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Deepening regional integration in Africa: enabling regional value chains through the Agreement Establishing the African Continental Free Trade Area for innovation, diversification and economic transformation

I. Introduction

1. The ability of African companies to harness frontier technologies and compete in the global digital economy depends on harmonized regulations, interoperable systems and robust cross-border digital infrastructure networks. Persistent fragmentation, regulatory divergence and connectivity gaps continue to constrain innovation and productivity, however. The present report begins with an outline of these structural challenges, followed by proposals for policy and institutional reforms to build a more unified regional environment that better enables innovation. In this context, the Agreement Establishing the African Continental Free Trade Area emerges as a critical platform for addressing these barriers, by promoting regulatory coherence, reducing compliance costs and incentivizing cross-border investment in both hard and soft infrastructure.

2. The Agreement lays the groundwork for the next milestones in African integration: the establishment of an African continental customs union and, ultimately, an African continental common market. Achieving these goals requires coordinated policies on trade; investment; competition; intellectual property; the movement of people and capital; and the harmonization of product and service standards. Such frontier technologies as digital customs platforms, interoperable payment systems and data-sharing solutions can play a pivotal role by enabling the exchange of data in real-time, thereby enhancing transparency and fostering policy coherence, both among the continent's regional economic communities and between each individual regional economic community and pan-African institutions.

3. The next issue addressed in the report is the potential of regional value chains as practical mechanisms to translate the African integration agenda into transformative outcomes, through continental frameworks that support the development of regional value chains in high-growth sectors, such as the automotive and services sectors, which are increasingly driven by advanced technologies and

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knowledge-intensive inputs. The strengthening of regional value chains offers a path to deeper integration and to inclusive, technology-enabled industrialization, while fostering job creation, economic diversification and greater resilience against global shocks.

II. Unlocking innovation: the Agreement Establishing the African Continental Free Trade Area as a platform for digital and regulatory convergence

4. A new wave of frontier technologies is redefining the global economy. While anchored in digital innovations, such as artificial intelligence, the Internet of things and big data, their reach extends to significant advances in renewable energy, biotechnology and advanced materials. The market for these technologies is set to grow sixfold to $16.4 trillion by 2033.[1] For African companies, harnessing these technologies presents a monumental opportunity to accelerate development and leapfrog traditional stages in the creation of mature industries.

5. To fully capitalize on frontier technologies, African States must prioritize investment in digital infrastructure. Despite the pivotal role of Internet connectivity in most such technologies, mobile broadband penetration in Africa stood at just 51.5 per cent in 2024, with fixed broadband penetration at a mere 0.9 per cent. Moreover, Internet connectivity is concentrated in major urban areas and high-traffic routes, limiting access in rural areas: in 2024, Internet usage in rural areas was only 22.7 per cent, compared to 57.1 per cent in cities. Furthermore, Africa has a significant digital gender divide, with women's Internet usage at 31.4 per cent, compared with that of men at 43.4 per cent.[2]

6. In addition to the challenges in gaining access to the Internet, the international Internet bandwidth of Africa remains the lowest in the world. Such bandwidth is a crucial building block of the delivery of data-intensive applications and services through high-speed networks. While African usage has increased significantly, rising from 11.0 kilobits per second per user in 2015 to 80.1 kilobits per second per user in 2024, it still pales in comparison with rates in the Americas (356.6 kilobits per second), the Arab States (232.2 kilobits per second) and the Asia and the Pacific region (268.4 kilobits per second); such figures serve to underscore the scale of the challenge.[3]

7. Affordability of broadband Internet services presents another hurdle. The continent has not yet achieved the goal of the Broadband Commission for Sustainable Development of making entry-level broadband services available, by 2025, in low- and middle-income countries at less than 2 per cent of monthly gross national income per capita.[4] As of 2023, the cost of mobile broadband data in Africa was 4.5 per cent of gross national income per capita, considerably higher than the global average of 1.3 per cent. Fixed broadband is even more expensive, averaging 14.8 per cent of gross national income per capita, far exceeding the world average of 2.7 per cent.[5]The high cost effectively prices out the vast majority of potential users, stifling innovation and deepening the digital divide.

