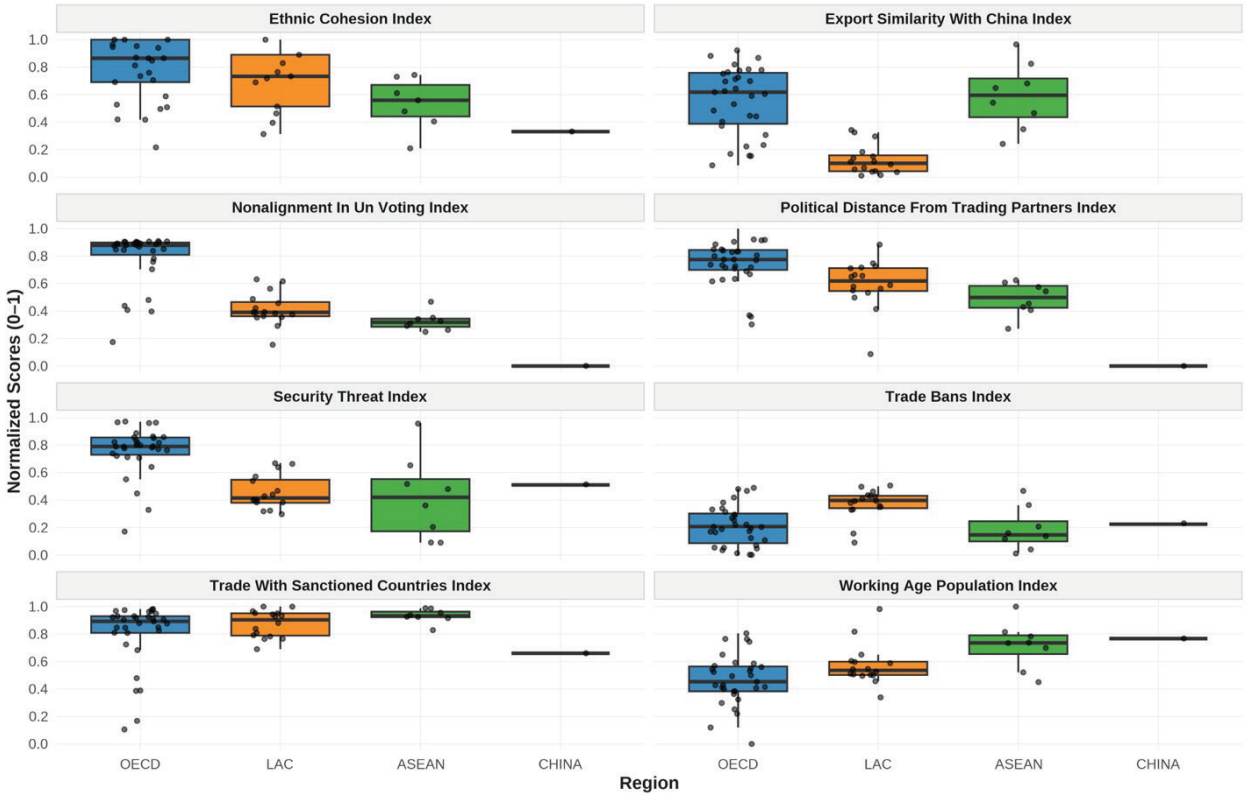
As geopolitical dynamics increasingly shaped trade and investment LAC's ability to strengthen institutions, manage risk and maintain diplomatic agility will determine its position in an increasingly fragmented GVC landscape. Advancing regional cooperation, reinforcing compliance infrastructure and pursuing targeted governance reforms are essential to translate resilience into a lasting competitive advantage. Without sustained progress, the region risks marginalization as global production networks continue to adjust to heightened uncertainty.

Regional benchmarking of geopolitical readiness (see Figure 2.12) highlights persistent misalignment across major regions. OECD economies set the standard in security, stability and political alignment, reflecting mature governance and robust institutions.

LAC and ASEAN display wider internal variation, underscoring uneven risk management capacity. China's manufacturing depth remains a key strength, yet gaps in security and diplomatic flexibility persist.

For LAC, moderate exposure to sanctions, pragmatic diplomacy and "safe harbor" status provide notable advantages. However, these strengths are offset by ongoing security, institutional and social cohesion challenges. Closing these gaps will be pivotal for LAC's integration into GVCs and its long-term competitiveness in the new era of reglobalization. Detailed country-level results are presented in Annex Table 2.A.3.

Figure 2.12: Institutional and Geopolitical Readiness Regional Performance Distributions



Source: Authors' calculations; see Estevadeordal, Kahn & Werner (2024), Latin America in the New Geometry of Global Supply Chains (CAF–Georgetown Americas Institute).

2.10 Intra-Regional Comparison

The country-level rankings reveal LAC's broad comparative advantage in sustainability, with emerging economies like Brazil, Chile, Costa Rica, Panama and Uruguay performing well. However, significant challenges remain in technology indicators, where all LAC economies are in the bottom half. Geopolitics presents varied results, with some Caribbean economies performing relatively well. Mexico, despite its GVC integration success, lags behind many LAC economies on sustainability indicators

and its growing investment links with China can expose it to US trade restrictions. Encouragingly, some small Caribbean and Central American economies show strong geopolitical indicators, suggesting they can leverage diplomacy to attract investments in strategic sectors. Panama, Paraguay and Peru also score well on sustainability, pointing to new opportunities in value chains.

Table 2.1: The LAC Playbook for Reglobalization

Policy responses for LAC	LAC must recalibrate development and integration strategies to benefit from GVC realignment. This includes fostering industrial and technological upgrading, improving regional logistics and infrastructure, strengthening institutional and regulatory frameworks, and embracing a pragmatic trade agenda.
Benefiting from digital technology transitions	Policymakers must prioritize robust digital infrastructure and digital literacy programmes. Addressing regulations on digital service provision and cross-border data flows, avoiding burdensome domestic regulations and striking a balance between data privacy and localization rules are crucial. Strategic PPAs can incentivize digital technology adoption.
Seizing green comparative advantage	Governments must translate clean energy resources into investment opportunities through stable regulatory frameworks. Upgrading electricity grids is essential. Policy frameworks should incentivize industries to reduce carbon footprints and accelerate transport sector electrification. Embracing market access and avoiding protectionism for clean energy technologies is vital. Facilitating R&D and leveraging trade agreements to promote sustainable practices are also key.
Attracting investment amid geopolitical risks	Governments can attract FDI by creating transparent and stable regulatory frameworks and investing in strategic infrastructure. Diversifying trading partners and fostering economic diplomacy are crucial. Strengthening anti-corruption and anti-money laundering frameworks, and establishing efficient customs controls, will mitigate risks for companies.
Aligning with major industrial policy initiatives (US and EU)	LAC can capitalize on nearshoring and friendshoring by enhancing competitiveness through targeted investments in digital infrastructure, innovation and sustainable practices, aligning with US and EU environmental and technological standards. Diplomatic engagement is crucial for integration.
Addressing unfinished regional and global integration	Promoting convergence of trade rules (especially rules of origin) and closing missing trade links within the region (e.g., Mexico-Brazil) are essential. Ambitious trade facilitation measures, like expanding national single windows and coordinated border management, will enhance connectivity. Active engagement with global partners through comprehensive trade agreements (USMCA, EU FTAs, RCEP, CPTPP) is vital for growth and resilience.
Roadmap for GVC integration for LAC	
Amid accelerating geopolitical realignment and recurring global shocks, the landscape for trade and investment is undergoing profound change. LAC's strengths in sustainability and pragmatic diplomacy position the region to capture new investment as a value chains pivot toward resilience and green growth. Yet, gaps in digital infrastructure, technology adoption and institutional quality – coupled with pronounced regional structural inefficiencies – continue to constrain LAC's full integration into value chains production networks. Capitalizing on this strategic moment requires coordinated, transformative policy action. LAC must implement digital transformation, harmonize regulatory frameworks and invest in skills and infrastructure to attract and retain high-value investment. Advancing regional cooperation and aligning with evolving global standards will be essential to translate resilience into sustained competitiveness. The region risks being bypassed as value chains recalibrate for a new era of uncertainty and competition.	

Note: This box outlines strategic policy priorities for Latin America and the Caribbean (LAC) to strengthen competitiveness and integration in reglobalizing supply chains. It summarizes regional responses across digital transformation, green industrial upgrading, investment attraction and trade facilitation.

Source: Background material drawn from the preprint Latin America in the New Geometry of Global Supply Chains by Estevadeordal, Kahn, and Werner (2024), CAF–Georgetown Americas Institute.

To translate these strategic imperatives into action, the following roadmap outlines priority policy areas, measurable indicators and institutional responsibilities that can guide LAC's integration into reglobalized value chains.

Table 2.2: LAC Policy Roadmap

Policy area	LAC-specific levers	Key performance indicators (KPIs) to track	Primary owner
Digital technology transition	• Light up IXPs on trade corridors (São Paulo-Santos, Santiago, Bogotá-Buenaventura, Mexico City-Laredo) • Universal e-ID and interoperability • Riskbased crossborder data rules • PPPs for SME cloud-AI adoption	• Broadband cost (percent GNIpc) • Corridor 4G/5G coverage • IXP count/traffic • EID coverage • Share of firms on cloud-AI	• ICT ministry & regulator • Competition authority
Green comparative advantage	• Fast track grid reliability to anchor nearshoring low/zerotariff lane for ETG • Enable green PPAs for exporters • Certify green industrial parks	• SAIDI/SAIFI • ETG MFN tariff level • Industrial renewables share • Parks certified to green standards	• Energy ministry • Customs • Standards body
Critical minerals & processing	• Develop lithium/copper value added hubs (Chile, Argentina, Peru, Bolivia) • Regional ESG protocols • Open access logistics from Andean & Southern Cone to ports	• Share of minerals processed domestically • Adoption of ESG/traceability standards • Corridor throughput	• Mining and industry ministries • Ports authority
Attracting investment	• Onestop FDI window • Beneficialownership registry linked to customs risk • Port proximate SEZ/bonded zones (Santos, Callao, Colón, Cartagena) • Unified permits and eprocurement	• FDI approval SLA • BO matches in risk engine • SEZ/bonded site count • Share of tenders via eprocurement	• Investment agency • Justice and customs
US/EU industrial policy alignment	• Conclude MRAs for conformity assessment, adopt ISO/IEC & cybersecurity baselines, CBAM readiness in exposed sectors, supplier compliance programmes for USMCA/EU buyers	• MRA coverage • CBAM ready sectors • Exporters certified to ISO-IEC cyber • Buyer audits passed	• Trade ministry • Standards body • Industry chambers
Regional integration (rules & procedures)	• Harmonize rules of origin (cumulation) across Pacific Alliance, Mercosur, SIECA, CARICOM • Expand national single window (NSW) • Mutual recognition of AEO • Coordinated border • Management of Southern Cone-Andean-Northern Triangle corridors	• NSW share of declarations • AEO MRA count • Average border release time • Rules of origin cumulation coverage	• Customs • RECs-secretariats • Foreign affairs
Connectivity and logistics	• Prioritize port-rail-dryport links to nearshoring clusters • Ensure Panama Canal reliability and alternative routings • Digitize port community systems	• Port turnaround time • Rail-truck dwell time • Canal reliability indicators • PCS transaction share	• Transport ministry • Port authorities
Security & compliance	• Integrate beneficial ownership • AML and customs risk targeting • Vetted logistics corridors • Joint ops with RECs to reduce cargo theft & smuggling	• Seizures per risk flag • Corridor incident rate • percent shipments via vetted operators	• Finance-justice • Customs • Interior security

IXP = internet exchange point; E-ID = electronic identification; AI = artificial intelligence; PPP = public–private partnership; SME = small and medium-sized enterprise; ETG = energy transition goods; PPA = power purchase agreement; SEZ = special economic zone; ESG = environmental, social, and governance; FDI = foreign direct investment; BO = beneficial ownership; MRA = mutual recognition agreement; CBAM = carbon border adjustment mechanism; ISO/IEC = International Organization for Standardization/International Electrotechnical Commission; USMCA = United States-Mexico-Canada Agreement; RoO = rules of origin; AEO = authorized economic operator; NSW = national single window; RECs = regional economic communities; PCS = port community system; AML = anti-money laundering; SAIDI = System Average Interruption Duration Index; SAIFI = System Average Interruption Frequency Index.

Note: This roadmap operationalizes the diagnostic findings presented in this chapter. It outlines key policy areas, LAC-specific levers and illustrative key performance indicators (KPIs) to monitor reform progress and institutional readiness for GVC integration. The KPIs serve as reference metrics rather than prescriptive targets, providing a foundation for benchmarking across economies and over time, and supporting evidence-based policymaking and regional coordination.

Source: Background material from Latin America in the New Geometry of Global Supply Chains by Estevadeordal, Kahn, and Werner (2024), CAF–Georgetown Americas Institute.

LAC's experience illustrates how reglobalization rewards economies that align natural endowments with institutional reliability and sustainability performance. Yet, the geography of opportunity is shifting. Africa enters this evolving trade cartography with scale, demographic momentum and renewable energy potential that position it to shape the next phase of global production. As LAC consolidates its comparative advantages through digital and green integration, Africa's readiness will hinge on translating structural endowments into systemic reliability through cross-border infrastructure, harmonized standards and deeper regional coordination.

Taken together, the preceding sections identify three binding conditions shaping LAC's current stage of GVC integration. First, diversification gains remain concentrated in a few globally connected hubs, with limited spillovers to peripheral economies. Second, digitally deliverable and data-intensive sectors face persistent backbone and affordability constraints that inhibit broader participation. Third, domestic firms capture limited value relative to multinational producers, underscoring that participation alone does not ensure upgrading. The following sections extend this analytical lens to Africa, where many of these same constraints appear in sharper relief, and then integrates both regions within a comparative, region-based roadmap that links digital, logistical and sustainability readiness. A central policy question that arises is therefore not whether to reglobalize but how to build price reliability, digital trust and low-carbon competitiveness into practical delivery mechanisms.

2.11 The New Trade Cartography for Africa – From Risk to Route

Building directly on the diagnostic evidence above, implementation is organized around four mutually reinforcing pillars: digital and data infrastructure, energy and sustainability readiness, trade facilitation and investment, and regional rules and infrastructure – each with concrete key performance indicators (KPIs) to track progress. Africa is entering a pivotal phase in the reorganization of the global economy. Despite strong resource endowments, demographic momentum and the potential of the African Continental Free Trade Area (AfCFTA), African economies remain only partly integrated into GVCs, concentrated in upstream resource-based segments. In 2018, the region accounted for 2.6% of world trade and 2.9% of output while representing more than 16% of the global population (Afreximbank 2019; UN DESA 2024). This imbalance underscores Africa's limited integration into global production networks. GVC participation rose only modestly from 1.5% in 2000 to 1.7% in 2019 (OECD 2024), reflecting the slow pace of structural transformation and persistent infrastructure and institutional-capacity gaps.

As shown in Figures 2.8 and 2.9, Africa's integration into GVCs has expanded only modestly over the past two decades. Average total participation rose by roughly 6 to 10 percentage points between 1995 and 2011 but then stagnated through 2022. Backward linkages grew

slightly while forward linkages flattened, leaving overall participation broadly stable. Country-level data confirms sharp heterogeneity: Morocco, Nigeria and Egypt achieved incremental gains, whereas South Africa and several smaller economies recorded declines. These patterns underscore that, despite policy reforms and infrastructure investment, Africa's integration remains concentrated in upstream, resource-based activities, with limited spillovers into higher-value manufacturing and services.

Manufacturing employment has expanded without equivalent value added gains, underscoring productivity deficits linked to weak innovation systems and unreliable energy and logistics (World Bank 2025a). Non-tariff barriers, ranging from inefficient borders to weak standardization, continue to inflate trade costs (UN ESCAP 2024). Research and innovation ecosystems remain underfunded, and the region attracts less than 2% of global clean energy investment (IEA 2024a).

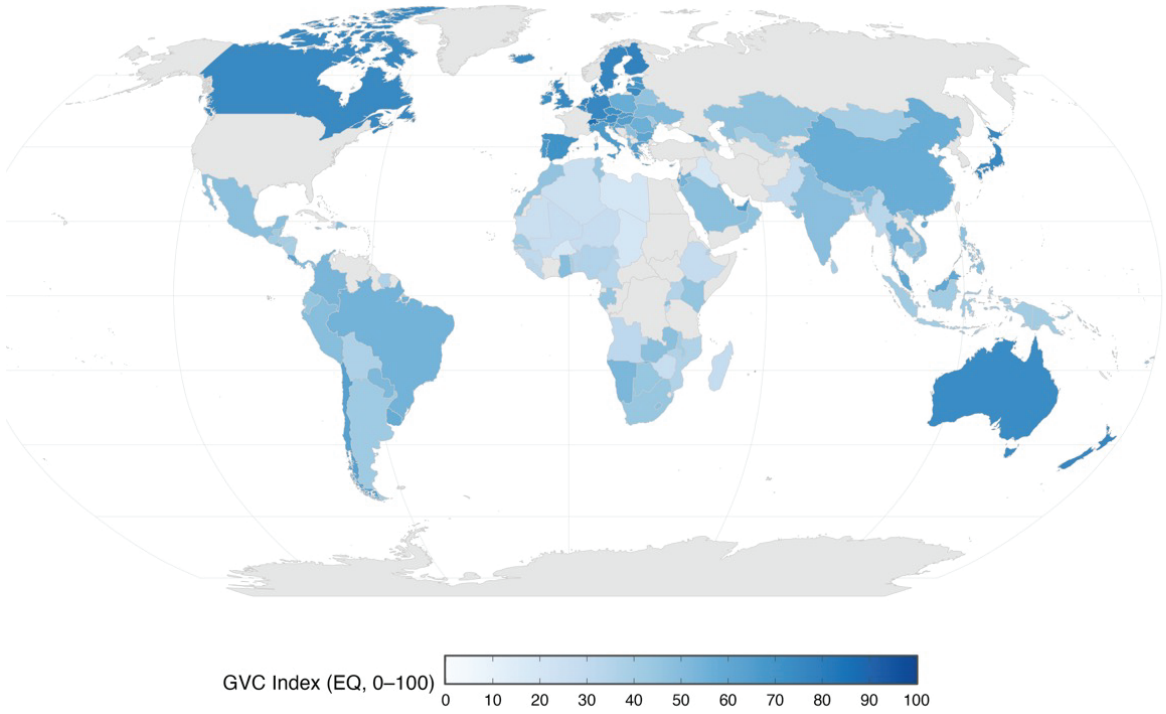
Global trade is rerouting rather than retreating, with overall connectedness near record highs even as border frictions rise (Altman and Bastian 2024). Patterns in LAC and Africa's expanding but uneven participation corroborate this shift (see Figure 2.1 for export-share trends and Figure 2.2 for diversification dynamics). For Africa, this rewiring of value chains creates corridor-based opportunities where logistics reliability, digital readiness and predictable regulation intersect. Strengthening transport, digital and financial infrastructure, anchored in interoperable data governance frameworks, can expand digitally delivered services and reinforce goods competitiveness. Paperless trade systems and coordinated border management reduce time and cost, while interoperable single window and cross-border data exchange platforms enhance transparency and resilience.

The diffusion of AI and harmonized data governance frameworks will shape productivity geography. Open and predictable trade in AI-enabling goods and services, combined with digital skills development and interoperability standards, is essential to prevent new divides (WTO 2025). Opportunities in the green transition are expanding. Lowering tariff and non-tariff barriers on energy transition goods (ETGs), scaling technology diffusion and developing robust measurement, reporting and verification (MRV) systems for embedded emissions are essential to integrate into low-carbon supply chains (ADB 2024; UNCTAD 2025).

In Figure 2.13, most African economies cluster in the lower-to-mid range, with higher-readiness pockets in North and Southern Africa. Sustainability outperforms other pillars, while digital infrastructure, logistics and institutional reliability remain binding gaps.

A resilient cohort is emerging, particularly in sustainability and governance. Targeted reforms, investment-grade renewable power and transparent PPP pipelines are attracting capital and improving productivity (UNECA 2025). Yet readiness remains uneven, most economies cluster in the lower-to-mid range, with stronger performance in North and Southern Africa.

Figure 2.13: Global Value Chain Readiness Index 2025



Note: Darker shading indicates higher readiness; grey shading denotes economies with data coverage below the publication threshold (66%) or with missing values. Scores represent the equal-weighted, direction-safe normalized average of six pillars: technology and connectivity, trade and investment readiness, sustainability and energy readiness, institutional and geopolitical readiness, financial readiness and business readiness. Each pillar aggregates three indicators normalized to a 0-1 range using the min-max method. Cost indicators are inverted so that higher scores reflect greater readiness. The overall Global Value Chain Readiness Index (GVCRI) is the simple mean of the six pillars and is rescaled to a 0–100 scale.

Source: International Monetary Fund (Artificial Intelligence Preparedness Index,); International Telecommunication Union (ITU); World Bank (World Development Indicators); GSMA (Mobile Connectivity Index); World Bank (Logistics Performance Index, LPI; Worldwide Governance Indicators; Global Findex Database; Enterprise Surveys; B-READY Program); World Trade Organization (WTO, World Integrated Trade Solution); International Renewable Energy Agency (IRENA); International Energy Agency (IEA); Ember (Yearly Electricity Data), and author calculations.

2.12 Africa in Inter-Regional Perspective – Global Value Chain Readiness Benchmarks

Africa's capacity to translate economic scale into value increasingly depends on the alignment of policies, backbone infrastructure and institutional frameworks with a standards-based, digitally enabled trading system. This section benchmarks Africa's GVC readiness against the OECD, ASEAN, LAC, the US and China to assess where the continent is gaining traction and where structural frictions remain. The region lags behind its peers in speed, reliability and border efficiency, reflecting gaps in logistics, digital connectivity and data exchange systems. However, Africa exhibits relative strength in sustainability, supported by favorable demographics and renewable energy potential. As global trade flows reroute rather than retreat, overall connectedness remains high even amid rising border frictions. Competitive advantage will accrue to trade corridors that combine credible logistics, predictable rules and digital readiness (Altman and Bastian 2024).

Readiness will hinge on progress across a narrow set of high-leverage enablers. Economies advancing interoperable digital trade systems, including national single windows (NSWs), e-signatures and e-payments, and predictable cross-border data regimes are scaling digitally delivered services that spill over into goods competitiveness. Paperless and coordinated border management compresses clearance times and logistics costs (UN ESCAP 2024). Lower barriers on ETGs, investment-grade renewable power, credible measurement, reporting and verification (MRV) systems for embedded emissions can further anchor Africa's participation in low-carbon value chains (ADB 2024; UNCTAD 2025). Collectively, these reforms reduce uncertainty, attract investment and strengthen firm-level productivity, positioning Africa to capture a greater share of rerouted global production.

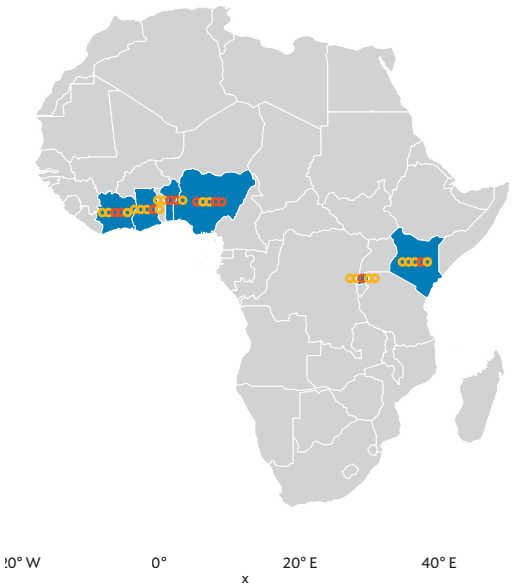
Figure 2.14 benchmarks Africa's digital trade policy readiness, comparing regulatory openness, interoperability and paperless trade implementation across six pilot economies and peer regions. Across these economies, core digital trade frameworks are in place but remain uneven in depth and enforcement. Most have enacted e-transaction and e-signature laws, yet judicial recognition, enforcement and user uptake still lag behind enactment. Online consumer protection frameworks are partial, while cross-border data flow and intermediary liability gaps continue to deter cloud adoption, platform growth and regional services trade. Paperless trade systems are advancing but typically cover only segments of the clearance chain rather than delivering end-to-end interoperability. In practice, digital trade readiness depends less on the existence of legal instruments than on their interoperability, institutional reliability and user confidence.

Technological Readiness

Digital transformation now defines the pace of competitiveness in GVCs and Africa continues to underperform on the digital foundations needed for upgrading. The most binding gaps lie in fixed-broadband reach and quality, the depth of backbone infrastructure such as terrestrial fibre broadband, internet exchange points and neutral data centres, and predictability of digital trade regimes. High last-mile costs keep rural and peri-urban areas underserved, limiting the growth of digitally deliverable services and constraining spillovers to manufacturing and agribusiness (WTO 2025).

As shown in Figure 2.15, Africa's dispersion across all six pillars remains wide, underscoring structural gaps in broadband depth, affordability and institutional reliability. Openness and data governance indicators appear stronger in legislative form than in practice, while most economies have adopted data protection and e-commerce frameworks, cross-border transfer rules remain inconsistent and only partially risk-based, creating uncertainty for investors and raising compliance costs. Human capital and AI readiness, together with enterprise adoption and innovation, also underperform relative to peer region benchmarks, reflecting shallow digital skills pipelines and limited diffusion of enterprise software, cloud computing and analytics

Figure 2.14: Digital Trade Policy Readiness



Country	E-transactions & e-signatures	Online consumer protection	Cross-border data flows	Intermediary liability	Paperless trade / single window
Benin	Partial	Partial	Absent	Absent	Partial
Côte d'Ivoire	Partial	Partial	Absent	Absent	Partial
Ghana	Partial	Partial	Partial	Absent	Partial
Kenya	Partial	Partial	Partial	Absent	Partial
Nigeria	Absent	Partial	Partial	Absent	Absent
Rwanda	Partial	Partial	Absent	Partial	Partial

In place = usable Partial = limited Absent = restrictive

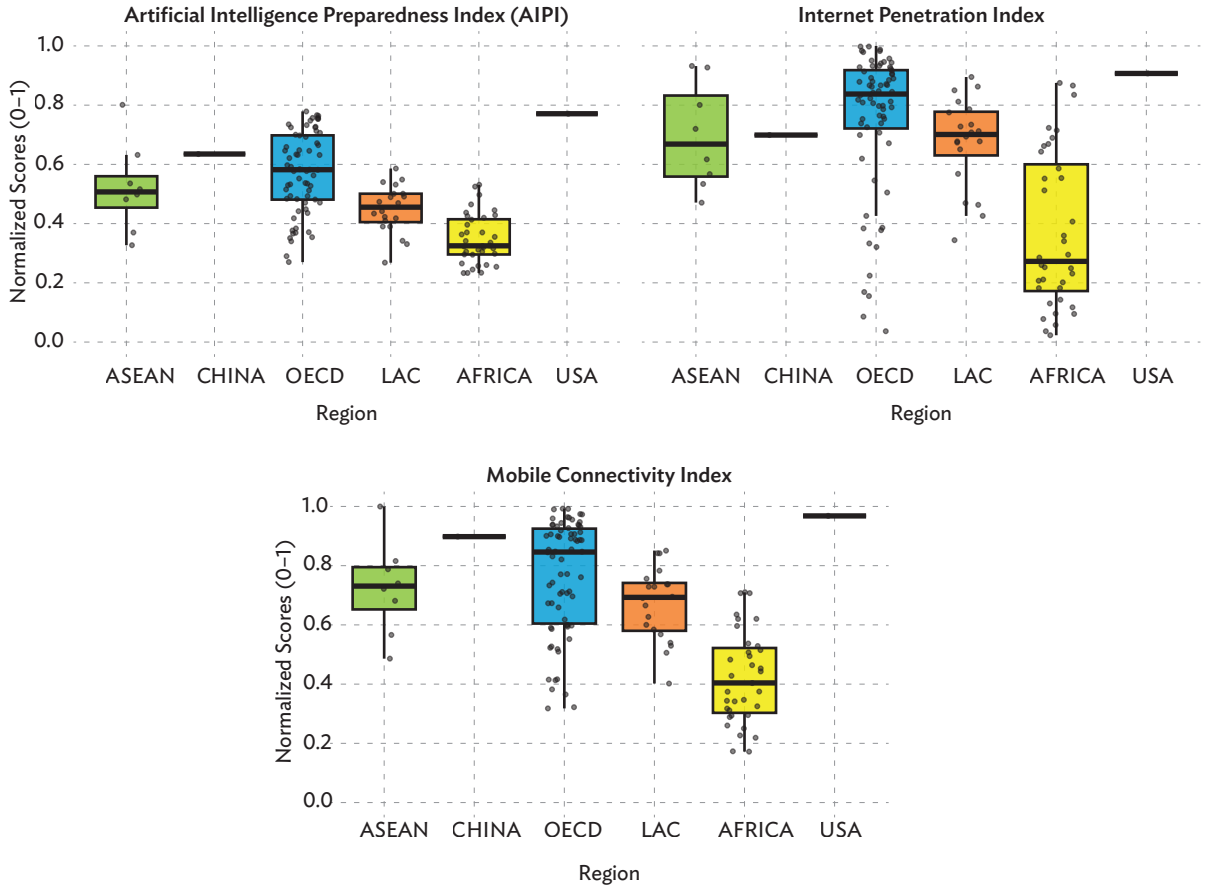
Note: Qualitative coding reflects the presence, usability and scope of national frameworks. "Paperless trade" refers to operational single window systems and the acceptance of electronic documents across customs and border procedures.
Source: Authors' compilation based on World Bank and World Trade Organization, Digital Trade for Africa (DTA) (2023, 2025).

tools. Cybersecurity and trust indicators remain below frontier standards, amplifying operational and reputational risks and raising the cost of digital participation.

