UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

Technical and statistical report

Leveraging digital technologies for MSMEs' integration into regional value and supply chains

The cases of Ethiopia, Malawi, United Republic of Tanzania and Uganda

United Nations
Geneva, 2025

United Nations Publications
405 East 42nd Street
New York, New York 10017
United States of America

Email: publications@un.org
Website: https://shop.un.org/

United Nations publication issued by the United Nations Conference on Trade and Development

UNCTAD/ALDC/2025/2

ISBN: 978-92-1-159561-1
eISBN: 978-92-1-154577-7
Sales No. E.25.II.D.40

Acknowledgements

This report was prepared by Habiba Ben Barka (team leader), Christine Awiti, Benjamin Mattondo Banda, Jiyuan Chen, Cherry Kang and Anja Slany, under the overall supervision of Junior Davis of the Division for Africa, Least Developed Countries and Special Programmes of UNCTAD.

UNCTAD extends its warm appreciation to the United Nations Capital Development Fund (UNCDF) for its collaboration, in particular Richard Ndahiro, and the financial as well as administrative support in the organization of consultation meetings. UNCTAD gratefully acknowledges the insights and cooperation received during the field missions from government counterparts, private sector representatives and development partners.

UNCTAD also gratefully acknowledges the contributions to the report by Grace Gondwe, Sven Jaggi, Ben-Vieira Kouassi, Georgia Koutsoura and Lin Shi.

Overall layout, graphics and desktop publishing were undertaken by the Division of Conference Management of the United Nations Office at Geneva.

Elena Stroganova (UNCTAD) and Ivana Damjanov, Seifu Teshome, Aster Zewdie, Helen Gebregiorgis and Mussie Yohannes (UNCDF) provided administrative support.

List of acronyms

AfCFTA	African Continental Free Trade Area
AI	Artificial Intelligence
AMF	AlphaMundi Foundation
BDS	Business Development Services
CBE	Commercial Bank of Ethiopia
COMESA	Common Market for Eastern and Southern Africa
EDAR	Economic Development in Africa Report
EAC	East African Community
DFIs	Development Finance Institutions
FSDT	Financial Sector Deepening Trust
GB	gigabyte
GDP	Gross domestic product
IoT	Internet of Things
KYC	Know-Your-Customer
MSEs	Micro and Small Enterprises
MSMEs	Micro, small, and medium-sized enterprises
NASME	National Association of Small and Medium Enterprises
PE	Private equity
SADC	Southern African Development Community
SCF	Supply chain finance
SEAF	Small Enterprise Assistance Funds
SEFA	Sustainable Energy Fund for Africa
SDC	Swiss Agency for Development and Cooperation
SDGs	Sustainable Development Goals
SMEs	Small and Medium Enterprises
SOEs	State-owned enterprises
TMX	Tanzania's Mercantile Exchange
UDC	Uganda Development Corporation
VC	Venture capital
WBES	World Bank Enterprise Survey

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Executive Summary

This report investigates how digital technologies and innovative financing can enable micro, small, and medium-sized enterprises (MSMEs) in Africa to integrate more effectively into regional value and supply chains. Drawing on case studies from Ethiopia, Malawi, Tanzania, and Uganda, it highlights the pivotal role of MSMEs in driving economic growth, employment, and structural transformation, while underscoring the persistent barriers they face, including limited access to finance, low levels of digital adoption, and widespread informality. MSMEs account for over 80 per cent of total production across Africa and employ about 90 per cent of the working population. They contribute two-thirds of total investment and three-fourths of total credit. Despite their central role, MSMEs face persistent barriers including limited access to finance, inadequate infrastructure, skills gaps, informality, and weak integration into regional and global value chains.

The African Continental Free Trade Area (AfCFTA) provides a historic opportunity to strengthen MSME participation in intra-African trade by reducing tariffs and non-tariff barriers, opening new market niches in manufacturing, agribusiness, and services. However, for MSMEs to fully benefit from this opportunity, structural bottlenecks must be addressed.

The report demonstrates that digital transformation, through mobile money, e-commerce, and digital trade facilitation tools, can enhance competitiveness and connectivity, while innovative financing models such as blended finance, supply chain finance, and fintech solutions can bridge Africa's US$300 billion MSME financing gap. Access to finance remains one of the most significant barriers for MSMEs across Africa, constraining their growth and export potential. Approximately 51 per cent of small-scale enterprises report needing more financing than they can access, creating a total credit shortfall of about US$300 billion. This financing gap helps explain why only 14 per cent of African firms engaged in export activities in 2024.

Digital technologies and innovative finance mechanisms have the potential to enhance MSME productivity and market access. Uganda and Tanzania show strong advances in digitalization and blended finance initiatives, while Malawi emphasizes policy-driven MSME support. Ethiopia illustrates persistent financial exclusion and collateral barriers despite rising digital adoption. Across all four countries, MSMEs are increasingly positioned to benefit from AfCFTA integration if enabling conditions are strengthened.

Findings show that coordinated policies to expand digital infrastructure, improve financing access, and strengthen trade facilitation are essential to unlocking MSME potential. By leveraging technology and finance, African MSMEs can move from the periphery of regional trade to central actors in driving inclusive and sustainable economic transformation across the continent.

1.

Introduction

1. Introduction

A robust and vibrant private sector drives inclusive and sustained economic growth. In Africa, the private sector holds immense potential to contribute directly to the Agenda 2030 Sustainable Development Goals (SDGs) and the African Union Agenda 2063—the Africa We Want. The private sector, especially micro, small and medium enterprises (MSMEs), dominates Africa's economy, accounting for over 80 per cent of total production, two-thirds of total investment, and three-fourths of total credit. It also employs about 90 per cent of the working population.

The African Continental Free Trade Area (AfCFTA) creates additional opportunities to unlock the transformative role of MSMEs in regional economies and markets. By reducing tariffs and costly non-tariff measures that especially burden small enterprises with limited resources, the AfCFTA can deliver significant benefits for MSMEs, as UNCTAD's 2021 Economic Development in Africa Report (EDAR) demonstrates. Intra-regional trade opens more pathways for economic diversification and productivity gains: intra-African exports feature higher levels of processing (61 per cent are processed or semi-processed goods), greater shares of technologically advanced products, and more export diversification than exports to the rest of the world (UNCTAD, 2021a).

However, many African economies lack the mechanisms and incentives needed to level the playing field for MSMEs and unlock their potential in regional and global value chains. Even when MSMEs don't export directly or indirectly, they often connect to local supply chains. In sectors like agriculture, little to no local processing occurs, and MSMEs may sell directly to end consumers. This lack of value addition creates a major barrier to diversification, structural transformation, market access, decent job creation, and sustainable development.

Furthermore, limited processing capacity makes MSMEs vulnerable to demand volatility and market disruptions like climate change. This vulnerability particularly affects agricultural products, which cannot be stored for extended periods.

Participation in value and supply chains offers a proven pathway to accelerate development through productivity gains and structural economic transformation. Developing countries, particularly in Africa, gain substantial benefits from supply chain participation through forward and backward linkages, including enhanced productivity, export diversification, and increased sophistication. These benefits flow through key channels: learning-by-doing, technology transfer and spillovers, gains from specializing in comparative advantage tasks, and favorable terms of trade effects. Two critical elements—innovative financing and digitalization—can help African MSMEs unlock their full potential in regional value and supply chains.

In today's digital world, the private sector plays a crucial role as the engine of digital transformation. Digitalization involves leveraging digital technology and data insights to deliver concrete customer benefits. The widespread adoption of connected digital services by consumers, enterprises, and governments has emerged as a key economic driver that accelerates growth and creates jobs. However, digitalization's impact varies significantly across economies at different development stages and across sectors. Each country brings a unique profile that shapes its digitalization journey based on technological maturity. Multiple factors influence this process, including economic size and growth, economic complexity, business and regulatory environments, technology access and usage, and skilled workforce availability.

MSMEs remain marginalized from regional and global markets **due to limited financing and digitalization opportunities**

While technology has become essential in business, most micro, small, and medium enterprises (MSMEs) rarely adopt it due to skill gaps, informal operations, infrastructure challenges, and financing constraints. Most remain non-digitalized—few African MSMEs maintain their own websites or participate in website networks. Consequently, large companies see little value in integrating MSMEs into their supply chains. To increase visibility and advertise their offerings, some MSMEs create accounts on social networks like Facebook, WhatsApp, LinkedIn, and Twitter. However, these platforms prove inadequate for meaningful supply chain integration.

Le Derf (2022) demonstrated that current technology can effectively reduce supply chain risks. The Covid-19 pandemic shut down or slowed most private sector companies and MSMEs across Africa, pushing millions into temporary unemployment or job cuts and severely affecting social conditions. For instance, the pandemic caused revenue drops in 95.6 per cent of Kenyan transport businesses in 2020 compared to 2019, while severely disrupting transport supply chains for Ethiopia's small- and medium-sized enterprises (UNCTAD, 2022a, 2022b).

Technology also plays a crucial role in consumer discretionary sectors through apparel and textile products, leisure facilities and services, and e-commerce platforms, including online marketplaces and specialty retailers. Additionally, the communication sector relies entirely on technology products and services like cable, satellite, internet media, and wire telecommunication. UNCTAD (2022c) revealed an interdependence between technology and financial development, giving rise to "Fintech"—the use of technology to deliver financial services. Fintech can drive supply chain diversification by unlocking Africa's potential to overcome commodity-dependency (UNCTAD, 2022c).

Across many African countries, MSMEs remain marginalized from regional and global markets due to limited financing and digitalization opportunities that restrict productivity gains. Combined with low domestic revenues, weak human and institutional capacities, and poor governance, these factors prevent meaningful participation in regional and global value chains and limit contributions to structural transformation across the continent. The challenges facing MSMEs, particularly in vulnerable African economies like least developed and landlocked countries, regarding access to finance, productive resources, trade information, market opportunities, and infrastructure require targeted support measures to ensure equal benefits from the AfCFTA. UNCTAD (2022d) reveals that Africa's 33 least developed countries account for only 16 per cent of expected export potential under the AfCFTA, though they show comparably greater export potential in agricultural products. Food processing industries also offer significant opportunities for value addition and commodity-based export growth in these countries.

African MSMEs can harness technological and innovation leapfrogging to accelerate their participation in regional markets. Key pathways include diversifying into industry – particularly agro-industries and manufacturing – integrating into value chains and driving structural transformation through strategic public policy interventions. These interventions encompass developing infrastructure, enhancing education and skills, attracting investment, and facilitating innovation to advance inclusive economic transformation across African countries.

This report explores fresh approaches to achieving inclusive and sustainable development in African least developed countries by leveraging digital and innovative business and financing solutions for MSMEs. The report brings together current knowledge on technology adoption and financing innovations for developing small-scale manufacturing and business services in rural communities. It examines how these technologies and innovations can create breakthroughs in MSME financing and facilitate economic and trade integration at national, regional, and global levels.