8. Beyond connectivity, most frontier technologies require robust data centres to process vast volumes of information efficiently. Proximity to these centres is crucial

[1] United Nations Conference on Trade and Development (UNCTAD), *Technology and Innovation Report, 2025: Inclusive Artificial Intelligence for Development* (Geneva, 2025).

[2] International Telecommunication Union (ITU), "Statistics". Available at www.itu.int/en/ITU-D/Statistics/pages/stat/default.aspx (accessed on 26 September 2025).

[3] Ibid.

[4] Broadband Commission for Sustainable Development, "2025 broadband advocacy target 2: make broadband affordable", 2025.

[5] ITU, "Fixed-broadband Internet basket", Data Hub database. Available at https://datahub.itu.int/data/?e=701&c=&i=34616 (accessed on 26 September 2025).

for improving service performance, as it lowers latency and reduces international bandwidth costs. Africa is critically underserved in this area, however, hosting only 2 per cent of the world's colocation data centres, with the majority of the region's data centre needs being met outside the continent.[6]

9. The infrastructure deficit has resulted in a cloud computing landscape dominated by service providers based in the United States of America. Such massive overreliance on a few global companies introduces several significant risks. First, the lack of competition can result in higher prices. Second, service disruptions, such as outages, pose systemic threats to vital sectors of national economies and, thus, to the economies themselves. Third, the providers may create unfair advantages for their own applications, stifling local innovation and future market entry. Finally, against the backdrop of the growing global threat of cyberattacks, their complex operations present a major challenge for effective regulatory oversight and pose a risk of data breaches.[7]

10. An enabling regulatory environment is equally crucial for driving the development and adoption of frontier technologies, as it fosters trust, ensures security and enhances efficiency. In contrast, significant regulatory fragmentation among African countries constitutes a major barrier. For instance, only 16 States have ratified the African Union Convention on Cyber Security and Personal Data Protection, which highlights a persistent gap in the legal alignment of data governance across the continent. Such inconsistencies force businesses, in particular small and medium-sized enterprises, to navigate complex compliance burdens in multiple markets, which can stifle innovation and cross-border scalability.[8]

11. In this context, the Agreement Establishing the African Continental Free Trade Area emerges as a critical, multi-faceted platform to address these intertwined challenges. By creating a single, integrated market, the Agreement fundamentally improves the business case for large-scale, cross-border infrastructure investment. It provides the scale and the demand certainty needed to attract private and public investment in the laying of the missing fibre-optic cable links, the construction of regional data centres, located within Africa and serving the continent, and the development of interoperable payment systems. The protocols to the Agreement on investment, competition policy and intellectual property rights further de-risk such ventures, assuring investors of market access and legal protection.

12. Simultaneously, the Agreement directly addresses regulatory fragmentation, through its landmark Protocol on Digital Trade. The Protocol is aimed at establishing a harmonized legal framework for digital commerce across the continent, thereby promoting regulatory coherence on such critical issues as data flows, consumer protection and electronic authentication. By reducing compliance costs and legal uncertainty, the Protocol will empower businesses to operate seamlessly across borders and to use the infrastructure that has been incentivized by the Agreement. The Agreement is, therefore, not merely a trade pact: it is the central institutional mechanism for systematically building the foundational infrastructure and erecting the coherent regulatory superstructure required to unleash a new era of African innovation and productivity.

[6] Economic Commission for Africa (ECA), *Digital Infrastructure in Africa* (Addis Ababa, 2023).

[7] Ibid.

[8] Economic and Social Commission for Asia and the Pacific (ESCAP), ECA and Economic Commission for Latin America and the Caribbean, *Digital Trade Regulatory Review for Asia-Pacific, Africa and Latin America and the Caribbean* (Bangkok, 2024).