Viewed globally, the US anchors the technological frontier, combining advanced AI preparedness, deep backbone networks, extensive cloud availability and mature cybersecurity ecosystems. It performs strongly on connectivity and enterprise adoption, but less so on openness and cross-border data governance, underscoring the trade-offs between scale and interoperability. Within Africa, however, several examples illustrate how targeted reform can narrow the gap. Developments in Kenya's fintech ecosystem, Nigeria's digital ID rollout and Rwanda's digital public infrastructure (DPI) initiatives demonstrate how coherent policy design, backbone investment and trusted data frameworks can translate into exportable digital services and faster firm-level adoption. Progress across these areas, expanding open access fibre and neutral data centres, operationalizing interoperable cross-border data transfer regimes, developing mid-career digital and AI credential programmes and completing paperless trade and single window integration, anchors a practical path forward (UN ESCAP 2024; WTO 2024).

Taken together, these developments confirm that technological readiness has become the decisive frontier for Africa's integration into reglobalized value chains: where connectivity, openness and trust converge, digital transformation becomes a direct channel for competitiveness.

Figure 2.15: Technology Readiness Regional Performance Distributions



Source: International Monetary Fund (Artificial Intelligence Preparedness Index); International Telecommunication Union (ITU-Internet Penetration Index); GSMA (Mobile Connectivity Index), and author calculations.

Trade and Logistics Capacity Readiness

Efficient logistics determine who participates, and at what margin in time-sensitive GVCs. Across Africa, persistent port congestion, fragmented overland corridors and limited customs automation continue to raise costs and extend lead times, excluding firms from higher-value production networks (World Bank 2025c; WTO 2024). On the Logistics Performance Index (LPI), most economies remain below the global average, with wide dispersion reflecting uneven infrastructure, border agency capacity and corridor reliability (World Bank 2025c; UNECA 2025). Regionally, overall GVC participation gains since 2011 have plateaued relative to 1995-2011, with wide cross-country heterogeneity (see Figure 2.8-2.9).

OECD systems are multimodal and data driven, integrating real-time tracking, risk-based inspections and paperless clearance. ASEAN economies, led by Viet Nam, Malaysia and Singapore have improved corridor performance through coordinated infrastructure investment and customs modernization. LAC performs above Africa

on average but continues to face institutional frictions that constrain reliability (ADB 2024; UN ESCAP 2024). As shown in Figure 2.16, Africa records the lowest medians on LPI and trade openness and the widest interquartile ranges, underscoring shallow integration and limited scalability (World Bank 2025c; OECD 2025a).

Africa's median Tariff Restrictiveness Index scores lag those of the OECD and ASEAN, reflecting residual protection on key intermediates and assembly inputs. Even where tariff schedules have been rationalized, non-tariff barriers remain high, manual clearance procedures, limited single window coverage and uneven authorized economic operator (AEO) adoption continue to inflate trade costs (World Bank 2025c; UN ESCAP 2024). Box 2.1 further illustrates how limited preference utilization across Africa and LAC constrains the potential gains from tariff liberalization and trade facilitation reforms.

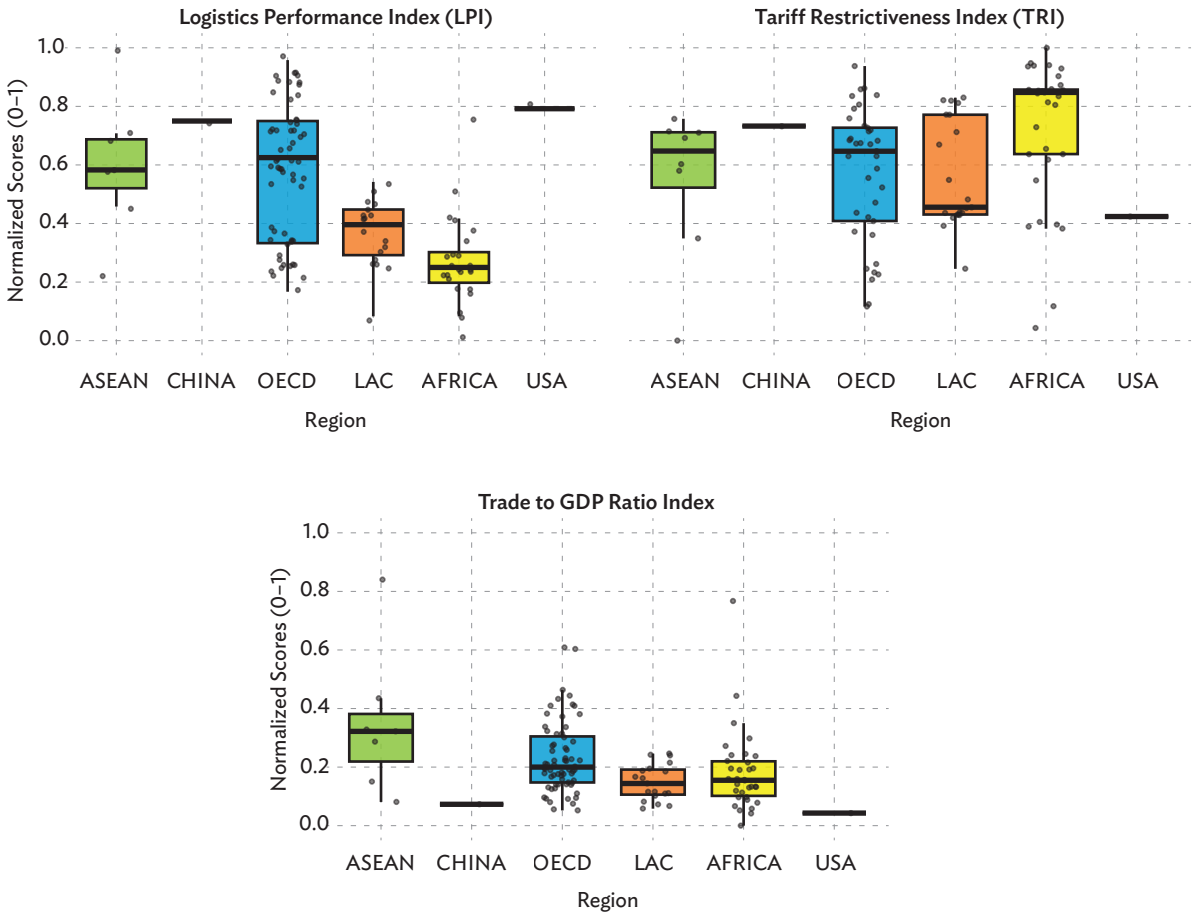
Country differences are pronounced. Morocco and South Africa have leveraged port modernization, special economic zones (SEZs) and regional corridor programs to improve LPI performance, while landlocked and Central African economies remain constrained by inadequate road and rail networks and limited cross-border coordination. The US and China, included as single economy benchmarks in Figure 2.16, anchor the global frontier. The US leads on LPI and trade facilitation, while China performs strongly on trade-to-gross domestic product (GDP) and corridor scale, reflecting sustained investment in logistics and customs digitalization.

Trade facilitation gains, reinforced by AfCFTA rules convergence and selective tariff relief on intermediate goods, are beginning to improve Africa's profile across LPI, trade-to-GDP and its Trade Restrictiveness Index scores. Sustained progress in corridor efficiency, risk management and digital border systems could reposition African economies within reglobalized production networks, enabling entry into time-sensitive, higher-value segments of global trade (TRALAC 2019).

Sustainability Performance Readiness

Sustainability has become a decisive factor in competitiveness and investment decisions as global production networks decarbonize and compliance regimes tighten. Benchmarked against OECD, ASEAN and LAC, with the US and China as single economy comparators, Africa shows relative strength in carbon efficiency (lower carbon dioxide, or CO_2, emissions per unit of GDP) and a growing share of modern renewables in several reform-oriented economies, including Kenya, Ethiopia, Morocco and South Africa. Yet the investment gap remains wide. In 2024, total energy investment across Africa stood at roughly $110 billion, with clean energy spending accounting for only a small fraction. By comparison, global clean energy investment exceeded $2 trillion and outpaced fossil fuel spending for the first time, underscoring the risk of widening competitiveness gap unless grid reliability, standards alignment and policy coherence advance in parallel (IEA 2024a; IEA 2024b).

Figure 2.16: Trade and Investment Readiness Regional Performance Distributions



Source: World Bank (Logistics Performance Index); World Trade Organization (WTO) and World Integrated Trade Solution (WITS) tariff data (Tariff Restrictiveness Index, ad valorem equivalents; direction-flipped); World Bank (World Development Indicators- Trade-to-GDP Ratio Index), and author calculations.

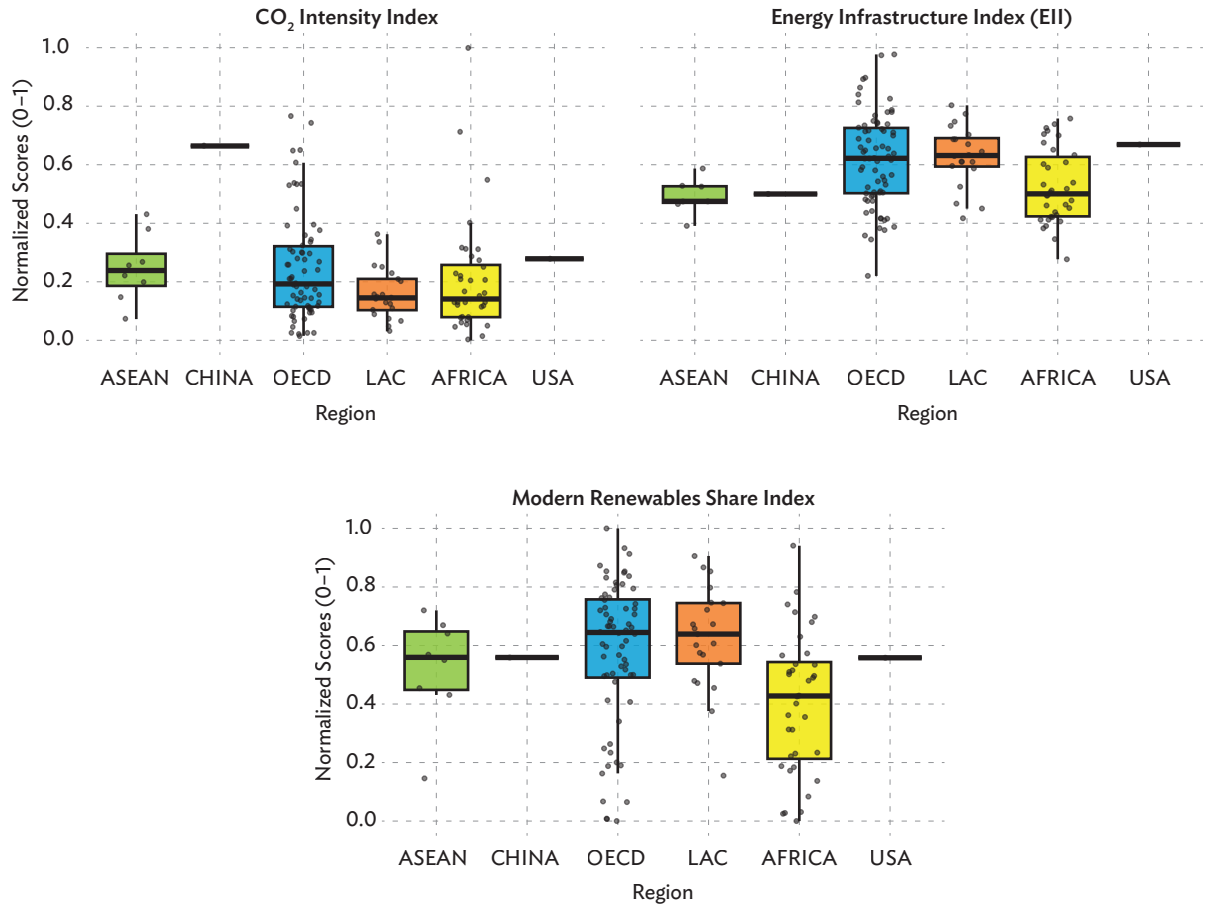
Three interconnected dimensions define Africa's sustainability readiness profile. The first concerns carbon efficiency and renewables, where median performance is relatively strong but dispersion wide. Several economies have achieved measurable progress in renewables generation and emissions intensity, but reliance on traditional biomass persists in many subregions (Ember 2025; IRENA 2025). The second dimension, energy infrastructure reliability, remains a binding constraint.

Grid connections are often slow, outages frequent and ancillary services thin, driving up energy costs for firms. Regulators are only gradually embedding SAIDI and SAIFI reliability metrics into tariff compacts and performance reviews, producing uneven outcomes across markets (AfDB 2025). The third dimension concerns input and standards. Africa's rich reserves of critical minerals contrast sharply with limited downstream processing and recycling capacity. Tariff and technical barriers continue to slow the deployment of energy transition goods (ETGs), while economies that align with International Electrotechnical Commission (IEC) and International Organization for

Standardization (ISO) norms– and streamline certification and testing regimes –see faster technology diffusion and cleaner supply chain integration (UNCTAD 2025; IEC 2024).

As shown in Figure 2.17, Africa's median scores remain below OECD and US benchmarks on energy infrastructure reliability but perform relatively better on carbon intensity (direction-flipped) than LAC. The widest dispersion appears in renewable energy shares, reflecting a patchwork of reform "bright spots" amid slower-moving peers. China, appearing as a single reference point, combines high ETG manufacturing and export intensity with comparatively low-carbon intensity, illustrating how scale, reliability and standards alignment interact to shape competitiveness across energy and industrial corridors (Ember 2025).

Figure 2.17: Sustainability Readiness Regional Performance Distributions



Source: World Bank (World Development Indicators – CO_2 Intensity Index); International Renewable Energy Agency (Renewable Energy Statistics, 2024 – Modern Renewables Share Index; Ember (Global Electricity Review and Yearly Electricity Data – Energy Infrastructure Index), and author calculations.

Institutional and Geopolitical Resilience Readiness

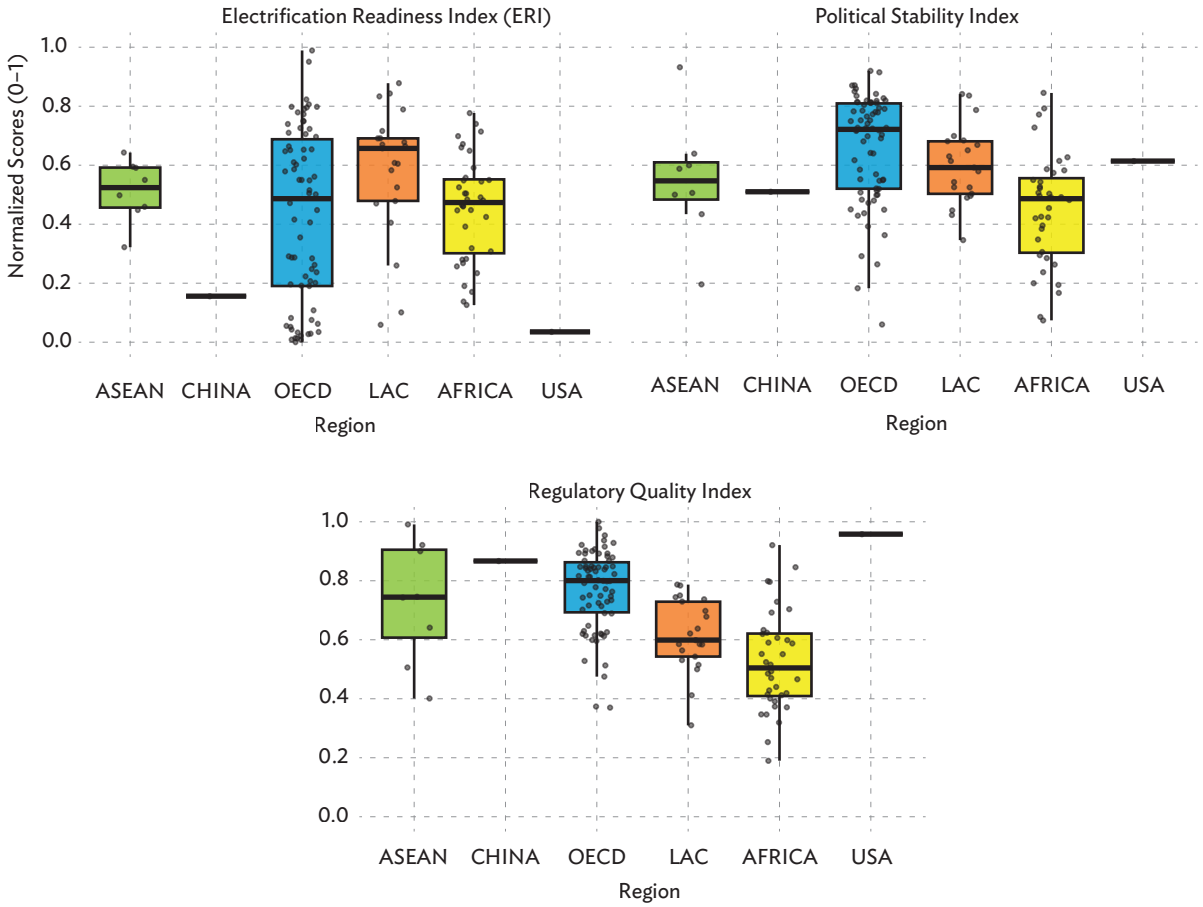
Institutional quality and political stability shape the risk premium of production locations in a reglobalizing world economy. Across Africa, persistent weaknesses in regulatory quality, contract enforcement and corridor governance continue to limit the reliability of upgrading and deter investment. Where policy coherence is weak and property rights remain unevenly enforced, risk premia rise, cross-border capital formation slows and compliance costs increase for firms operating in time-sensitive value chains (World Bank 2025b; AfDB 2025).

The institutional readiness composite spans six dimensions that together determine credibility and resilience. It captures regulatory quality and the rule of law, political stability and security, exposure to sanctions and compliance regimes, diplomatic alignment and geoeconomic positioning, business entry and exit governance, and the reliability of infrastructure. For the latter, an "Electrification Readiness Index" is introduced as a complementary composite that draws on conceptional elements of the Electricity Regulatory Index (ERI) and incorporates electricity access, reliability (SAIDI/SAIFI), and cross-border corridor "timeliness" using indicators from the Logistics Performance Index (World Bank 2025c; UN ESCAP 2024).

As shown in Figure 2.18, Africa's median scores are lowest, and dispersion widest, in regulatory quality and political stability, confirming persistent constraints on contract credibility and operational continuity. By contrast, sanctions and compliance exposure scores are relatively favorable, reflecting pragmatic non-alignment, though inconsistent screening and licensing procedures continue to raise transaction costs. Diplomatic alignment and geoeconomic positioning suggest broad neutrality but limited export similarity with China, constraining opportunities for "China+1" substitution beyond a few diversified hubs. Entry and exit governance improve where one-stop digital filing systems and alternative dispute-resolution mechanisms are in place, yet slow and costly insolvency processes still deter risk capital. ERI highlights reliability gaps in both energy and border infrastructure, though North and Southern African economies cluster above the regional median, supported by targeted regulatory and corridor reforms.

Globally, the US anchors the frontier in regulatory quality but lags on reliability due to ageing infrastructure, while ranks midrange on stability yet performs above average on regulatory effectiveness within this compilation. These contrasts provide practical benchmarks for assessing corridor risk and institutional performance across African economies.

Figure 2.18: Institutional and Geopolitical Readiness Regional Performance Distributions



Source: World Bank (Worldwide Governance Indicators – Regulatory Quality and Political Stability); Energy Institute (Statistical Review of World Energy– inputs for Electrification Readiness Index), and author calculations.

Financial Readiness

Finance is a decisive enabler of participation and upgrading in GVCs. Across Africa, performance on this pillar trails other regions, reflecting persistent gaps in inclusion, financial depth and macrofinancial buffers. These factors shape firms' ability to transact, invest and withstand shocks, core conditions for integration into production networks (World Bank 2025; IMF 2025).

Financial access has expanded rapidly with digital platforms and mobile money innovation, especially in East Africa. Yet inclusion remains below global norms and retains wide gender and rural gaps (World Bank 2025f; OECD 2024). Mobile money systems have broadened payments and savings, and lowered transaction costs, but contributions to credit and investment finance are still limited, with usage concentrated in low value transactions. Small firms face high collateral requirements and limit formal credit, constraining productivity growth and GVC participation (AfDB 2025).

Financial systems remain shallow and concentrated. Banks frequently favor sovereign paper over private sector lending, limiting funds for productive investment. High interest spreads elevated nonperforming loans, and thin capital markets reinforce this pattern. While bank capitalization and profitability are generally sound, the structural challenge is channelling liquidity to enterprise lending through stronger credit information systems, movable collateral frameworks and risk-sharing mechanisms for small and medium-sized enterprises (SMEs) (IMF 2025).

Many economies operate with narrow fiscal and reserve margins, leaving them exposed to tighter global financial conditions and rising debtservice costs. Debt vulnerabilities remain elevated, and limited access to concessional finance has intensified refinancing pressures (S&P Global 2024). Regional mechanisms are evolving: the African Development Bank (AfDB) and African Export-Import Bank (Afreximbank) have expanded liquidity and trade finance facilities, while initiatives such as the African Monetary Fund and Southern African Development Community (SADC) reserve pooling arrangements signal gradual moves towards regional safety nets and crisis prevention frameworks (AfDB 2025).

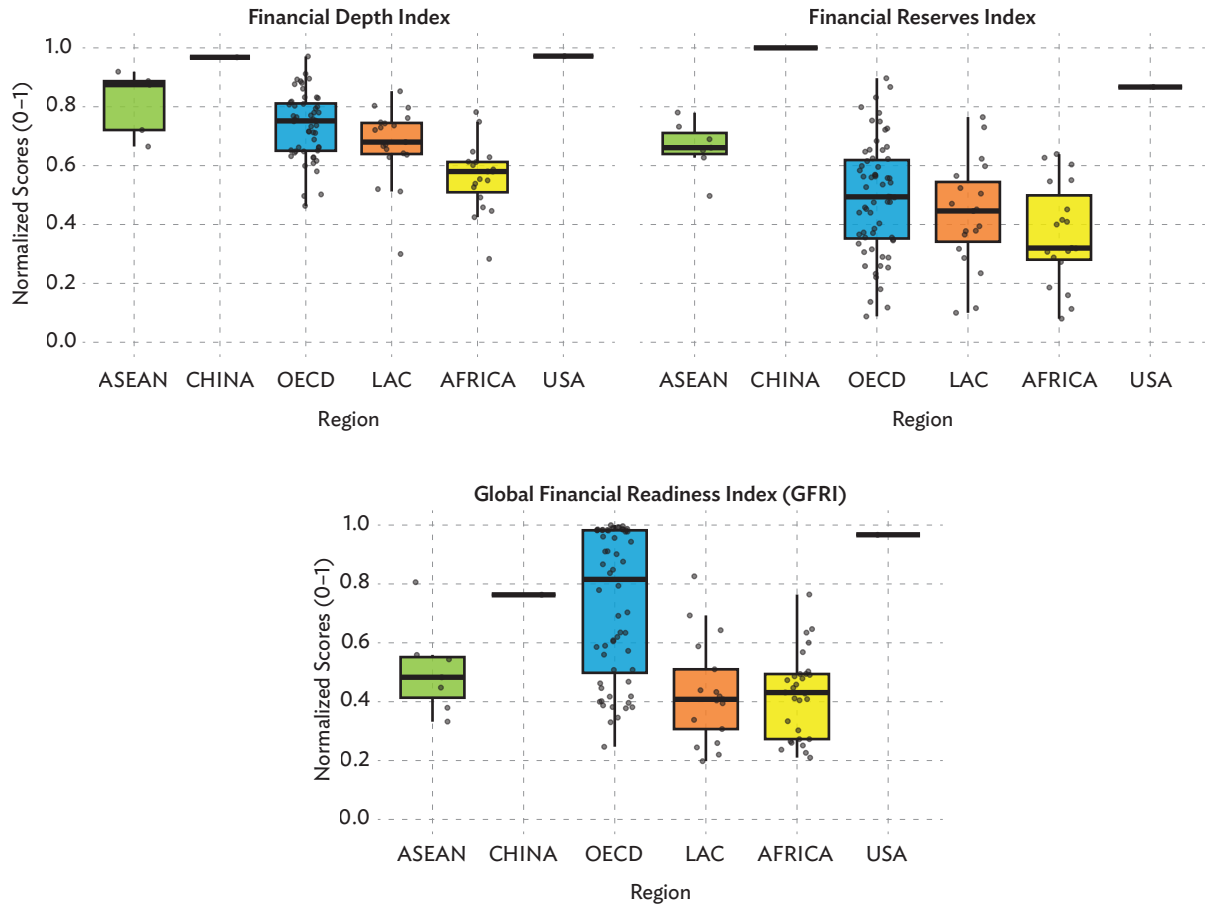
As shown in Figure 2.19, Africa's median scores are lowest across subpillars, with the widest dispersion in inclusion and depth. Even so, innovation in mobile finance and the gradual expansion of collective buffers provide a base for greater resilience. Priorities include strengthening credit infrastructure, harmonizing financial regulation and deepening capital markets to convert liquidity into investment and sustain GVC integration.

Regional financial connectivity is also deepening through institutional innovation. The Afreximbank and Pan-African Payment and Settlement System (PAPSS) enable intra-African trade in local currencies, reducing transaction costs and settlement risks. Complementary initiatives to digitalize SMEs, expand credit-guarantee facilities and scale fintech-enabled supply chain finance are gradually strengthening intermediation and extending access to working capital across emerging value chain sectors. These mechanisms mark early progress towards a more resilient continental financial architecture, aligning liquidity channels with productive investment.

Business Readiness

Business readiness reflects firms' capacity to operate productively, integrate into trade networks and respond to competition. It depends on firm capabilities, the operating environment and access to finance – factors that determine how effectively enterprises absorb technology, scale production and link to value chains (IMF 2025). Despite expanding connectivity and market access, productivity and managerial gaps remain binding. Enterprise surveys show that managerial quality, digital adoption and certification rates lag East Asia and LAC, with high software costs, shallow skills ecosystems and limited management depth constraining firm upgrading (World Bank 2025b; UNIDO 2023).

Figure 2.19: Financial Readiness Regional Performance Distributions



Source: International Monetary Fund (International Financial Statistics – Financial Depth and Financial Reserves Index); World Bank (Global Findex Database 2025 – Global Financial Readiness Index,), and author calculations.

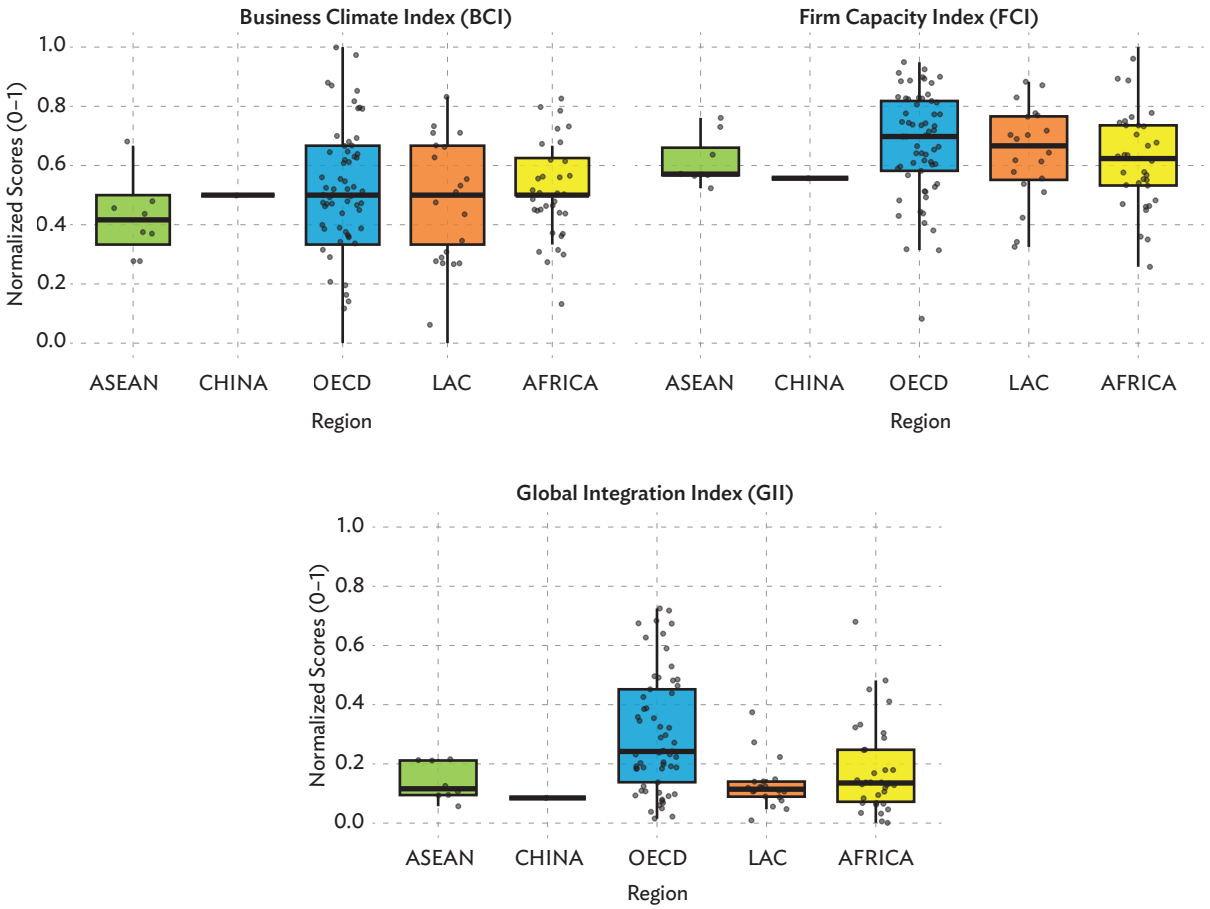
Recent firm-level literature shows that African enterprises participating in global value chains register higher rates of process and product innovation than non-GVC peers, albeit from a low base, underscoring the potential of international linkages to stimulate technological upgrading even in capacity-constrained environments. In Cameroon and Côte d'Ivoire, for instance, GVC-integrated firms tend to be larger, more productive and more export-oriented than domestic counterparts, while regional value chain participation in East Africa's textiles and apparel sector has supported backward integration and local supplier growth.