The report provides an overview of MSME characteristics across Africa and identifies niche areas where MSMEs can integrate into regional value and supply chains, particularly under the AfCFTA framework. It examines digital technologies and innovative financing as key enablers for MSME growth and competitiveness in regional markets, drawing examples from Ethiopia, Tanzania, Malawi, and Uganda. These four African countries have made considerable progress in MSME development in recent years, making them compelling case studies for assessing how digitalization and innovative finance can enable African MSMEs to integrate into regional and global trade markets.

2.

The MSME Ecosystem across Africa

2. The MSME Ecosystem across Africa

MSMEs are the backbone of African economies, driving jobs, output, and inclusive growth, yet their small scale, informality, and limited access to finance and innovation constrain their ability to grow and integrate into value chains.

Micro, Small, and Medium Enterprises (MSMEs) form a fundamental pillar of economic activity across Africa, driving growth, employment, and economic diversification. In Malawi, MSMEs make substantial contributions to the national economy, accounting for an estimated 47 per cent of GDP in 2019 and employing approximately 38 per cent of the total working-age population as of 2000[1]. Uganda demonstrates a similar pattern, where MSMEs dominate the private sector landscape, constituting up to 90 per cent of all private businesses. According to the Uganda Micro, Small and Medium Enterprise Policy (Government of Uganda, 2015), the Ugandan MSME sector serves as a major source of livelihood, employing over 2.5 million individuals. The sector also drives production, accounting for over 80 per cent of manufactured output and contributing approximately 20 per cent to the country's gross domestic product (GDP). This significant footprint appears most notably in agriculture, forestry, and fishing (comprising 30.8 per cent of MSMEs and contributing 19.04 per cent to GDP) and manufacturing (representing 29.53 per cent of MSMEs and contributing 29.66 per cent to GDP). This evidence collectively demonstrates that MSMEs serve as indispensable engines for inclusive economic development and structural transformation in African economies.

However, their small scale puts MSMEs at a disadvantage compared to larger firms and state-owned enterprises (SOEs). The latter often benefit from subsidies and incentives, financial resources, and technological equipment that smaller firms struggle to access.

The literature offers no single definition for MSMEs, as definitions vary across sectors, country sizes, and economies. These differences create challenges for cross-country comparability. The literature often distinguishes between Small and Medium Enterprises (SMEs) and Micro and Small Enterprises (MSEs). This analysis focuses on MSMEs in general, though depending on the underlying literature, some information may only be available for specific subgroups.

Nonetheless, the characteristics used to determine whether a firm qualifies as a MSME typically include assets, revenue, or staff numbers. The European Commission, for instance, uses staff headcount as the mandatory criterion for MSME classification (under 250 employees), along with either annual turnover (under €50 million) or annual balance sheet total (under €43 million) (European Commission, 2020). India takes a different approach where employee size plays no role, and only investment in plant and machinery/equipment and annual turnover determine MSME status (Government of India, 2020). Ethiopia's classification system primarily relies on assets, with staff size serving as a secondary

[1] https://trade.gov.mw/index.php/dept/sme-s-cooperatives/policy-and-planning

Many MSMEs operate outside formal legal frameworks, **cutting them off from formal financial services**

criterion. The Government of Ethiopia (2016) also creates separate thresholds for Services and Industry sectors, with Industry firms facing higher qualification limits. Additional characteristics sometimes used to identify MSMEs include market share, sole proprietorship status, and operation from single offices or stores.[2]

MSME classifications vary significantly across countries and studies, reflecting different policy priorities and institutional frameworks. These definitional inconsistencies affect survey outcomes and determine which businesses can access public procurement opportunities, financial support programs, and other targeted policy interventions. This paper conducts a cross-country analysis of MSMEs as a broad collective group. Consequently, the internal classification thresholds distinguishing micro, small, and medium-sized enterprises remain unharmonized, with data sourced from various studies and surveys. For simplicity, we use "MSME" broadly to describe enterprises with fewer than 100 employees. Table 1 outlines the MSME characteristics in our focus countries: Ethiopia, Malawi, Tanzania, and Uganda.

Despite differences in how they're classified, MSMEs across Africa share several defining traits: they're mostly micro and small operations, they often work informally, and they cluster heavily in service sectors like retail, wholesale trade, tourism, and hospitality. A 2024 national survey in Uganda revealed that over half of all MSMEs are microenterprises run by sole proprietors with no employees.

African MSMEs typically struggle with weak links to global value chains, short business histories, and limited capacity for innovation, finance access, and digital adoption. Small-scale and tight working capital often trap these businesses in low-asset sectors, which restricts their turnover and cash flow. This makes them especially sensitive to the costs of business registration and formalization. Consequently, many MSMEs operate outside formal legal frameworks, cutting them off from formal financial services, public support programs, and incentive schemes. These challenges fuel high failure rates, minimal export activity, and weak innovation capacity—all of which prevent MSMEs from growing into larger, higher-value operations.

Even so, MSMEs drive broad-based economic participation and inclusive growth. Their role directly supports SDG 8, which champions decent work and inclusive, sustainable economic transformation. This chapter examines MSMEs across African economies, using enterprise surveys and labor force data to analyze their characteristics, constraints, and development potential.

2 https://msmepolicy.unescap.org/common-characteristics-msmes

Table 1
MSME classification systems vary empirically across studies and policies

Country	Micro Enterprise	Small Enterprise	Medium Enterprise
Ethiopia (World Bank Enterprise Survey 2015)[3]	Staff: < 10 Assets: ≤ ETB 600,000	Staff: 11-50 Assets: ETB 600,001 – 10,000,000	Staff: 51-100 Assets: ETB 10,000,001 – 90,000,000
Tanzania (World Bank Enterprise Survey 2023)[4]	Staff: 1-4	Staff: 5–19	Staff: 20-99
Uganda (Government of Uganda, 2015a)	Staff: 1-4 Assets: ≤ UGX 10M	Staff: 5–49 Assets: UGX 10M–100M	Staff: 50–100 Assets: UGX 100M–360M
Malawi (Government of Malawi, 2020a)	Staff: 1–4 Turnover: ≤ MWK 5M Assets: ≤ *MWK 1M**	Staff: 5–20 Turnover: MWK 5M–50M Assets: *MWK 1M-20M**	Staff: 21–99 Turnover: MWK 50M–500M Assets: *MWK 20M-250M**

** Asset thresholds exclude land and buildings for manufacturing enterprises.*

Source: UNCTAD, based on World Bank (2015; 2023a), Government of Uganda (2015a) and Government of Malawi (2020a).

2.1 Key Characteristics of MSMEs in Africa

The analysis of MSME activity across Africa reveals distinct patterns of sectoral concentration, with service-oriented and trade-related activities dominating the landscape—particularly wholesale and retail trade, accommodation and food services, and personal care sectors like hairdressing. Manufacturing, by contrast, typically accounts for less than 10 per cent of MSME operations and remains concentrated in low-complexity segments such as garment production and basic food processing (Government of Uganda, 2024a; World Bank, 2023a). High value-added manufacturing—which requires substantial fixed capital and benefits from economies of scale—remains underdeveloped across many African countries. Persistent structural constraints drive this pattern, including limited access to finance and technical expertise, weak market information systems, and fierce competition from low-cost imports. Labour force survey data reinforces these findings, showing that agriculture continues to absorb the majority of the workforce in many countries (International Labour Organization, 2024). This agricultural dominance helps explain why MSMEs capture a smaller share of labour-intensive services and manufacturing sectors.

African MSMEs show limited integration into value and supply chains at both regional and global levels. While constraints related to scale and capacity often prevent direct participation, value and supply chain integration represents a critical pathway for enterprise upgrading and growth. In 2024, only about 14 per cent of African firms engaged in export activities, whether directly or indirectly. The 2025 World Bank Enterprise Surveys database[5] reveals that just 6.47 per cent of African firms exported in 2024, compared to a world average of 11.44 per cent. Among

In 2024, only about 14 per cent of African firms engaged in export activities, **well below the world average**

[3] World Bank Enterprise Survey 2015: Ethiopia. Available at https://microdata.worldbank.org/index.php/catalog/2577/study-description

[4] Word Bank Enterprise Survey 2023: Tanzania Country Profile [Dataset]. Available at https://microdata.worldbank.org/index.php/catalog/6474/study-description#study_desc1674579234511

[5] Database available at https://www.enterprisesurveys.org

MSMEs that do participate in international markets, indirect export channels – through intermediaries, aggregators, or domestic exporters – prove most common, particularly for smaller enterprises. This intermediary-based model allows resource-constrained firms to bypass barriers related to logistics, certification, and direct buyer engagement. Given the disproportionate challenges smaller firms face when accessing export markets, targeted policy interventions must strengthen MSME capacities and facilitate their integration into regional and global value chains.

A young establishment age defines the structural landscape of African MSMEs, reflecting both vibrant entrepreneurial entry and high enterprise failure rates. In countries like Ethiopia, Uganda, and Malawi, most MSMEs have operated for less than 10 years (Gebreeyesus *et al*., 2018; Government of Malawi, 2019; Government of Uganda, 2024a; World Bank, 2016). Ethiopia illustrates this pattern clearly: the World Bank Enterprise survey 2015 found small firms averaged 9.5 years in operation, while larger firms averaged 15.4 years—indicating higher failure rates among smaller enterprises. Gebreeyesus *et al*. (2018) confirm this trend, finding that 60 per cent of surveyed Micro and Small Businesses were under five years old. This pattern stems largely from high exit rates and scale-related constraints. Larger enterprises can better absorb fixed costs—like specialized machinery expenses—giving established market players competitive advantages that threaten the long-term survival of newer, smaller firms.

Across Africa, MSMEs show limited adoption of digital technologies and innovation, with significant variations by sector and enterprise size. Take Malawi as an example: digital access remains severely constrained. Fewer than 20 per cent of urban households own a computer or tablet, while this drops to under 5 per cent in rural areas. As of 2024, only 24 per cent of Malawi's population uses the internet, and just 22 per cent have unique mobile internet subscriptions. However, 40 per cent of adults over 15 have made or received digital payments (World Bank, 2024a), suggesting mobile money leads digital adoption.

Malawian MSMEs follow similar patterns in adopting mobile money, broadband internet, and other digital services. Yet most haven't fully integrated digital technologies into core business functions like sales and payments. Technology use for sector-specific functions or production processes remains extremely low, reflecting the basic nature of products and commodities these enterprises handle.

Uganda shows comparable challenges. Over half of MSMEs (53 per cent) lack access to smartphones or computers for business use (Government of Uganda, 2024a). This access gap directly impacts adoption rates, particularly since smartphones represent the most basic digital tool compared to computers. Interestingly, 57 per cent of female-owned MSMEs own phones versus 49 per cent of male-owned enterprises, yet 94 per cent of female-owned businesses lack business software compared to 89.4 per cent of male-owned ones (Government of Uganda, 2024b).

Ethiopia reveals similar gender disparities in mobile business use. GSMA's analysis (2023a) found that among micro-entrepreneurs surveyed, 53 per cent of males and 32 per cent of females use mobile phones for business, averaging 3.2 business activities for males compared to 2.6 for females. The remainder use phones purely for personal purposes.