III. Next horizon: using frontier technologies to advance regional integration beyond the Agreement Establishing the African Continental Free Trade Area

13. The continent's regional integration journey has entered a crucial phase. With the implementation of the Agreement now well under way, the continent stands at a critical turning point on the road towards the next major milestones: a customs union and a common market that span the entire continent. In the light of the aspiration to realize such a customs union and a common market, articulated by the Economic Commission for Africa (ECA) in the eleventh edition of its flagship report on the assessment of regional integration in Africa,[9] it is urgently necessary to overcome complex integration challenges, which range from the overlapping memberships of the regional economic communities to asymmetries of policy and infrastructure. Unlocking the full potential of the African continental customs union and common market requires not only political commitment and institutional alignment, but also the strategic deployment of emerging technologies.

14. Such technologies as artificial intelligence, blockchain, big data analytics and the Internet of things offer powerful tools to harmonize customs systems, enable real-time data exchange and support interoperable governance. As African integration deepens under the Treaty Establishing the African Economic Community and Agenda 2063: The Africa We Want, of the African Union, these innovations become more critical to modernizing trade and migration systems, upgrading digital infrastructure and accelerating the development of regional value chains – in particular in strategic sectors like automotives and pharmaceuticals – to build a unified, digital-enabled African Economic Community.

15. Deeper regional trade integration, beyond the measures set out in the Agreement, hinges on decisive reforms in trade facilitation to ensure seamless cross-border commerce. Such reforms require modern infrastructure, streamlined border procedures and the removal of non-tariff barriers. Making use of frontier technologies is crucial for digitalizing customs and trade operations, enhancing transparency, fostering competitiveness and driving efficiency. As implementation of the Agreement advances and political momentum towards full establishment of the African Economic Community grows, the adoption of these transformative measures is rapidly gaining pace across the continent.

16. Modernizing customs systems through the integration or deployment of such tools as the Automated System for Customs Data and national trade information portals, both of the United Nations Conference on Trade and Development, is crucial for realizing the African continental customs union and common market, as envisioned in the eleventh edition of the ECA report on the assessment of regional integration in Africa. The Automated System for Customs Data employs frontier technologies, including artificial intelligence for risk management, blockchain for secure data-sharing and cloud computing for scalable digital infrastructure, in order to harmonize and streamline customs procedures. These digital platforms enable real-time data exchange, transparency and coordinated border management, which are essential for eliminating non-tariff barriers and ensuring seamless movement of goods, services and people. As States align their trade systems, such technologies will be the backbone of a unified and integrated African continental customs union and common market.

17. The movement of goods across African borders is often hampered by the uncertainty resulting from transit delays and administrative bottlenecks. With the use of devices connected to the Internet of things, the Global Positioning System and cloud-based logistics platforms, real-time tracking of cargo is now possible, improving supply chain transparency and reducing theft and losses in transit. Several

[9] ECA, *Assessing Regional Integration in Africa ARIA XI – Delivering on the African Economic Community: Towards an African Continental Customs Union and African Continental Common Market* (Addis Ababa, 2025).

partner States of the East African Community[10] have, since 2014, been jointly operating the Regional Electronic Cargo Tracking system, on which they cooperate closely with development partners.[11] The system electronically tracks cargo cleared at the port of entry and monitors its movement along transit corridors, while also tracing transit cargo to prevent fraudulent diversion. In addition, the Common Market for Eastern and Southern Africa (COMESA) is facilitating the movement of transit goods through its Yellow Card scheme, under which third-party motor vehicle insurance cover is provided.[12] Its operations have been enhanced by the Digital Yellow Card system, which allows for real-time verification and improved cross-border efficiency,[13] innovations that are critical for reducing delivery time variability and making African products more competitive in regional and global markets. To scale up these tools, digital logistics frameworks should be developed and aligned with existing customs and infrastructure projects under the Programme for Infrastructure Development in Africa.

18. The use of frontier technologies can be further enhanced by building on existing digital payment solutions. Under the Agreement, the Pan-African Payment and Settlement System facilitates cross-border transactions using advanced technologies, such as artificial intelligence and big data, to enable interoperability. Within COMESA, the Regional Payment and Settlement System serves a similar purpose and efforts are ongoing to expand the Regional Digital Retail Payments Platform. The expansion is aimed at reducing dependence on foreign currencies and lowering transaction costs, in particular for small-scale traders. These financial systems of COMESA are now being upgraded to ensure interoperability with the Pan-African Payment and Settlement System, thereby creating a more integrated and efficient continental payment infrastructure.

