

# Africa Business Forum 2025

## From potential to prosperity: activating Africa's regional value chains

Round table 3: Technological transformation and innovation in African livestock, pharmaceutical and agricultural sectors

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### Issues note

#### I. Introduction

1. Regional value chains help to achieve accelerated industrialization across Africa and, importantly, serve as a vital gateway for the integration of firms within Africa into global value chains. The concept of regional value chains concerns the value addition activities that occur between each link in a production process within a geographical region, often across multiple countries, which thereby support regional integration and economic development. The value chains play an important role in promoting trade and investment flows across regions, boost the competitiveness of sectors and enable firms to benefit from technology transfer, knowledge and other shared resources. They have a great potential for accelerated expansion through a new generation of special economic zones that are centred on digitalization and environmental sustainability. The proliferation of this next generation of competitive special economic zones on the continent, with a focus on digital technologies and innovation to enhance productivity along value chains, further boosts competitiveness and trade.

2. During the present round table, the transformative role of technology and innovation in three critical sectors – agriculture, livestock and pharmaceuticals – will be put under the spotlight. The sectors are important for sustainable and inclusive growth in Africa and offer excellent potential for skills development, job creation, intra-African trade and mapping to global value chains. The session will involve an exploration of the pathways to unlock their full economic potential by leveraging cutting-edge technologies and innovative practices.

#### II. Activating regional value chains: the cases of pharmaceuticals, livestock and agriculture

3. The great potential of African regional value chains is bolstered by the rich natural endowments of the continent, including agricultural and livestock produce, minerals and energy resources. The vast resource base of African countries is conducive to upward chain development, through the provision of a stable supply of the raw ingredients necessary for value-added industries, such as the production of pharmaceuticals and livestock. To ensure that the development of regional value chains can truly succeed, however, vital enablers of inclusive participation are required, such as reduced time spent on logistics and shipment, enhanced regulatory frameworks and upgraded digital infrastructure.<sup>1</sup> Regional value chains

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<sup>1</sup> For more information, see Anja Slany, “The role of trade policies in building regional value chains – some preliminary evidence from Africa”, *Political Economy – Development: Comparative Regional Economies eJournal*, 24 April 2017.



rely on the proliferation of local procurement and more competitiveness within and between sectors, which would require African firms to improve their quality, reliability and innovation and use automation to keep costs down.

4. The pharmaceutical sector has great potential to support the sustainable development of Africa. The expansion of pharmaceutical value chains presents a unique opportunity to combat communicable and non-communicable diseases on the continent, create jobs, foster sustainable security with regard to health commodities and build resilient economies. Pharmaceutical value chains are highly specialized, with technology and innovation at the centre of product development, and require a reliable and predictable environment with strong regulatory control. The value chain starts with sourcing intermediate inputs from within Africa, through which the region could meet one third of its demand.<sup>2</sup> Presently, in most of sub-Saharan Africa, approximately 70–90 per cent of pharmaceutical products are imported, and the market is valued at \$14 billion.<sup>3</sup> The African healthcare and wellness sector offers business opportunities that are estimated to be worth \$259 billion by 2030 and have the potential to create 16 million jobs.<sup>4</sup> Harnessing the potential of the pharmaceutical sector requires strategic investments in research and development, infrastructure and harmonized regulatory frameworks.

5. The livestock sector has been identified as a sector of high potential, in particular for East and Southern Africa, with major producers in Botswana, Chad, Ethiopia and South Africa. The Economic Commission for Africa (ECA) believes it is possible to create a regional value chain for beef, following the success of an initiative piloted by the centre of excellence at the Lobu Small Stock Farm in Botswana that is aimed at integrating best practices and smart technologies into facilities management, breeding and feeding, replicating the progress that has been made in small stock development. The approach addresses a number of bottlenecks that have been identified in livestock production and in downstream and upstream activities, including by-product industries, and involves the adoption of smart agriculture techniques, such as in breeding, animal health and tracking, all of which may help to improve the quality and quantity of livestock and livestock products, including in important upstream manufacturing. The beef sector in Botswana is well positioned in regional and global markets, and, therefore, provides a model for replicating or enhancing livestock value chains across the region. The livestock sector in the country has a robust traceability system and infrastructure that helps to prevent wildlife interference, which enhances disease control and management. Furthermore, Botswana has a track record of export proficiency, with the Botswana Meat Commission having led exports for 70 years. That depth of experience has contributed to the certification of beef from Botswana as meeting various international standards, including the Brand Reputation through Compliance Global Standard of the British Retail Consortium. ECA hopes that export opportunities for value-added beef from Botswana can be identified and the required public or private investments will be made to support a regional value chain along the cattle corridor of Southern Africa.