Stark gender disparities persist across Africa's business ecosystems, driven by structural barriers that prevent women from participating equally in economic activities. In many African countries, women remain underrepresented in enterprise ownership and leadership, with only about a third of firms reporting female participation in ownership (World Bank, 2023a). Yet studies reveal higher rates of female ownership among informal enterprises and in sectors like retail trade (World Bank, 2023b). This pattern suggests that formalization barriers disproportionately impact female entrepreneurs, blocking their access to capital-intensive sectors and formal support systems. Consequently, women-led enterprises cluster in informal, low-capital activities with low barriers to entry, often reflecting "necessity entrepreneurship," where people start businesses because they lack other livelihood options rather than pursuing market opportunities.

African MSMEs face additional challenges from a difficult business environment marked by persistent systemic barriers. These include burdensome legal and regulatory frameworks, severe limitations in accessing finance, dependency on low value-added sectors, and costly formalization processes involving registration fees, tax compliance requirements, and complex administrative procedures. Many of these barriers prevent small businesses from fully engaging with the formal economy, including financial institutions, banks, and insurance brokers, which further restricts their access to essential benefits. As a result, many MSMEs stay informal to preserve their limited capital and avoid regulatory complexity, though this comes at the cost of long-term scalability, market access, and economic resilience. In Malawi, informal enterprises dominate, with only 7 per cent of non-farm businesses formally registered nationwide, of which 11 per cent in urban areas and 6 per cent in rural areas (Government of Malawi, 2020b). However, operating informally prevents micro and small enterprises from accessing key formal economy advantages, such as public procurement eligibility, export market participation, and formal financial services (Elgin *et al.*, 2021). These dynamics create a vicious cycle: formalization costs discourage small business registration, while informality restricts access to credit, insurance, and growth opportunities.

Operating informally prevents MSMEs from accessing public procurement, export markets, and formal financial services

2.2 In focus: MSMEs in Tanzania

The private sector drives Tanzania's economic growth and structural transformation. MSMEs dominate this landscape, representing approximately 80 per cent of all enterprises (World Bank, 2023c) and employing up to 40 per cent of the workforce (Economic and Social Research Foundation (ESRF), 2016). Most striking is that an estimated 80 per cent of MSMEs operate in the informal economy (UNCTAD, 2022e), highlighting the widespread informality that characterizes Tanzania's private sector.

An estimated 80 per cent of MSMEs in Tanzania **operate in the informal economy**

Understanding MSMEs in Tanzania requires drawing from multiple data sources. The 2023 World Bank Enterprise Survey for Tanzania (World Bank, 2023c) offers the most recent comprehensive data on formal enterprises, providing internationally comparable insights. However, the WBES focuses exclusively on formal firms in manufacturing and services, excluding agricultural enterprises. The 2023 Tanzania Startup Ecosystem Status Report (Tanzania Startup Association, 2023) and the 2023 World Bank Informal Business Survey (World Bank, 2023d) fill this gap by capturing dynamics within the informal MSME segment.

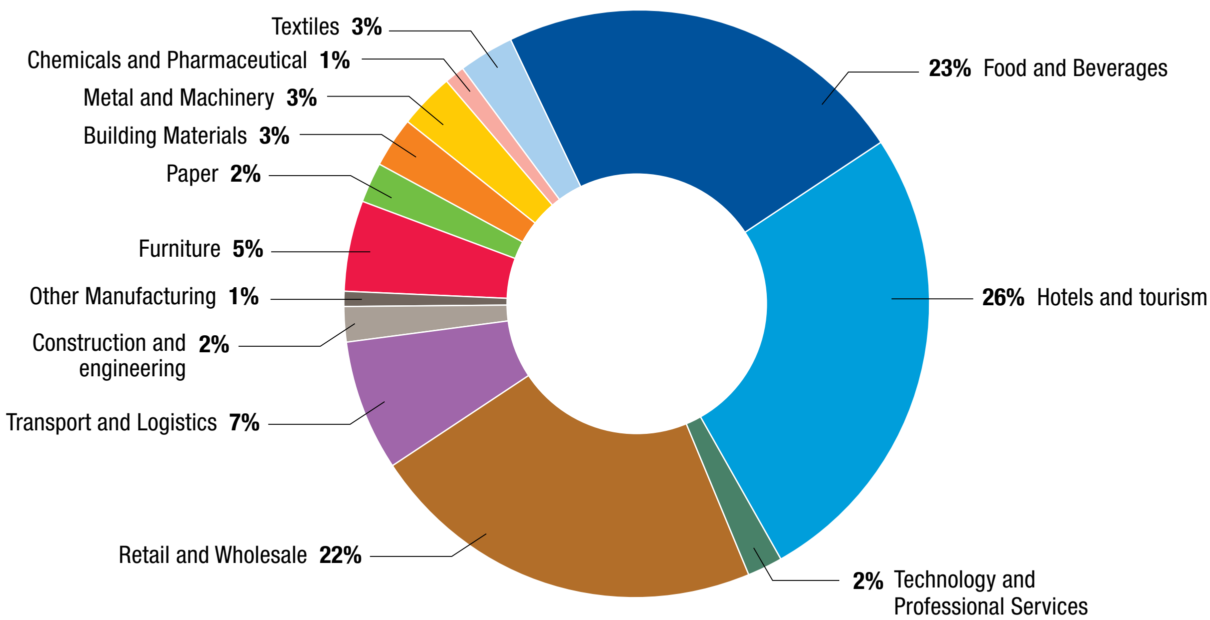
The 2023 WBES reveals that small enterprises employing 5 to 19 workers dominate Tanzania's formal business sector, representing 57 per cent of surveyed firms. Medium-sized enterprises (20–99 employees) account for 28 per cent, while large enterprises (100 or more employees) comprise the remaining 15 per cent. This distribution remains consistent across sectors, confirming the prevalence of small-scale operations throughout Tanzania's formal business landscape.

Tanzania's firms are relatively young, which may indicate low survival rates, as UNCTAD (2022e) suggests. About 20 per cent of firms are less than 10 years old, and 41 per cent are less than 20 years old, showing continued market entry by new businesses. However, a significant portion (29 per cent) of firms have operated for 30 to 50 years, demonstrating that well-established enterprises exist across different sectors.

Only 13.67 per cent of firms (82 in total) have female ownership. Breaking this down by firm size reveals that 52.63 per cent of these female-owned businesses are small enterprises, 32.89 per cent are medium-sized, and 14.47 per cent are large companies (WBES, 2023). The picture looks similar for top management: just 15 per cent of firms (91 in total) have a female top manager, with over 59 per cent of these companies falling into the small business category. Medium and large firms account for 31.03 per cent and 9.20 per cent respectively. These numbers reveal significant underrepresentation of women in both ownership and leadership roles, though women show a slightly stronger presence in smaller firms. This pattern underscores how crucial MSMEs are for driving inclusive and industrial growth.

Tanzania's formal enterprise sector centers heavily on services and agro-related trade. Hotels and tourism lead the way, making up 25.7 per cent of formal businesses, while food and beverage activities – mainly agro-processing and retail – account for 23.2 per cent, and retail and wholesale trade represents 22 per cent (see Figure 1). This service-heavy structure becomes even more striking in the informal sector. The 2023 World Bank Informal Business Survey (World Bank, 2023d) examined 3,105 informal enterprises across Tanzania and found that retail activities dominate

Figure 1
Tanzania: Distribution of firms by sector (2023)



Source: UNCTAD, based on World Bank Enterprise Survey, 2023.

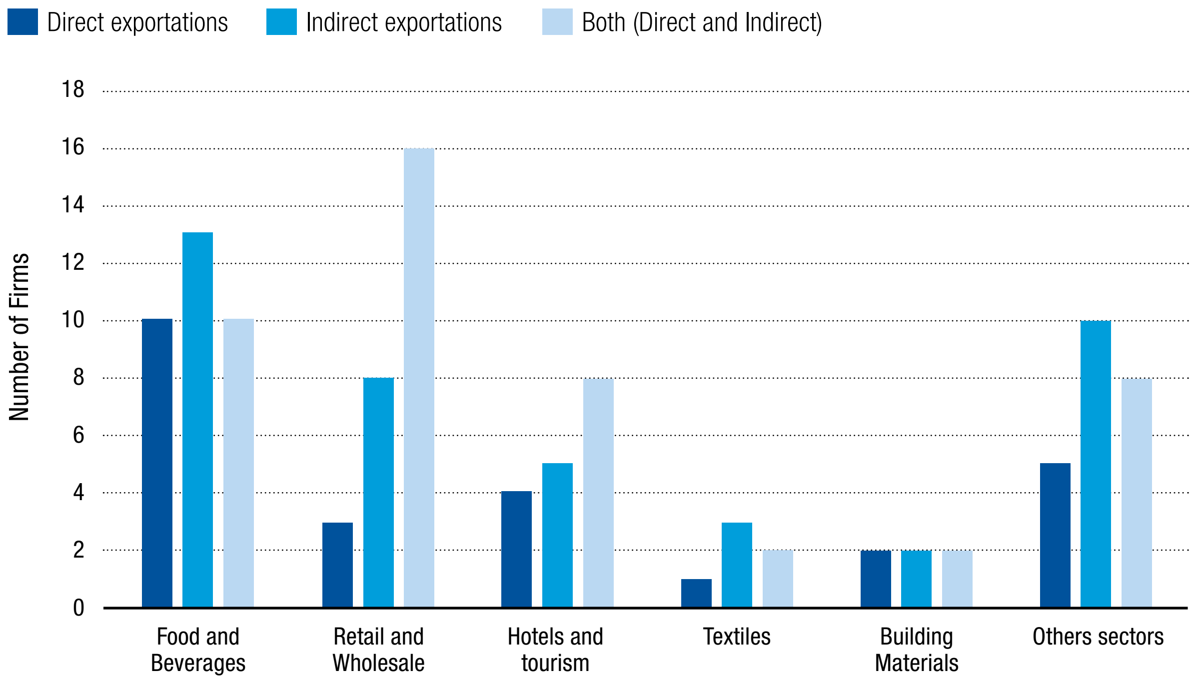
completely, representing 79 per cent of all informal businesses. Manufacturing plays a minimal role at just 7 per cent of informal enterprises, and even then, it focuses on simple activities—clothing production makes up 45 per cent of the manufacturing segment, while food processing accounts for 16 per cent.

Export participation among Tanzanian firms remains relatively limited. According to the 2023 WBES, only 18.7 per cent of firms engage in export activity, defined as exporting at least 10 per cent of their sales through direct or indirect channels. Among these exporting firms, 22.3 per cent export exclusively through direct channels, 36.6 per cent rely solely on intermediaries for indirect exports, and 41.1 per cent use both approaches.

Firm size plays a crucial role in determining export capacity. Large enterprises account for half of all direct exporters, while small enterprises comprise only 20.8 per cent of this group. In contrast, small firms dominate indirect exporting, representing nearly 48.8 per cent of enterprises that rely solely on intermediaries. This pattern reflects their greater dependence on third parties to navigate international trade complexities. The leading export activities span retail and wholesale trade, food and beverages, and hotels and tourism across both direct and indirect export channels (Figure 2).