19. It is important to note that digital-enabled infrastructure, not only supports trade in goods and services, but also complements efforts to liberalize movement of people as an essential pillar of implementing the Agreement. Progress has been slow on the African Union Protocol to the Treaty Establishing the African Economic Community Relating to Free Movement of Persons, Right of Residence and Right of Establishment, as well as on the corresponding frameworks of the East African Community, the Economic Community of West African States and the Southern African Development Community. This is partly due to the persistence of constraints, such as weak identification systems, fragmented visa regimes and lack of mutual recognition of qualifications and social benefits. The adoption of digital-enabled infrastructure would go a long way towards addressing some of these challenges.

20. In addition, many African States remain cautious, citing perceived or actual risks linked to the implementation of the Protocol on Free Movement of Persons. In this context, strong security and intelligence frameworks are essential to support safe and efficient cross-border movement and to ensure coordinated, seamless border management. Frontier technologies can provide practical solutions to address these challenges and ensure that mobility promotes, rather than undermines, regional integration. Digital identity systems and interoperable databases would further enable safe, people-centred mobility. Moreover, existing tools, such as advance passenger information and passenger name record systems, are being deployed to enhance traveller verification, automate threat detection and strengthen border security, while maintaining efficiency.

21. To fully realize these benefits, however, innovation needs to be scaled up, private sector participation encouraged and digital governance across the continent harmonized, all of which will require policy coherence on data protection, targeted investment in digital infrastructure and coordination mechanisms, such as the

[10] Democratic Republic of the Congo, Kenya, Rwanda and Uganda.

[11] ESCAP and International Chamber of Commerce, “Regional Electronic Cargo Tracking system”.

[12] COMESA, “COMESA Yellow Card”.

[13] COMESA, “COMESA launches digital yellow card mobile app”, e-COMESA Newsletter, No. 70 (February 2023).

African Scientific, Research and Innovation Council. ECA is working with the African Union Commission on an initiative entitled "International migration in Africa: shaping a positive narrative and removing barriers to mobility".[14] States' use of advanced immigration mechanisms to improve security, such as advance passenger information and passenger name record systems, makes the initiative more likely to succeed. ECA can play a role in advocating the incorporation of frontier technologies into regional trade and migration frameworks, as a lever for deeper continental integration.

22. As African States and institutions work towards fully implementing the Agreement and transitioning to a customs union and common market, protecting migrant workers through portable social protection systems is essential. Currently, the absence of cross-border health insurance, pensions and unemployment benefits exposes migrants and host economies to significant risks, fuelling informality and exclusion. Frontier technologies offer powerful solutions to transform this landscape. Blockchain-based regional health cards could securely store patient data and information on any entitlements that are accessible across borders, while cellular phone applications linked to regional insurance schemes could enable migrants and informal workers to contribute to the schemes and access the benefits anywhere on the continent. Such digital systems could remove administrative barriers, build trust and put people at the heart of African integration. Deploying these innovations would be vital for modernizing both trade facilitation and migration governance, driving the continent closer to seamless economic and social integration.

IV. African Continental Free Trade Area and deeper integration as catalysts for technology-driven regional value chains

23. The African journey towards structural transformation depends on the continent turning from the current disparate collection of fragmented, low-value added and technology-deficient economies into a continent-wide network of integration, value retention and innovation. Together, the African Continental Free Trade Area, the envisioned African continental customs union and the planned African continental common market form the backbone of this strategy.