Infrastructure reliability and the operating environment continue to limit competitiveness. Power interruptions, transport delays and broadband deficits raise costs for manufacturing and logistics sectors, while complex tax procedures, informal payments and weak contract enforcement weigh on SMEs. Reform leaders such as Morocco and Rwanda demonstrate how streamlined regulation and digitalized administration can improve reliability and formalization (AfDB 2025). Access to finance remains restricted by high collateral requirements and fragmented credit systems,

leaving many firms dependent on informal funding. Expanding credit registries, movable collateral regimes and guarantee facilities is essential to mobilize capital and scale production (AfDB 2025; IMF 2025).

African firms also face higher trade costs and clearance times than peers. Non-tariff barriers, inconsistent documentation and limited risk-based inspections inflate costs, though digital single window systems and port modernization, such as Morocco's Tanger Med and Kenya's Northern Corridor, are improving corridor reliability. The AfCFTA offers a platform to unify markets and expand scale economies, but success depends on continued customs modernization, standards harmonization and transparent dispute resolution (OECD 2025a; WTO 2024). As shown in Figure 2.20, Africa's median scores remain below global benchmarks, yet reform-driven economies in North and East Africa demonstrate that coherent business climate and logistics reforms yield measurable gains.

Figure 2.20: Business Readiness Regional Performance Distributions



Source: World Bank (Enterprise Surveys – Firm Capacity Index, and Global Integration Index); World Bank (B-READY Program – Business Climate Index, BCI), and author calculations.

2.13 Africa's GVC Readiness Index: Intra-Regional Comparisons

Africa's readiness for GVC integration remains imbalanced, shaped by sharp contrasts in infrastructure, institutional quality and industrial structure. Southern and North Africa anchor continental performance, supported by stronger trade corridors, customs modernization and established manufacturing clusters in Morocco, South Africa, Egypt and Tunisia. These hubs combine relatively predictable regulation and corridor reliability with expanding renewables and digital connectivity. East Africa sits in transition: progress in digital public infrastructure and trade facilitation is tangible, yet recurrent power unreliability and corridor inefficiencies still cap competitiveness. West and Central Africa remain constrained by fragmented infrastructure, high logistics costs and institutional fragility, keeping firms at the periphery of production networks.

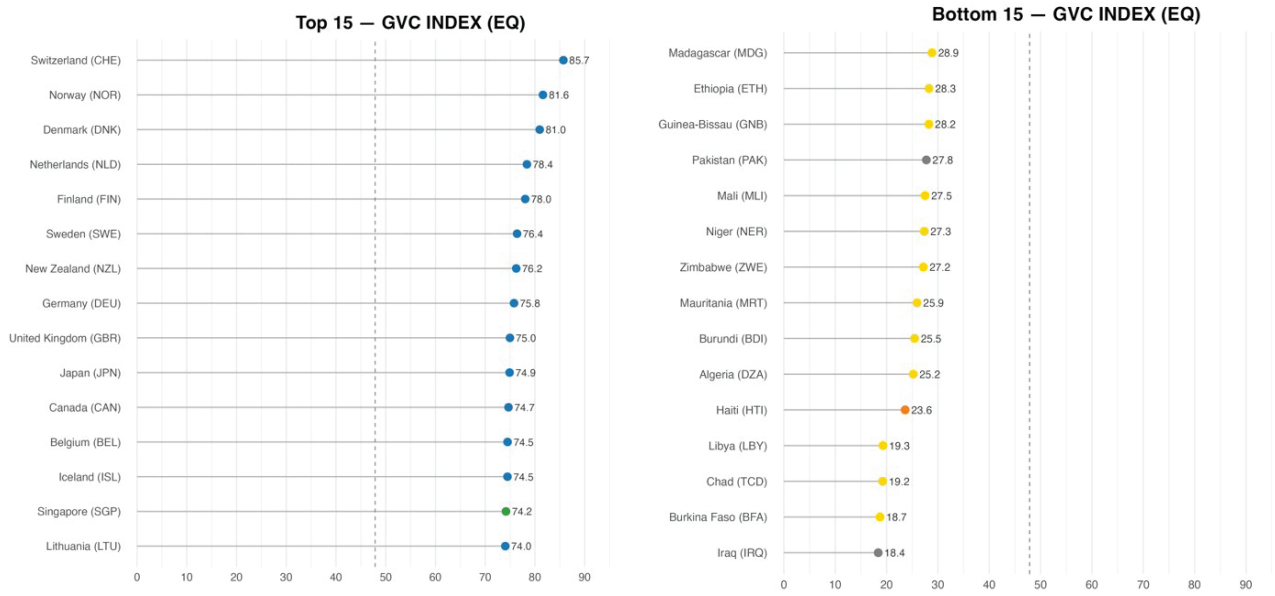
These disparities argue for differentiated policy pathways that reflect varied starting points while advancing continental coherence through the African Union, the AfCFTA Secretariat and regional economic communities (RECs). Scaling best practice in corridor management, single window interoperability and renewable grid reliability can accelerate convergence and strengthen Africa's position in reglobalized supply chains.

Variation across readiness dimensions is widest in technology and connectivity, and institutional and geopolitical resilience, underscoring persistent gaps in broadband depth, electricity reliability data governance and regulatory stability. Economies such as Kenya, Mauritius and Ghana perform relatively strongly where digital infrastructure, governance reliability and business regulation align. Gaps are narrower in trade and integration, and sustainability and energy, where investment has advanced, but systemic grid and border inefficiencies persist, especially in landlocked economies.

Figure 2.21 situates Africa within the global GVC-readiness distribution, and many African economies cluster near the lower quartile, confirming structural asymmetries in technology, governance and finance. Within Africa, North and Southern Africa consistently sit above the continental median, while dispersion elsewhere is among the widest globally. Frontier economies (Switzerland, Norway, Singapore) define the upper range with composite scores above 75, reflecting deep technological and institutional integration.

Financial and business readiness remain the most binding constraints. Shallow credit markets, limited trade finance and uneven diffusion of firm capabilities hinder upgrading into higher-value segments. Priorities include deepening financial intermediation, harmonizing credit infrastructure and promoting SME digitalization. The effectiveness of AfCFTA implementation, especially customs modernization, standards alignment and corridor investment, will determine whether demographic scale and natural endowments translate into durable competitiveness.

Figure 2.21: GVC Readiness Top 15 and Bottom 15 Economies



Note: The Global Value Chain (GVC) Readiness Index aggregates six equally weighted dimensions: technology and connectivity, trade and integration, sustainability and energy, institutional and geopolitical, financial, and business environment. Each pillar combines normalized indicators scaled from 0 to 1, with cost- and risk-based variables direction-adjusted so that higher scores represent stronger readiness. The composite index is rescaled to a 0-100 range.

Source: International Monetary Fund (Artificial Intelligence Preparedness Index); International Telecommunication Union (ITU DATA); GSMA (Mobile Connectivity Index); World Bank (Logistics Performance Index; Worldwide Governance Indicators; World Development Indicators; Global Findex Database; Enterprise Surveys; B-READY Program); World Trade Organization (World Integrated Trade Solution); International Renewable Energy Agency (Renewable Energy Statistics); International Energy Agency (IEA Statistics); Ember (Global Electricity Review), and author calculations.

Southern Africa

Anchored by South Africa, Southern Africa remains the continent's most integrated subregion. Strategic corridors (notably the North-South Corridor) link inland SADC economies to Durban, the Kazungula Bridge and one-stop border post (Zambia-Botswana) have cut transit times. SADC/Southern African Customs Union (SACU) programmes continue customs modernization via single window platforms, digital risk-based inspections and AEO scaling, with steps towards mutual recognition and e-certificates of origin. South Africa's AEO-US Customs-Trade Partnership Against Terrorism (C-TPAT) mutual recognition signals operational trust that can lower insurance premiums and corridor risk pricing.

The subregion ranks among the highest in trade and integration (strong LPI and trade-to-GDP, see Figure 2.16), though dispersion is wide given uneven corridor reliability and automation. Technology and connectivity sit above the continental median – broadband and mobile coverage are extensive – but AI preparedness lags comparators, pointing to the need for mid-level digital and data science skills.

Sustainability and energy are improving (with renewables led by Namibia and South Africa), yet grid reliability continues to limit industrial uptime despite adoption of SAIDI/SAIFI benchmarks around SEZs. Institutional and geopolitical scores benefit from relatively higher regulatory quality and political stability, with contracting and border transparency varying across states. Financial performance is mixed; South Africa leads in private credit and reserves, while smaller economies face thin intermediation. Business readiness is moderate given uneven firm digitalization and productivity.

North Africa

The region leads overall GVC readiness (see Figure 2.21), leveraging EU proximity, preferential access and sustained investment in logistics and renewables. Morocco and Egypt anchor this performance through large-scale SEZs, industrial platforms, and green hydrogen and renewables programmes.

Technology and connectivity is the strongest on the continent, with high internet penetration, expanding mobile broadband and rising AI preparedness. Trade and integration continue to strengthen top-tier LPI scores and corridor performance, especially around Tanger Med. Sustainability and energy sit well above the continental average with lower CO_2 intensity and higher modern renewables shares (see Figure 2.17).

Institutional and geopolitical readiness is comparatively robust due to higher regulatory quality and improving governance, though episodic policy uncertainty and administrative fragmentation can affect perceptions. Moreover, financial readiness benefits from larger banking systems and stronger FX buffers, venture/innovation finance remains narrow. Business readiness is strong in SEZs and export hubs but weaker among smaller firms where digital adoption and certification lag.

West Africa

West Africa combines notable digital progress with structural constraints. Nigeria and Ghana lead in fintech, mobile money innovation and digital services exports, lifting technology and connectivity and elements of financial readiness. In 2024, Nigeria's digital economy was nearly 20% of GDP – about four times the oil sector (US Department of Commerce 2024).

Yet, trade and integration trails continental and global medians (see Figure 2.16) as persistent non-tariff barriers, port congestion and weak overland connectivity raise costs. Additionally, sustainability and energy is held back by low renewables adoption and grid instability. Institutional and geopolitical readiness varies widely; Ghana and Côte d'Ivoire show improving frameworks, while several Sahelian economies face heightened risks. Finally, financial readiness is buoyed by mobile money penetration but constrained by shallow private credit and limited reserves, and business indicators point to low firm capacity and limit regional, and GVC integration.

Central Africa

Central Africa is the least integrated subregion, with broad deficits across all six pillars despite significant resource endowments. Chad, the Central African Republic and the Republic of Congo sit among the lowest globally on logistics performance, regulatory quality and digital connectivity (see Figure 2.18).

Technology and connectivity is weakest, with minimal broadband and high internet costs. Trade and integration suffer from fragmented corridors, inefficient ports and limited border automation. Sustainability and energy is undermined by unreliable grids and dependence on traditional biomass. Institutional fragility depresses regulatory quality and political stability, while weak grid management lowers electrification readiness. Financial performance is low due to thin reserves, high dollarization and limited credit. Firm-level gains are sporadic and urban-centered.

A coordinated strategy is required: sustained infrastructure investment, governance reform and stronger regional cooperation, translating policy into operational connectivity across transport, energy and digital networks.

Institutional Innovators

A subset of smaller economies, most notably Rwanda and Mauritius, demonstrates how targeted policy reform and institutional innovation can generate outsized gains in GVC participation even without large industrial bases. Rwanda has emerged as a continental leader in digital public infrastructure and governance innovation: interoperable e-government systems, national digital ID and e-procurement platforms, and open-data ecosystems have strengthened transparency, service delivery and investor confidence.

Sustained investment in digital skills development and the integration of ICT training into education frameworks have translated into measurable progress across the technology and connectivity, institutional and geopolitical, and business dimensions of the GVC Readiness Index. Mauritius, by contrast, illustrates how institutional depth and regulatory predictability can anchor diversification. Long-standing commitments to rule-of-law reform, investment promotion and innovation-friendly regulation have positioned the economy as a regional hub for digital commerce, fintech and green technology deployment. Strong performance across financial readiness, regulatory quality and business climate reflects close alignment between policy frameworks and private sector capability upgrading.

Taken together, these cases show that institutional strength, policy coherence and governance innovation, rather than scale or resource endowment alone, can determine GVC competitiveness. Both economies have leveraged transparent regulation, credible reform signaling and cross-sector coordination to attract knowledge-intensive investment and advance into higher-value segments of the global production system.

Broader Implications

The experience of these institutional innovators reinforces the broader findings in Annex 2.3, Africa's GVC readiness remains highly segmented, with deep asymmetries across subregions in industrial development, digital maturity, infrastructure access and regulatory quality. Uniform, continent-wide approaches are unlikely to yield results. Differentiated strategies are needed, raising underperforming subregions through targeted capacity-building and institutional development, while consolidating and scaling high-performing models through policy diffusion and peer learning.

Regional coordination platforms, including the African Union, the AfCFTA Secretariat and RECs, are well placed to benchmark readiness, disseminate effective policy models and align infrastructure and regulatory reforms. Progress towards a more inclusive and convergent readiness profile will depend on sequenced, evidence-based interventions that mobilize capital, technical assistance and regulatory harmonization across diverse economic geographies. These findings provide the empirical foundation for the strategic roadmap that follows, which sets out actionable policy and investment priorities to accelerate Africa's integration into global value chains.

2.14 Roadmap for Strategic Global Value Chain Integration – Aligning Africa's Policy Priorities

Africa's ability to compete in and capture value from the GVCs will depend on how effectively national and regional agendas align with an international production system that is being reshaped by digitalization, decarbonization and geopolitical realignment. As investors and multinational firms diversify sourcing to strengthen resilience, Africa faces a rare opportunity to reposition itself within emerging supply networks. Realizing this potential requires a coherent continental strategy that lowers participation risk, strengthens institutional credibility and delivers predictable, investable projects capable of attracting long-term capital.

This strategic roadmap identifies five mutually reinforcing policy levers – digital connectivity, renewable energy deployment, investment facilitation, regulatory adaptation and regional integration – that together define a pathway for accelerating GVC readiness. These levers are not standalone initiatives but interconnected pillars of an integrated investment strategy, aligned with Africa's diverse macroeconomic realities and institutional baselines. The framework seeks to channel public reform momentum and blended finance towards bankable, future-ready sectors, positioning policy coherence as the foundation for sustainable capital formation and cross-border value creation.

Harnessing the Digital Technology Transition

Digital transformation is the first enabler. With fewer than 30% of Africans having access to fixed broadband, and mobile broadband costs among the highest globally, closing the connectivity gap has become an economic imperative. Governments should earmark spectrum auction revenues for universal service funds and accelerate last-mile infrastructure, while implementing the AfCFTA Digital Trade Protocol 2024 to harmonize rules on e-signatures, data standards, cross-border data flows and cybersecurity. Regional programmes to certify at least 500,000 ICT professionals by 2028, with gender parity benchmarks, would strengthen the talent base. Complementary reforms, reducing ICT import tariffs, promoting affordable access devices, and investing in AI-readiness and digital public infrastructure – such as digital ID, payment systems and registries – can help African economies leapfrog legacy systems and expand their share of digitally deliverable services.

Seizing Africa's Green Comparative Advantage

Africa's abundant renewables and critical mineral reserves position it strategically in the global net zero economy, yet deployment is hindered by underinvestment and fragmented grids. Modernizing SEZ frameworks to reward renewable sourcing and enforce local content rules can anchor green industrial clusters. A blended finance facility led by the AfDB can de-risk cross-border renewable energy projects and strengthen regional power pool integration, where pooled procurement has already lowered costs by about 12% (AfDB, 2025). Eliminating non-tariff barriers and aligning standards with ISO/IEC benchmarks could cut certification lead times by 30-40%. With these reforms and effective risk-mitigation mechanisms, Africa can convert its green endowments into a durable competitive advantage in low-carbon GVC segments.

Attracting and De-Risking Global Value Chain-Oriented Investment

Investment facilitation and risk mitigation are critical for scaling participation. Operationalizing the AfCFTA Protocol on Investment by 2026 should include a centralized dispute resolution mechanism, enforceable investor protections and an African Arbitration Academy to strengthen legal certainty. Establishing a Pan-African Trade Disruption Observatory, modeled on LAC's ALADI system, would provide real-time analytics on trade frictions and supply chain shocks. Mobilizing long-duration private capital will also require scaled blended de-risking instruments, first-loss guarantees, political risk insurance and local currency hedging, supported by the AfDB, development finance institutions and sovereign wealth funds. Concentrating these efforts around industrial clusters and strategic logistics corridors can convert regulatory reforms into tangible investment pipelines.

Aligning with Global Industrial Policy and Market Access Regulations

Regulatory adaptation will determine competitiveness under new industrial policy regimes. The EU Carbon Border Adjustment Mechanism (CBAM) and the US Inflation Reduction Act continue to reshape access to major markets by linking trade preferences to emissions intensity, traceability and local content compliance. Africa must establish regulatory intelligence units within trade and industry ministries to monitor plurilateral negotiations, anticipate standards shifts and translate them into domestic legislation. Bilateral regulatory sandboxes with the EU and US in sectors such as smart grids, electric mobility, fintech and carbon capture can fast-track certification and testing, while capacity building in carbon accounting, rules of origin and environment, social and governance (ESG) due diligence for policymakers and firms will be vital for sustained compliance.

Finally, regional integration remains the anchor for scale and resilience. Effective implementation of the AfCFTA, through customs modernization, corridor investment, harmonized standards and dispute-resolution mechanisms, will determine whether Africa converts its demographic and resource scale into competitiveness. As GVCs reconfigure around trusted partners and transparent standards, alignment with these emerging frameworks is not optional: it is the condition for durable access to high-value trade corridors and a decisive step toward Africa's full participation in a standards-driven, reglobalized economy.

Strengthening preference utilization is only one component of the broader effort to deepen Africa's regional economic integration. The same institutional and logistical frictions that limit firms' ability to claim tariff preferences also restrict participation in intra-African and cross-regional production networks. Realizing the full potential of the AfCFTA therefore requires a shift from policy intent to operational connectivity, linking digital trade systems, interoperable rules-of-origin (RoO) platforms and corridor infrastructure into a cohesive regional production architecture.

Emerging evidence from the World Bank (2024), the World Trade Organization, or WTO (2025) and the AfCFTA Secretariat (2025) shows that economies with digitalized RoO verification, end-to-end paperless trade and interoperable customs platforms record higher preference utilization, faster clearance times and greater export diversification. In this context, regional integration becomes not only a political commitment but an economic multiplier, one that consolidates gains from improved preference utilization and amplifies them through cross-border logistics, harmonized data regimes and cumulative market access.

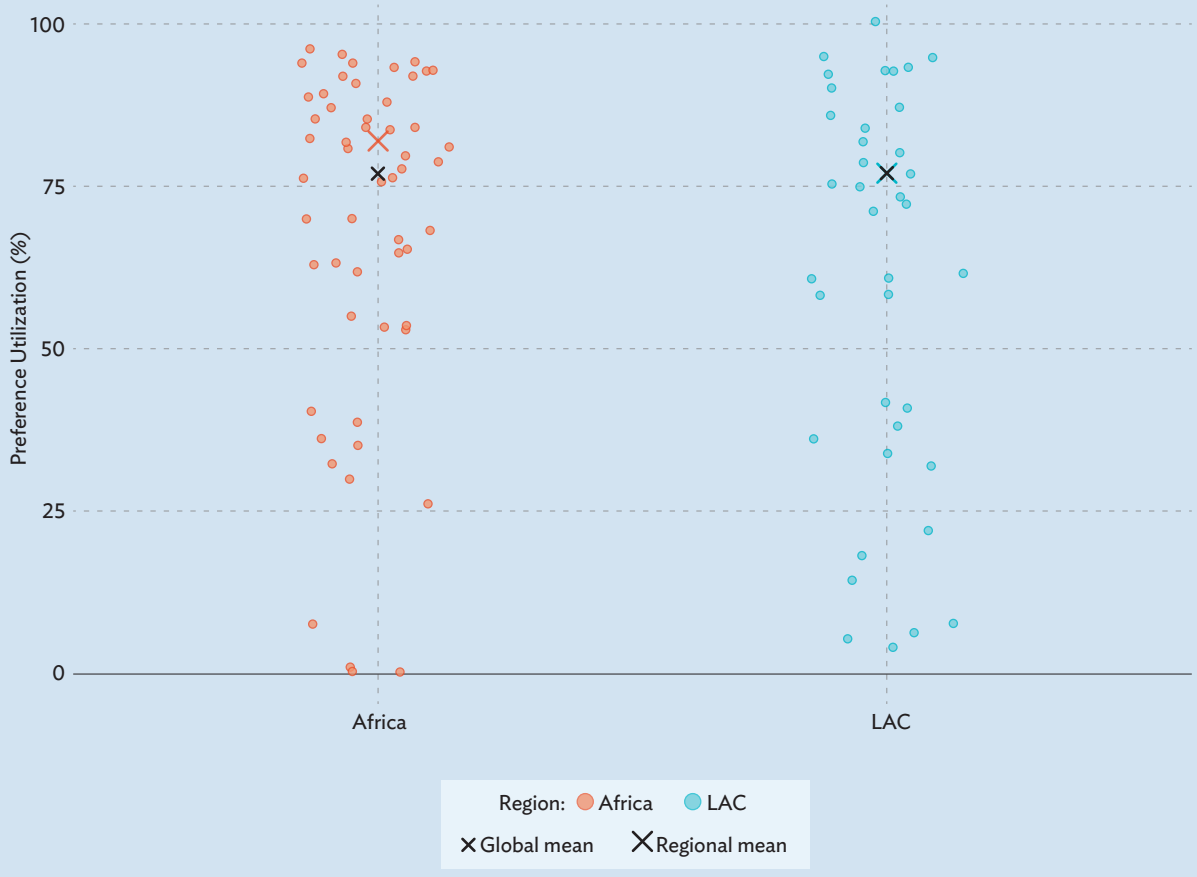
The following section outlines how Africa can institutionalize these linkages through digital RoO registries, blended finance corridor projects and data-driven monitoring frameworks, translating policy convergence into measurable trade and investment outcomes.

Box 2.2: Preference Utilization and GVCS in Africa and LAC

Regional trade agreements and unilateral schemes, such as the Generalized System of Preferences, often grant preferential market access through tariffs lower than those applied on a most-favoured nation basis. However, developing economies frequently face obstacles to fully utilizing preferences, due to structural and policy-related factors, including complex rule of origins, insufficient administrative capacity or low preference margins. This underuse of preferences is particularly detrimental in GVCs as the numerous border crossings of intermediate goods within these chains lead to costly tariff accumulation (see Escaith, 2017 in the GVC Development Report 2017) that effective use of preferential tariff rates could limit. In this context, a novel dataset by the World Trade Organization on preference utilization rates can provide new insights:

1. Detailed import data 2021-2023 indicate that, on average, preference utilization in Africa and LAC aligns closely to a global benchmark. Figure 2.22 shows that the global average preference utilization rate (PUR) stands at 77%. The identical average is calculated for LAC. In Africa, the average is higher, reaching 82%. However, the figure also shows that there is substantial variation within each region with some economies making barely use of their preferences.

Figure 2.22: Preference Utilization in Africa and LAC



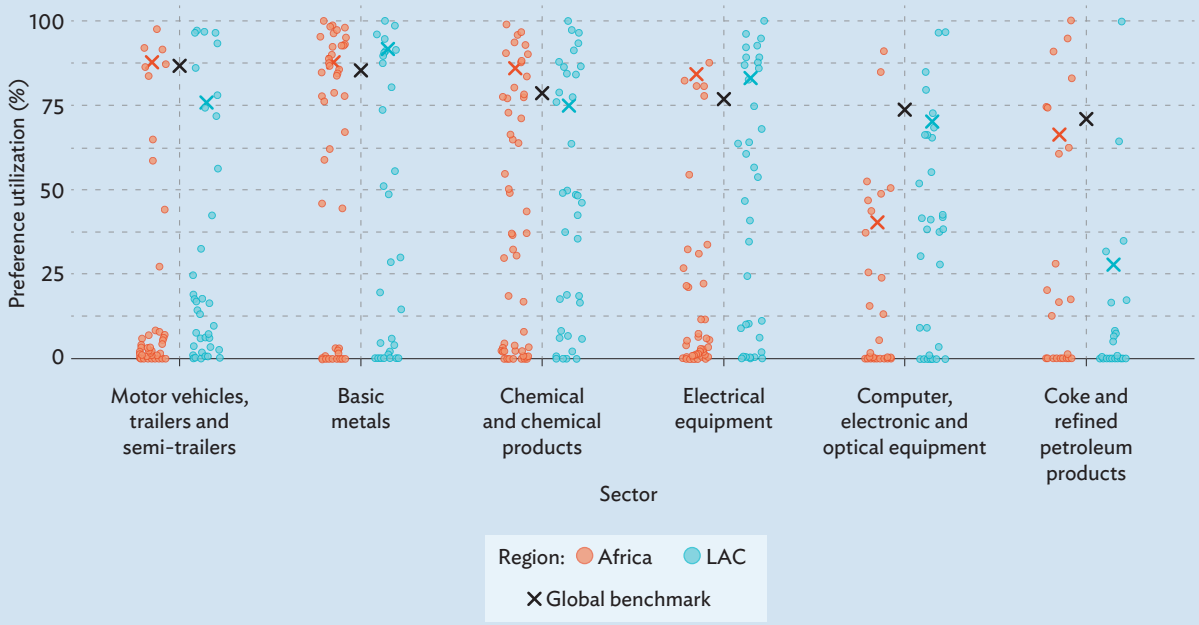
Source: WTO Integrated Data Base (IDB), 2025

continued on next page

Box 2.2: continued

2. In some of the sectors that are most integrated in GVCs globally, based on the high foreign value added content in exports identified using the OECD TiVA database, Africa and LAC could improve their preference utilization rates (PURs). Figure 2.23 shows that PURs in LAC are particularly low in the key GVC sectors motor vehicles, and coke and refined petroleum. African PURs are particularly low for computer, electronic and optical equipment. Moreover, the large variation in PURs within both regions suggests that many economies could export under significantly more favorable terms across major GVC sectors than is currently the case.

Figure 2.23: Preference Utilization in Africa and LAC in High FVAX Sectors



Source: WTO Integrated Data Base (IDB) and OECD TiVA, 2025

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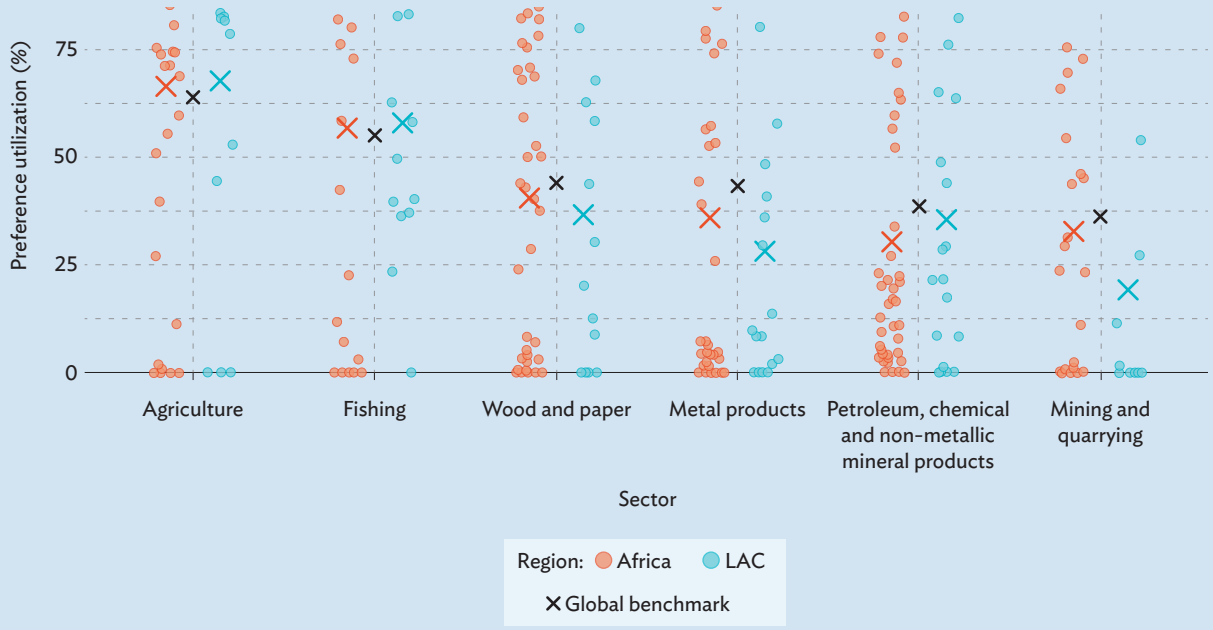
2.15 Completing the Agenda of Regional Economic Integration

Africa continues to lag comparator regions in regional trade integration (see Annex Table 2.A.8), reflecting weak logistics connectivity, non-harmonized rules of origin and underdeveloped cross-border infrastructure. Despite the entry into force of the AfCFTA, intra-African trade remains below 18% of total trade – less than half the level in ASEAN or LAC. The shortfall reflects an execution gap rather than a policy vacuum: customs modernization, corridor connectivity and digital interoperability have yet to converge at scale. Progress now depends on shifting emphasis from protocol ratification to operational delivery.