Tanzania's enterprise landscape features a significant concentration of emerging firms. According to the 2023 World Bank Enterprise Survey, 69 per cent of businesses are less than 20 years old, with 25 per cent established within the past decade (World Bank, 2023c). The 2023 Tanzania Startup Survey reinforces this trend, reporting a 25.3 per cent increase in startup activity between 2022 and 2023. These startups generated 112,119 jobs in 2023—a 20.2 per cent year-on-year increase that underscores their growing contribution to employment creation and economic dynamism.

Figure 2
Export activities of firms in Tanzania, by sector



Source: UNCTAD, based on World Bank Enterprise Survey, 2023.

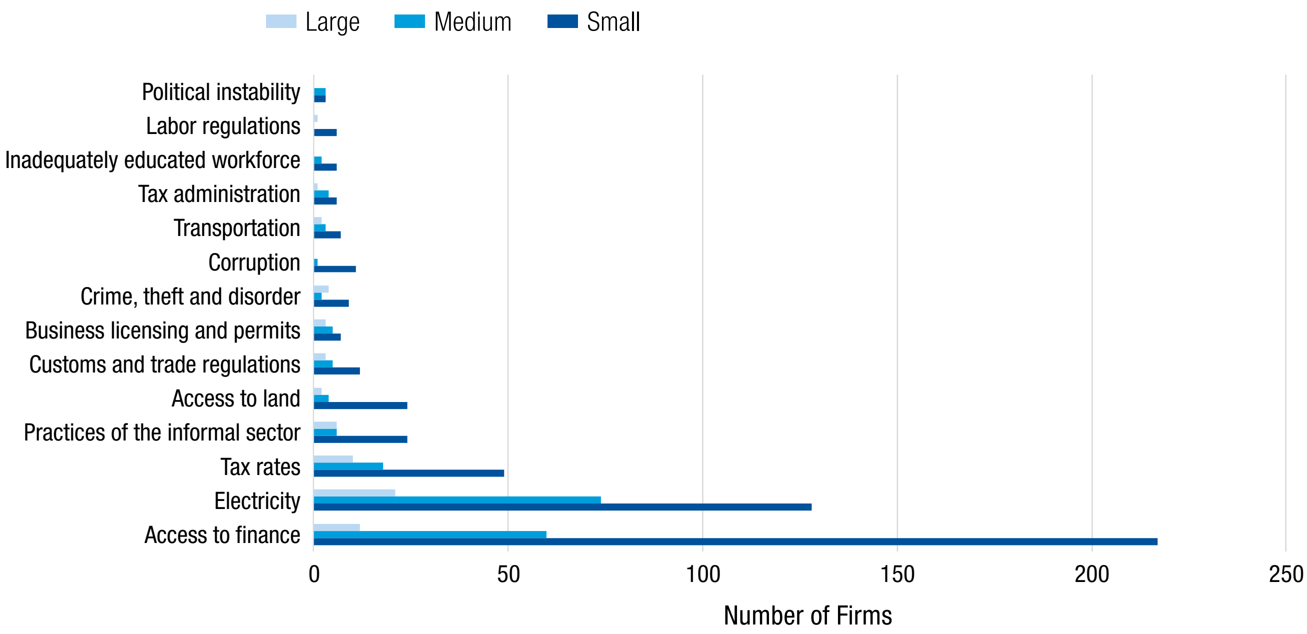
However, despite the expanding presence of younger enterprises, innovation adoption remains limited. Only 14.5 per cent of firms introduced new or significantly improved products or services. Similarly, firms show low adoption of licensed foreign technology, averaging just 13.7 per cent across all enterprises. Larger enterprises demonstrate significantly higher adoption rates at 32 per cent, compared to only 7.7 per cent among small enterprises (World Bank, 2023c). This gap reveals pronounced scale-related disparities in innovation capacity.

Overall, Tanzanian firms face multiple obstacles. Among small firms, access to finance represents the biggest barrier (38.5 per cent), followed by electricity (12 per cent), tax rates (12 per cent), tax administration (10 per cent) and business licensing and permits (7 per cent). For medium-sized firms, access to finance also tops the list at 29 per cent (see Figure 3). Access to finance clearly remains the most significant obstacle across all firms, particularly small and medium-sized enterprises, though large firms face this challenge less acutely. Addressing this barrier could involve easing access through more favorable loan terms, improved credit availability, or financial products tailored to businesses of different sizes.

Tax rates and tax administration emerge as additional critical barriers across all firm categories. Simplifying tax structures, streamlining administrative processes, and ensuring greater transparency could significantly reduce this burden. Meanwhile, electricity represents a major concern that reflects broader infrastructure limitations affecting firm productivity. Strategic investments in reliable and affordable energy solutions could alleviate this obstacle and benefit firms across the board.

Turning to innovation, the WBES results reveal that innovation levels among Tanzanian firms remain relatively low. Over the past three years, only 14.5 per cent of firms introduced new products or services, while 85.33 per cent did not, and the remainder lacked information. When broken down by firm size, small firms

Figure 3
Constraints to doing business by firms in Tanzania



Source: UNCTAD, based on World Bank Enterprise Survey, 2023.

reported that 15.10 per cent introduced new products, while medium firms achieved a slightly higher rate at 16.67 per cent. This pattern shows that medium-sized firms maintain a marginally higher innovation rate compared to their smaller counterparts.

These structural constraints hit smaller enterprises particularly hard, limiting their capacity to scale, innovate, and diversify into export-oriented activities (World Bank, 2023c).

2.3 Market niche opportunities for MSMEs: What to expect under the AfCFTA

Effective participation of MSMEs in regional value and supply chains can boost productivity and competitiveness by improving access to inputs and technology. Intra-African trade offers strong potential for developing viable value and supply chains across the continent. The African Continental Free Trade Area (AfCFTA), for instance, aims to integrate and strengthen African economies and businesses through regional value chains by eliminating trade barriers and enhancing access to inputs in key sectors like services, agribusiness, and manufacturing. The AfCFTA can also drive growth and competitiveness for MSMEs in the surveyed economies (Ethiopia, Malawi, Tanzania and Uganda) by opening regional markets, reducing cross-border trade costs, and allowing MSMEs to specialize in niche areas through intermediate goods and services.

An analysis of countries' regional comparative advantage reveals potential strengths in exporting value-added products, highlighting intra-African complementarities and untapped export opportunities when trading with other African countries. The Annex shows the revealed comparative advantage index and lists the top ten products for which Malawi, Tanzania and Uganda have revealed comparative advantage within Africa. These products and sectors offer prime opportunities for MSMEs to specialize and integrate into regional markets. Ethiopia provides a compelling example: Table 2 shows relatively low exports of monofilament synthetic (a textile product) to Africa (valued at about US$32,000 in 2023), while its intra-Africa revealed comparative advantage shows significant competitive strength (with an intra-Africa RCA index of 247.7). This means Ethiopia specializes in this textile product and holds a competitive advantage over other African countries when exporting under the AfCFTA or other regional trade agreements. Ethiopia's other top products with regional competitive advantage include vegetables, oil seeds, hides and skins, zinc waste and scrap, and chemical products such as radioactive elements. Tanzania and Uganda also show intra-African competitive advantage in agri-food, light manufacturing, and chemical products. Malawi's top intra-Africa RCA includes manufactured products in wood, metals and chemical-related products.

The products for which Ethiopia, Malawi, Tanzania and Uganda have high intra-African RCA reveal not only their regional competitive advantage and trade potential, but also the market niche opportunities available to MSMEs. However, helping MSMEs realize their trade potential in these top RCA products requires RCA-guided trade policies and targeted support measures. These measures should focus on MSME-friendly industrial clustering, market access, and MSME specialization within regional value and supply chains.

Ethiopia's Bole Lemi Industrial Park demonstrates how industrial clustering can integrate MSMEs into value and supply chains. Within this industrial ecosystem, MSMEs have joined specific value chains by supplying inputs or providing services – including gardening, cleaning, worker transport, and catering – to medium-sized manufacturing firms in the park. These direct

The AfCFTA can drive growth for MSMEs by opening regional markets, reducing cross-border trade costs, and allowing them to specialize in niche areas

Table 2
Ethiopia's revealed comparative advantage when exporting to Africa: Top 10 products in 2023

Product Group	Product Type (HS6 ID)	Export value to Africa (US$)	Intra-Africa RCA
Textiles and textile articles	Monofilament, synthetic; of 67 decitex or more and of which no cross-sectional dimension exceeds 1mm, strip and the like (e.g. artificial straw), of synthetic textile materials with width not over 5mm (HS 540500)	32'033.96	247.71
Vegetable products	Vegetables; edible, n.e.c. in chapter 07, fresh or chilled (HS 070999)	181'650'486.98	240.66
Live animals; animal products	Mammals; live, camels and other camelids (Camelidae) (HS 010613)	1'317'595.26	233.37
Vegetable products	Oil seeds; castor oil seeds, whether or not broken (HS 120730)	1'117'734.71	227.92
Miscellaneous manufactured articles	Vegetable, mineral carving material and articles of these materials, moulded or carved articles of wax, stearin, natural gums, resins or modelling pastes, worked unhardened gelatin (not heading no. 3503) (HS 960200)	231'481.40	214.83
Raw hides and skins, leather, furskins and articles thereof	Hides and skins; other than whole, but including butts, bends and bellies, of bovine (including buffalo) and equine animals, fresh, salted or preserved, but not tanned, parchment dressed or further prepared, whether or not dehaired or split (HS 410190)	622'085.29	207.16
Base metals and articles of base metal	Zinc; waste and scrap (HS 790200)	47'315.28	193.78
Vegetable Products	Vegetables, alliaceous; leeks and other kinds n.e.c. in heading no. 0703, fresh or chilled (HS 070390)	477'401.49	190.59
Vegetable Products	Vegetables; cabbage (head) lettuce (lactuca sativa), fresh or chilled (HS 070511)	4'630'551.18	188.33
Products of the chemical or allied industries	Radioactive elements, isotopes, compounds n.e.c. in heading no. 2844, alloys, dispersions (including cermets), ceramic products, mixtures containing the elements, isotopes, compounds; radioactive residues (HS 284444)	248'584.07	183.41

Source: UNCTAD, based on UN Comtrade data.

contracts between firms and MSMEs have fuelled the growth of Ethiopian MSMEs in sectors like transport and catering.

Uganda offers another example of supporting MSME specialization within regional value and supply chains. Given Uganda's high intra-African revealed comparative advantage in tanned or crust hides and skins – a by-product used in leather processing – the Ugandan government can implement targeted support measures. These could include financing small-scale tanneries or helping MSMEs supply inputs, services, or distribution to tanning processing plants. For regional market access, measures might include trade facilitation and supply chain finance programs that help MSMEs specializing in packaging, branding, or logistics integrate into the leather-to-footwear or leather-to-car seats regional value chains.

Value-added trade network analysis offers a systemic lens for assessing trade network strengths by examining trade density, centrality, and clustering. It also evaluates trade network dynamics and how shocks transmit through value chains. In this paper, we use value-added trade network analysis[6], particularly at the regional level, to identify opportunities for SMEs to integrate into these networks through backward and forward linkages, technology diffusion, and knowledge transfer.