24. The Agreement is the operational lever of this transformation, with the potential to sharply reduce the cost of trading goods, services and inputs across African borders, thereby linking production stages across multiple countries and enabling the formation of regional value chains. In the absence of the Agreement, African traders would face tariffs exceeding 6 per cent and non-tariff barriers of around 18 per cent when trading with their counterparts elsewhere in Africa; such rates are higher than those that they face when they trade outside Africa.[15] If fully implemented, the Agreement is set to spark a surge in intra-African trade in intermediate goods and services. Compared with a hypothetical scenario in which the Agreement did not exist, there would be a 51.7 per cent boost to industrial goods, a 48.6 per cent boost to agrifood, a 40.4 per cent boost to services and 28.4 per cent boost to energy and mining by 2045.[16] Projected gains in intermediate trade hint at a future in which African economies increasingly plug into each other's supply chains, paving the way for continent-wide production networks.

25. Beyond substantial reductions to tariff and non-tariff barriers, the Agreement's power to unlock value chains hinges on one critical feature: its rules of origin. These rules set the minimum share of local value added that a product must contain to

[14] ECA, "ECA and AUC to tackle migration narrative and barriers in Africa", 29 May 2023.

[15] ECA, *AfCFTA: What You Need to Know – Common Questions and Answers, No. 2* (Addis Ababa, 2024).

[16] Stephen Karingi and others "Implementing the AfCFTA agreement and implications for Africa's regional value chains", paper presented during the twenty-seventh Annual Conference on Global Economic Analysis, Fort Collins, United States, June 2024.

qualify as “originating goods” (i.e. goods deemed to be made in Africa for customs purposes) and benefit from tariff-free access across the continent: typically, the required share is between 30 and 50 per cent, depending on the sector and subject to ongoing negotiations.[17] The rules’ most notable feature is the cumulation principle, under which African States may combine their value added contributions to meet these thresholds jointly. This approach directly incentivizes cross-border production partnerships and helps to weave stronger regional supply networks.

26. The next phase of African integration – through the Area’s progression into a customs union and, ultimately, a common market – will be pivotal in shaping the depth, efficiency and competitiveness of the continent’s regional value chains. While tariff liberalization under the Agreement is a major step forward, firms will continue to grapple with burdensome rules of origin and complex customs procedures at each border. It is estimated that compliance with rules of origin can cost between 2.3 and 8.0 per cent of a trade transaction’s value, which often eclipses the tariff savings that the rules are meant to unlock.[18] For many firms, in particular small and medium-sized enterprises, these burdensome hidden costs constitute a strong disincentive to any participation in preferential trade. Transitioning to a customs union would remove such bureaucratic impediments, which would reduce hidden costs and empower companies to organize production on the basis of economic efficiency rather than on the basis of tariff and non-tariff barrier avoidance. A future African continental common market would take this further, allowing the completely free movement of people, capital and services, which is a vital component of value chains that rely on mobile skills, cross-border finance and integrated logistics. In short, the Area opens the door, the African continental customs union tears down the walls and the African continental common market lays the runway, allowing the region to take off, as a truly borderless, agile production powerhouse and to thrive in an increasingly complex global economic environment.

27. Once cross-border value chains are established, they become conduits for the diffusion of innovation and technology, including frontier technologies. From a recent analysis of World Bank enterprise surveys conducted in 48 African countries during the period 2006–2018, quantitative evidence has been obtained that firms that are integrated into global value chains are significantly more likely to introduce new products and improve production processes. Such innovation occurs in firms of all sizes – including those typically constrained by limited resources, such as small and medium-sized enterprises and recently established companies – and creates positive spillovers among sectors and regions. Participation in global and regional value chains pushes firms to innovate because they are driven to do so by such factors as competitive pressure, market size, input effort and lessons from their relationships with suppliers and buyers.[19] By extension, it may be reasonably anticipated that, under the Agreement, regional value chains will generate comparable innovation benefits, underpinned by similar mechanisms, such as inter-firm learning and heightened competition.

28. The fact that there are positive spillovers from African companies that operate within global value chains to African firms that operate outside global value chains demonstrates the broader potential for economy-wide innovation. To tap into this potential, policymakers must build bridges, connecting companies operating within global value chains with the wider domestic economy to spark knowledge flows and innovation. Such initiatives as industrial clusters, technology parks and business incubators can play a central role in promoting interaction, collaboration and knowledge-sharing across the economy.[20] Africa is host to some 237 special

[17] For more information, see African Continental Free Trade Area secretariat, *Rules of Origin Manual, vol. 1.0 (July 2022)* (Accra, 2022) and Trade Law Centre, “AfCFTA rules of origin: introduction to the AfCFTA RoO – key provisions, sectoral approach and outstanding issues” (Cape Town, South Africa, 2021).