Box 2.2: continued

3. The sectors that are most critical to African and LAC integration into GVCs exhibit similarly PURs that indicate room for improvement. Unlike many of the sectors most integrated into GVCs worldwide, Africa and LAC are less active in downstream manufacturing and participate upstream mainly through the supply of raw materials such as minerals and agricultural products. To capture this and assess PURs in these sectors, we identify key GVC sectors for Africa and LAC by calculating forward integration measures based on the domestic value added content of the two regions that is re-exported by third economies, so called DVAR ratios, using the EORA database. This approach suggests that agriculture, fishing, mining, minerals, metal products, and wood and paper are critical sectors for these two regions. Yet, even in some of these sectors PURs are relatively low. While Africa and LAC have high PURs in agriculture and fishing, they have lower PURs than the global average in the other four sectors (see Figure 2.24). The difference is particularly pronounced for LAC in metal and mining exports.

Figure 2.24: Preference Utilization in Africa and LAC in High DVAR Sectors



Source: WTO Integrated Data Base (IDB) and EORA, 2025

Overall, we find that Africa and LAC could improve their competitiveness in GVCs if they made better use of their existing tariff preferences. Even in sectors where they have high average PURs, some economies within the regions record very low PURs. This suggests that there is substantive scope to lower import prices from these regions. Realizing these gains requires a thorough analysis of the barriers that continue to constrain preference utilization in these two regions.

Note: This box was contributed by Siramane Coulibaly, Tomasz Gonciarz, Victor Stolzenburg, and Thomas Verbeet (World Trade Organization). The analysis draws on data from the WTO Integrated Database (2025), OECD TiVA (2025), and EORA (2025). The views expressed are those of the authors and do not necessarily reflect the position of the WTO or its Members. The views expressed are those of the authors and do not necessarily reflect the position of the WTO or its Members. Foreign value added (FVAX) measures the share of imported intermediate inputs embodied in a country's exports and is commonly used to capture backward GVC integration. Domestic value added re-exported (DVAR or DVR) reflects the domestic value that is incorporated in a country's exports and subsequently re-exported by third economies, indicating forward GVC integration. These indicators help identify sectors where preferential market access can meaningfully reduce cumulative tariffs and strengthen participation in cross-border production networks.

A central priority is the AfCFTA Digital Rules-of-Origin Registry, under development by the AfCFTA Secretariat and United Nations Economic Commission for Africa, or UNECA (2025). The platform will enable real-time verification, full cumulation of regional inputs and automated clearance, especially for SMEs facing heavy documentation burdens. Integration with national single window and paperless trade systems will enable exporters to claim preferences seamlessly, cutting administrative costs and clearance times by up to 40% (ESCAP 2024). Digital RoO verification will also enhance trade-data integrity and support compliance with global transparency regimes under the EU CBAM and the US IRA.

Physical connectivity must advance alongside digital reform. The proposed AfCFTA Infrastructure Bond, structured through blended finance and partial sovereign guarantees, should prioritize high-impact corridors such as Abidjan-Lagos, Mombasa-Kigali and Durban-Lubumbashi, which together handle more than 40% of intra-African freight (AfDB 2025). Coordinated corridor programmes combining hard infrastructure, ports, rail and roads with soft systems customs harmonization, transit guarantees and electronic documentation could reduce transit times by 20-25% and logistics costs by up to 15% (WTO 2025). Complementary investment in cross-border power pools (SAPP, EAPP, WAPP and CAPP)[2] and regional internet exchange points will stabilize energy supply, expand high-speed data exchange and strengthen e-commerce and digital services trade (ITU 2025; GSMA 2025).

To ensure accountability, regional institutions should deploy data-driven integration dashboards tracking RoO utilization, corridor performance and regional investment trends. Real-time analytics drawing on World Bank LPI, WTO Integrated Database and AfCFTA data would enable policymakers to identify bottlenecks and target technical assistance. The African Union Commission and AfCFTA Secretariat could then calibrate financing and interventions where institutional gaps persist.

Africa's integration agenda must evolve from institutional aspiration to structural investment strategy. The goal is not only to expand intra-African trade volumes but to reshape their composition linking economies through interoperable digital trade systems, efficient logistics corridors and harmonized regulatory frameworks. The next phase of GVC participation will hinge on translating policy alignment into tangible connectivity that lowers trade costs, broadens market access and attracts sustainable investment. Integration into GVCs is therefore not only a development objective but a strategic investment proposition, requiring targeted capital deployment, regulatory modernization and coordinated regional infrastructure.

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2 SAPP (Southern African Power Pool), EAPP (Eastern Africa Power Pool), WAPP (West African Power Pool), and CAPP (Central African Power Pool) are the four regional electricity markets coordinating power generation and transmission across Southern, Eastern, West and Central Africa.

Table 2.3: Africa's Policy Roadmap

Policy area	Africa-specific levers	KPIs to track	Primary owner(s)
Digital technology transition	• Expand IXPs and open-access fibre along key trade corridors (Abidjan-Lagos, Mombasa-Kigali, Durban-Lubumbashi) • Operationalize AfCFTA Digital Trade Protocol (e-signatures, e-invoicing, cybersecurity) • Universal digital ID and data-interoperability frameworks across RECs • PPPs for SME cloud and AI adoption	• Broadband cost (percent GNI per capita) • Corridor 4G/5G coverage • IXP traffic volume • e-ID coverage • Share of firms using cloud/AI	• ICT and digital economy ministries • AfCFTA Secretariat (Digital Trade) • Competition and data protection authorities
Green comparative advantage	• Build green SEZs and eco-industrial parks near renewable corridors • Launch AfDB blended-finance facility for cross-border renewables • Align SEZ frameworks with renewable sourcing mandates • Eliminate NTBs for energy-transition goods (ETGs)	• SAIDI/SAIFI reliability metrics • Renewable share in industrial power • ETG tariff levels • Certified green-park count	• Energy and industry ministries • AfDB/RECs infrastructure units • Customs and standards authorities
Critical minerals & processing	• Establish value-addition hubs for lithium, cobalt, and rare-earths (DRC-Zambia-Namibia) • Regional ESG and traceability protocols via AU/UNCTAD • Open-access corridors for mineral exports (Central & Southern Africa)	• Share of minerals processed domestically • ESG/traceability compliance rate • Corridor throughput (tons/year)	• Mining and industry ministries • AU Commission (Minerals Unit) • Ports and corridor authorities
Attracting & de-risking investment	• Operationalize AfCFTA Protocol on Investment (dispute resolution, arbitration academy) • Beneficial-ownership registry integrated with customs risk engines • Expand port-proximate SEZ/bonded zones (Tema, Mombasa, Durban) • Unified digital permitting and e-procurement	• FDI approval SLA (days) • BO matches in customs risk system • SEZ/bonded zone count • Share of tenders processed online	• Investment promotion agencies • Justice and customs ministries • AfCFTA Secretariat (Investment)
Global industrial-policy alignment	• Establish regulatory sandboxes with EU/US for conformity testing and CBAM readiness • Adopt ISO/IEC and cybersecurity standards across RECs • Launch supplier-compliance programs for EU CBAM / IRA buyers	• MRA coverage by sector • CBAM-ready sectors • Exporters certified ISO/IEC-cyber • Buyer audit success rate	• Trade and industry ministries • Standards bodies • Chambers of commerce
Regional economic integration (rules & infrastructure)	• Implement AfCFTA Digital Rules-of-Origin registry • Issue AfCFTA Infrastructure Bond for corridor development • Mutual recognition of AEOs across RECs • Harmonize border management & electronic documentation	• Share of declarations via single window • AEO MRA count • Average border release time • RoO utilization rate	• Customs authorities • AfCFTA Secretariat • RECs' transport & trade directorates
Connectivity & logistics	• Prioritize multimodal links in Abidjan-Lagos, Mombasa-Kigali, and North-South corridors • Develop regional port community systems (PCS) • Ensure redundancy in key maritime routes	• Port turnaround time • Corridor dwell time • PCS transaction share • Corridor reliability index	• Transport ministries • Port authorities • Corridor management institutions

continued on next page

Table 2.3: continued

Table 2.3: Africa's Policy Roadmap			
Policy area	**Africa-specific levers**	**KPIs to track**	**Primary owner(s)**
Security and compliance	• Integrate BO data and AML frameworks into trade systems • Vet and license 'trusted corridor operators' • Joint border operations to reduce cargo theft and smuggling	• Seizures per risk flag • Corridor incident rate • Percent shipments via vetted operators	• Finance and justice ministries • Customs • Interior and security agencies

AfCFTA = African Continental Free Trade Area; RECs = Regional Economic Communities; ETG = Energy Transition Goods; SEZ = Special Economic Zone; AEO = Authorized Economic Operator; CBAM = Carbon Border Adjustment Mechanism; ISO/IEC = International Organization for Standardization / International Electrotechnical Commission; PPP = Public–Private Partnership; MRV = Measurement, Reporting, and Verification

Note: The Africa Policy Roadmap summarizes actionable policy levers and institutional roles drawn from AfCFTA, AU, AfDB, and World Bank–WTO frameworks. It is designed as a diagnostic and operational reference, rather than a prescriptive policy blueprint. Key Performance Indicators (KPIs) serve as indicative metrics for tracking progress across digital, sustainability, logistics, investment, and governance enablers.

2.16 Comparative Discussion and Prospects for Successful Integration

LAC and Africa stand at parallel crossroads in the reglobalization era. Both regions face a common structural test: shifting from commodity-dependent, low-complexity exports towards reliable, digitally enabled and low-carbon production fast enough to sustain growth, employment and investor confidence. Despite notable progress, participation in GVCs remains shallow, with most economies concentrated in low-productivity segments. New TiVA-based evidence confirms that while total participation rose markedly during 1995-2011, momentum has since weakened. From 2011 to 2022, backward linkages increased only modestly while forward linkages flattened, indicating consolidation rather than renewed expansion of integration. Evidence across this chapter – spanning diversification, upgrading and resilience – shows that while the geography of trade is broadening, the depth of inclusion remains limited. Apparent diversification often masks concentration: rerouted trade flows, particularly Chinese indirect value added to the US, benefit mainly established Asian economies such as Viet Nam, Chinese Taipei and Singapore, with limited spillovers to Africa or LAC. Spurious diversification persists, partner counts are rising, yet concentration and technological dependence remain high.

Three persistent gaps shape both regions' readiness for reglobalization. First, technological and digital readiness, though improving, still lags global benchmarks, constraining participation in data-driven and service-intensive GVCs. High fixed broadband costs and limited backbone infrastructure, evidenced in Nordås and Xu (2024), restrict the ability of firms to engage in digital segments of trade. Second, sustainability and energy resilience remain uneven: LAC leads in clean electricity generation and Africa in critical mineral endowments, but both need stronger alignment between trade, industrial and energy policies. Third, institutional and

geopolitical resilience, regulatory predictability, trade facilitation and risk management continue to define investor confidence and supply chain reliability. Together these gaps underpin a central finding of Chapter 2: integration alone is no longer sufficient. The TiVA patterns and firm-ownership diagnostics demonstrate that formal participation does not guarantee upgrading, domestic firms in both regions remain concentrated in low-complexity, assembly-intensive tasks dominated by foreign-controlled value capture. Economies must therefore be technologically, institutionally and climatically ready to compete in the next configuration of global production.

LAC possesses stronger modern services capabilities, more permissive data governance regimes and cleaner power systems, providing a platform for nearshoring and green manufacturing. If corridor reliability improves and digital bottlenecks are reduced, TiVA evidence suggests renewed backward linkage potential in sectors such as electronics, medical devices and digitally intensive manufacturing. With improved corridor reliability, standardized conformity-assessment procedures for ETGs and bankable green PPAs the region can position itself in reliability-priced sectors such as electronics, medical devices and digitally intensive manufacturing.

Africa, by contrast, combines rapid mobile technology and fintech diffusion with abundant renewable energy and mineral resources. Yet TiVA data show Africa's integration remains primarily forward-oriented – driven by raw material exports with limited domestic value capture – underscoring the need to expand processing and intermediate goods capabilities. Its opportunity lies in converting these endowments into processing, logistics and digital services hubs if grid reliability, traceability and contract bankability advance in sequence. Targeted corridor upgrades, standardized PPAs and the operationalization of AfCFTA digital trade and single window systems can move Africa from fragmented participation to integrated, higher-value engagement.

Across both regions, the practical agenda must be corridor-first and KPI-anchored, emphasizing measurable outcomes over aspirational commitments. Translating readiness into performance requires coordinated progress across four mutually reinforcing pillars.

- **Digital and data infrastructure**: Expand IXPs and enforce backbone service standards along major trade corridors. Deploy interoperable e-ID systems and universal digital ID coverage and promote SME adoption of cloud computing and AI.
- **Energy and sustainability readiness**: Fast-track substation and last-mile grid upgrades to strengthen reliability. Publish low- or zero-tariff lanes for ETGs under a harmonized-system list and align conformity assessment procedures with international standards to accelerate participation in clean technology value chains.
- **Trade facilitation and investment frameworks**: Operationalize trusted trader lanes through AEO mutual recognition, pre-arrival processing and e-payments. Establish one-stop investment windows with standardized PPP models, partial

credit guarantees and transparent project pipelines to attract and de-risk private capital.

- **Skills, enterprise upgrading and inclusion:** Scale targeted upskilling and supplier-development programs that enable micro, small, and medium-sized enterprises (MSMEs) to integrate into original equipment manufacturer (OEM) supply tiers and digital service networks. Strengthening absorptive capacity is essential to convert connectivity into competitiveness.

Progress across these pillars should be tracked through a compact readiness scorecard covering corridor uptime, IXP traffic, e-ID coverage, grid reliability (SAIDI/SAIFI), ETG tariff levels and certification times, AEO share of exports, licensing turnaround and MSME upgrading rates. To accelerate impact, governments should sequence reforms: (1) fix corridor and grid reliability on priority routes, (2) stand up digital trust enablers (IXPs, e-ID, single windows), (3) operationalize bankable PPAs and standardized ETG conformity, and (4) crowd in private capital via guaranteed platforms and pipeline transparency. Delivery should be owned by cross-ministerial "readiness units" with quarterly KPI reviews and sunset clauses for underperforming programmes. On the investor side, publishing corridor service-level agreements and green power availability maps can shorten time-to-investment and anchor OEM supplier upgrading.

Together these actions operationalize the chapter's central message that reglobalization is not a retreat but a rewiring. Economies that combine reliability, digital trust and low-carbon competitiveness will secure durable advantages in the new geography of trade. For LAC and Africa, success will hinge on converting endowments into bankable reliability, measured in hours of corridor uptime, cents per kilowatt-hour of certified clean power, minutes to clear customs and the share of MSME suppliers meeting OEM quality standards. Where these metrics move, TiVA will follow higher domestic value capture, deeper backward linkages, and more resilient participation in the next wave of sustainable, digitally driven growth.

Building on the comparative roadmap developed in Chapter 2, the next chapter turns to a live test case where reglobalization is already reshaping industrial geography: the global EV value chain. Chapter 3 traces this system end-to-end – from critical mineral extraction and processing to batteries, motors, electronics, charging infrastructure, recycling and software – and examines how value added and carbon burdens are being redistributed relative to internal combustion engine vehicles (ICEVs). Using life cycle analysis under varying power mix and efficiency scenarios, it quantifies emissions outcomes and identifies policy levers that reconcile competitiveness with decarbonization. Through a product space lens, the chapter maps where developing economies can enter, climb and diversify across EV-related segments of global production.

For policymakers in LAC and Africa, the implications are immediate and practical. The enabling conditions highlighted in Chapter 2 corridor-first digital reliability, bankable green PPAs, trusted trader lanes and predictable investment facilitation remain decisive. Within the EV ecosystem, opportunities lie in critical mineral processing, mid-stream battery components, motor and electronics niches and downstream services such as charging networks, data systems and circular economy solutions. The EV case provides a concrete template for translating Chapter 2's readiness levers into sector-specific strategies that price reliability, accelerate technological upgrading and deliver low-carbon growth. Chapter 3 applies this framework to quantify how these interventions can reshape participation, value capture and resilience across the next generation of reglobalized production networks.

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Annex 2.1: Latin America and the Caribbean (LAC) Readiness Indicators

This appendix presents the country-level data and composite rankings that underpin the readiness diagnostics for LAC discussed in Chapter 2.

Indicators are min-max normalized (0-1) and grouped into three composite pillars:

(1) Technology and connectivity
(2) Sustainability and energy
(3) Institutional and geopolitical Resilience

The tables report normalized indicator scores (0-1), composite pillar rankings and overall readiness scores for all LAC economies, enabling comparative benchmarking within the region and against global reference economies.

Annex Table 2.A.1: Pillar Ranking By Country Technology Readiness

Rank	Logistic Performance Index	Mobile Connectivity Index	ICT Capital Goods Imports Index	Human Capital	Digital Services Trade Restrictiveness Index	Digitally Deliverable Services Index	Government Promotion of Investments in Emerging	Global Cyber-security Index
1	Singapore	Singapore	Singapore	Singapore	Belize	United States	China	United States
2	Finland	Switzerland	United States	Israel	Laos	Ireland	Singapore	Estonia
3	Denmark	Denmark	Vietnam	Brunei	Cambodia	Germany	Luxembourg	United Kingdom
4	Germany	Australia	Malaysia	Iceland	Argentina	China	Israel	Singapore
5	Netherlands	Finland	Philippines	Denmark	Uruguay	Japan	Finland	South Korea
6	Switzerland	Norway	South Korea	Sweden	China	Netherlands	United States	Spain
7	Austria	Ireland	Mexico	Estonia	Indonesia	Switzerland	South Korea	Malaysia
8	Belgium	United States	Czechia	Malaysia	Poland	Luxembourg	Malaysia	Lithuania
9	Canada	United Kingdom	Hungary	United Kingdom	Colombia	France	France	Japan
10	Sweden	New Zealand	Ireland	New Zealand	Iceland	United Kingdom	Canada	Canada
11	France	Sweden	Thailand	Norway	Türkiye	Canada	Germany	France
12	Japan	Austria	Netherlands	Finland	Chile	Italy	Japan	Australia
13	Spain	Netherlands	Japan	Netherlands	Bolivia	Belgium	Sweden	Türkiye
14	South Korea	Iceland	Israel	Canada	Peru	Sweden	Brunei	Germany
15	United States	Luxembourg	Germany	South Korea	Brunei	South Korea	Netherlands	Luxembourg
16	Australia	Germany	Slovakia	Australia	Brazil	Spain	United Kingdom	Latvia
17	China	Canada	Poland	Uruguay	Latvia	Israel	Thailand	Portugal
18	Greece	France	Brazil	United States	South Korea	Finland	Indonesia	Netherlands
19	Italy	Japan	Laos	Greece	Austria	Austria	Ireland	Norway
20	Norway	Spain	Australia	Portugal	Singapore	Denmark	Switzerland	Brazil

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Annex Table 2.A.1: continued

Annex Table 2.A.1: Pillar Ranking By Country Technology Readiness								
Rank	Logistic Performance Index	Mobile Connectivity Index	ICT Capital Goods Imports Index	Human Capital	Digital Services Trade Restrictiveness Index	Digitally Deliverable Services Index	Government Promotion of Investments in Emerging	Global Cyber-security Index
21	United Kingdom	Estonia	Argentina	Luxembourg	Greece	Poland	Portugal	Belgium
22	Estonia	South Korea	Costa Rica	Ireland	Paraguay	Türkiye	Vietnam	Italy
23	Iceland	Belgium	Denmark	Japan	Slovenia	Australia	Austria	Finland
24	Ireland	Lithuania	Sweden	France	Israel	Brazil	Estonia	Indonesia
25	Israel	Slovenia	Finland	Slovenia	Hungary	Norway	New Zealand	Sweden
26	Luxembourg	Czechia	Indonesia	Austria	Czechia	Philippines	Australia	Vietnam
27	Malaysia	Israel	Austria	Poland	Belgium	Czechia	Lithuania	Greece
28	New Zealand	Italy	Canada	Germany	Vietnam	Malaysia	Türkiye	Austria
29	Poland	Slovakia	Portugal	Switzerland	Portugal	Mexico	Czechia	Poland
30	Latvia	Hungary	Iceland	Lithuania	Ireland	New Zealand	Laos	Denmark
31	Thailand	Portugal	Norway	Czechia	Thailand	Hungary	Iceland	China
32	Lithuania	China	Paraguay	Trinidad and Tobago	New Zealand	Portugal	Hungary	Slovakia
33	Portugal	Poland	United Kingdom	Latvia	Philippines	Indonesia	Slovenia	Hungary
34	Türkiye	Latvia	France	Spain	Italy	Argentina	Belgium	Israel
35	Czechia	Greece	New Zealand	Slovakia	Finland	Greece	Denmark	Switzerland
36	Philippines	Uruguay	Colombia	Italy	France	Slovakia	Norway	Thailand
37	Slovakia	Brazil	Latvia	Hungary	Germany	Costa Rica	Uruguay	Ireland
38	Slovenia	Chile	Estonia	Belgium	Spain	Panama	Philippines	New Zealand
39	Vietnam	Türkiye	Peru	Panama	Sweden	Thailand	Myanmar	Mexico
40	Brazil	Malaysia	Panama	Peru	Guatemala	Uruguay	Chile	Iceland
41	Hungary	Thailand	Trinidad and Tobago	Belize	Denmark	Slovenia	Spain	Philippines
42	Panama	Mexico	Chile	China	Lithuania	Estonia	Colombia	Uruguay
43	Chile	Brunei	Lithuania	Indonesia	Netherlands	Colombia	Poland	Dominican Republic
44	Indonesia	Panama	Nicaragua	Colombia	Estonia	Latvia	Latvia	Slovenia
45	Peru	Costa Rica	Italy	Bolivia	Luxembourg	Lithuania	Guyana	Czechia
46	Uruguay	Vietnam	Slovenia	Myanmar	Japan	Iceland	Mexico	Chile
47	Colombia	Indonesia	Türkiye	Brazil	Slovakia	Chile	Trinidad and Tobago	Costa Rica
48	Costa Rica	Colombia	Belgium	Guyana	Mexico	El Salvador	Italy	Colombia
49	Honduras	Argentina	Ecuador	Türkiye	Australia	Peru	Argentina	Paraguay
50	Mexico	Peru	Spain	Costa Rica	Norway	Vietnam	Costa Rica	Brunei
51	Argentina	Ecuador	Switzerland	Mexico	Switzerland	Dominican Republic	Jamaica	Peru
52	El Salvador	Paraguay	Greece	Chile	United Kingdom	Nicaragua	Dominican Republic	Argentina
53	Paraguay	Trinidad and Tobago	Uruguay	Vietnam	United States	Cambodia	Cambodia	Myanmar

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Annex Table 2.A.1: continued

Annex Table 2.A.1: Pillar Ranking By Country Technology Readiness								
Rank	Logistic Performance Index	Mobile Connectivity Index	ICT Capital Goods Imports Index	Human Capital	Digital Services Trade Restrictiveness Index	Digitally Deliverable Services Index	Government Promotion of Investments in Emerging	Global Cyber-security Index
54	Dominican Republic	Dominican Republic	Dominican Republic	Argentina	Costa Rica	Trinidad and Tobago	Slovakia	Panama
55	Guatemala	Philippines	Belize	Honduras	Ecuador	Ecuador	Panama	Jamaica
56	Jamaica	Belize	Luxembourg	Nicaragua	Dominican Republic	Honduras	Brazil	Suriname
57	Nicaragua	Bolivia	Guatemala	Thailand	Canada	Bolivia	Peru	Guyana
58	Trinidad and Tobago	Venezuela	Suriname	Dominican Republic	Malaysia	Laos	Belize	Venezuela
59	Bolivia	El Salvador	Jamaica	Suriname	Panama	Paraguay	Suriname	Ecuador
60	Cambodia	Suriname	Brunei	Philippines	Trinidad and Tobago	Venezuela	Venezuela	Trinidad and Tobago
61	Guyana	Guyana	Honduras	Venezuela	Guyana	Singapore	Ecuador	Laos
62	Laos	Guatemala	Bolivia	Jamaica	Jamaica	Brunei	Greece	Cambodia
63	Venezuela	Cambodia	Venezuela	Paraguay	El Salvador	Belize	Guatemala	Bolivia
64	Belize	Laos	Guyana	El Salvador	Nicaragua	Guyana	Paraguay	El Salvador
65	Brunei	Jamaica	Myanmar	Ecuador	Venezuela	Jamaica	Bolivia	Guatemala
66	Ecuador	Honduras	Cambodia	Guatemala	Honduras	Myanmar	El Salvador	Belize
67	Myanmar	Nicaragua	China	Laos	Myanmar	Guatemala	Honduras	Nicaragua
68	Suriname	Myanmar	El Salvador	Cambodia	Suriname	Suriname	Nicaragua	Honduras

Source: Authors' calculations using World Bank (Connecting to Compete: LPI 2023); GSMA (Mobile Connectivity Index 2023); UN Comtrade (2022 release); Oxford Insights (Government AI Readiness Index 2023); OECD (DSTRI and Digitally Deliverable Services data); Portulans Institute (Network Readiness Index 2023); and International Telecommunication Union (Global Cybersecurity Index, various years).

Conceptual framing and indicator grouping adapted from Estevadeordal, A., Kahn, T. and Werner, A. (2024) Latin America in the New Geometry of Global Supply Chains. Washington, DC: CAF – Georgetown Americas Institute.

Note: Higher values indicate stronger technological and digital readiness. Scores are min–max normalized (0–100) across all economies within the Latin America and Caribbean (LAC) region. Missing values are excluded from pillar averages.