This report builds on findings from the 2024 edition of UNCTAD's Economic Development in Africa Report (UNCTAD, 2025), which analyzed intra-African value-added trade networks and examined how small-scale enterprises can leverage this analysis to enhance competitiveness and unlock opportunities under the African Continental Free Trade Area (AfCFTA). UNCTAD (2025) found that many African economies remain marginally integrated into regional and global value chains, with domestic content exceeding 90 per cent in exports. This translates into limited use of foreign inputs and missed opportunities for technology adoption.

The core elements of value-added trade network analysis, including centrality, density, and clustering, enable MSMEs to identify reliable partners, avoid overdependence on vulnerable suppliers, and target entry points in resilient sectors such as digital technology-enabled services, agro-processing, and manufacturing hubs.

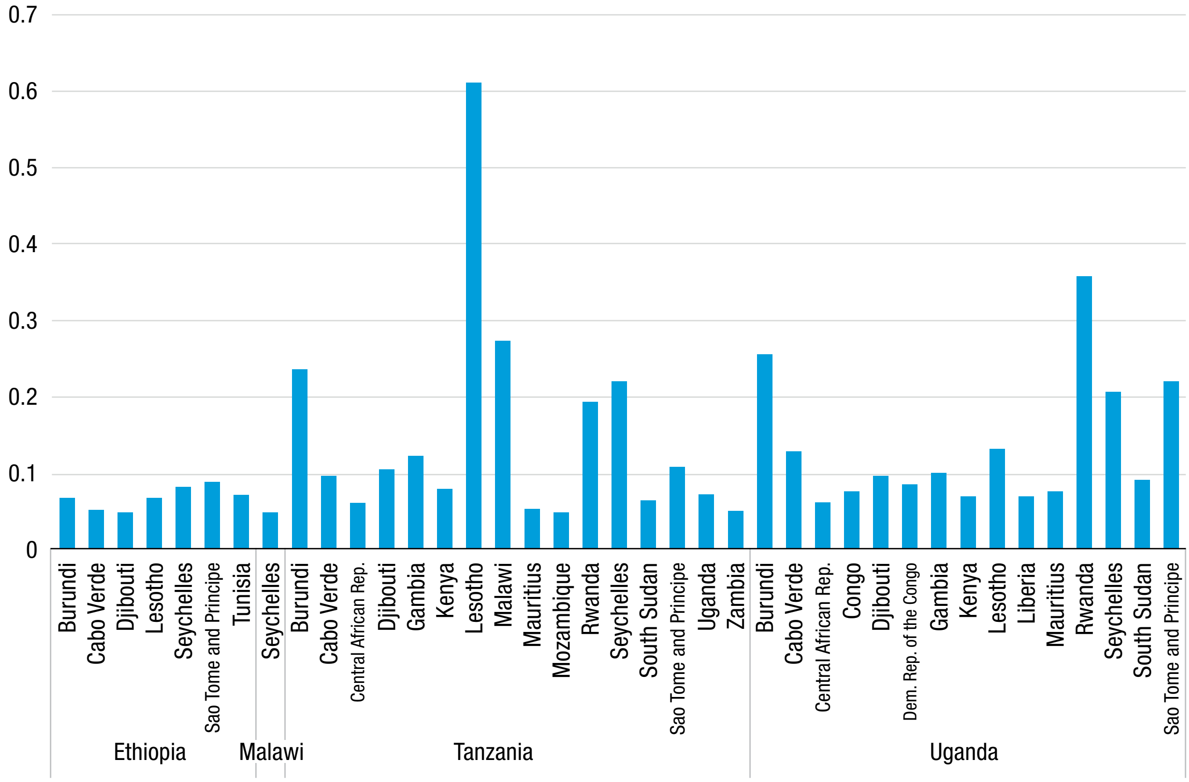
The intra-Africa value added trade network analysis reveals stronger clustering within regional economic communities (RECs) where dense linkages reduce trade risks (UNCTAD, 2025). African MSMEs can position themselves strategically in these regional hubs to capture economies of scale and expand beyond national borders. By embedding themselves in resilient trade networks, MSMEs can shift from the periphery of global trade to become active nodes in Africa's economic transformation.

While the AfCFTA provides the overarching framework, value-added trade network-guided MSME strategies will ultimately determine whether Africa builds resilient, diversified, and inclusive value chains in the coming decades. UNCTAD (2025) offers specific recommendations for African firms seeking to integrate into regional value-added trade networks. These include targeting intermediate input supply in textiles, leather, and automotive components; leveraging ICT and business services integration, particularly in countries like Kenya, Rwanda, and Mauritius where ICT adoption is accelerating; aligning with regions that are investing in transport and ICT infrastructure improvements, since these investments reduce transaction costs and boost competitiveness; and developing digital trade platforms that help African firms overcome border inefficiencies, connect directly with buyers, and reduce dependence on traditional intermediaries.

Using a threshold of 0.05 per cent of total gross exports to measure foreign value added trade networks between Ethiopia, Malawi, Tanzania and Uganda and the rest of Africa, Figure 4 reveals that Tanzania and Uganda serve as foreign value added suppliers to a significant number of African countries—16 for Tanzania and 15 for Uganda. These countries include Burundi,

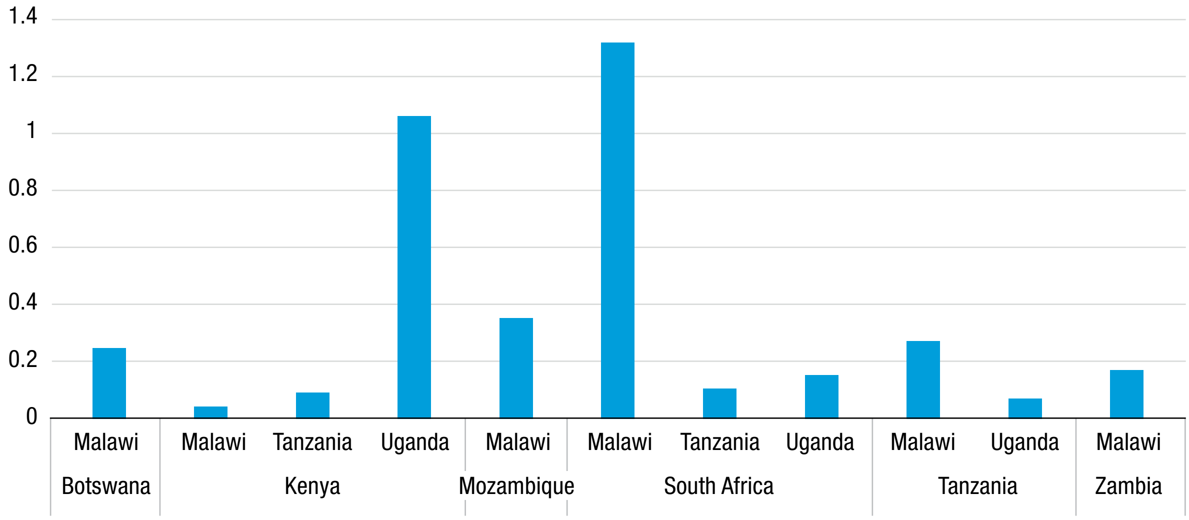
[6] This report analyzes value-added trade flows using the World Input-Output Database (WIOD). The analysis examines foreign value added in exports while excluding domestic value added flows. The methodology creates networks based on how important foreign value added suppliers are relative to user countries' gross exports. We set a threshold of 0.05 percent of total gross exports to African countries to identify foreign value added flows in intra-African trade. At the global level, we use a 1 percent threshold of total gross exports to identify significant foreign value added flows.

Figure 4
Top African importers of value added goods from Ethiopia, Malawi, Tanzania and Uganda



Source: UNCTAD, based on the UNCTAD–Eora Global Value Chain database (2022).

Figure 5
Top African exporters of value added goods to Ethiopia, Malawi, Tanzania and Uganda



Source: UNCTAD, based on the UNCTAD–Eora Global Value Chain database (2022).

Cabo Verde, Djibouti, Gambia, Lesotho, Malawi, Mauritius, Rwanda, Sao Tome and Principe, and Seychelles, among others. Ethiopia supplies foreign value added goods to 5 of these countries, plus Tunisia.

However, when examining the sourcing of foreign value added goods and inputs (at 0.05 per cent), the pattern shows high concentration among very few countries. For example, only 3 African countries supply value added goods and inputs to Uganda at this threshold: Kenya, South Africa, and Tanzania (see Figure 5).

The foreign value added trade network analysis for Malawi reveals an interesting contrast. At the 0.05 per cent threshold, Malawi sources from a relatively higher number of suppliers—Botswana, Kenya, Mozambique, South Africa, Tanzania, and Zambia—compared to its role as a supplier. Malawi provides foreign value added goods and inputs to only one country: Seychelles.

Notably, at the selected threshold of 0.05 per cent, Ethiopia does not source any value added goods or inputs from other African countries.

A balanced regional trade relationship like Tanzania's demonstrates strong backward and forward integration into regional value and supply chains, which is a clear sign of resilience in the regional market. This balance means Tanzanian MSMEs can rely on alternative sources and suppliers of value-added inputs within the network when supply chain disruptions or trade disturbances hit one of their trading partners.

When a country shows high polarity in its foreign value-added trade relationships or high network concentration, as seen with Malawi (as source) and Ethiopia (as supplier), it faces dependency risks on specific inputs or suppliers. This dependency increases vulnerability to disruptions when shocks hit particular input markets. More diverse and stronger networks with higher density and greater foreign value-added flows create more stability and resilience in regional value and supply chains.
The full implementation of the African Continental Free Trade Agreement can unlock these opportunities. See Box 1 on the current state of AfCFTA implementation in Malawi, Tanzania and Uganda.

To better analyze how countries integrate into regional value and supply chains through backward or forward linkages in the network, Section 2.4 uses Malawi as a case study to examine the characteristics and composition of intra-African value-added trade networks across all values (0 to 100 per cent).

Structural barriers in regional markets

While African MSMEs are expected to benefit from tariff liberalization under the AfCFTA and gain preferential access to African markets, non-tariff barriers significantly limit the potential market access gains under the AfCFTA and other regional trade blocs. These barriers include product certification requirements that impose substantial technical, financial, and bureaucratic constraints on African MSMEs, restricting their ability to access regional and global markets.

In Uganda, only 16 per cent of firms hold internationally recognized quality certifications (World Bank Enterprise Survey), revealing systemic gaps in compliance capacity. More than half of locally produced consumer goods in Uganda's market are estimated to be substandard and/or undetected by the Uganda National Bureau of Standards (UNBS) (Monitor, 2025). The UNBS requires rigorous testing with prohibitive costs: microbusinesses pay 500,000 Uganda Shillings (UGX), while medium and large firms plus beverage producers face UGX 1,000,000 fees, along with variable lab costs for audit and surveillance samples. These financial burdens effectively exclude informal SMEs and startups from the formal market.