[18] Yohannes Ayele, “Assessing the restrictiveness of rules of origin in the AfCFTA” (London, ODI, 2024).

[19] Gideon Ndubuisi and others, “Global value chains and the innovativeness of firms in Africa”, *Technovation*, vol. 146, 2025.

[20] Ibid.

economic zones,[21] which represent a suitably stable launchpad for scaling up regional value chains under the Agreement.

29. The African automotive sector is a standout opportunity for the development of a regional value chain that would be well-positioned to thrive under the Agreement and in a context of deeper continental integration, serving as a catalyst for technological innovation. With full implementation of the Agreement, an 85.2 per cent increase in intra-African trade in vehicles and transport equipment and a 45.2 per cent boost to intra-African trade in transport services are projected by 2045,[22] which suggest deepening integration of cross-border production. An example of such integration is the production of an internal combustion engine vehicle, which contains about 30,000 parts[23] and is linked to a wide web of upstream and downstream sectors, including rubber, leather, textiles, electronics, energy, logistics and services. The range of sectors demonstrates both the magnitude of the value chains involved and the diversity of the industries needed to support them. Given the capital intensity and complex coordination demands of the internal combustion engine vehicle sector, it is impossible for all parts of such vehicles to be produced in a single country; interconnected regional supply chains are essential, in particular in today's disruption-prone world, in which resilience is essential.

30. Furthermore, the innovation content of the automotive value chain is growing rapidly. As software becomes increasingly central to the operation of vehicles, frontier technologies – such as artificial intelligence, advanced robotics, the Internet of things and additive manufacturing – will become increasingly important. Electronic systems alone accounted for 40 per cent of a new car's cost by 2017, up from 18 per cent in 2000; by 2030, they are projected to represent 45 per cent of the cost.[24] In the African automotive sector, emerging technologically advanced regional value chains are beginning to take shape, with a number of examples evidencing the continent's growing ambition in that connection: the joint initiative of the Democratic Republic of the Congo and Zambia to establish special economic zones for electric vehicle battery production; the thriving automotive industry of Morocco, where there are growing ambitions with regard to electric vehicles; and the initiatives of the Government of South Africa to increase the local content of the vehicles manufactured in the country for export within the region.

31. Likewise, services represent an effective but underutilized driver of regional value chains in Africa. Globally, services account for 62 per cent of gross domestic product in value added terms.[25] In innovation-intensive sectors like pharmaceuticals and medical devices, companies spend on average up to 80 per cent of their revenue on research and development and on intangible assets, such as software, branding and intellectual property,[26] which demonstrates the extent to which, in modern economies, value creation is now anchored in services. Using methodologies developed by ECA together with the United Nations Conference on Trade and Development[27] and piloted in six countries,[28] it has been calculated that services contribute between 34 and 55 per cent of national gross domestic product and between 23 and 57 per cent of total employment in those countries. Despite their economic weight, however, services remain largely non-tradable and confined to

[21] UNCTAD, *Handbook on Special Economic Zones in Africa: Towards Economic Diversification across the Continent* (Geneva, 2021).

[22] Stephen Karingi and others, "Implementing the AfCFTA agreement and implications for Africa's regional value chains".

[23] Edmunds, "Parts of a car", 12 September 2024.

[24] Jonathan Ramsey, "40% of a new car's cost is electronic systems", Autoblog, 11 May 2020.

[25] World Bank, "Services, value added (% of GDP)", World Development Indicators database. Available at https://data.worldbank.org/indicator/NV.SRV.TOTL.ZS (accessed 24 July 2024).

[26] McKinsey (2019) Globalization in transition: The future of trade an value chains https://www.mckinsey.com/featured-insights/innovation-and-growth/globalization-in-transition-the-future-of-trade-and-value-chains.