Annex Table 2.A.2: Pillar Rankings By Country Sustainability Readiness								
Rank	Low Carbon Intensity Index	Renewable Energy Consumption Index	Trade In Energy Transition Goods Index	Protectionism in Energy Transition Goods Index	Critical Mineral Index	Biodiversity and Habitat Environmental Performance	Exposure to Natural Disasters Index	Vulnerability To Natural Disasters Index
1	Switzerland	Iceland	Panama	Venezuela	Australia	Germany	Czechia	Finland
2	Sweden	Paraguay	Chile	Brazil	Brazil	France	Hungary	Sweden
3	Costa Rica	Norway	Peru	Argentina	China	Thailand	Luxembourg	Luxembourg
4	Ireland	Uruguay	Australia	Cambodia	Indonesia	Belize	Paraguay	South Korea
5	Iceland	Costa Rica	Jamaica	Uruguay	Chile	Slovenia	Singapore	Iceland
6	Singapore	Sweden	Greece	Bolivia	Türkiye	Latvia	South Korea	Denmark
7	Denmark	Denmark	Brazil	Paraguay	Bolivia	Belgium	Austria	Türkiye
8	Panama	New Zealand	Hungary	Suriname	Argentina	Estonia	Denmark	Ireland
9	Paraguay	Brazil	Brunei	Guyana	United States	Laos	Switzerland	Japan
10	Uruguay	Austria	Luxembourg	Belize	Mexico	Singapore	Bolivia	Switzerland
11	France	Ecuador	South Korea	China	Peru	Czechia	Slovakia	Slovakia
12	Venezuela	Switzerland	Finland	Malaysia	Philippines	Austria	Estonia	Netherlands
13	United Kingdom	Finland	Laos	Laos	Canada	Lithuania	Laos	Austria
14	Colombia	El Salvador	Malaysia	Indonesia	Poland	Portugal	Finland	Estonia
15	Norway	Belize	Sweden	Chile	Germany	Netherlands	Iceland	Germany
16	Luxembourg	Honduras	Italy	Ecuador	Czechia	Australia	Trinidad and Tobago	Lithuania
17	Portugal	Latvia	Estonia	South Korea	Spain	Myanmar	Lithuania	Portugal
18	Italy	Portugal	Germany	Myanmar	Portugal	Bolivia	Latvia	Hungary
19	Latvia	Laos	Japan	Ireland	Norway	Iceland	Israel	Greece
20	Spain	Colombia	Czechia	Philippines	Austria	Denmark	Sweden	Belgium
21	Guatemala	Venezuela	Singapore	Luxembourg	Finland	Dominican Republic	Jamaica	Norway
22	Austria	Peru	Thailand	Estonia	Belgium	Brazil	Norway	New Zealand
23	El Salvador	Nicaragua	China	Thailand	Belize	Ecuador	Ireland	Czechia
24	Dominican Republic	Suriname	Lithuania	Slovakia	Brunei	Colombia	Uruguay	Italy
25	Peru	Canada	United States	Latvia	Cambodia	Italy	Poland	Singapore
26	Myanmar	Guatemala	Denmark	Netherlands	Colombia	Finland	Belgium	Slovenia
27	Nicaragua	Luxembourg	Iceland	Lithuania	Costa Rica	United Kingdom	Suriname	Spain
28	Netherlands	Cambodia	Portugal	Vietnam	Denmark	Philippines	Germany	Poland
29	Finland	Chile	Slovenia	Hungary	Dominican Republic	Malaysia	Netherlands	China
30	Germany	Spain	Poland	Jamaica	Ecuador	Greece	Belize	United Kingdom
31	Brazil	Lithuania	Netherlands	Slovenia	El Salvador	South Korea	Cambodia	United States
32	Hungary	Greece	Türkiye	Czechia	Estonia	Nicaragua	Guyana	Suriname
33	Belgium	Vietnam	Mexico	Greece	France	Costa Rica	United Kingdom	Canada
34	Estonia	Italy	Austria	Poland	Greece	Japan	France	Australia

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Annex Table 2.A.2: continued

Annex Table 2.A.2: Pillar Rankings By Country Sustainability Readiness								
Rank	Low Carbon Intensity Index	Renewable Energy Consumption Index	Trade In Energy Transition Goods Index	Protectionism in Energy Transition Goods Index	Critical Mineral Index	Biodiversity and Habitat Environmental Performance	Exposure to Natural Disasters Index	Vulnerability To Natural Disasters Index
35	New Zealand	Panama	Latvia	Finland	Guatemala	Sweden	Portugal	Chile
36	Philippines	Slovenia	Spain	Portugal	Guyana	Trinidad and Tobago	Guatemala	Uruguay
37	Slovenia	Ireland	Slovakia	Denmark	Honduras	Ireland	Brazil	France
38	Israel	Myanmar	Canada	Spain	Hungary	Chile	Dominican Republic	Guyana
39	Slovakia	United Kingdom	Belgium	Belgium	Iceland	Indonesia	El Salvador	Trinidad and Tobago
40	Argentina	Germany	Philippines	Italy	Ireland	Spain	Spain	Latvia
41	Mexico	Türkiye	Ecuador	Austria	Israel	Switzerland	Greece	Costa Rica
42	Honduras	Estonia	France	Sweden	Italy	Panama	Malaysia	Argentina
43	Greece	Philippines	Israel	France	Jamaica	Slovakia	Italy	Panama
44	Indonesia	Bolivia	United Kingdom	Germany	Japan	Canada	Honduras	Paraguay
45	Türkiye	China	Colombia	Türkiye	Laos	Norway	Türkiye	Laos
46	Chile	United States	Vietnam	Panama	Latvia	Cambodia	Costa Rica	Brazil
47	Guyana	Australia	Suriname	Trinidad and Tobago	Lithuania	Hungary	Slovenia	Belize
48	Ecuador	Mexico	Indonesia	United States	Luxembourg	New Zealand	Argentina	Malaysia
49	Bolivia	France	Switzerland	Dominican Republic	Malaysia	Paraguay	Chile	Israel
50	Japan	Japan	Norway	Australia	Myanmar	Brunei	Thailand	Dominican Republic
51	Czechia	Argentina	Costa Rica	Israel	Netherlands	Jamaica	Ecuador	Vietnam
52	United States	Netherlands	Dominican Republic	New Zealand	New Zealand	Peru	Panama	Venezuela
53	Poland	Slovakia	El Salvador	Colombia	Nicaragua	Luxembourg	Peru	Nicaragua
54	Thailand	Hungary	Uruguay	Mexico	Panama	Suriname	New Zealand	Bolivia
55	Jamaica	Malaysia	Cambodia	Nicaragua	Paraguay	Guyana	Nicaragua	Mexico
56	Belize	Thailand	Ireland	Honduras	Singapore	Argentina	Venezuela	El Salvador
57	South Korea	Dominican Republic	Guatemala	El Salvador	Slovakia	Israel	Myanmar	Jamaica
58	Cambodia	Belgium	Trinidad and Tobago	Guatemala	Slovenia	Venezuela	Canada	Honduras
59	Suriname	Indonesia	New Zealand	Japan	South Korea	Guatemala	Vietnam	Guatemala
60	Malaysia	Jamaica	Paraguay	United Kingdom	Suriname	Uruguay	Australia	Cambodia
61	Australia	South Korea	Argentina	Costa Rica	Sweden	El Salvador	Colombia	Thailand
62	Canada	Czechia	Honduras	Peru	Switzerland	Honduras	Indonesia	Ecuador
63	Lithuania	Guyana	Myanmar	Canada	Thailand	United States	Philippines	Peru
64	Laos	Israel	Nicaragua	Brunei	Trinidad and Tobago	Mexico	Japan	Indonesia

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Annex Table 2.A.2: continued

Annex Table 2.A.2: Pillar Rankings By Country Sustainability Readiness								
Rank	Low Carbon Intensity Index	Renewable Energy Consumption Index	Trade In Energy Transition Goods Index	Protectionism in Energy Transition Goods Index	Critical Mineral Index	Biodiversity and Habitat Environmental Performance	Exposure to Natural Disasters Index	Vulnerability To Natural Disasters Index
65	Vietnam	Poland	Bolivia	Iceland	United Kingdom	Türkiye	Mexico	Colombia
66	Brunei	Singapore	Guyana	Norway	Uruguay	Poland	China	Philippines
67	Trinidad and Tobago	Brunei	Belize	Singapore	Venezuela	Vietnam	Brunei	Myanmar
68	China	Trinidad and Tobago	Venezuela	Switzerland	Vietnam	China	United States	Brunei

Source: Authors' calculations using World Bank (World Development Indicators 2024, CO_2 intensity and renewable energy share); UN Comtrade (2022 exports and MFN tariffs); U.S. Department of Commerce (Executive Order 14017critical-goods list); U.S. Geological Survey (Mineral Commodity Summaries 2024); Yale University (Environmental Performance Index 2024); and WorldRisk Index 2024 (Bündnis Entwicklung Hilft & Ruhr University Bochum).

Conceptual framing and indicator grouping adapted from Estevadeordal, A., Kahn, T. and Werner, A. (2024) Latin America in the New Geometry of Global Supply Chains. Washington, DC: CAF – Georgetown Americas Institute.

Note: Higher values indicate stronger environmental and energy-transition readiness. Scores are min–max normalized (0–100) across all LAC economies. Countries with no mineral reserves receive 0 for that component.

Annex Table 2.A.3: Pillar rankings By Country Institutional And Geopolitical Resilience								
Rank	Export Similarity with China Index	Trade Bans Index	Security Threat Index	Trade with Sanctioned Countries Index	Political Distance from Trading Partners Index	Nonalignment in UN Voting Index	Ethnic Cohesion Index	Working Age Population Index
1	Czechia	United States	Portugal	Belize	Luxembourg	Germany	Denmark	Singapore
2	Vietnam	Brunei	Slovenia	Suriname	Iceland	Belgium	El Salvador	Jamaica
3	Germany	Laos	Iceland	Cambodia	Belgium	Denmark	Germany	South Korea
4	South Korea	Venezuela	Luxembourg	Laos	Austria	Lithuania	Ireland	Brazil
5	Italy	Belize	Singapore	Myanmar	Trinidad and Tobago	Luxembourg	Italy	Malaysia
6	Poland	Suriname	Denmark	Trinidad and Tobago	Denmark	Netherlands	Jamaica	Colombia
7	Thailand	Iceland	Slovakia	Australia	Portugal	Poland	Latvia	Trinidad and Tobago
8	France	Latvia	Austria	Canada	Jamaica	Slovakia	Lithuania	Thailand
9	Netherlands	Cambodia	Norway	Mexico	Slovakia	Slovenia	Norway	China
10	Austria	Guyana	Switzerland	Ireland	Ireland	Greece	Portugal	Costa Rica
11	Türkiye	Luxembourg	Japan	Chile	Sweden	Estonia	South Korea	Luxembourg
12	Japan	Bolivia	South Korea	Panama	Slovenia	Latvia	Sweden	Chile
13	Hungary	Honduras	New Zealand	Luxembourg	Latvia	Norway	Uruguay	Myanmar
14	Spain	Nicaragua	Estonia	New Zealand	France	Portugal	Czechia	Vietnam
15	Slovakia	Slovakia	Hungary	Philippines	Norway	Spain	Poland	Türkiye
16	Lithuania	Trinidad and Tobago	Netherlands	Peru	Czechia	Iceland	France	Indonesia
17	Portugal	Estonia	Poland	Bolivia	Netherlands	Czechia	Japan	Slovakia
18	Sweden	Paraguay	Czechia	Iceland	Spain	South Korea	Greece	Belize
19	Denmark	El Salvador	Finland	Dominican Republic	Estonia	Finland	Paraguay	Mexico
20	United States	Uruguay	Latvia	Nicaragua	Italy	Italy	Dominican Republic	Ecuador
21	Malaysia	Panama	Australia	Vietnam	Germany	Hungary	Finland	El Salvador
22	Singapore	Slovenia	Ireland	Jamaica	Laos	France	Austria	Poland
23	Slovenia	Jamaica	Sweden	Norway	Guyana	Austria	Costa Rica	Suriname
24	Mexico	Myanmar	Canada	Portugal	United Kingdom	Ireland	Chile	Iceland
25	Estonia	Guatemala	Lithuania	Guyana	Israel	New Zealand	Honduras	Spain
26	United Kingdom	Lithuania	Germany	United States	Lithuania	Sweden	Hungary	Austria
27	Belgium	Ecuador	Belgium	Colombia	Poland	Switzerland	Brazil	Switzerland
28	Latvia	Hungary	Israel	Malaysia	Bolivia	Japan	Netherlands	Honduras
29	Philippines	Peru	Spain	Singapore	Switzerland	United Kingdom	New Zealand	Peru
30	Finland	Costa Rica	Costa Rica	Israel	Belize	Australia	Venezuela	Hungary
31	Israel	Dominican Republic	France	Denmark	Costa Rica	Türkiye	Philippines	Dominican Republic

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Annex Table 2.A.3: continued

Annex Table 2.A.3: Pillar rankings By Country Institutional And Geopolitical Resilience								
Rank	Export Similarity with China Index	Trade Bans Index	Security Threat Index	Trade with Sanctioned Countries Index	Political Distance from Trading Partners Index	Nonalignment in UN Voting Index	Ethnic Cohesion Index	Working Age Population Index
32	Indonesia	Finland	United Kingdom	Indonesia	Panama	Canada	Mexico	Canada
33	Canada	Greece	Guyana	Switzerland	Finland	Brazil	Panama	Uruguay
34	Greece	Norway	Suriname	Austria	Colombia	Guatemala	Cambodia	Ireland
35	Luxembourg	Denmark	Vietnam	Sweden	Dominican Republic	Honduras	Nicaragua	Cambodia
36	Switzerland	China	Chile	Japan	Canada	Panama	Australia	Panama
37	Cambodia	Colombia	Uruguay	Uruguay	El Salvador	Colombia	Türkiye	Argentina
38	El Salvador	Czechia	Brunei	France	Paraguay	Myanmar	Slovenia	New Zealand
39	Brazil	New Zealand	Laos	Belgium	Ecuador	Uruguay	Argentina	Nicaragua
40	Ireland	Poland	Argentina	United Kingdom	Greece	Mexico	United Kingdom	Guyana
41	Guatemala	Austria	Italy	Germany	Mexico	Argentina	Slovakia	Australia
42	Dominican Republic	Ireland	Panama	Spain	Singapore	Costa Rica	Vietnam	Laos
43	Myanmar	Philippines	United States	Slovenia	Hungary	Dominican Republic	Colombia	United States
44	Colombia	Türkiye	Malaysia	Argentina	Malaysia	Chile	Thailand	Paraguay
45	Costa Rica	Sweden	China	Thailand	United States	Paraguay	Estonia	Norway
46	Peru	Switzerland	Indonesia	Netherlands	Suriname	Ecuador	Guatemala	Bolivia
47	New Zealand	Chile	Bolivia	Czechia	Argentina	Peru	Belgium	Netherlands
48	Norway	Israel	Greece	Brazil	Philippines	Guyana	United States	Philippines
49	Chile	Portugal	Nicaragua	Hungary	Guatemala	Suriname	Spain	Slovenia
50	Australia	Argentina	Paraguay	Costa Rica	Peru	Belize	Myanmar	Portugal
51	Honduras	Vietnam	Ecuador	South Korea	Indonesia	Jamaica	Ecuador	Venezuela
52	Laos	Indonesia	El Salvador	Ecuador	Honduras	El Salvador	Switzerland	Belgium
53	Argentina	Australia	Peru	Honduras	Brazil	Trinidad and Tobago	Canada	Lithuania
54	Ecuador	Malaysia	Brazil	Brunei	Myanmar	Venezuela	Malaysia	Germany
55	Paraguay	Belgium	Guatemala	Guatemala	Brunei	Thailand	Peru	Italy
56	Uruguay	Brazil	Cambodia	Paraguay	Cambodia	Singapore	China	Czechia
57	Trinidad and Tobago	Germany	Dominican Republic	Slovakia	Uruguay	Philippines	Trinidad and Tobago	United Kingdom
58	Iceland	Italy	Türkiye	Italy	Thailand	Vietnam	Bolivia	Greece
59	Brunei	Netherlands	Colombia	El Salvador	South Korea	Bolivia	Laos	Denmark
60	Jamaica	Spain	Venezuela	Poland	Chile	Malaysia	Israel	Estonia
61	Venezuela	Mexico	Belize	China	Australia	Brunei	Indonesia	Guatemala
62	Suriname	Thailand	Honduras	Venezuela	Türkiye	Laos	Luxembourg	Latvia
63	Bolivia	France	Jamaica	Finland	Japan	Indonesia	Iceland	Sweden
64	Panama	Singapore	Trinidad and Tobago	Latvia	New Zealand	Cambodia	Singapore	Finland

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Annex Table 2.A.3: continued

Annex Table 2.A.3: Pillar rankings By Country Institutional And Geopolitical Resilience								
Rank	Export Similarity with China Index	Trade Bans Index	Security Threat Index	Trade with Sanctioned Countries Index	Political Distance from Trading Partners Index	Nonalignment in UN Voting Index	Ethnic Cohesion Index	Working Age Population Index
65	Nicaragua	United Kingdom	Thailand	Estonia	Vietnam	Israel	Suriname	France
66	Guyana	Canada	Mexico	Greece	Venezuela	Nicaragua	Guyana	Israel
67	Belize	Japan	Myanmar	Lithuania	Nicaragua	China	Belize	Brunei
68	China	South Korea	Philippines	Türkiye	China	United States	Brunei	Japan

Source: Authors' calculations using World Bank (World Development Indicators, governance and demography); UN Comtrade (trade with sanctioned partners); Global Trade Alert (trade bans and restrictions); Freedom House (Freedom in the World); Erik Voeten (UN General Assembly Voting Data); Fund for Peace (Fragile States Index, security category); and Ethnic Power Relations (EPR) Dataset (ETH Zurich).

Conceptual framing and indicator grouping adapted from Estevadeordal, A., Kahn, T. and Werner, A. (2024) Latin America in the New Geometry of Global Supply Chains. Washington, DC: CAF – Georgetown Americas Institute.

Note: Higher values indicate stronger institutional, demographic, and political resilience. Scores are min–max normalized (0–100) within the LAC region. Composite rankings are equal-weighted averages across available indicators.

Annex 2.2: Indicator Definitions and Source Data (LAC)

Annex Table 2.A.4: Technology Indicators								
Country	Logistic Performance index	Mobile Connectivity index	ICT Capital Goods Imports index	Human Capital - AI Readiness index	Digital Services Trade Restrictiveness index	Digitally Deliverable Services index	Government Promotion of Investments in Emerging Techs index	Global Cybersecurity index
Argentina	0.560	0.668	0.197	0.349	0.660	0.640	0.349	0.501
Australia	0.740	0.906	0.204	0.754	0.939	0.709	0.512	0.975
Austria	0.800	0.868	0.176	0.707	0.798	0.745	0.537	0.939
Belgium	0.800	0.834	0.114	0.588	0.838	0.794	0.456	0.963
Belize	0.000	0.603	0.096	0.448	0.000	n/a	0.235	0.103
Bolivia	0.480	0.593	0.085	0.422	0.758	0.314	0.066	0.161
Brazil	0.640	0.762	0.226	0.401	0.777	0.707	0.284	0.966
Brunei	0.000	0.712	0.088	0.938	0.768	n/a	0.703	0.561
Cambodia	0.480	0.546	0.050	0.000	0.595	0.410	0.311	0.191
Canada	0.800	0.855	0.176	0.774	1.000	0.817	0.742	0.977
Chile	0.600	0.761	0.128	0.358	0.737	0.491	0.381	0.688
China	0.740	0.807	0.000	0.432	0.692	0.883	1.000	0.925
Colombia	0.580	0.678	0.152	0.425	0.701	0.551	0.379	0.637
Costa Rica	0.580	0.706	0.197	0.363	0.957	0.595	0.343	0.675
Czechia	0.660	0.823	0.411	0.663	0.837	0.692	0.492	0.744
Denmark	0.820	0.909	0.196	0.886	0.896	0.739	0.456	0.926
Dominican Republic	0.520	0.635	0.101	0.303	0.960	0.468	0.315	0.751
Ecuador	0.000	0.652	0.114	0.198	0.957	0.396	0.217	0.263
El Salvador	0.540	0.571	0.000	0.203	n/a	0.488	0.059	0.133
Estonia	0.720	0.844	0.151	0.866	0.917	0.558	0.519	0.995
Finland	0.840	0.905	0.188	0.803	0.877	0.759	0.831	0.958
France	0.780	0.846	0.164	0.720	0.877	0.860	0.748	0.976
Germany	0.820	0.860	0.249	0.697	0.877	0.912	0.734	0.974
Greece	0.740	0.785	0.106	0.739	0.816	0.626	0.178	0.940
Guatemala	0.520	0.550	0.092	0.163	0.895	n/a	0.089	0.131
Guyana	0.480	0.556	0.070	0.374	n/a	n/a	0.368	0.281
Honduras	0.580	0.513	0.088	0.343	n/a	0.364	0.022	0.022
Hungary	0.640	0.817	0.362	0.600	0.834	0.654	0.465	0.913
Iceland	0.720	0.866	0.170	0.906	0.733	0.502	0.469	0.798
Indonesia	0.600	0.679	0.178	0.427	0.693	0.642	0.604	0.949
Ireland	0.720	0.889	0.355	0.721	0.856	0.923	0.578	0.859
Israel	0.720	0.822	0.271	0.960	0.820	0.778	0.833	0.909
Italy	0.740	0.822	0.123	0.608	0.874	0.809	0.357	0.961
Jamaica	0.500	0.514	0.090	0.264	n/a	n/a	0.335	0.325
Japan	0.780	0.846	0.313	0.721	0.918	0.876	0.717	0.978
Laos	0.480	0.525	0.205	0.079	0.501	0.310	0.478	0.203
Latvia	0.700	0.798	0.152	0.658	0.777	0.551	0.373	0.973

Note: Numbers are min–max normalized to 0–1 and shown as provided. "N/A" = unavailable. Country-level indicator values are normalized within indicators and grouped by readiness pillar.

Annex Table 2.A.4: Technology Indicators								
Country	Logistic Performance index	Mobile Connectivity index	ICT Capital Goods Imports index	Human Capital - AI Readiness index	Digital Services Trade Restrictiveness index	Digitally Deliverable Services index	Government Promotion of Investments in Emerging Techs index	Global Cybersecurity index
Lithuania	0.680	0.833	0.127	0.669	0.896	0.528	0.506	0.979
Luxembourg	0.720	0.861	0.094	0.727	0.917	0.861	0.949	0.974
Malaysia	0.720	0.739	0.670	0.844	n/a	0.668	0.764	0.981
Mexico	0.580	0.717	0.469	0.363	0.921	0.657	0.368	0.817
Myanmar	0.000	0.475	0.056	0.413	n/a	n/a	0.384	0.364
Netherlands	0.820	0.868	0.314	0.776	0.896	0.874	0.666	0.971
New Zealand	0.720	0.878	0.163	0.813	0.860	0.657	0.516	0.840
Nicaragua	0.500	0.503	0.124	0.340	n/a	0.447	0.022	0.090
Norway	0.740	0.905	0.170	0.806	0.939	0.701	0.456	0.969
Panama	0.620	0.709	0.143	0.566	n/a	0.586	0.289	0.341
Paraguay	0.540	0.652	0.167	0.247	0.819	0.283	0.067	0.571
Peru	0.600	0.661	0.148	0.557	0.758	0.470	0.253	0.557
Philippines	0.660	0.630	0.560	0.275	0.873	0.695	0.392	0.770
Poland	0.720	0.801	0.229	0.705	0.697	0.738	0.379	0.939
Portugal	0.680	0.808	0.171	0.732	0.855	0.645	0.545	0.973
Singapore	0.860	0.931	1.000	1.000	0.800	n/a	0.996	0.985
Slovakia	0.660	0.820	0.243	0.633	0.920	0.601	0.300	0.924
Slovenia	0.660	0.830	0.115	0.708	0.819	0.562	0.459	0.749
South Korea	0.760	0.836	0.559	0.774	0.797	0.785	0.775	0.985
Spain	0.780	0.845	0.113	0.647	0.877	0.782	0.381	0.985
Suriname	0.000	0.571	0.091	0.282	n/a	n/a	0.235	0.312
Sweden	0.800	0.878	0.189	0.869	0.878	0.790	0.714	0.946
Switzerland	0.820	0.912	0.112	0.693	0.939	0.866	0.573	0.870
Thailand	0.700	0.738	0.341	0.306	0.859	0.580	0.644	0.865
Trinidad and Tobago	0.500	0.649	0.130	0.660	n/a	0.404	0.368	0.222
Türkiye	0.680	0.747	0.115	0.365	0.736	0.714	0.502	0.975
United Kingdom	0.740	0.879	0.165	0.833	0.939	0.856	0.665	0.995
United States	0.760	0.886	0.689	0.740	0.939	1.000	0.786	1.000
Uruguay	0.600	0.765	0.106	0.752	0.682	0.579	0.435	0.752
Venezuela	0.460	0.578	0.077	0.266	n/a	0.000	0.235	0.271
Vietnam	0.660	0.685	0.671	0.355	0.854	0.470	0.541	0.946

Note: Numbers are min–max normalized to 0–1 and shown as provided. "N/A" = unavailable. Country-level indicator values are normalized within indicators and grouped by readiness pillar.

Annex Table 2.A.5: Sustainability Indicators								
Country	Low Carbon Intensity index	Renewable Energy Consumption index	Trade in energy transition goods index	Protectionism in energy transition goods index	Critical Mineral index	Biodiversity and Habitat-Environmental Performance index	Exposure to Natural Disasters index	Vulnerability to Natural Disasters index
Argentina	0.729	0.115	0.017	0.096	0.343	0.491	0.885	0.789
Australia	0.438	0.124	0.456	0.831	1.000	0.837	0.688	0.854
Austria	0.851	0.421	0.144	0.788	0.001	0.855	0.998	0.923
Belgium	0.801	0.078	0.123	0.785	0.000	0.874	0.982	0.906
Belize	0.601	0.387	0.000	0.435	0.000	0.879	0.975	0.766
Bolivia	0.663	0.148	0.008	0.345	0.361	0.836	0.997	0.731
Brazil	0.814	0.447	0.271	0.077	0.658	0.781	0.936	0.768
Brunei	0.297	0.000	0.225	0.994	0.000	0.592	0.000	0.000
Cambodia	0.505	0.268	0.030	0.269	0.000	0.601	0.975	0.704
Canada	0.413	0.307	0.125	0.992	0.106	0.605	0.741	0.861
Chile	0.697	0.262	0.496	0.653	0.547	0.653	0.871	0.851
China	0.000	0.148	0.164	0.506	0.613	0.190	0.354	0.873
Colombia	0.884	0.359	0.104	0.874	0.000	0.768	0.685	0.533
Costa Rica	0.986	0.612	0.059	0.926	0.000	0.701	0.901	0.796
Czechia	0.637	0.029	0.168	0.779	0.023	0.857	0.999	0.899
Denmark	0.949	0.461	0.162	0.782	0.000	0.817	0.998	0.942
Dominican Republic	0.847	0.082	0.059	0.824	0.000	0.816	0.930	0.752
Ecuador	0.690	0.414	0.118	0.677	0.000	0.773	0.854	0.655
El Salvador	0.851	0.396	0.053	0.911	0.000	0.358	0.927	0.717
Estonia	0.801	0.164	0.170	0.760	0.000	0.870	0.996	0.923
Finland	0.826	0.407	0.209	0.780	0.001	0.755	0.995	0.966
France	0.936	0.119	0.111	0.790	0.000	0.883	0.973	0.835
Germany	0.819	0.193	0.170	0.792	0.055	0.888	0.980	0.923
Greece	0.719	0.228	0.392	0.779	0.000	0.726	0.918	0.911
Guatemala	0.858	0.290	0.024	0.911	0.000	0.413	0.957	0.709
Guyana	0.692	0.026	0.001	0.413	0.000	0.510	0.974	0.832
Honduras	0.727	0.379	0.013	0.899	0.000	0.345	0.912	0.710
Hungary	0.804	0.101	0.229	0.777	0.000	0.599	0.999	0.914
Iceland	0.960	1.001	0.160	1.000	0.000	0.820	0.995	0.950
Indonesia	0.712	0.076	0.079	0.566	0.550	0.632	0.601	0.569
Ireland	0.962	0.202	0.029	0.715	0.000	0.658	0.986	0.934
Israel	0.744	0.025	0.111	0.834	0.000	0.476	0.991	0.755
Italy	0.866	0.212	0.171	0.785	0.000	0.756	0.913	0.899
Jamaica	0.604	0.054	0.396	0.777	0.000	0.582	0.989	0.713
Japan	0.656	0.119	0.169	0.914	0.000	0.697	0.563	0.934
Laos	0.333	0.361	0.199	0.562	0.000	0.867	0.996	0.778
Latvia	0.865	0.373	0.132	0.763	0.000	0.875	0.992	0.804
Lithuania	0.383	0.231	0.164	0.773	0.000	0.855	0.994	0.922
Luxembourg	0.881	0.284	0.224	0.756	0.000	0.551	0.999	0.956
Malaysia	0.457	0.092	0.188	0.559	0.000	0.729	0.914	0.761

Note: Numbers are min–max normalized to 0–1 and shown as provided. "N/A" = unavailable. Country-level indicator values are normalized within indicators and grouped by readiness pillar.

Annex Table 2.A.5: Sustainability Indicators								
Country	Low Carbon Intensity index	Renewable Energy Consumption index	Trade in energy transition goods index	Protectionism in energy transition goods index	Critical Mineral index	Biodiversity and Habitat-Environmental Performance index	Exposure to Natural Disasters index	Vulnerability to Natural Disasters index
Mexico	0.728	0.121	0.145	0.879	0.145	0.310	0.499	0.718
Myanmar	0.837	0.197	0.009	0.714	0.000	0.837	0.776	0.439
Netherlands	0.828	0.112	0.151	0.770	0.000	0.840	0.978	0.926
New Zealand	0.801	0.452	0.021	0.870	0.000	0.596	0.820	0.905
Nicaragua	0.833	0.344	0.009	0.898	0.000	0.715	0.813	0.733
Norway	0.883	0.792	0.064	1.000	0.003	0.604	0.989	0.906
Panama	0.943	0.212	1.000	0.804	0.000	0.628	0.841	0.787
Paraguay	0.938	0.843	0.020	0.363	0.000	0.595	0.999	0.784
Peru	0.844	0.347	0.489	0.971	0.140	0.566	0.834	0.612
Philippines	0.777	0.149	0.121	0.755	0.118	0.730	0.600	0.452
Poland	0.615	0.022	0.153	0.779	0.056	0.209	0.983	0.876
Portugal	0.870	0.368	0.160	0.780	0.005	0.850	0.969	0.916
Singapore	0.950	0.008	0.168	1.000	0.000	0.864	0.999	0.899
Slovakia	0.735	0.105	0.128	0.761	0.000	0.626	0.997	0.933
Slovenia	0.776	0.208	0.158	0.777	0.000	0.876	0.900	0.889
South Korea	0.520	0.039	0.211	0.697	0.000	0.725	0.999	0.956
Spain	0.859	0.241	0.131	0.784	0.006	0.630	0.922	0.879
Suriname	0.473	0.328	0.091	0.370	0.000	0.530	0.982	0.867
Sweden	0.998	0.500	0.185	0.789	0.000	0.678	0.990	0.959
Switzerland	1.000	0.412	0.068	1.000	0.000	0.630	0.998	0.934
Thailand	0.615	0.088	0.165	0.760	0.000	0.880	0.857	0.695
Trinidad and Tobago	0.100	0.000	0.022	0.807	0.000	0.675	0.995	0.825
Türkiye	0.701	0.182	0.151	0.794	0.466	0.250	0.911	0.942
United Kingdom	0.890	0.195	0.107	0.916	0.000	0.751	0.974	0.870
United States	0.624	0.148	0.164	0.808	0.310	0.333	0.000	0.870
Uruguay	0.938	0.645	0.031	0.316	0.000	0.374	0.985	0.843
Venezuela	0.891	0.351	0.000	0.000	0.000	0.464	0.805	0.742
Vietnam	0.299	0.227	0.097	0.773	0.000	0.201	0.733	0.750

Note: Numbers are min–max normalized to 0–1 and shown as provided. "N/A" = unavailable. Country-level indicator values are normalized within indicators and grouped by readiness pillar.