> In Uganda, only 16 per cent of firms hold internationally recognized quality certifications, **revealing systemic gaps in compliance capacity**

Sector-specific permits create additional export complications. Fish, minerals, coffee, and timber require periodic renewals from relevant ministries (such as the Directorate of Fisheries Resources), with additional export levies for certain products like large fish exports. Consignment-level health and safety certifications, plus mandatory quality marks ("Q-marks"), add further compliance layers. While preferential certificates of origin for AfCFTA, East African Community (EAC), and Common Market for Eastern and Southern Africa (COMESA) are issued by the Uganda Revenue Authority, many SMEs still struggle to navigate this process (UEPB, 2019).[7]

In some countries, administrative inefficiencies and fragmented regulatory frameworks create significant barriers for MSMEs trying to join regional value chains across African economies. These businesses face complex compliance requirements around business registration, taxation, and customs procedures. In Tanzania, for example, customs delays and complicated trade regulations directly hurt SME competitiveness—35 per cent of firms identify these as moderate or major obstacles (WBES), with export clearance taking an average of 9 days.

In Uganda, perishable goods like fruits, vegetables, and fish face 8-day delays at inland borders. These holdups force exporters to absorb income losses and additional costs while storing goods properly during transit and meeting sanitary and phytosanitary regulations. At the Malaba border, congestion can stretch 10 km, and clearing fresh produce consignments can take 24 hours due to documentation errors or verification failures (De *et al*., 2023). This erodes product quality and forces businesses to pay expensive cold-storage costs.

African MSMEs also struggle with severe logistics constraints stemming from inadequate transport infrastructure—including poor distribution networks, limited warehousing, and insufficient transporters—plus prohibitive shipping costs that undermine their regional trade competitiveness. In Uganda, only 23 per cent of the national road network was paved in 2016/17 (Government of Uganda, 2017), rising slightly to 6,133 km by 2023 (Government of Uganda, 2023b). This infrastructure deficit, combined with low electrification rates (20 per cent grid access), forces SMEs to absorb transport costs that represent 30–40 per cent of their total production expenses.

Such structural barriers and logistics inefficiencies hit MSMEs hardest, limiting their ability to tap into regional markets. Building MSME capacity and awareness of standards and regulations across different trade regimes is crucial—especially helping them fully utilize preferential market access like what the AfCFTA offers.

Integrating MSMEs into value and supply chains under the AfCFTA requires tackling three connected pillars: standards compliance, logistics efficiency, and technology adoption. Ethiopia's industrial park linkages and Uganda's traceability systems provide proven models that other regions can learn from. By focusing on simplified rules of origin, cold chain infrastructure, and SME certification support, African countries could boost export-ready enterprises by 40-60 per cent across target countries by 2026. Chapter 4 examines the technological requirements and opportunities that African MSMEs can leverage to participate in regional markets.

[7] Beyond the preferential certificate of origin, the EU also requires a GSP Certificate of Origin and prior registration in the Registered Exporter (REX) system. These additional requirements ensure conformity and verification by the destination market (UEPB, 2019).

Box 1.
AfCFTA Implementation Progress in Malawi, Tanzania and Uganda

Uganda, Malawi, and Tanzania have made significant progress in implementing the African Continental Free Trade Area (AfCFTA), using tailored strategies to capitalize on regional integration while addressing their unique economic challenges.

Uganda was among the first nine countries to ratify the AfCFTA in November 2018 and bases its strategy on using the East African Community (EAC) and COMESA as stepping stones for continental trade. The National AfCFTA Implementation Strategy (2024) outlines over 50 measures to boost competitiveness, including a Business Development Services (BDS) framework that empowers SMEs in regional markets. Programs like the Free Zones Export Facility and tax incentives aim to diversify exports beyond traditional EAC-COMESA corridors, targeting priority goods such as coffee, dairy, iron/steel, and cereal flours. However, despite ambitious goals under the National Export Development Strategy (2015–2020), which targeted regional markets (EAC and COMESA) and 40 per cent for the EU annually, actual performance fell short by 10–34 per cent, highlighting ongoing gaps in market penetration and SME capacity.

Malawi's AfCFTA National Strategy (2021–2026) aims to double exports to African nations, reaching $662 million annually by 2026. The strategy prioritizes tobacco alternatives like legumes and oilseeds, along with ethanol and wood products. Meanwhile, the National Export Strategy II (NES II) sets a short-term goal of increasing Malawi's export share of GDP from 14.5 per cent in 2020 to 20 per cent by 2026.

Following NES II guidance, Malawi focuses on improving export readiness through One-Stop Border Posts with Zambia and Tanzania, ensuring industry compliance with international standards, and diversifying markets. African markets absorbed 37.5 per cent of exports in 2022, though this dropped to 32.9 per cent in 2023. Global reach remains constrained with exports to Singapore, Japan, and Canada representing just 0.6 per cent of total exports in 2023. The strategy tackles supply-side constraints through trade facilitation reforms and investor incentives in Special Economic Zones.

Tanzania ratified the agreement in September 2021 and quickly began trading value-added products like ceramic tiles, batteries, sisal fiber, and processed meats. Its National Trade Policy (2023–2033) focuses on strengthening domestic firms' competitiveness through gradual trade liberalization. As one of the AfCFTA Guided Trade Initiative pioneers—an interim solution to jumpstart AfCFTA trade—Tanzania demonstrates a proactive approach. The country's strategic selection of high-potential products for AfCFTA trade signals a deliberate shift from raw materials to processed goods, supporting broader economic diversification goals.

Source: UNCTAD, based on various sources.

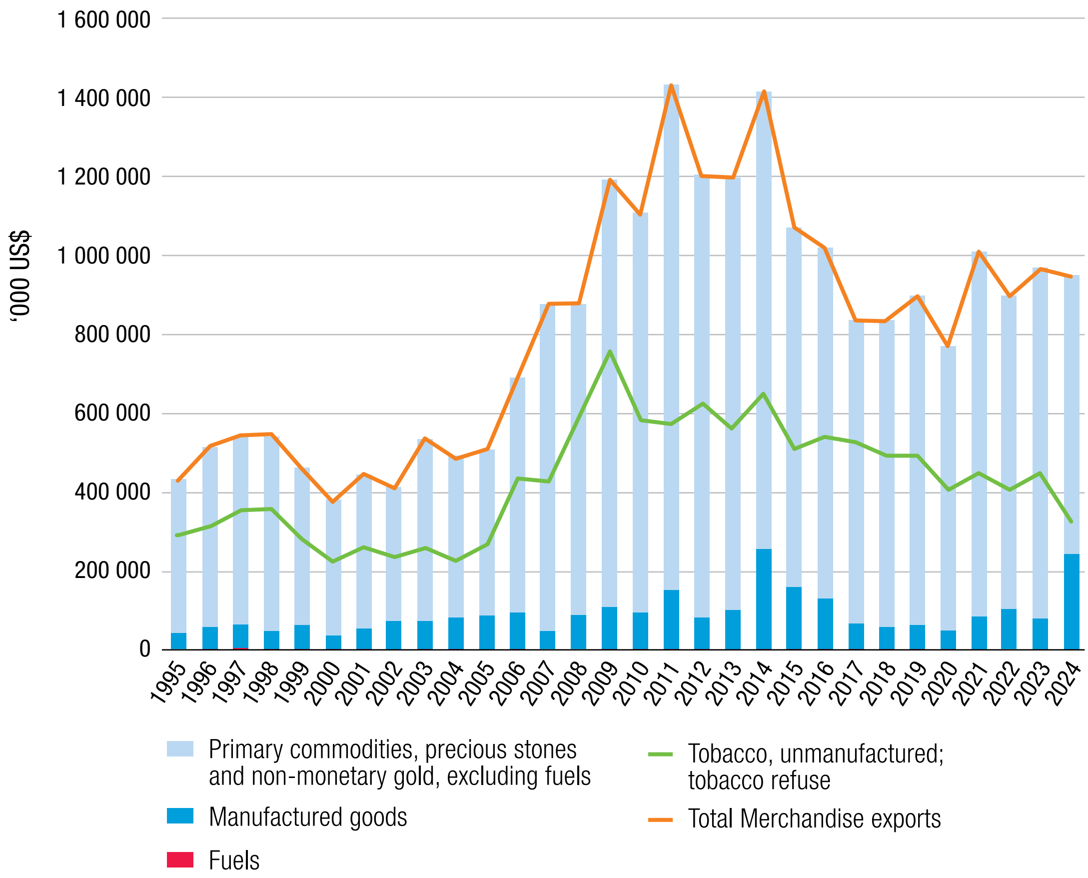
2.4 In focus: Market niche opportunities for MSMEs in Malawi

Malawi's export potential could expand well beyond its traditional narrow export basket of tobacco, sugar, coffee, and tea. From 2019 to 2023, primary commodities, precious stones, and non-monetary gold (excluding fuels) averaged 92 per cent of Malawi's merchandise exports. Within this category, unmanufactured tobacco and tobacco refuse alone accounted for 48 per cent of merchandise exports. Meanwhile, manufactured goods represented only 8 per cent of merchandise exports during the same period (see Figure 6).

In 2023, Malawi directed the majority of its exports to three key regions: Europe (38 per cent), Africa (38 per cent), and Asia (19 per cent).[8] Within Africa, Malawi's top markets included the

[8] Based on data from UNCTAD Statistics.

Figure 6
Evolution of Malawi's main exports



Source: UNCTAD, based on data from UNCTAD Statistics.

United Republic of Tanzania (10.9 per cent), South Africa (5.4 per cent), Zimbabwe (5.3 per cent), Zambia (4.7 per cent), and Kenya (3.2 per cent).

The regional market proves critical for MSMEs in Malawi **seeking to integrate into regional value and supply chains**

The regional market proves critical for MSMEs in Malawi seeking to integrate into regional value and supply chains. Malawi's neighboring countries—Mozambique, the United Republic of Tanzania, and Zambia—absorbed 18.4 per cent of total exports in 2023. Additionally, South Africa, Zimbabwe, Kenya, Rwanda, Republic of the Congo, and Egypt have emerged as key export destinations within Africa.

An analysis of export demand patterns reveals that Malawi's exports generated high value relative to distance in kilometers to markets in Tanzania, Zimbabwe, and Zambia (Table 3). The ranking stays consistent for the top two destinations across all food products, with South Africa taking third place and Zambia dropping to seventh behind Kenya, Mozambique, and Rwanda.

For manufactured goods, however, Zambia leads as the top export destination based on value earned relative to distance, followed by Zimbabwe, Mozambique, Tanzania, and South Africa. When examining oil seeds and oleaginous fruits (excluding flour), Tanzania, Kenya, and Zimbabwe maintain their top three positions according to exports relative to distance to their respective markets.