6. The common agro-industrial park on the border of Zambia and Zimbabwe is an example of the new generation of special economic zones and can contribute to the operationalization of the Agreement Establishing the African Continental Free Trade Area through the

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<sup>2</sup> International Trade Centre, *Made by Africa: Creating Value Through Integration* (Geneva, 2022).

<sup>3</sup> Michael Conway and others, “Should sub-Saharan Africa make its own drugs?” McKinsey and Company, 10 January 2019.

<sup>4</sup> Economic Commission for Africa (ECA), GBCHealth and Aliko Dangote Foundation, *Healthcare and Economic Growth in Africa* (Addis Ababa, ECA, 2019).

proliferation of agricultural regional value chains. The park is aimed at leveraging the unique natural resources and collaborative resource utilization of the two countries and thereby harnessing various competitive advantages and economies of scale. By establishing a single market for goods and services across 54 countries, the Agreement is projected to increase intra-African industry trade by 35.7 per cent in 2045, compared with scenarios without the Agreement.<sup>5</sup> The creation of the park marks the achievement of a longstanding continental aspiration that is rooted in the Comprehensive African Agriculture Development Programme of the African Union, the objective of which is coordinated action across the continent to create large-scale, transboundary agro-industries, food reserves and food supply corridors. Regional agricultural value chains in Africa will benefit from the unparalleled ability of the continent to grow all of the world's crop varieties twice a year. That promising prospect helps to explain the projections made in recent studies by ECA that show that, under the Agreement, intra-African trade in the agrifood sector is expected to surge by 49.1 per cent in 2045 compared with a scenario without the Agreement.<sup>6</sup> The increase highlights the particularly significant opportunity that continental agricultural value chains present.

### **III. Leveraging technology and innovation in supply chains**

7. Technological innovations are increasingly being leveraged to improve compliance with technical regulations and standards across various value chains. Blockchain and other technologies are being used to improve traceability, enabling producers to provide verifiable records of a product's journey through a supply chain. The integration of that technology into African value chains, in particular in such sectors as agriculture, livestock and pharmaceuticals, will be pivotal to boosting compliance with regulations and enhancing competitiveness. Global certification requirements, such as the Ecomark Africa programme for the sustainable leather industry, are considerable and are often specific to sectors, requiring significant investment by firms to achieve and enhance competitiveness. To enhance regional value chains, firms require support to accelerate their adoption of new technologies that are aligned with certifications, traceability systems and standards. Certifications are increasingly required to gain entry into regional and global value chains, and non-compliance has a huge cost. In addition, technology and innovation, through the modification of products and processes, can radically improve the performance and reach of enterprises. By helping with the introduction of new products, the design of novel production processes and the generation of new markets, they can improve the competitive advantage of firms.

8. Sector-specific technological transformations that are relevant to livestock value chains and that must be prioritized include innovations in livestock management systems, traceability technologies to ensure export compliance and sustainable practices to enhance productivity and market access. The centre of excellence at the Lobu Small Stock Farm in Botswana is a good example of the way to leverage smart agriculture technologies in order to transform small stock farming and address climate change adaptation.

9. In relation to pharmaceutical value chains, technology must be leveraged for local pharmaceutical manufacturing and regulatory compliance. Artificial intelligence could be used in the development and distribution of drugs. In addition, the role of digital health solutions should be explored, and blockchain could be used to ensure transparency in supply chains and to combat counterfeit medicines.

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<sup>5</sup> ECA, *The AfCFTA – What You Need to Know: Frequently Asked Questions & Answers* (Addis Ababa, 2023).

<sup>6</sup> Ibid.

10. With regard to agriculture, in particular agriparks, smart farming solutions, precision agriculture, traceability systems, including controlling for sanitary and phytosanitary measures, technical standards and digitalization of market linkages will enhance efficiency and scalability.

#### **IV. Guiding questions**

11. The following questions will guide discussions during the round table:

(a) How might the new generation of special economic zones, with their integration of digitalization, support the development of regional value chains, in particular for agriparks and the livestock and pharmaceutical industries? How can they help to create an innovative environment for nurturing nascent industries and start-ups, enabling firms to leverage technological tools to participate in modernized value chains? What role will automation, artificial intelligence and digital tools play in streamlining production and distribution in the three critical sectors and facilitate intra-African and global trade?

(b) How is the financial services sector helping African businesses to invest in and benefit from new innovations, including smart logistics and transport optimization, smart warehouses, cold chain solutions, real-time inventory tracking and blockchain for supply chain transparency in the three critical sectors?

(c) Are the private sector, government agencies and other relevant bodies, including training organizations and members of the third sector, ready to take necessary actions to support the development of workforce skills in data analytics, digital tools and systems and technology management to ensure that there is capacity to achieve a rapid transformation in the three sectors?

(d) To what extent are African research institutions involved in developing new technology and innovation to transform livestock and pharmaceutical value chains on the continent?

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