Annex Table 2.A.6: Geopolitical Indicators								
Country	Export Similarity with China index	Trade Bans index	Security Threat index	Trade with sanctioned countries index	Political distance from trading partners index	Nonalignment in UN voting index	Ethnic Cohesion index	Working age population index
Argentina	0.138	0.155	0.570	0.838	0.578	0.421	0.689	0.506
Australia	0.153	0.121	0.790	0.982	0.359	0.758	0.706	0.499
Austria	0.779	0.207	0.860	0.906	0.915	0.852	0.865	0.560
Belgium	0.605	0.103	0.760	0.876	0.918	0.906	0.508	0.415
Belize	0.010	0.500	0.320	1.000	0.717	0.364	n/a	0.650
Bolivia	0.044	0.431	0.470	0.951	0.727	0.293	0.313	0.457
Brazil	0.326	0.086	0.380	0.809	0.498	0.630	0.765	0.817
Brunei	0.071	0.638	0.610	0.781	0.442	0.286	n/a	0.000
Cambodia	0.348	0.466	0.360	0.988	0.430	0.249	0.730	0.521
Chile	0.155	0.172	0.640	0.966	0.369	0.397	0.848	0.744
China	n/a	0.224	0.510	0.660	0.000	0.000	0.331	0.767
Colombia	0.233	0.224	0.330	0.926	0.690	0.481	0.588	0.805
Costa Rica	0.222	0.310	0.710	0.808	0.716	0.407	0.865	0.764
Czechia	0.999	0.224	0.800	0.819	0.822	0.882	0.981	0.391
Denmark	0.696	0.259	0.890	0.918	0.905	0.906	1.000	0.383
Dominican Republic	0.260	0.310	0.350	0.948	0.684	0.401	0.870	0.538
Ecuador	0.113	0.328	0.400	0.791	0.650	0.391	0.463	0.604
Canada	0.446	0.000	0.780	0.978	0.668	0.704	0.417	0.531
El Salvador	0.343	0.397	0.400	0.690	0.664	0.354	1.000	0.597
Estonia	0.618	0.414	0.830	0.386	0.775	0.892	0.527	0.363
Finland	0.531	0.293	0.800	0.479	0.709	0.879	0.869	0.252
France	0.819	0.017	0.710	0.879	0.833	0.869	0.953	0.220
Germany	0.922	0.069	0.770	0.849	0.770	0.909	1.000	0.407
Greece	0.442	0.293	0.450	0.168	0.634	0.896	0.941	0.384
Guatemala	0.296	0.345	0.380	0.765	0.563	0.616	0.514	0.339
Guyana	0.015	0.466	0.670	0.927	0.748	0.384	n/a	0.500
Honduras	0.150	0.431	0.320	0.782	0.533	0.562	0.830	0.546
Hungary	0.764	0.328	0.820	0.809	0.616	0.875	0.812	0.542
Iceland	0.085	0.483	0.960	0.949	0.921	0.886	n/a	0.585
Indonesia	0.465	0.138	0.480	0.916	0.544	0.263	0.209	0.699
Ireland	0.306	0.207	0.790	0.968	0.849	0.848	1.000	0.524
Israel	0.484	0.172	0.740	0.923	0.738	0.175	0.216	0.120
Italy	0.882	0.052	0.550	0.724	0.775	0.879	1.000	0.399
Jamaica	0.067	0.362	0.300	0.933	0.884	0.357	1.000	0.982
Japan	0.775	0.000	0.850	0.892	0.303	0.781	0.947	0.000
Laos	0.147	0.638	0.610	0.986	0.749	0.269	0.283	0.498
Latvia	0.591	0.483	0.800	0.389	0.834	0.892	1.000	0.324
Lithuania	0.725	0.345	0.780	0.106	0.734	0.906	1.000	0.412
Luxembourg	0.403	0.466	0.960	0.963	1.000	0.906	n/a	0.763
Malaysia	0.682	0.121	0.520	0.926	0.608	0.293	0.404	0.815

Note: Numbers are min–max normalized to 0–1 and shown as provided. "N/A" = unavailable. Country-level indicator values are normalized within indicators and grouped by readiness pillar.

Annex Table 2.A.6: Geopolitical Indicators								
Country	Export Similarity with China index	Trade Bans index	Security Threat index	Trade with sanctioned countries index	Political distance from trading partners index	Nonalignment in UN voting index	Ethnic Cohesion index	Working age population index
Mexico	0.626	0.034	0.170	0.974	0.628	0.438	0.735	0.650
Myanmar	0.242	0.362	0.090	0.986	0.454	0.468	0.478	0.737
Netherlands	0.784	0.052	0.820	0.827	0.806	0.902	0.760	0.453
New Zealand	0.176	0.224	0.840	0.955	0.300	0.845	0.758	0.503
Nicaragua	0.036	0.431	0.440	0.943	0.087	0.155	0.718	0.503
Norway	0.169	0.276	0.860	0.930	0.829	0.892	1.000	0.494
Panama	0.039	0.379	0.540	0.966	0.711	0.488	0.733	0.511
Paraguay	0.110	0.414	0.430	0.764	0.657	0.394	0.890	0.496
Peru	0.183	0.328	0.400	0.952	0.550	0.391	0.396	0.544
Philippines	0.542	0.207	0.090	0.955	0.575	0.327	0.743	0.450
Poland	0.867	0.224	0.820	0.683	0.728	0.902	0.965	0.592
Portugal	0.713	0.172	0.970	0.930	0.886	0.892	1.000	0.428
Singapore	0.649	0.017	0.960	0.925	0.625	0.343	n/a	1.000
Slovakia	0.735	0.431	0.880	0.738	0.859	0.902	0.668	0.657
Slovenia	0.645	0.379	0.970	0.846	0.840	0.902	0.691	0.429
South Korea	0.899	0.000	0.850	0.804	0.402	0.882	1.000	0.881
Spain	0.753	0.052	0.720	0.847	0.800	0.889	0.496	0.568
Suriname	0.056	0.500	0.660	0.999	0.588	0.374	n/a	0.588
Sweden	0.698	0.190	0.790	0.904	0.849	0.845	1.000	0.298
Switzerland	0.372	0.190	0.860	0.909	0.718	0.838	0.420	0.549
Thailand	0.825	0.034	0.200	0.828	0.407	0.350	0.559	0.782
Trinidad and Tobago	0.088	0.431	0.270	0.983	0.911	0.354	0.319	0.793
Türkiye	0.778	0.207	0.340	0.000	0.355	0.726	0.701	0.711
United Kingdom	0.614	0.017	0.710	0.863	0.740	0.778	0.674	0.388
United States	0.684	1.000	0.530	0.927	0.598	0.000	0.504	0.498
Uruguay	0.091	0.397	0.640	0.880	0.415	0.458	1.000	0.527
Venezuela	0.064	0.534	0.330	0.501	0.243	0.354	0.744	0.421
Vietnam	0.965	0.155	0.650	0.938	0.271	0.310	0.611	0.734

Note: Numbers are min–max normalized to 0–1 and shown as provided. "N/A" = unavailable. Country-level indicator values are normalized within indicators and grouped by readiness pillar.

Annex 2.3: Africa Readiness Indicators

This appendix presents the country-level data and composite rankings that underpin the readiness diagnostics for Africa, as discussed in Chapter 2.

Indicators are min-max normalized (0-1) and grouped into six composite pillars:

(1) Technology readiness
(2) Trade and investment readiness
(3) Sustainability and energy readiness
(4) Institutional and geopolitical readiness
(5) Financial readiness
(6) Business readiness

The tables report normalized indicator scores (0-1), composite pillar rankings and overall readiness scores for all African economies, enabling comparative benchmarking across subregions and against global reference economies.

Annex Table 2.A.7: Pillar Rankings By Country Technology Readiness			
Rank	Artificial Intelligence Preparedness Index (AIPI)	Internet Penetration Index	Mobile Connectivity Index
1	Denmark	Bahrain	Singapore
2	Singapore	United Arab Emirates	Switzerland
3	Netherlands	Iceland	Denmark
4	Estonia	Qatar	Australia
5	Finland	Kuwait	Finland
6	Switzerland	Saudi Arabia	Norway
7	New Zealand	Luxembourg	United Arab Emirates
8	Germany	Denmark	Ireland
9	Sweden	Norway	Netherlands
10	Luxembourg	Australia	United Kingdom
11	Japan	Switzerland	Germany
12	United Kingdom	United Kingdom	Sweden
13	Australia	Sweden	New Zealand
14	Austria	New Zealand	France
15	Israel	Oman	Canada
16	Canada	Ireland	Luxembourg
17	Norway	Singapore	Austria
18	Iceland	Spain	Belgium
19	France	Canada	Iceland
20	Ireland	Netherlands	Estonia
21	Belgium	Malaysia	Japan
22	Lithuania	Belgium	Spain
23	Malta	Finland	Lithuania
24	Spain	Austria	Portugal
25	Czechia	Germany	Qatar
26	Portugal	Estonia	Italy
27	China	Chile	Czechia
28	Slovenia	Latvia	Slovenia
29	Cyprus	Cyprus	China
30	Latvia	Israel	Latvia
31	Malaysia	Kazakhstan	Slovakia
32	United Arab Emirates	Malta	Hungary
33	Italy	Libya	Croatia
34	Poland	Slovakia	Cyprus
35	Slovakia	Hungary	Israel
36	Chile	Japan	Greece
37	Romania	Slovenia	Kuwait
38	Croatia	Morocco	Poland
39	Greece	Uruguay	Uruguay
40	Bulgaria	Belarus	Bulgaria
41	Saudi Arabia	Argentina	Bahrain

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Annex Table 2.A.7: continued

Annex Table 2.A.7: Pillar Rankings By Country Technology Readiness			
Rank	Artificial Intelligence Preparedness Index (AIPI)	Internet Penetration Index	Mobile Connectivity Index
42	Hungary	Azerbaijan	Malta
43	Kazakhstan	Lithuania	Brazil
44	Uruguay	France	Chile
45	Costa Rica	Seychelles	Saudi Arabia
46	Serbia	Poland	Romania
47	Thailand	Jordan	Malaysia
48	Qatar	Czechia	Thailand
49	Oman	Costa Rica	Mexico
50	Mexico	Lebanon	Serbia
51	Seychelles	Bhutan	Kazakhstan
52	Georgia	Romania	Moldova
53	Albania	Thailand	Costa Rica
54	Mauritius	Portugal	Oman
55	Indonesia	Serbia	Indonesia
56	Bahrain	Croatia	Panama
57	Ukraine	Brazil	Peru
58	Brazil	Greece	Georgia
59	Panama	Jamaica	Colombia
60	Philippines	Uzbekistan	Paraguay
61	South Africa	Ukraine	Vietnam
62	Armenia	Albania	Armenia
63	India	Italy	Ukraine
64	Peru	Armenia	South Africa
65	Colombia	Georgia	Azerbaijan
66	Mongolia	Mexico	Mauritius
67	Jordan	Paraguay	Seychelles
68	Vietnam	Bulgaria	Belarus
69	Moldova	Botswana	Albania
70	Argentina	Vietnam	Dominican Republic
71	Azerbaijan	South Africa	Argentina
72	Belarus	Panama	Philippines
73	Dominican Republic	Suriname	India
74	Tunisia	Fiji	Mongolia
75	Kuwait	China	Ecuador
76	Fiji	Mongolia	Jordan
77	Kenya	Colombia	Tunisia
78	Bhutan	Mauritius	Belize
79	Ecuador	Grenada	Libya
80	Rwanda	Peru	Morocco
81	Sri Lanka	Ecuador	Samoa

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Annex Table 2.A.7: continued

Annex Table 2.A.7: Pillar Rankings By Country Technology Readiness			
Rank	Artificial Intelligence Preparedness Index (AIPI)	Internet Penetration Index	Mobile Connectivity Index
82	Jamaica	Moldova	El Salvador
83	Morocco	Tunisia	Uzbekistan
84	Ghana	Algeria	Bolivia
85	Belize	Belize	Botswana
86	Namibia	Gabon	Fiji
87	Lebanon	Philippines	Bhutan
88	Suriname	Djibouti	Lebanon
89	Botswana	El Salvador	Guatemala
90	Paraguay	Indonesia	Suriname
91	Senegal	Namibia	Cambodia
92	El Salvador	Ghana	Sri Lanka
93	Guatemala	Cambodia	Jamaica
94	Bangladesh	Senegal	Ghana
95	Bolivia	Samoa	Nicaragua
96	Zambia	Myanmar	Algeria
97	Algeria	Guatemala	Nepal
98	Cambodia	Honduras	Bangladesh
99	Liberia	Nicaragua	Gabon
100	Pakistan	Tajikistan	Vanuatu
101	Tajikistan	Lesotho	Nigeria
102	Benin	Vanuatu	Honduras
103	Lesotho	India	Namibia
104	Uganda	Sri Lanka	Myanmar
105	Nepal	Cameroon	Kenya
106	Honduras	Angola	Cameroon
107	Cameroon	Bangladesh	Senegal
108	Malawi	Solomon Islands	Lesotho
109	Nigeria	Nigeria	Rwanda
110	Nicaragua	Zimbabwe	Pakistan
111	Myanmar	Mali	Papua New Guinea
112	Niger	Mauritania	Zambia
113	Guinea	Togo	Angola
114	Gabon	Kenya	Uganda
115	Djibouti	Zambia	Togo
116	Togo	Rwanda	Zimbabwe
117	Madagascar	Benin	Solomon Islands
118	Zimbabwe	Guinea	Mozambique
119	Sierra Leone	Guinea-Bissau	Benin
120	Mali	Papua New Guinea	Sierra Leone
121	Papua New Guinea	Pakistan	Mauritania

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Annex Table 2.A.7: continued

Annex Table 2.A.7: Pillar Rankings By Country Technology Readiness			
Rank	Artificial Intelligence Preparedness Index (AIPI)	Internet Penetration Index	Mobile Connectivity Index
122	Guinea-Bissau	Liberia	Tajikistan
123	Angola	Niger	Malawi
124	Mozambique	Sierra Leone	Guinea
125	Ethiopia	Mozambique	Ethiopia
126	Libya	Ethiopia	Liberia
127	Mauritania	Malawi	Madagascar
128	Grenada	Madagascar	Mali
129	Uzbekistan	Uganda	Guinea-Bissau
130	Samoa	Dominican Republic	Niger
131	Vanuatu	Bolivia	Grenada
132	Solomon Islands	Nepal	Djibouti

Source: Authors' calculations using International Monetary Fund (Artificial Intelligence Preparedness Index 2024); International Telecommunication Union (ITU DataHub); and GSMA (Mobile Connectivity Index 2024).
Note: Scores are min-max normalized (0-100). Higher values indicate greater technological and digital readiness across African economies.

Annex Table 2.A.8: Pillar Rankings By Country Trade and Investment Readiness			
Rank	Logistics Performance Index (LPI)	Trade to GDP Ratio Index	Tariff Restrictiveness Index (TRI)
1	Finland	Luxembourg	Algeria
2	Singapore	Singapore	Zimbabwe
3	Denmark	Djibouti	India
4	Germany	Ireland	Cameroon
5	Netherlands	Malta	Gabon
6	Switzerland	United Arab Emirates	Morocco
7	Austria	Slovakia	Ethiopia
8	Belgium	Cyprus	Nepal
9	Canada	Seychelles	Bangladesh
10	Sweden	Vietnam	Sierra Leone
11	United Arab Emirates	Belgium	Togo
12	France	Netherlands	Benin
13	Japan	Hungary	Liberia
14	Spain	Slovenia	Ghana
15	Australia	Estonia	Niger
16	China	Lithuania	Guinea
17	Greece	Bahrain	Guinea-Bissau
18	Italy	Lesotho	Mali
19	Norway	Latvia	Senegal
20	South Africa	Czechia	Nigeria
21	United Kingdom	Cambodia	Samoa
22	Estonia	Switzerland	Mauritania
23	Iceland	Malaysia	Solomon Islands
24	Ireland	Belarus	Grenada
25	Israel	Mongolia	Suriname
26	Luxembourg	Bulgaria	Belize
27	Malaysia	Libya	Madagascar
28	New Zealand	Denmark	Argentina
29	Poland	Thailand	Bhutan
30	Bahrain	Serbia	Mozambique
31	Latvia	Austria	Serbia
32	Qatar	Mozambique	Brazil
33	Thailand	Poland	Chile
34	India	Georgia	Mongolia
35	Lithuania	Croatia	Myanmar
36	Portugal	Nicaragua	Tajikistan
37	Saudi Arabia	Mauritius	China
38	Croatia	Honduras	Tunisia
39	Czechia	Tunisia	Zambia
40	Malta	Belize	Fiji
41	Oman	Guinea	Cambodia

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Annex Table 2.A.8: continued

Annex Table 2.A.8: Pillar Rankings By Country Trade and Investment Readiness			
Rank	Logistics Performance Index (LPI)	Trade to GDP Ratio Index	Tariff Restrictiveness Index (TRI)
42	Philippines	Sweden	Oman
43	Slovakia	Fiji	Uruguay
44	Slovenia	Armenia	Indonesia
45	Vietnam	Qatar	Philippines
46	Brazil	Oman	Qatar
47	Bulgaria	Mauritania	United Arab Emirates
48	Cyprus	Moldova	Pakistan
49	Hungary	Namibia	Belarus
50	Kuwait	Jamaica	Armenia
51	Romania	Portugal	Uganda
52	Botswana	Greece	Paraguay
53	Panama	Jordan	Libya
54	Chile	Kuwait	Vanuatu
55	Indonesia	Romania	Kenya
56	Peru	Ukraine	Kazakhstan
57	Uruguay	Morocco	Malawi
58	Benin	Gabon	Rwanda
59	Colombia	Panama	Thailand
60	Costa Rica	Finland	Azerbaijan
61	Honduras	Azerbaijan	Vietnam
62	Mexico	Iceland	Switzerland
63	Namibia	Botswana	Ecuador
64	Argentina	Germany	Angola
65	Rwanda	Mexico	Uzbekistan
66	Serbia	El Salvador	Costa Rica
67	Solomon Islands	Bhutan	Ukraine
68	Sri Lanka	Lebanon	Mexico
69	Belarus	Zambia	El Salvador
70	Djibouti	Albania	Colombia
71	El Salvador	Samoa	Honduras
72	Georgia	Norway	Sri Lanka
73	Kazakhstan	Vanuatu	Jamaica
74	Papua New Guinea	Paraguay	Dominican Republic
75	Paraguay	Solomon Islands	Nicaragua
76	Ukraine	Costa Rica	Jordan
77	Bangladesh	Ghana	Guatemala
78	Dominican Republic	Senegal	Japan
79	Guatemala	Spain	South Africa
80	Guinea-Bissau	Mali	Lesotho
81	Mali	Angola	Panama
82	Nigeria	France	United Kingdom

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Annex Table 2.A.8: continued

Annex Table 2.A.8: Pillar Rankings By Country Trade and Investment Readiness			
Rank	Logistics Performance Index (LPI)	Trade to GDP Ratio Index	Tariff Restrictiveness Index (TRI)
83	Uzbekistan	Philippines	Namibia
84	Albania	Canada	Botswana
85	Algeria	Chile	Albania
86	Armenia	United Kingdom	Australia
87	Bhutan	Italy	Malaysia
88	Ghana	Kazakhstan	New Zealand
89	Grenada	Tajikistan	Canada
90	Guinea	Uzbekistan	Peru
91	Jamaica	Madagascar	Papua New Guinea
92	Mauritius	Togo	Norway
93	Moldova	Rwanda	Israel
94	Mongolia	Saudi Arabia	Iceland
95	Nicaragua	South Africa	Seychelles
96	Tajikistan	Bolivia	Georgia
97	Togo	Israel	Mauritius
98	Zimbabwe	Zimbabwe	Singapore
99	Bolivia	Ecuador	Luxembourg
100	Cambodia	Uruguay	Ireland
101	Gabon	Benin	Netherlands
102	Liberia	Peru	Belgium
103	Fiji	Dominican Republic	Malta
104	Madagascar	New Zealand	Denmark
105	Mauritania	Guatemala	Djibouti
106	Angola	Guinea-Bissau	Austria
107	Cameroon	Algeria	Finland
108	Libya	Australia	Estonia
109	Suriname	Nepal	Sweden
110	Myanmar	India	Germany
111	Malawi	Sri Lanka	Slovakia
112	Morocco	Sierra Leone	Bahrain
113	Mozambique	Colombia	Lithuania
114	Belize	Indonesia	Latvia
115	Samoa	Japan	Slovenia
116	Senegal	Cameroon	Cyprus
117	Tunisia	Uganda	Spain
118	Nepal	China	Poland
119	Sierra Leone	Brazil	France
120	Zambia	Niger	Hungary
121	Ethiopia	Argentina	Greece
122	Niger	Kenya	Czechia
123	Vanuatu	Bangladesh	Italy

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Annex Table 2.A.8: continued

Annex Table 2.A.8: Pillar Rankings By Country Trade and Investment Readiness			
Rank	**Logistics Performance Index (LPI)**	**Trade to GDP Ratio Index**	**Tariff Restrictiveness Index (TRI)**
124	Azerbaijan	Ethiopia	Bulgaria
125	Lesotho	Pakistan	Croatia
126	Uganda	Suriname	Portugal
127	Pakistan	Myanmar	Kuwait
128	Kenya	Malawi	Saudi Arabia
129	Ecuador	Nigeria	Romania
130	Jordan	Grenada	Moldova
131	Seychelles	Liberia	Lebanon
132	Lebanon	Papua New Guinea	Bolivia

Source: Authors' calculations using World Bank (Connecting to Compete: LPI 2023); WTO Tariff Data; WITS Database; and World Bank (World Development Indicators).

Note: Higher values reflect stronger openness and trade efficiency. Tariff-related variables are inverted so that higher scores correspond to more open regimes.

Annex Table 2.A.9: Pillar Rankings By Country Sustainability And Energy Readiness			
Rank	Modern Renewables Share Index	CO_2 Intensity Index	Energy Infrastructure Index (EII)
1	Gabon	Libya	Iceland
2	Iceland	Mongolia	Norway
3	Norway	Kuwait	Bhutan
4	Sweden	Oman	Sweden
5	Uruguay	South Africa	Finland
6	Finland	China	Canada
7	Brazil	Bahrain	Switzerland
8	Latvia	Qatar	France
9	Albania	Uzbekistan	Paraguay
10	Paraguay	Seychelles	New Zealand
11	Malawi	Samoa	Albania
12	Tajikistan	Kazakhstan	Austria
13	Denmark	Saudi Arabia	Costa Rica
14	Estonia	United Arab Emirates	Belgium
15	Austria	Vanuatu	Ethiopia
16	Uganda	Vietnam	Nepal
17	Costa Rica	Algeria	Uruguay
18	Lithuania	Moldova	Slovakia
19	Croatia	Canada	Malawi
20	Madagascar	Malaysia	Sierra Leone
21	Portugal	Ukraine	Uganda
22	New Zealand	Jamaica	Tajikistan
23	Fiji	Australia	Brazil
24	Sri Lanka	India	Denmark
25	Belize	Jordan	Lesotho
26	Chile	Suriname	Spain
27	Switzerland	Belarus	Zambia
28	Sierra Leone	Zimbabwe	Kenya
29	Georgia	Morocco	Latvia
30	Romania	Solomon Islands	Georgia
31	Serbia	Tunisia	Portugal
32	Colombia	Estonia	Mozambique
33	Cambodia	Tajikistan	El Salvador
34	Canada	Azerbaijan	Namibia
35	Slovenia	Bolivia	Slovenia
36	Zambia	Mozambique	Croatia
37	Namibia	Bulgaria	Ecuador
38	Bulgaria	Liberia	Panama
39	Greece	Malawi	Hungary
40	Cameroon	Poland	United Kingdom
41	Luxembourg	Thailand	Angola

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Annex Table 2.A.9: continued

Annex Table 2.A.9: Pillar Rankings By Country Sustainability And Energy Readiness			
Rank	Modern Renewables Share Index	CO_2 Intensity Index	Energy Infrastructure Index (EII)
42	Peru	Czechia	Belize
43	Panama	Fiji	Netherlands
44	Thailand	Ecuador	Ireland
45	Italy	Indonesia	Lithuania
46	Spain	Mexico	Armenia
47	Germany	Japan	Guinea
48	Slovakia	Slovakia	Luxembourg
49	Ecuador	Botswana	Colombia
50	India	Honduras	Romania
51	Czechia	Cambodia	Ukraine
52	France	Senegal	Peru
53	Vietnam	Georgia	Guatemala
54	El Salvador	Argentina	Italy
55	Poland	Cyprus	Fiji
56	Mozambique	Mauritania	Germany
57	Hungary	Pakistan	Qatar
58	Honduras	Lesotho	Bulgaria
59	Cyprus	Namibia	United Arab Emirates
60	Nicaragua	Chile	Greece
61	Ireland	Philippines	Nicaragua
62	Papua New Guinea	New Zealand	Chile
63	Suriname	Papua New Guinea	Honduras
64	Togo	Armenia	Rwanda
65	Indonesia	Greece	Cameroon
66	Mexico	Israel	Suriname
67	Belgium	Mauritius	Estonia
68	Ghana	Nepal	Kuwait
69	Bhutan	Benin	Zimbabwe
70	China	Brazil	Argentina
71	Australia	Dominican Republic	Singapore
72	Philippines	Slovenia	Czechia
73	Argentina	Iceland	Belarus
74	Netherlands	Mali	Japan
75	Zimbabwe	El Salvador	Samoa
76	Angola	Myanmar	Oman
77	Armenia	Belgium	Australia
78	Jordan	Hungary	Mali
79	Mauritius	Peru	Gabon
80	Rwanda	Germany	Malta
81	Malta	Nicaragua	Cambodia
82	Guinea-Bissau	Croatia	Mexico

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Annex Table 2.A.9: continued

Annex Table 2.A.9: Pillar Rankings By Country Sustainability And Energy Readiness			
Rank	Modern Renewables Share Index	CO_2 Intensity Index	Energy Infrastructure Index (EII)
83	Japan	Angola	Vietnam
84	Belarus	Colombia	Pakistan
85	Ukraine	Gabon	Liberia
86	Benin	Ghana	Ghana
87	Pakistan	Zambia	Israel
88	Morocco	Djibouti	Madagascar
89	Mali	Finland	Saudi Arabia
90	Dominican Republic	Austria	Bolivia
91	Nepal	Lithuania	Lebanon
92	Jamaica	Nigeria	Sri Lanka
93	Guatemala	Italy	China
94	Myanmar	Netherlands	Cyprus
95	Malaysia	Togo	Mauritania
96	Lesotho	Guatemala	Seychelles
97	Nigeria	Spain	Vanuatu
98	Samoa	Albania	Papua New Guinea
99	Israel	Latvia	Nigeria
100	Senegal	Panama	Bahrain
101	Kenya	Romania	Jordan
102	South Africa	Bangladesh	Malaysia
103	Lebanon	Norway	Thailand
104	Guinea	United Kingdom	Jamaica
105	Ethiopia	Uruguay	Myanmar
106	Vanuatu	Portugal	Tunisia
107	Mongolia	Luxembourg	Senegal
108	Kazakhstan	Madagascar	Togo
109	Niger	Cameroon	Mauritius
110	Tunisia	France	Serbia
111	Azerbaijan	Paraguay	Algeria
112	Uzbekistan	Singapore	Morocco
113	Mauritania	Grenada	Azerbaijan
114	Grenada	Sri Lanka	Grenada
115	Singapore	Kenya	Moldova
116	Seychelles	Guinea	Poland
117	United Arab Emirates	Costa Rica	Guinea-Bissau
118	Liberia	Niger	Benin
119	Solomon Islands	Denmark	Indonesia
120	Bangladesh	Guinea-Bissau	South Africa
121	Algeria	Belize	Solomon Islands
122	Djibouti	Ireland	Bangladesh
123	Botswana	Sweden	Djibouti

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Annex Table 2.A.9: continued

Annex Table 2.A.9: Pillar Rankings By Country Sustainability And Energy Readiness			
Rank	Modern Renewables Share Index	CO_2 Intensity Index	Energy Infrastructure Index (EII)
124	Kuwait	Uganda	India
125	Saudi Arabia	Malta	Kazakhstan
126	Oman	Ethiopia	Libya
127	Bahrain	Switzerland	Mongolia
128	Libya	Rwanda	Botswana
129	Qatar	Sierra Leone	Uzbekistan
130	Bolivia	Bhutan	Philippines
131	Moldova	Serbia	Dominican Republic
132	United Kingdom	Lebanon	Niger

Source: Authors' calculations using International Renewable Energy Agency (Renewable Energy Statistics 2024); International Energy Agency (World Energy Balances 2024); World Bank (World Development Indicators); European Commission EDGAR; and Ember (Yearly Electricity Data 2024).