Based on Table 3's rankings, Malawi's exports performed well in the top five countries and show growth potential in Mozambique, Rwanda, Republic of the

Table 3
Malawi's export value relative to distance in 2023
(Thousand dollars per kilometer)

Rank*	Destination market	Total - All products	All food items	Manu-factured goods	Primary commodities, precious stones and non-monetary gold, excluding fuel	Unmanu-factured tobacco, and tobacco refuse	Sugar, molasses and honey	Oil seeds and oleaginous fruits (excluding flour)	Textile fibres, yarn, fabrics and clothing	Tea and mate
1	United Republic of Tanzania	117.0	110.4	6.5	110.5	0.3	0.0	67.6	0.0	-
2	Zimbabwe	99.1	88.8	10.2	88.9	24.9	12.4	6.9	1.6	0.0
3	Zambia	73.8	6.6	58.6	15.2	-	-	0.4	2.1	0.4
4	South Africa	36.1	27.5	5.2	30.9	0.0	0.0	4.9	0.2	10.4
5	Kenya	21.0	19.7	1.3	19.7	-	0.8	13.8	0.0	0.9
6	Mozambique	20.8	12.3	8.1	12.7	-	-	1.6	1.2	-
7	Rwanda	13.5	11.6	0.2	13.3	-	9.0	0.8	0.0	-
8	Congo	3.8	3.5	0.3	3.5	-	1.3	-	-	-
9	Uganda	2.2	0.6	0.9	1.2	0.5	-	-	0.1	-
10	Angola	1.7	-	1.7	-	-	-	-	-	-
11	Egypt	1.4	1.4	-	1.4	1.3	-	-	-	0.1
12	Democratic Republic of the Congo	1.0	0.7	0.3	0.7	-	0.3	-	0.0	-
13	Burundi	0.9	0.0	0.9	0.0	-	-	-	-	-
14	Morocco	0.8	0.8	-	0.8	0.8	-	-	-	-
15	Botswana	0.7	0.7	0.0	0.7	-	-	-	0.0	0.6

**Ranked according to the value of all products per unit distance. The distances were based on Haversine formula for great circle applied to geolocation data obtained from the World Bank, World Development Indicators database.*

Source: UNCTAD, based on data from UNCTADStat.

Congo, Uganda, and Angola. Meanwhile, Democratic Republic of the Congo and Botswana represent relatively untapped markets closer to Malawi compared to more distant destinations like Burundi, Egypt, and Morocco, which also rank in the top 15.

Regarding imports, South Africa supplied 49 per cent of goods sourced within the Africa region, followed by Tanzania (15 per cent) and Zambia (13 per cent) (Table 4). South Africa dominated as the supplier of manufactured goods, agricultural raw materials, and food items sourced within Africa, while Zambia and Tanzania served as the main suppliers of beverages and tobacco, and ores, metals, precious stones, and non-monetary gold, respectively.

South Africa leads as Malawi's supplier of manufactured goods, accounting for 22.5 per cent of manufactured imports in 2023. Key manufactured goods from South Africa included chemical products, machinery and transport equipment, and iron and steel. Malawi's diverse

Table 4
Malawi's import value relative to distance in 2023
(Share of the product category)

Imports source	Total- All products	Primary commodities, precious stones and non-monetary gold, excluding fuel	Ores, metals, precious stones and non-monetary gold	Manufac-tured goods	Fuels	Agricultural raw materials	All food items	Beverages and tobacco
South Africa	48.67	38.25	15.10	61.80	8.83	70.02	39.34	13.96
United Republic of Tanzania	15.12	5.31	31.66	5.66	62.03	4.27	2.55	2.98
Zambia	13.11	23.98	16.55	13.24	1.21	1.25	25.74	61.89
Mozambique	7.99	11.39	1.18	2.69	24.80	2.01	12.88	15.24
Kenya	5.22	8.82	3.39	5.40	0.73	0.21	9.77	4.98
Angola	3.45	2.02		4.76			2.32	
Zimbabwe	2.03	1.88	4.669	2.12	1.84	13.24	1.10	0.56
Egypt	2.02	2.56	1.99	2.33	0.30	2.82	2.61	
Eswatini	0.56	1.64		0.39	0.11	6.03	1.62	0
Botswana	0.54	2.34	25.34	0.18	0	0.01	0	0
Total value of imports from African countries in million dollars	**1211.01**	**217.55**	**20.10**	**786.18**	**204.91**	**8.10**	**189.34**	**58.38**

Source: UNCTAD, based on data from UNCTADStat.

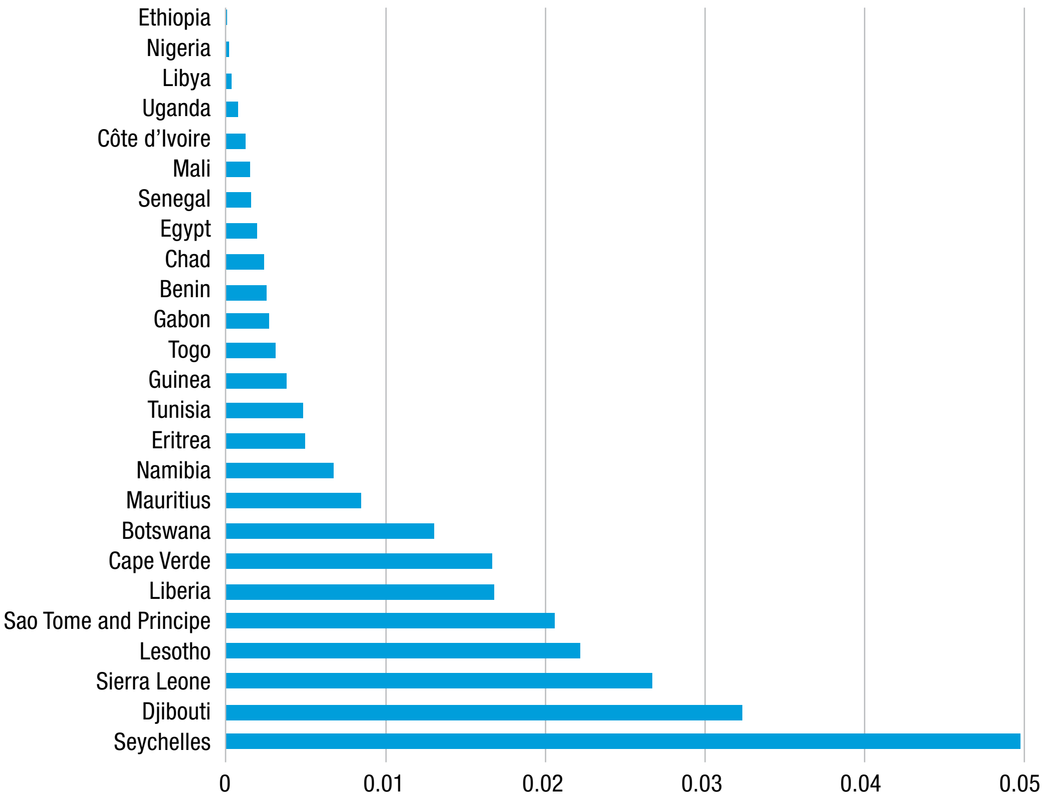
import portfolio also encompasses other manufactured goods such as lime, cement, fabricated construction materials (excluding glass and clay), medicines (including veterinary medicines), soaps, cleansing and polishing preparations, and glassware.

Using foreign value added trade network analysis to identify Malawi's trade partners across Africa and assess its reliability within regional trade networks like the African Continental Free Trade Area (AfCFTA), Figure 7 shows that Malawi supplies low value-added inputs to African countries. Its exported goods and inputs contain less than 0.05 per cent value added, indicating that Malawi remains only marginally integrated into continental value chains.

While Figure 7 lists all African countries that source inputs from Malawi, the per centage of value added in Malawi's exports to most African countries ranges from very low to insignificant. As noted in the previous section, the density or strength of a value added trade network – and a country's relevance within that network – is measured based on the level and share of foreign value added content in products or inputs exported to the region.

Malawi's position as neither a dominant nor dependent partner in the network (whether as supplier or buyer of goods and inputs with high foreign value added content) and its weak network connections aren't unique. UNCTAD (2025) found

Figure 7
Malawi's intra-African value added exports, by partner



Source: UNCTAD, based the UNCTAD–Eora Global Value Chain database.

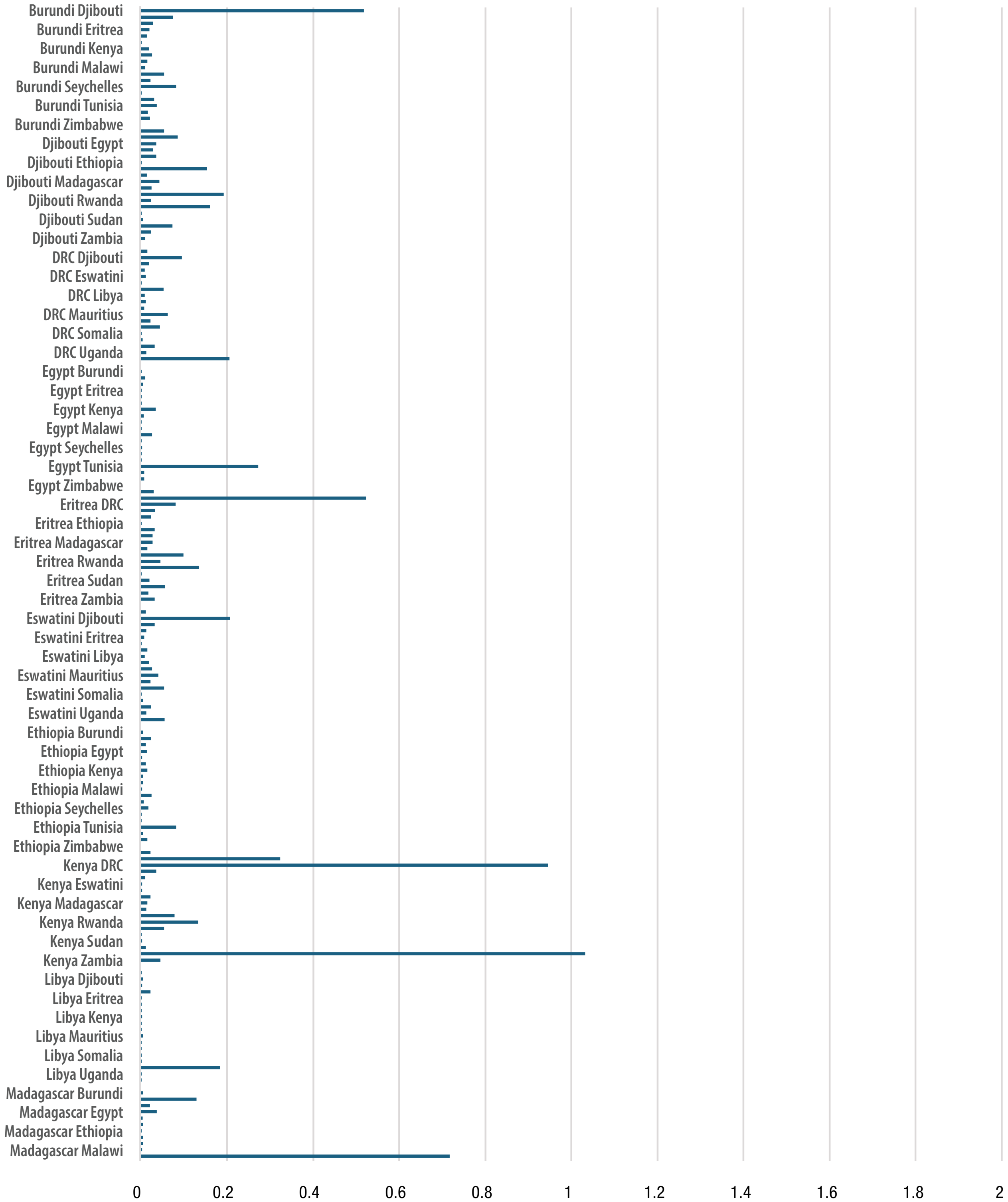
that many African countries operate at the periphery of the intra-African trade network, while only a few countries occupy the network's core, supplying or purchasing value added inputs from a significant number of African countries.