[27] For further information, please see https://knowledge.uneca.org/stp/.

[28] Ethiopia, Gambia, Kenya, Mali, Nigeria and Togo.

domestic markets.[29] This points to a structural lack of connectedness: robust domestic service sectors exist, but they are fragmented and poorly integrated into the wider region, owing to regulatory divergence, infrastructure deficits and limited market liberalization. The Protocol on Trade in Services to the Agreement offers a pathway to overcome this lack of connectedness, by liberalizing critical sectors – finance, transport, tourism and communications – and harmonizing regulatory frameworks among countries. A fully integrated continental services market could serve as the connective tissue of regional value chains, linking production stages across borders through efficient logistics, seamless communications and shared digital platforms. By reducing friction and improving coordination, such a degree of service integration would lay the groundwork for more reliable supply networks and create the conditions for innovation to flourish through knowledge exchange, real-time data-sharing and service-based differentiation. The implementation of complementary regional initiatives, such as the Pan-African Payment and Settlement System and the Single African Air Transport Market, represents a further element in the move towards truly continental services sectors.

V. Conclusions and recommendations

32. The integration trajectory of Africa is at a decisive juncture. The Agreement has laid the foundations for a continent-wide market, but the true promise lies in advancing towards the African continental customs union and common market, in which borders will become seamless for goods, services, people and capital. Regional value chains, in particular in such innovation-driven sectors as automotives, pharmaceuticals and services, will drive this transformation. Technology-driven approaches are capital-intensive and therefore need to operate at a large scale. Accordingly, by harnessing the scale of regional integration, African States and institutions can strengthen cross-country production linkages, accelerate technology transfer and enhance resilience against global disruption. Frontier technologies will be the backbone of the next industrial revolution in Africa. Achieving widespread uptake of these technologies also requires strong regional cooperation, as coordinated policies, shared infrastructure and harmonized standards are essential for scaling up innovation, reducing costs and ensuring cross-border interoperability. Ultimately, regional integration and frontier technology adoption are mutually reinforcing: integrated markets create the scale that technology-driven solutions require, while technology accelerates the efficiency and depth of African integration.

33. With regard to the Agreement serving as a platform for digital and regulatory convergence to unlock innovation through frontier technologies, African States and their partners are recommended:

(a) To prioritize using the integrated market established under the Agreement and protocols thereto to de-risk projects and ensure demand certainty, with a view to attracting private capital for large-scale digital infrastructure projects, including broadband expansion, regional data centres and cross-border fibre-optic cable networks;

(b) To expedite ratification of the protocols to the Agreement on investment, competition policy and intellectual property rights and their incorporation into domestic legislation and frameworks, which are essential for creating the stable, harmonized environment needed to attract large-scale investment and unlock cross-border innovation.

34. Concerning the advancement of regional integration through frontier technologies, African States and their partners are recommended:

(a) To accelerate the incorporation of frontier technologies into all national

[29] ECA calculations from the Eora Global Supply Chain Database.

and regional customs procedures, trade facilitation systems, infrastructure and such strategic sectors as automotives and pharmaceuticals, including the expanded deployment of the Automated System for Customs Data, among other systems, and the enhancement of existing digital tools to create harmonized, interoperable customs management systems that increase efficiency, lower trade barriers and drive the development of modern infrastructure;

(b) To advance secure and seamless cross-border mobility by implementing robust, continent-wide digital identity systems, which are critical for enabling the safe and efficient movement of people, safeguarding migrant rights and unlocking the full potential of labour mobility and integration in all African economies.

35. In respect of using the Agreement and deeper integration as catalysts for technology-driven regional value chains, African States and their partners are recommended:

(a) To undertake value chain diagnostics to identify sectors with competitive or strategic potential and embed the findings into national strategies for implementing the Agreement, incorporating clear targets for intra-African sourcing of inputs, production specialization, supplier upgrading and export diversification;

(b) To redefine special economic zones as dynamic hubs for regional value chains, employing the Agreement to remove intra-African trade barriers, thus enabling seamless sourcing and value addition across the continent.