Note: Scores are min–max normalized (0–100). CO_2 intensity is inverted so that lower emissions per unit GDP yield higher readiness. Higher values indicate stronger energy-transition capacity.

Annex Table 2.A.10: Pillar Rankings By Country Institutional and Geopolitical Readiness			
Rank	Political Stability Index	Electrification Readiness Index (ERI)	Regulatory Quality Index
1	New Zealand	Lithuania	New Zealand
2	Singapore	Hungary	Singapore
3	Iceland	Netherlands	Denmark
4	Luxembourg	Austria	Georgia
5	Switzerland	Switzerland	United Kingdom
6	Samoa	Greece	Norway
7	Botswana	Australia	Sweden
8	Norway	Italy	Lithuania
9	Uruguay	Portugal	Malaysia
10	Grenada	South Africa	Mauritius
11	Japan	Brazil	Australia
12	Bhutan	Spain	United Arab Emirates
13	Sweden	Ireland	Estonia
14	Vanuatu	Qatar	Latvia
15	Malta	Chile	Finland
16	Canada	Belgium	Thailand
17	Czechia	Romania	Germany
18	Ireland	Norway	Canada
19	Denmark	Germany	Ireland
20	Australia	Slovenia	Kazakhstan
21	Portugal	Poland	Iceland
22	Finland	Bulgaria	Austria
23	Qatar	Iceland	Japan
24	Mauritius	Denmark	China
25	Austria	United Kingdom	Spain
26	Costa Rica	Ecuador	France
27	Netherlands	Colombia	Azerbaijan
28	Lithuania	Sweden	Israel
29	Hungary	New Zealand	Switzerland
30	Slovenia	Canada	Portugal
31	Fiji	Peru	Rwanda
32	Seychelles	Latvia	Slovenia
33	Estonia	Ukraine	Poland
34	United Arab Emirates	Croatia	Czechia
35	Croatia	Israel	Netherlands
36	Mongolia	Czechia	Bahrain
37	Germany	China	Serbia
38	Slovakia	Japan	Slovakia
39	Namibia	Sri Lanka	Belgium
40	Belgium	India	Armenia
41	Latvia	France	Moldova

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Annex Table 2.A.10: continued

Annex Table 2.A.10: Pillar Rankings By Country Institutional and Geopolitical Readiness			
Rank	Political Stability Index	Electrification Readiness Index (ERI)	Regulatory Quality Index
42	Poland	Pakistan	Belarus
43	Oman	Slovakia	Croatia
44	United Kingdom	Vietnam	Cyprus
45	Solomon Islands	Argentina	Hungary
46	Romania	Malaysia	Morocco
47	Italy	Philippines	Romania
48	Cyprus	United Arab Emirates	Kenya
49	Belize	Finland	Italy
50	Bulgaria	Kazakhstan	Chile
51	Spain	Thailand	Mexico
52	Suriname	Morocco	Bulgaria
53	France	Azerbaijan	Saudi Arabia
54	Jamaica	Saudi Arabia	India
55	Kuwait	Mexico	Ukraine
56	Panama	Luxembourg	Colombia
57	Dominican Republic	Uzbekistan	Oman
58	Greece	Indonesia	Uzbekistan
59	Albania	Estonia	Vietnam
60	Malaysia	Algeria	Jamaica
61	Chile	Bangladesh	Indonesia
62	Rwanda	Belarus	Luxembourg
63	Zambia	Cyprus	Costa Rica
64	Ghana	Kuwait	Jordan
65	Paraguay	Oman	Peru
66	Vietnam	Singapore	Qatar
67	Argentina	Mauritius	Tunisia
68	Cambodia	Botswana	Greece
69	Gabon	Costa Rica	Mongolia
70	Serbia	Bhutan	Albania
71	Senegal	Georgia	Kuwait
72	El Salvador	Malta	South Africa
73	Sierra Leone	Rwanda	Zambia
74	Malawi	Samoa	Panama
75	Nepal	Mongolia	Botswana
76	Jordan	Uruguay	Malta
77	Liberia	Serbia	Bhutan
78	Uzbekistan	Jamaica	El Salvador
79	Kazakhstan	Vanuatu	Nepal
80	Ecuador	Seychelles	Philippines
81	Lesotho	Fiji	Guatemala
82	Morocco	Panama	Togo

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Annex Table 2.A.10: continued

Annex Table 2.A.10: Pillar Rankings By Country Institutional and Geopolitical Readiness			
Rank	Political Stability Index	Electrification Readiness Index (ERI)	Regulatory Quality Index
83	Guatemala	Bahrain	Samoa
84	Peru	Albania	Sri Lanka
85	Benin	Moldova	Seychelles
86	Bolivia	Namibia	Fiji
87	Sri Lanka	Zambia	Uruguay
88	Georgia	Grenada	Namibia
89	China	Jordan	Tajikistan
90	Moldova	Armenia	Vanuatu
91	Guinea-Bissau	El Salvador	Pakistan
92	Thailand	Dominican Republic	Malawi
93	Brazil	Solomon Islands	Djibouti
94	Djibouti	Belize	Dominican Republic
95	Indonesia	Kenya	Ghana
96	Saudi Arabia	Ghana	Uganda
97	Bahrain	Nepal	Papua New Guinea
98	Madagascar	Tunisia	Lesotho
99	Nicaragua	Paraguay	Senegal
100	South Africa	Malawi	Brazil
101	Angola	Guatemala	Paraguay
102	Honduras	Senegal	Argentina
103	Belarus	Lesotho	Ecuador
104	Mauritania	Djibouti	Nigeria
105	Tajikistan	Tajikistan	Niger
106	Papua New Guinea	Cambodia	Honduras
107	Tunisia	Papua New Guinea	Belize
108	Armenia	Suriname	Solomon Islands
109	India	Togo	Mozambique
110	Mexico	Uganda	Zimbabwe
111	Uganda	Honduras	Nicaragua
112	Philippines	Nicaragua	Lebanon
113	Colombia	Benin	Cambodia
114	Azerbaijan	Bolivia	Grenada
115	Algeria	Sierra Leone	Mali
116	Guinea	Mauritania	Benin
117	Togo	Gabon	Bolivia
118	Zimbabwe	Zimbabwe	Mauritania
119	Bangladesh	Madagascar	Guinea
120	Kenya	Mozambique	Algeria
121	Israel	Liberia	Ethiopia
122	Mozambique	Guinea	Madagascar
123	Ukraine	Guinea-Bissau	Sierra Leone

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Annex Table 2.A.10: continued

Annex Table 2.A.10: Pillar Rankings By Country Institutional and Geopolitical Readiness			
Rank	Political Stability Index	Electrification Readiness Index (ERI)	Regulatory Quality Index
124	Cameroon	Niger	Suriname
125	Lebanon	Lebanon	Myanmar
126	Niger	Angola	Cameroon
127	Nigeria	Nigeria	Bangladesh
128	Myanmar	Cameroon	Gabon
129	Ethiopia	Ethiopia	Guinea-Bissau
130	Pakistan	Myanmar	Liberia
131	Libya	Mali	Angola
132	Mali	Libya	Libya

Source: Authors' calculations using World Bank (Worldwide Governance Indicators 2024); Energy Institute (Electricity Regulatory Index 2025), and World Bank (World Development Indicators).
Note: Higher scores denote more predictable, secure, and reliable institutional environments. ERI reflects the adequacy and resilience of national power systems.

Annex Table 2.A.11: Pillar Rankings By Country Financial Readiness			
Rank	Global Financial Readiness Index (GFRI)	Financial Depth Index	Financial Reserves Index
1	Finland	Japan	China
2	Iceland	China	Japan
3	Austria	Thailand	Switzerland
4	United Kingdom	Denmark	India
5	France	Australia	Saudi Arabia
6	Netherlands	Norway	Singapore
7	Lithuania	Cambodia	Germany
8	Estonia	Sweden	Brazil
9	Slovenia	Qatar	Italy
10	Denmark	Fiji	France
11	Norway	Malaysia	United Arab Emirates
12	Sweden	United Kingdom	Thailand
13	Japan	France	Mexico
14	Canada	Chile	Poland
15	Spain	Nepal	Israel
16	Switzerland	Finland	United Kingdom
17	Germany	Iceland	Indonesia
18	Ireland	Luxembourg	Czechia
19	Belgium	Austria	Canada
20	Australia	Netherlands	Malaysia
21	New Zealand	Jordan	Denmark
22	Malta	Honduras	Spain
23	Cyprus	Portugal	Philippines
24	Latvia	Samoa	Libya
25	Czechia	Brazil	Algeria
26	Slovakia	Spain	Vietnam
27	Portugal	Mauritius	Norway
28	Israel	Belgium	Netherlands
29	Greece	Georgia	Peru
30	Hungary	Bolivia	Romania
31	Italy	Armenia	South Africa
32	Chile	Malta	Sweden
33	Singapore	El Salvador	Colombia
34	Bahrain	Estonia	Australia
35	Ukraine	Italy	Qatar
36	Kenya	Slovakia	Kuwait
37	China	Cyprus	Hungary
38	Mongolia	Tunisia	Kazakhstan
39	Kuwait	Paraguay	Chile
40	Uruguay	Ecuador	Bulgaria
41	Croatia	Vanuatu	Ukraine

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Annex Table 2.A.11: continued

Annex Table 2.A.11: Pillar Rankings By Country Financial Readiness			
Rank	Global Financial Readiness Index (GFRI)	Financial Depth Index	Financial Reserves Index
42	Ghana	Grenada	Portugal
43	Brazil	Bhutan	Belgium
44	Senegal	Costa Rica	Uzbekistan
45	Serbia	Jamaica	Nigeria
46	Uganda	Philippines	Morocco
47	Saudi Arabia	Czechia	Austria
48	Kazakhstan	Greece	Lebanon
49	Bulgaria	Bulgaria	Serbia
50	Namibia	Croatia	Argentina
51	Poland	Colombia	Guatemala
52	Argentina	Belize	Cambodia
53	Georgia	Guatemala	New Zealand
54	United Arab Emirates	Indonesia	Jordan
55	Zambia	Lithuania	Bangladesh
56	South Africa	Bangladesh	Pakistan
57	Romania	Slovenia	Oman
58	Thailand	Mexico	Finland
59	Malaysia	Albania	Uruguay
60	Costa Rica	Poland	Greece
61	India	Uzbekistan	Slovakia
62	Oman	Botswana	Angola
63	Nigeria	Serbia	Costa Rica
64	Botswana	Hungary	Dominican Republic
65	Gabon	Dominican Republic	Azerbaijan
66	Togo	Uruguay	Ireland
67	Mauritius	Solomon Islands	Kenya
68	Vietnam	Nicaragua	Tunisia
69	Cameroon	Senegal	Belarus
70	Lesotho	Latvia	Mauritius
71	Azerbaijan	Moldova	Honduras
72	Moldova	Kazakhstan	Lithuania
73	Mali	Togo	Ecuador
74	Philippines	Azerbaijan	Panama
75	Liberia	Lesotho	Albania
76	Malawi	Ireland	Iceland
77	Peru	Djibouti	Nicaragua
78	Paraguay	Mali	Sri Lanka
79	Mozambique	Romania	Moldova
80	Benin	Rwanda	Mongolia
81	Panama	Algeria	Latvia
82	Uzbekistan	Benin	Bahrain

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Annex Table 2.A.11: continued

Annex Table 2.A.11: Pillar Rankings By Country Financial Readiness			
Rank	Global Financial Readiness Index (GFRI)	Financial Depth Index	Financial Reserves Index
83	Armenia	Mozambique	Georgia
84	Sierra Leone	Madagascar	Mozambique
85	Colombia	Suriname	Ethiopia
86	Zimbabwe	Argentina	El Salvador
87	Belize	Uganda	Armenia
88	Albania	Libya	Botswana
89	Sri Lanka	Pakistan	Namibia
90	Jordan	Guinea-Bissau	Croatia
91	Dominican Republic	Niger	Slovenia
92	Pakistan	Angola	Luxembourg
93	Bangladesh	Sierra Leone	Madagascar
94	Indonesia	Switzerland	Rwanda
95	Nepal	Germany	Cyprus
96	Bolivia	Canada	Estonia
97	Ecuador	Israel	Bolivia
98	Guinea	Singapore	Suriname
99	Cambodia	New Zealand	Fiji
100	Tajikistan	Saudi Arabia	Malta
101	Mexico	Ukraine	Lesotho
102	Morocco	India	Bhutan
103	Ethiopia	United Arab Emirates	Seychelles
104	Tunisia	Kuwait	Vanuatu
105	Madagascar	Ghana	Samoa
106	Honduras	Kenya	Belize
107	Libya	South Africa	Zimbabwe
108	Lebanon	Bahrain	Djibouti
109	El Salvador	Vietnam	Grenada
110	Mauritania	Peru	Ghana
111	Algeria	Mongolia	Zambia
112	Guatemala	Nigeria	Gabon
113	Nicaragua	Zambia	Cameroon
114	Niger	Oman	Nepal
115	Qatar	Belarus	Senegal
116	Belarus	Namibia	Liberia
117	Fiji	Gabon	Malawi
118	Luxembourg	Cameroon	Uganda
119	Jamaica	Morocco	Paraguay
120	Angola	Panama	Jamaica
121	Samoa	Liberia	Togo
122	Bhutan	Malawi	Mali
123	Rwanda	Lebanon	Benin

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Annex Table 2.A.11: continued

Annex Table 2.A.11: Pillar Rankings By Country Financial Readiness			
Rank	Global Financial Readiness Index (GFRI)	Financial Depth Index	Financial Reserves Index
124	Vanuatu	Sri Lanka	Guinea
125	Solomon Islands	Ethiopia	Tajikistan
126	Grenada	Guinea	Solomon Islands
127	Suriname	Tajikistan	Sierra Leone
128	Seychelles	Zimbabwe	Guinea-Bissau
129	Djibouti	Seychelles	Mauritania
130	Guinea-Bissau	Mauritania	Niger
131	Myanmar	Myanmar	Myanmar
132	Papua New Guinea	Papua New Guinea	Papua New Guinea

Source: Authors' calculations using World Bank (World Development Indicators); IMF (International Financial Statistics 2024), and World Bank (Global Findex Database 2025).

Note: Higher values indicate deeper financial systems, greater inclusion, and stronger external buffers. All indicators equally weighted within the composite.

Annex Table 2.A.12: Pillar Rankings By Country Business Readiness			
Rank	Firm Capacity Index (FCI)	Global Integration Index (GII)	Business Climate Index (BCI)
1	Liberia	Luxembourg	India
2	Seychelles	Slovenia	Lithuania
3	Samoa	Czechia	Benin
4	Ireland	Estonia	Bulgaria
5	Finland	Tunisia	Colombia
6	Iceland	Belgium	Czechia
7	Cyprus	Latvia	Finland
8	Mauritius	Austria	France
9	Gabon	Denmark	Israel
10	Luxembourg	Greece	Morocco
11	Belgium	Jordan	Rwanda
12	Chile	Italy	Samoa
13	Malta	Serbia	Zambia
14	Costa Rica	Croatia	Bangladesh
15	Solomon Islands	Bulgaria	Belize
16	Hungary	Mauritania	Bhutan
17	El Salvador	Finland	Canada
18	Estonia	Lithuania	Chile
19	New Zealand	Togo	Dominican Republic
20	Slovenia	Spain	Ethiopia
21	Denmark	Germany	Georgia
22	Czechia	Lesotho	Ghana
23	Portugal	Sweden	Greece
24	Italy	Lebanon	Jamaica
25	Lesotho	Belize	Jordan
26	Brazil	Belarus	Kazakhstan
27	Germany	Albania	Latvia
28	Croatia	Bahrain	Lesotho
29	Spain	Djibouti	Malawi
30	Paraguay	Iceland	Malaysia
31	Uruguay	Mauritius	Malta
32	Togo	Malta	Mexico
33	Philippines	Nigeria	Mozambique
34	Guinea-Bissau	Solomon Islands	Namibia
35	Bahrain	Fiji	New Zealand
36	Senegal	Morocco	Niger
37	Sweden	El Salvador	Suriname
38	Austria	Portugal	Uzbekistan
39	Lithuania	Mozambique	Armenia
40	Canada	Kenya	Azerbaijan
41	Rwanda	Georgia	Bahrain
42	Sierra Leone	Cyprus	Belgium

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Annex Table 2.A.12: continued

Annex Table 2.A.12: Pillar Rankings By Country Business Readiness			
Rank	Firm Capacity Index (FCI)	Global Integration Index (GII)	Business Climate Index (BCI)
43	France	France	Bolivia
44	Namibia	Canada	Botswana
45	Myanmar	Moldova	Cambodia
46	Jordan	Hungary	China
47	Ecuador	Costa Rica	Costa Rica
48	Greece	Romania	Croatia
49	Ghana	Cambodia	Cyprus
50	Colombia	Singapore	Denmark
51	Peru	Malaysia	Djibouti
52	Georgia	Bangladesh	Ecuador
53	Bolivia	Bolivia	El Salvador
54	Papua New Guinea	Nepal	Estonia
55	Guatemala	India	Gabon
56	Botswana	Ireland	Germany
57	Mauritania	New Zealand	Guinea
58	Tajikistan	Saudi Arabia	Guinea-Bissau
59	Romania	Armenia	Ireland
60	Latvia	Pakistan	Kenya
61	Nicaragua	Vanuatu	Liberia
62	Bhutan	Benin	Luxembourg
63	Albania	Ethiopia	Madagascar
64	Cambodia	Ghana	Mali
65	Nepal	Paraguay	Mauritius
66	Cameroon	Senegal	Nicaragua
67	Mozambique	Chile	Nigeria
68	Tunisia	Suriname	Paraguay
69	Dominican Republic	Malawi	Philippines
70	Armenia	Seychelles	Poland
71	Honduras	Gabon	Portugal
72	Poland	Namibia	Saudi Arabia
73	Kazakhstan	Cameroon	Senegal
74	Bulgaria	Botswana	Singapore
75	Moldova	Vietnam	Solomon Islands
76	Belarus	Papua New Guinea	Spain
77	Azerbaijan	Uruguay	Sweden
78	Serbia	Grenada	Tajikistan
79	Angola	Argentina	Togo
80	Mexico	Peru	Tunisia
81	Singapore	South Africa	Uganda
82	Thailand	Guatemala	Vanuatu
83	Morocco	Honduras	Zimbabwe

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Annex Table 2.A.12: continued

Annex Table 2.A.12: Pillar Rankings By Country Business Readiness			
Rank	Firm Capacity Index (FCI)	Global Integration Index (GII)	Business Climate Index (BCI)
84	Vietnam	Samoa	Albania
85	Israel	Dominican Republic	Angola
86	Malaysia	Ecuador	Argentina
87	China	Israel	Belarus
88	Jamaica	Myanmar	Brazil
89	Guinea	Niger	Cameroon
90	Niger	Bhutan	Grenada
91	Mali	Zambia	Guatemala
92	Argentina	Indonesia	Honduras
93	Zambia	Zimbabwe	Hungary
94	Kenya	Thailand	Iceland
95	Benin	Azerbaijan	Indonesia
96	Uzbekistan	Poland	Italy
97	Indonesia	Colombia	Moldova
98	Sri Lanka	Jamaica	Mongolia
99	Mongolia	China	Myanmar
100	Panama	Rwanda	Nepal
101	Bangladesh	Sri Lanka	Pakistan
102	Ethiopia	Panama	Panama
103	Vanuatu	Guinea-Bissau	Papua New Guinea
104	Djibouti	Mali	Romania
105	Madagascar	Mongolia	Seychelles
106	Nigeria	Madagascar	Sierra Leone
107	Malawi	Sierra Leone	South Africa
108	Fiji	Uganda	Sri Lanka
109	Pakistan	Philippines	Thailand
110	Grenada	Brazil	Uruguay
111	India	Nicaragua	Vietnam
112	Zimbabwe	Liberia	Austria
113	South Africa	Kazakhstan	Fiji
114	Suriname	Guinea	Lebanon
115	Belize	Uzbekistan	Mauritania
116	Lebanon	Tajikistan	Serbia
117	Saudi Arabia	Mexico	Slovenia
118	Uganda	Angola	Peru
119	Algeria	Algeria	Algeria
120	Australia	Australia	Australia
121	Japan	Japan	Japan
122	Kuwait	Kuwait	Kuwait
123	Libya	Libya	Libya
124	Netherlands	Netherlands	Netherlands

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Annex Table 2.A.12: continued

Annex Table 2.A.12: Pillar Rankings By Country Business Readiness			
Rank	Firm Capacity Index (FCI)	Global Integration Index (GII)	Business Climate Index (BCI)
125	Norway	Norway	Norway
126	Oman	Oman	Oman
127	Qatar	Qatar	Qatar
128	Slovakia	Slovakia	Slovakia
129	Switzerland	Switzerland	Switzerland
130	Ukraine	Ukraine	Ukraine
131	United Arab Emirates	United Arab Emirates	United Arab Emirates
132	United Kingdom	United Kingdom	United Kingdom

Source: Authors' calculations using World Bank (Enterprise Surveys 2024); World Bank (B-READY Program 2024), and OECD (SME and Entrepreneurship Outlook Database, comparative benchmark for selected economies).

Note: Higher values represent stronger firm-level capability, innovation, and participation in global value chains. Scores are normalized (0-100) and averaged with equal weights.

Annex 2.4: Indicator Definitions and Source Data (Africa)

Table 2.A.13: Normalized Indicators Technology, Trade & Investment, Sustainability, Institutional and Geopolitical, Financial and Business Readiness																			
			Technology Readiness			Trade & Investment Readiness			Sustainability Readiness			Institutional & Geopolitical Readiness			Financial Readiness			Business Readiness		
Economy	Region	Income Group	Artificial Intelligence Preparedness Index (AIPI)	Internet Penetration Index	Mobile Connectivity Index	Logistics Performance Index (LPI)	Trade to GDP Ratio Index	Tariff Restrictiveness Index (TRI)	Modern Renewables Share Index	CO_2 Intensity Index	Energy Infrastructure Index (EII)	Regulatory Quality Index	Political Stability Index	Electrification Readiness Index (ERI)	Financial Depth Index	Financial Reserves Index	Global Financial Readiness Index (GFRI)	Firm Capacity Index (FCI)	Global Integration Index (GII)	Business Climate Index (BCI)
Albania	OECD	Upper middle income	0.527	0.754	0.696	0.250	0.176	0.728	0.853	0.951	0.780	0.714	0.640	0.823	0.652	0.373	0.402	0.641	0.354	0.333
Algeria	AFRICA	Upper middle income	0.370	0.662	0.529	0.250	0.097	0.318	0.031	0.874	0.428	0.428	0.425	0.190	0.554	0.627	0.226	N/A	N/A	N/A
Angola	AFRICA	Lower middle income	0.260	0.341	0.404	0.083	0.154	0.602	0.534	0.945	0.675	0.319	0.491	0.591	0.425	0.451	N/A	0.578	0.006	0.333
Argentina	LAC	Upper middle income	0.474	0.850	0.691	0.375	0.058	0.411	0.538	0.924	0.587	0.584	0.592	0.101	0.512	0.524	0.588	0.538	0.120	0.333
Armenia	OECD	Upper middle income	0.493	0.739	0.713	0.250	0.223	0.511	0.529	0.931	0.655	0.816	0.450	0.579	0.769	0.316	0.417	0.617	0.184	0.500
Australia	OECD	High income	0.727	0.957	0.990	0.750	0.096	0.736	0.552	0.885	0.543	0.916	0.811	0.549	0.895	0.596	0.978	N/A	N/A	N/A
Austria	OECD	High income	0.725	0.914	0.937	0.875	0.273	N/A	0.810	0.948	0.780	0.879	0.791	0.798	0.815	0.542	0.996	0.743	0.640	0.167
Azerbaijan	OECD	Upper middle income	0.471	0.847	0.707	N/A	0.191	0.573	0.200	0.901	0.417	0.849	0.429	0.287	0.608	0.440	0.468	0.589	0.093	0.500
Bahrain	OECD	High income	0.515	1.000	0.847	0.667	0.373	N/A	0.000	0.809	0.476	0.838	0.498	0.190	N/A	0.346	0.794	0.747	0.345	0.500
Bangladesh	OECD	Lower middle income	0.384	0.333	0.518	0.292	0.056	0.377	0.065	0.954	0.383	0.374	0.393	0.192	0.662	0.492	0.381	0.493	0.206	0.667
Belarus	OECD	Upper middle income	0.471	0.862	0.705	0.333	0.315	0.504	0.499	0.894	0.581	0.813	0.483	0.000	N/A	0.404	N/A	0.596	0.358	0.333
Belgium	OECD	High income	0.672	0.922	0.936	0.875	0.433	N/A	0.567	0.941	0.768	0.823	0.727	0.035	0.780	0.558	0.981	0.885	0.675	0.500
Belize	LAC	Upper middle income	0.423	0.651	0.627	N/A	0.240	0.405	0.746	0.971	0.670	0.531	0.699	0.716	0.671	0.116	0.404	0.325	0.374	0.667
Benin	AFRICA	Lower middle income	0.363	0.207	0.344	0.417	0.113	0.380	0.496	0.937	0.406	0.485	0.522	0.460	0.550	N/A	0.428	0.532	0.179	0.833

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Annex Table 2.A.13: continued

Table 2.A.13: Normalized Indicators Technology, Trade & Investment, Sustainability, Institutional and Geopolitical, Financial and Business Readiness																			
			Technology Readiness			Trade & Investment Readiness			Sustainability Readiness			Institutional & Geopolitical Readiness			Financial Readiness			Business Readiness		
Economy	Region	Income Group	Artificial Intelligence Preparedness Index (AIPI)	Internet Penetration Index	Mobile Connectivity Index	Logistics Performance Index (LPI)	Trade to GDP Ratio Index	Tariff Restrictiveness Index (TRI)	Modern Renewables Share Index	CO_2 Intensity Index	Energy Infrastructure Index (EII)	Regulatory Quality Index	Political Stability Index	Electrification Readiness Index (ERI)	Financial Depth Index	Financial Reserves Index	Global Financial Readiness Index (GFRI)	Firm Capacity Index (FCI)	Global Integration Index (GII)	Business Climate Index (BCI)
Bhutan	OECD	Lower middle income	0.442	0.809	0.590	0.250	0.182	0.415	0.562	N/A	0.897	0.689	0.827	0.696	0.733	0.180	N/A	0.642	0.103	0.667
Bolivia	OECD	Lower middle income	0.377	N/A	0.599	0.208	0.127	N/A	N/A	0.901	0.505	0.475	0.521	0.505	0.771	0.254	0.346	0.698	0.203	0.500
Botswana	AFRICA	Upper middle income	0.413	0.723	0.596	0.500	0.190	0.721	0.025	0.919	0.277	0.692	0.845	0.126	0.647	0.310	0.494	0.677	0.128	0.500
Brazil	LAC	Upper middle income	0.501	0.786	0.842	0.542	0.067	0.440	0.867	0.938	0.733	0.585	0.503	0.878	0.797	0.765	0.643	0.777	0.056	0.333
Brunei	ASEAN	High income	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bulgaria	OECD	High income	0.577	0.726	0.848	0.542	0.302	N/A	0.691	0.906	0.616	0.778	0.698	0.021	0.713	0.563	0.605	0.605	0.482	0.833
Burkina Faso	AFRICA	Low income	0.312	0.058	0.250	0.167	0.142	0.385	0.188	0.945	0.422	0.470	0.237	0.282	0.612	N/A	0.409	0.258	0.001	0.333
Burundi	AFRICA	Low income	0.295	0.023	0.173	N/A	0.052	0.537	0.231	0.961	0.633	0.401	0.306	0.392	N/A	N/A	N/A	0.463	0.129	0.333
Cambodia	ASEAN	Lower middle income	0.370	0.534	0.566	0.208	0.328	0.481	0.720	0.921	0.528	0.506	0.588	0.643	0.887	0.497	0.332	0.637	0.216	0.500
Cameroon	AFRICA	Lower middle income	0.341	0.359	0.464	0.083	0.078	0.321	0.680	0.959	0.602	0.391	0.285	0.649	N/A	N/A	0.479	0.636	0.131	0.333
Canada	OECD	High income	0.713	0.928	0.939	0.875	0.148	0.820	0.720	0.876	0.840	0.892	0.814	0.082	N/A	0.664	0.983	0.736	0.238	0.667
Chad	AFRICA	Low income	0.234	0.037	0.172	N/A	0.192	0.319	0.172	0.958	0.412	0.253	0.295	0.268	N/A	N/A	0.265	0.576	0.034	0.500
Chile	LAC	High income	0.586	0.895	0.842	0.458	0.144	0.440	0.745	0.926	0.610	0.787	0.630	0.691	0.853	0.565	0.826	0.883	0.141	0.667
China	CHINA	Upper middle income	0.635	0.699	0.898	0.750	0.073	0.468	0.559	0.805	0.500	0.867	0.510	0.156	0.968	1.000	0.763	0.557	0.085	0.500
Colombia	LAC	Upper middle income	0.489	0.694	0.729	0.417	0.082	0.682	0.722	0.945	0.645	0.750	0.431	0.691	0.680	0.598	0.408	0.703	0.090	0.833
Costa Rica	LAC	High income	0.540	0.812	0.756	0.417	0.162	0.649	0.798	0.966	0.774	0.737	0.787	0.789	0.729	0.451	0.510	0.871	0.223	0.500

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Annex Table 2.A.13: continued

Table 2.A.13: Normalized Indicators Technology, Trade & Investment, Sustainability, Institutional and Geopolitical, Financial and Business Readiness																				
			Technology Readiness			Trade & Investment Readiness			Sustainability Readiness			Institutional & Geopolitical Readiness			Financial Readiness			Business Readiness		
Economy	Region	Income Group	Artificial Intelligence Preparedness Index (AIPI)	Internet Penetration Index	Mobile Connectivity Index	Logistics Performance Index (LPI)	Trade to GDP Ratio Index	Tariff Restrictiveness Index (TRI)	Modern Renewables Share Index	CO_2 Intensity Index	Energy Infrastructure Index (EII)	Regulatory Quality Index	Political Stability Index	Electrification Readiness Index (ERI)	Financial Depth Index	Financial Reserves Index	Global Financial Readiness Index (GFRI)	Firm Capacity Index (FCI)	Global Integration Index (GII)	Business Climate Index (BCI)
Croatia	OECD	High income	0.582	0.793	0.887	0.583	0.255	N/A	0.791	0.943	0.689	0.802	0.752	0.750	0.711	0.306	0.692	0.773	0.485	0.500
Cyprus	OECD	High income	0.632	0.890	0.886	0.542	0.444	N/A	0.605	0.924	0.496	0.799	0.703	0.561	0.751	0.259	0.956	0.893	0.242	0.500
Czech Republic	OECD	High income	0.646	0.818	0.901	0.583	0.337	N/A	0.646	0.911	0.582	0.843	0.814	0.009	0.716	0.684	0.911	0.818	0.718	0.833
Denmark	OECD	High income	0.779	0.983	0.992	0.917	0.287	N/A	0.832	0.967	0.727	0.978	0.812	0.790	0.912	0.654	0.986	0.824	0.627	0.500
Djibouti	AFRICA	Lower middle income	0.319	0.586	N/A	0.333	0.767	N/A	0.028	0.947	0.383	0.606	0.503	0.170	0.587	0.080	N/A	0.470	0.333	0.500
Dominican Republic	LAC	Upper middle income	0.469	N/A	0.695	0.292	0.110	0.687	0.479	0.938	N/A	0.599	0.651	0.479	0.642	0.446	0.395	0.618	0.107	0.667
Ecuador	LAC	Upper middle income	0.442	0.674	0.666	N/A	0.116	0.601	0.658	0.912	0.687	0.564	0.543	0.670	0.743	0.379	0.338	0.718	0.107	0.500
El Salvador	LAC	Upper middle income	0.390	0.568	0.600	0.333	0.185	0.680	0.639	0.940	0.703	0.678	0.579	0.664	0.762	0.317	0.245	0.830	0.273	0.500
Estonia	OECD	High income	0.764	0.904	0.931	0.708	0.383	N/A	0.815	0.900	0.592	0.907	0.765	0.726	0.758	0.259	0.989	0.829	0.684	0.500
Ethiopia	AFRICA	Low income	0.254	0.095	0.311	N/A	0.042	0.367	0.312	0.975	0.758	0.419	0.194	0.491	N/A	0.319	0.273	0.482	0.179	0.667
Fiji	OECD	Upper middle income	0.449	0.707	0.594	0.167	0.227	0.478	0.762	0.911	0.623	0.621	0.773	0.706	0.877	0.233	N/A	0.438	0.289	0.167
Finland	OECD	High income	0.758	0.917	0.974	0.958	0.194	N/A	0.873	0.947	0.864	0.901	0.805	0.033	0.832	0.475	1.000	0.900	0.464	0.833
France	OECD	High income	0.698	0.842	0.944	0.833	0.154	N/A	0.643	0.960	0.813	0.850	0.681	0.013	0.861	0.750	0.992	0.733	0.242	0.833
Gabon	AFRICA	Upper middle income	0.323	0.643	0.515	0.208	0.195	0.326	0.941	0.945	0.532	0.374	0.587	0.777	N/A	N/A	0.494	0.887	0.137	0.500
Georgia	OECD	Upper middle income	0.530	0.738	0.733	0.333	0.259	0.913	0.729	0.922	0.714	0.954	0.514	0.723	0.780	0.335	0.586	0.702	0.244	0.667
Germany	OECD	High income	0.753	0.906	0.959	0.917	0.190	N/A	0.664	0.942	0.621	0.894	0.749	0.647	N/A	0.779	0.982	0.776	0.426	0.500

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Annex Table 2.A.13: continued

Table 2.A.13: Normalized Indicators Technology, Trade & Investment, Sustainability, Institutional and Geopolitical, Financial and Business Readiness																				
			Technology Readiness			Trade & Investment Readiness			Sustainability Readiness			Institutional & Geopolitical Readiness			Financial Readiness			Business Readiness		
Economy	Region	Income Group	Artificial Intelligence Preparedness Index (AIPI)	Internet Penetration Index	Mobile Connectivity Index	Logistics Performance Index (LPI)	Trade to GDP Ratio Index	Tariff Restrictiveness Index (TRI)	Modern Renewables Share Index	CO_2 Intensity Index	Energy Infrastructure Index (EII)	Regulatory Quality Index	Political Stability Index	Electrification Readiness Index (ERI)	Financial Depth Index	Financial Reserves Index	Global Financial Readiness Index (GFRI)	Firm Capacity Index (FCI)	Global Integration Index (GII)	Business Climate Index (BCI)
Ghana	AFRICA	Lower middle income	0.425	0.552	0.537	0.250	0.159	0.382	0.566	0.945	0.512	0.599	0.615	0.545	N/A	N/A	0.647	0.705	0.169	0.667
Greece	OECD	High income	0.582	0.786	0.855	0.750	0.209	N/A	0.681	0.931	0.612	0.725	0.642	0.653	0.716	0.458	0.867	0.715	0.590	0.667
Grenada	LAC	Upper middle income	N/A	0.678	N/A	0.250	N/A	0.398	0.155	0.962	0.417	0.500	0.836	0.260	0.736	0.100	N/A	0.424	0.123	0.333
Guatemala	LAC	Upper middle income	0.390	0.469	0.584	0.292	0.102	0.694	0.455	0.950	0.630	0.638	0.525	0.525	0.667	0.505	0.220	0.690	0.110	0.333
Guinea	AFRICA	Lower middle income	0.324	0.182	0.317	0.250	0.238	0.383	0.313	0.965	0.651	0.440	0.423	0.448	N/A	N/A	0.334	0.554	0.032	0.500
Guinea-Bissau	AFRICA	Low income	0.265	0.182	0.260	0.292	0.098	0.383	0.502	0.967	0.412	0.347	0.507	0.466	0.458	N/A	N/A	0.750	0.068	0.500
Haiti	LAC	Lower middle income	0.268	0.344	0.402	0.083	0.073	0.670	0.376	0.946	0.450	0.310	0.346	0.405	0.300	0.286	N/A	N/A	N/A	N/A
Honduras	LAC	Lower middle income	0.342	0.463	0.506	0.417	0.242	0.682	0.607	0.919	0.610	0.543	0.490	0.608	0.803	0.394	0.259	0.614	0.110	0.333
Hungary	OECD	High income	0.563	0.868	0.888	0.542	0.410	N/A	0.616	0.941	0.683	0.799	0.780	0.027	0.644	0.569	0.848	0.831	0.231	0.333
Iceland	OECD	High income	0.700	0.998	0.933	0.708	0.191	0.907	1.000	0.939	0.974	0.883	0.915	0.989	0.829	0.371	1.000	0.898	0.325	0.333
India	OECD	Lower middle income	0.493	0.384	0.673	0.625	0.092	0.320	0.652	0.889	0.377	0.763	0.449	0.237	N/A	0.832	0.508	0.381	0.192	1.000
Indonesia	ASEAN	Upper middle income	0.516	0.567	0.740	0.458	0.081	0.484	0.569	0.912	0.391	0.743	0.500	0.498	0.665	0.690	0.379	0.523	0.095	0.333
Iraq	OECD	Upper middle income	0.270	0.619	0.523	0.208	0.146	N/A	0.163	0.840	0.410	0.370	0.060	0.262	0.497	0.647	0.387	0.406	0.050	0.000
Ireland	OECD	High income	0.693	0.933	0.964	0.708	0.609	N/A	0.597	0.972	0.660	0.892	0.813	0.622	0.599	0.440	0.982	0.913	0.192	0.500
Israel	OECD	High income	0.725	0.885	0.883	0.708	0.125	0.846	0.407	0.933	0.510	0.849	0.363	0.448	N/A	0.722	0.876	0.567	0.107	0.833

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Annex Table 2.A.13: continued

Table 2.A.13: Normalized Indicators Technology, Trade & Investment, Sustainability, Institutional and Geopolitical, Financial and Business Readiness																				
			Technology Readiness			Trade & Investment Readiness			Sustainability Readiness			Institutional & Geopolitical Readiness			Financial Readiness			Business Readiness		
Economy	Region	Income Group	Artificial Intelligence Preparedness Index (AIPI)	Internet Penetration Index	Mobile Connectivity Index	Logistics Performance Index (LPI)	Trade to GDP Ratio Index	Tariff Restrictiveness Index (TRI)	Modern Renewables Share Index	CO_2 Intensity Index	Energy Infrastructure Index (EII)	Regulatory Quality Index	Political Stability Index	Electrification Readiness Index (ERI)	Financial Depth Index	Financial Reserves Index	Global Financial Readiness Index (GFRI)	Firm Capacity Index (FCI)	Global Integration Index (GII)	Business Climate Index (BCI)
Italy	OECD	High income	0.621	0.753	0.906	0.750	0.141	N/A	0.666	0.949	0.629	0.792	0.716	0.651	0.757	0.753	0.837	0.806	0.496	0.333
Jamaica	LAC	Upper middle income	0.434	0.775	0.540	0.250	0.215	0.686	0.472	0.884	0.467	0.744	0.681	0.470	0.721	N/A	N/A	0.556	0.087	0.667
Japan	OECD	High income	0.733	0.867	0.927	0.833	0.080	0.702	0.500	0.916	0.565	0.868	0.835	0.052	0.971	0.897	0.984	N/A	N/A	N/A
Jordan	OECD	Lower middle income	0.483	0.823	0.659	N/A	0.207	0.693	0.518	0.891	0.476	0.734	0.551	0.501	0.807	0.494	0.396	0.719	0.529	0.667
Kazakhstan	OECD	Upper middle income	0.552	0.880	0.771	0.333	0.141	0.542	0.234	0.839	0.358	0.892	0.547	0.284	0.616	0.568	0.609	0.609	0.038	0.667
Kenya	AFRICA	Lower middle income	0.445	0.231	0.483	N/A	0.058	0.537	0.362	0.963	0.716	0.796	0.384	0.504	N/A	0.416	0.764	0.534	0.247	0.500
Latvia	OECD	High income	0.632	0.892	0.897	0.667	0.338	N/A	0.854	0.952	0.715	0.903	0.727	0.798	0.628	0.349	0.943	0.654	0.674	0.667
Lebanon	OECD	Lower middle income	0.418	0.812	0.586	N/A	0.179	N/A	0.341	N/A	0.505	0.513	0.264	0.406	N/A	0.536	0.247	0.317	0.385	0.167
Lesotho	AFRICA	Lower middle income	0.355	0.407	0.443	N/A	0.350	0.711	0.429	0.925	0.726	0.590	0.543	0.548	0.602	0.186	0.473	0.778	0.411	0.667
Liberia	AFRICA	Low income	0.370	0.143	0.295	0.208	N/A	0.381	0.084	0.907	0.518	0.347	0.550	0.257	N/A	N/A	0.447	1.000	0.046	0.500
Libya	AFRICA	Upper middle income	0.245	0.875	0.620	0.000	0.298	0.524	0.000	0.717	0.346	0.190	0.086	0.138	0.492	0.639	0.251	N/A	N/A	N/A
Lithuania	OECD	High income	0.665	0.845	0.913	0.625	0.381	N/A	0.795	0.948	0.657	0.922	0.783	0.740	0.663	0.386	0.990	0.738	0.452	1.000
Luxembourg	OECD	High income	0.735	0.984	0.938	0.708	1.000	N/A	0.673	0.958	0.649	0.743	0.871	0.664	0.818	0.288	N/A	0.887	1.000	0.500
Madagascar	AFRICA	Low income	0.305	0.078	0.294	0.167	0.133	0.409	0.783	0.958	0.506	0.415	0.496	0.672	0.527	0.288	0.260	0.461	0.066	0.500
Malawi	OECD	Low income	0.340	0.086	0.318	N/A	N/A	0.542	0.849	0.907	0.741	0.612	0.569	0.806	N/A	N/A	0.446	0.444	0.138	0.667
Malaysia	ASEAN	Upper middle income	0.632	0.927	0.816	0.708	0.322	0.745	0.431	0.879	0.475	0.921	0.639	0.448	0.875	0.661	0.544	0.565	0.211	0.667

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Annex Table 2.A.13: continued

Table 2.A.13: Normalized Indicators Technology, Trade & Investment, Sustainability, Institutional and Geopolitical, Financial and Business Readiness																			
			Technology Readiness			Trade & Investment Readiness			Sustainability Readiness			Institutional & Geopolitical Readiness			Financial Readiness			Business Readiness		
Economy	Region	Income Group	Artificial Intelligence Preparedness Index (AIPI)	Internet Penetration Index	Mobile Connectivity Index	Logistics Performance Index (LPI)	Trade to GDP Ratio Index	Tariff Restrictiveness Index (TRI)	Modern Renewables Share Index	CO_2 Intensity Index	Energy Infrastructure Index (EII)	Regulatory Quality Index	Political Stability Index	Electrification Readiness Index (ERI)	Financial Depth Index	Financial Reserves Index	Global Financial Readiness Index (GFRI)	Firm Capacity Index (FCI)	Global Integration Index (GII)	Business Climate Index (BCI)
Mali	AFRICA	Low income	0.296	0.260	0.289	0.292	0.156	0.383	0.480	0.939	0.539	0.493	0.074	0.504	0.580	N/A	0.458	0.541	0.068	0.500
Malta	OECD	High income	0.659	0.879	0.845	0.583	0.603	N/A	0.504	0.973	0.532	0.690	0.818	0.515	0.765	0.221	0.961	0.879	0.322	0.667
Mauritania	AFRICA	Lower middle income	0.233	0.253	0.325	0.167	0.221	0.394	0.184	0.924	0.495	0.466	0.482	0.308	N/A	N/A	0.237	0.667	0.482	0.167
Mauritius	AFRICA	Upper middle income	0.525	0.690	0.707	0.250	0.245	0.966	0.515	0.935	0.438	0.921	0.793	0.484	0.782	0.400	0.486	0.893	0.323	0.500
Mexico	LAC	Upper middle income	0.532	0.734	0.783	0.417	0.188	0.668	0.568	0.913	0.525	0.784	0.447	0.059	0.656	0.730	0.307	0.578	0.009	0.667
Moldova	OECD	Upper middle income	0.481	0.671	0.761	0.250	0.221	N/A	N/A	0.875	0.416	0.814	0.508	0.416	0.627	0.356	0.462	0.603	0.232	0.333
Mongolia	OECD	Upper middle income	0.484	0.699	0.673	0.250	0.313	0.449	0.248	0.778	0.345	0.716	0.752	0.287	N/A	0.356	0.703	0.511	0.068	0.333
Morocco	AFRICA	Lower middle income	0.429	0.866	0.620	N/A	0.196	0.345	0.490	0.897	0.421	0.799	0.527	0.462	N/A	0.547	0.303	0.568	0.288	0.833
Mozambique	AFRICA	Low income	0.257	0.096	0.347	N/A	0.272	0.416	0.630	0.904	0.705	0.524	0.348	0.660	0.539	0.320	0.431	0.635	0.248	0.667
Myanmar	ASEAN	Lower middle income	0.327	0.471	0.486	N/A	N/A	0.450	0.454	0.940	0.466	0.401	0.196	0.459	N/A	N/A	N/A	0.730	0.106	0.333
Namibia	AFRICA	Lower middle income	0.420	0.554	0.495	0.417	0.216	0.716	0.698	0.925	0.700	0.620	0.728	0.699	N/A	0.307	0.600	0.732	0.137	0.667
Nepal	OECD	Lower middle income	0.351	N/A	0.527	N/A	0.095	0.375	0.476	0.936	0.750	0.647	0.552	0.586	0.832	N/A	0.378	0.637	0.198	0.333
Netherlands	OECD	High income	0.766	0.928	0.962	0.917	0.414	N/A	0.536	0.949	0.663	0.840	0.785	0.602	0.810	0.623	0.992	N/A	N/A	N/A
New Zealand	OECD	High income	0.754	0.944	0.947	0.708	0.110	0.808	0.764	0.928	0.787	1.000	0.920	0.773	N/A	0.495	0.977	0.827	0.188	0.667
Nicaragua	LAC	Lower middle income	0.331	0.426	0.530	0.250	0.246	0.687	0.601	0.942	0.611	0.515	0.496	0.605	0.629	0.366	0.198	0.643	0.047	0.500

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Annex Table 2.A.13: continued

Table 2.A.13: Normalized Indicators Technology, Trade & Investment, Sustainability, Institutional and Geopolitical, Financial and Business Readiness																				
			Technology Readiness			Trade & Investment Readiness			Sustainability Readiness			Institutional & Geopolitical Readiness			Financial Readiness			Business Readiness		
Economy	Region	Income Group	Artificial Intelligence Preparedness Index (AIPI)	Internet Penetration Index	Mobile Connectivity Index	Logistics Performance Index (LPI)	Trade to GDP Ratio Index	Tariff Restrictiveness Index (TRI)	Modern Renewables Share Index	CO_2 Intensity Index	Energy Infrastructure Index (EII)	Regulatory Quality Index	Political Stability Index	Electrification Readiness Index (ERI)	Financial Depth Index	Financial Reserves Index	Global Financial Readiness Index (GFRI)	Firm Capacity Index (FCI)	Global Integration Index (GII)	Business Climate Index (BCI)
Niger	AFRICA	Low income	0.326	0.130	0.219	N/A	0.067	0.382	0.234	0.966	N/A	0.551	0.263	0.234	0.446	N/A	0.210	0.551	0.106	0.667
Nigeria	AFRICA	Lower middle income	0.336	0.295	0.507	0.292	N/A	0.387	0.426	0.948	0.478	0.552	0.200	0.447	N/A	0.551	0.503	0.449	0.304	0.500
Norway	OECD	High income	0.706	0.979	0.973	0.750	0.172	0.834	0.933	0.954	0.977	0.937	0.842	0.951	0.893	0.625	0.985	N/A	N/A	N/A
Oman	OECD	High income	0.533	0.941	0.743	0.583	0.222	0.481	0.007	0.784	0.547	0.749	0.724	0.223	N/A	0.476	0.508	N/A	N/A	N/A
Pakistan	OECD	Lower middle income	0.369	0.155	0.416	N/A	0.052	0.503	0.495	0.924	0.523	0.614	0.183	0.043	0.463	0.477	0.382	0.430	0.184	0.333
Panama	LAC	High income	0.501	0.712	0.737	0.500	0.195	0.714	0.672	0.952	0.687	0.698	0.669	0.678	N/A	0.378	0.418	0.510	0.076	0.333
Papua New Guinea	OECD	Lower middle income	0.290	0.169	0.415	0.333	N/A	0.829	0.596	0.929	0.482	0.596	0.472	0.550	N/A	N/A	N/A	0.698	0.125	0.333
Paraguay	LAC	Upper middle income	0.410	0.728	0.729	0.333	0.167	0.514	0.853	0.960	0.803	0.585	0.614	0.833	0.747	N/A	0.433	0.769	0.148	0.500
Peru	LAC	Upper middle income	0.491	0.678	0.737	0.458	0.111	0.820	0.673	0.941	0.633	0.729	0.525	0.657	N/A	0.623	0.439	0.703	0.119	0.000
Philippines	ASEAN	Lower middle income	0.498	0.617	0.681	0.583	0.151	0.497	0.550	0.927	N/A	0.641	0.434	0.550	0.721	0.652	0.448	0.761	0.057	0.500
Poland	OECD	High income	0.597	0.833	0.854	0.708	0.265	N/A	0.639	0.909	0.416	0.844	0.725	0.550	0.651	0.726	0.590	0.612	0.091	0.500
Portugal	OECD	High income	0.646	0.798	0.907	0.625	0.212	N/A	0.775	0.957	0.710	0.846	0.811	0.749	0.803	0.560	0.901	0.813	0.272	0.500
Qatar	OECD	High income	0.535	0.998	0.907	0.667	0.223	0.499	0.000	0.809	0.621	0.729	0.794	0.248	0.881	0.584	N/A	N/A	N/A	N/A
Romania	OECD	High income	0.584	0.807	0.821	0.542	0.202	N/A	0.726	0.952	0.644	0.798	0.718	0.075	0.581	0.615	0.560	0.663	0.223	0.333
Rwanda	AFRICA	Low income	0.437	0.211	0.428	0.375	0.132	0.551	0.510	0.979	0.608	0.846	0.627	0.550	0.580	0.273	N/A	0.736	0.084	0.833
Samoa	OECD	Upper middle income	N/A	0.505	0.618	N/A	0.176	0.392	0.413	0.838	0.560	0.630	0.860	0.472	0.800	0.118	N/A	0.949	0.109	0.833

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Annex Table 2.A.13: continued

Table 2.A.13: Normalized Indicators Technology, Trade & Investment, Sustainability, Institutional and Geopolitical, Financial and Business Readiness																				
			Technology Readiness			Trade & Investment Readiness			Sustainability Readiness			Institutional & Geopolitical Readiness			Financial Readiness			Business Readiness		
Economy	Region	Income Group	Artificial Intelligence Preparedness Index (AIPI)	Internet Penetration Index	Mobile Connectivity Index	Logistics Performance Index (LPI)	Trade to GDP Ratio Index	Tariff Restrictiveness Index (TRI)	Modern Renewables Share Index	CO_2 Intensity Index	Energy Infrastructure Index (EII)	Regulatory Quality Index	Political Stability Index	Electrification Readiness Index (ERI)	Financial Depth Index	Financial Reserves Index	Global Financial Readiness Index (GFRI)	Firm Capacity Index (FCI)	Global Integration Index (GII)	Business Climate Index (BCI)
Saudi Arabia	OECD	High income	0.577	0.987	0.831	0.625	0.131	N/A	0.008	0.839	0.506	0.772	0.500	0.207	N/A	0.799	0.620	0.314	0.188	0.500
Senegal	AFRICA	Lower middle income	0.396	0.512	0.453	N/A	0.159	0.386	0.402	0.921	0.461	0.588	0.583	0.425	0.629	N/A	0.635	0.745	0.145	0.500
Serbia	OECD	Upper middle income	0.537	0.797	0.772	0.375	0.277	0.425	0.726	N/A	0.436	0.834	0.585	0.610	0.648	0.527	0.635	0.582	0.492	0.167
Seychelles	AFRICA	High income	0.531	0.835	0.707	N/A	0.443	0.912	0.137	0.835	0.495	0.624	0.772	0.280	N/A	0.160	N/A	0.961	0.138	0.333
Sierra Leone	AFRICA	Low income	0.298	0.117	0.342	N/A	0.088	0.377	0.740	0.978	0.739	0.412	0.574	0.740	0.283	N/A	0.411	0.735	0.062	0.333
Singapore	ASEAN	High income	0.801	0.932	1.000	1.000	0.840	0.997	0.146	0.960	0.587	0.991	0.932	0.322	N/A	0.780	0.806	0.572	0.213	0.500
Slovakia	OECD	High income	0.592	0.871	0.892	0.583	0.464	N/A	0.662	0.917	0.745	0.832	0.741	0.008	0.753	0.453	0.910	N/A	N/A	N/A
Slovenia	OECD	High income	0.634	0.867	0.900	0.583	0.409	N/A	0.706	0.938	0.700	0.846	0.779	0.029	0.661	0.290	0.987	0.826	0.725	0.167
Solomon Islands	OECD	Lower middle income	N/A	0.321	0.365	0.375	0.167	0.394	0.067	0.897	0.388	0.528	0.719	0.196	0.632	N/A	N/A	0.840	0.297	0.500
South Africa	AFRICA	Upper middle income	0.497	0.715	0.710	0.750	0.130	0.704	0.356	0.792	0.391	0.704	0.492	0.481	N/A	0.604	0.568	0.350	0.119	0.333
Spain	OECD	High income	0.648	0.932	0.919	0.833	0.158	N/A	0.666	0.950	0.722	0.867	0.691	0.108	0.794	0.653	0.983	0.773	0.439	0.500
Sri Lanka	OECD	Lower middle income	0.436	0.378	0.552	0.375	0.091	0.682	0.756	0.962	0.502	0.626	0.520	0.654	N/A	0.366	0.400	0.513	0.079	0.333
Sudan	AFRICA	Low income	0.233	0.202	0.227	0.208	0.000	0.313	0.714	0.913	N/A	0.371	0.167	0.714	N/A	N/A	N/A	0.616	0.134	0.500
Suriname	LAC	Upper middle income	0.418	0.708	0.568	N/A	N/A	0.404	0.575	0.891	0.596	0.412	0.684	0.583	0.520	0.235	N/A	0.342	0.140	0.667
Sweden	OECD	High income	0.748	0.946	0.955	0.875	0.230	N/A	0.913	0.972	0.893	0.928	0.819	0.062	0.887	0.599	0.985	0.744	0.388	0.500
Switzerland	OECD	High income	0.757	0.951	0.993	0.917	0.323	0.596	0.742	0.975	0.826	0.847	0.870	0.055	N/A	0.867	0.983	N/A	N/A	N/A

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Annex Table 2.A.13: continued

Table 2.A.13: Normalized Indicators Technology, Trade & Investment, Sustainability, Institutional and Geopolitical, Financial and Business Readiness																				
			Technology Readiness			Trade & Investment Readiness			Sustainability Readiness			Institutional & Geopolitical Readiness			Financial Readiness			Business Readiness		
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Tajikistan	OECD	Lower middle income	0.366	0.426	0.322	0.250	0.141	0.467	0.837	0.900	0.734	0.618	0.480	0.796	N/A	N/A	0.330	0.665	0.015	0.500
Thailand	ASEAN	Upper middle income	0.536	0.801	0.788	0.667	0.287	0.562	0.669	0.909	0.474	0.900	0.506	0.591	0.919	0.732	0.559	0.570	0.094	0.333
Togo	AFRICA	Low income	0.316	0.249	0.375	0.250	0.133	0.379	0.573	0.949	0.452	0.633	0.420	0.525	0.613	N/A	0.491	0.764	0.452	0.500
Tonga	OECD	Upper middle income	N/A	0.546	0.598	N/A	0.185	0.510	0.190	N/A	0.442	0.620	0.850	0.291	0.689	0.088	N/A	0.925	0.075	0.667
Tunisia	AFRICA	Lower middle income	0.465	0.669	0.635	N/A	0.241	0.471	0.221	0.897	0.464	0.729	0.455	0.319	0.749	0.409	0.273	0.631	0.680	0.500
Uganda	OECD	Low income	0.354	0.037	0.382	N/A	0.075	0.513	0.807	0.972	0.739	0.599	0.437	0.779	0.502	N/A	0.634	0.082	0.060	0.500
Ukraine	OECD	Upper middle income	0.512	0.762	0.711	0.333	0.198	0.657	0.499	0.880	0.639	0.751	0.292	0.014	N/A	0.563	0.779	N/A	N/A	N/A
United States	USA	High income	0.771	0.907	0.968	0.792	0.043	0.691	0.558	0.906	0.669	0.958	0.614	0.035	0.972	0.867	0.967	N/A	N/A	N/A
Uruguay	LAC	High income	0.549	0.863	0.851	0.458	0.116	0.483	0.906	0.956	0.747	0.621	0.841	0.843	0.637	0.471	0.693	0.765	0.125	0.333
Uzbekistan	OECD	Lower middle income	N/A	0.765	0.600	0.292	0.139	0.619	0.188	0.820	0.220	0.747	0.549	0.201	0.649	0.557	0.418	0.528	0.022	0.667
Vanuatu	OECD	Lower middle income	N/A	0.386	0.510	N/A	0.171	0.530	0.263	0.861	0.493	0.615	0.819	0.355	0.737	0.137	N/A	0.482	0.184	0.500
Vietnam	ASEAN	Lower middle income	0.482	0.720	0.722	0.583	0.435	0.578	0.641	0.866	0.525	0.746	0.600	0.595	N/A	0.627	0.483	0.568	0.126	0.333
Zambia	OECD	Lower middle income	0.371	0.224	0.413	N/A	0.178	0.472	0.706	0.945	0.717	0.702	0.617	0.710	N/A	N/A	0.573	0.538	0.098	0.833
Zimbabwe	AFRICA	Lower middle income	0.305	0.285	0.374	0.250	0.119	0.275	0.536	0.896	0.590	0.516	0.396	0.558	N/A	0.113	0.405	0.360	0.095	0.500

Note: Numbers are min-max normalized to 0-1 and shown as provided. "N/A" = unavailable. Country-level indicator values normalized by indicators and grouped by readiness pillar.