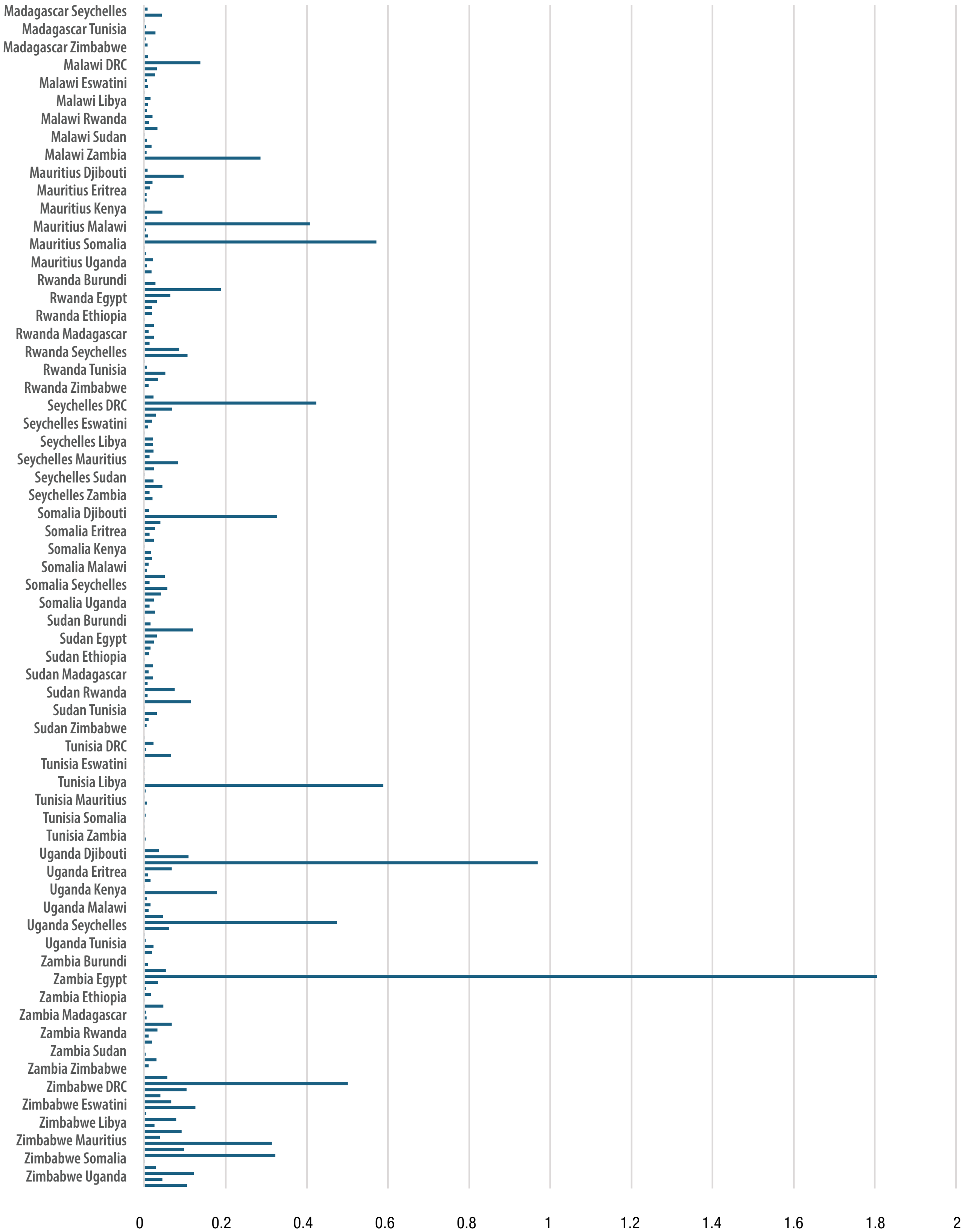
To better assess the robustness and resilience of regional trade networks in Africa, the 2024 Economic Development in Africa Report (UNCTAD, 2025) analyzed value-added trade within regional trade blocks that operated long before the AfCFTA. In the Common Market for Eastern and Southern Africa (COMESA), for instance, UNCTAD's foreign value-added trade network analysis revealed more diversified connections and less concentration in core-periphery positions within sub-regional value-added trade networks. This translated into deeper integration at the regional-economic-community level with resilient value chains – factors that enhance the network's ability to respond to shocks and risks.

Using COMESA to identify Malawi's potential strength at the sub-regional level, Figure 8 shows that Malawi benefits more from value-added integration at the REC level than at the continental level. This stems from higher tariff and non-tariff trade costs when trading outside established regional trading blocs. Within COMESA, at a threshold higher than 0.01 per cent[9], Malawi supplies manufacturing value-added inputs to countries including Zambia, Djibouti, Seychelles, Democratic

[9] For Malawi in this analysis, we use a smaller threshold (0.01 percent) to capture more value added trade partners within the region.

Figure 8
Intra-COMESA value added trade network: Manufacturing sector





Source: UNCTAD, based on the UNCTAD–Eora Global Value Chain database.

Republic of the Congo, Egypt, Mauritius, Tunisia, Kenya and Rwanda (see Figure 8). At the same threshold, Malawi sources value-added manufacturing inputs from Djibouti, Eritrea, Eswatini, Kenya, Rwanda, Seychelles, Zambia and Zimbabwe. This connectedness confirms that Malawi has potential to integrate into regional value and supply chains when the right frameworks (such as low or zero-tariff trading within established trading blocs), policies and measures are in place.

Malawi's export growth and regional value chain integration potential depends on the country overcoming various challenges and seizing opportunities that the AfCFTA creates. As a landlocked, least developed country, Malawi faces obstacles ranging from structural limitations and high dependence on agricultural commodity exports to a stagnant manufacturing sector that neither fosters product diversification nor creates linkages with the primary sector, plus inadequate infrastructure connecting the country to markets.

The AfCFTA market is critical for integrating MSMEs into regional value and supply chains. However, Malawi's MSMEs show low readiness for this market. The main challenges include poor product quality, insufficient production volumes, and limited capacity to compete in saturated markets.

Mgomezulu *et al*. (2024) examined the AfCFTA's potential impact on various economic sectors. They found that reducing tariffs on competing imports would significantly benefit Malawian consumers through lower prices. However, local producers would need to cut wages to stay competitive, particularly in agriculture (-18.78 per cent) and manufacturing and construction (-19.01 per cent). These wage cuts could undermine prospects for achieving inclusive economic growth through AfCFTA trade.

A significant disconnect exists between the private sector and government regarding policy priorities and the public business services needed to facilitate private sector growth. The perceived lack of transparency around assessment procedures and requirements for MSMEs to obtain compliance certificates from standards bodies seems counterproductive for a country that relies on the MSME sector to drive economic growth and exports. Business associations argue that government should establish clear timeframes for product and process certification while shortening the overall certification period.

Greater policy transparency is also needed, drawing lessons from industry examples like the Halaal Standard, which provides labeling stickers for pre-certified products. The Small and Medium Enterprises Development Institute (SMED), a parastatal under the Ministry of Trade and Industry, operates pre-certified premises that MSMEs can use for product packaging and labeling. This model could be replicated at regional or district levels, or extended to special export promotion clusters.

Although some standards are mutually recognized within the Southern African Development Community (SADC) and COMESA, exported products still face rigorous scrutiny in cross-border trade. The Malawi Bureau of Standards lacks access to all the standards, regulations, and certifications required by neighboring countries and others within the region. The absence of shared facilities and business infrastructure also constrains MSME sector growth. The lack of aggregators with storage and distribution capacity particularly hurts producers of fresh products like fruits and vegetables, who depend on these services to meet both quality and volume demands for competitive trade within and outside Malawi. This gap also impacts micro and small-scale producers who cannot mobilize the resources needed to install their own storage and distribution units, testing laboratories, and other certified facilities for their operations.

Access to finance and affordable credit represents another major constraint to private sector development. The FinScope survey revealed that business owners rely primarily on their own resources for start-up capital, consisting mainly of savings (29 per cent), money from another business (21 per cent), salary (11 per cent), or asset sales (11 per cent). Traditional financing sources such as business loans (3 per cent), consumer loans (3 per cent), and business partners (0.1 per cent) play a much smaller role in financing businesses. Many business owners lack essential business skills, which increases their risk profile in credit applications. Additionally, limited awareness of government policies and facilitation services available to MSMEs may contribute to these disparities in finance access.

Market access in the broader African market remains a significant hurdle for Malawi's MSMEs. Non-tariff barriers such as import or export controls, standards and procedures, restrictive rules of origin, and unharmonized trade taxes reduce the competitiveness of small-scale businesses. Some constraints could be addressed by cultivating business-to-business linkages across borders. The National Association of Small and Medium Enterprises (NASME) serves this core function as an independent business association that brings together SMEs to disseminate market information and uncover market potential. This self-sustaining organization operates on contributions from over 200 active fee-paying members. NASME successfully secured support from the Indian Technical and Economic Cooperation (ITEC) and identified India as a growing destination for Malawi's exports (High Commission of India, 2018). Similar approaches could open strategic markets across Africa.

The Malawi Chamber of Commerce and Industry also catalyzes business linkages through annual trade fair events and supports businesses with tailored training programs. The Chamber has approximately 300 registered, tax-paying members. As a corporate body, the Chamber affiliates with the COMESA and SADC Business Councils and has facilitated major trade deals with Zambia (dairy products) and Zimbabwe (livestock).

To modernize the MSME sector, the government takes a multipronged approach. In agriculture, it focuses on promoting value addition and processing. In tourism, efforts concentrate on improving tourism site accessibility through infrastructure development. A review of MSME policy and institutional arrangements has produced new legislation and established an authority to regulate MSMEs.

Additionally, industrial parks are being developed under the Special Economic Zones Act of February 2024 to stimulate industrialization. In mining, the government has reviewed regulations and engaged stakeholders to address binding constraints, including metallurgical processing and value addition. Efforts to harmonize policies, eliminate cumbersome legislation, and streamline processes are underway across all sectors, alongside implementing a national single window for exports.

3.

Enabling MSME Integration into Regional Value Chains: Digital Transformation and Innovative Financing Solutions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3. Enabling MSME Integration into Regional Value Chains: Digital Transformation and Innovative Financing Solutions

Digital transformation and innovative financing present critical opportunities for African MSMEs to overcome structural barriers, enhance competitiveness, and integrate effectively into regional value chains under the AfCFTA.

As Africa advances regional integration through the AfCFTA, MSMEs are gaining renewed strategic importance. These businesses are now recognized not only as key beneficiaries of the initiative but also as critical enablers of its success, playing a catalytic role in boosting intra-Africa trade and fostering economic cooperation across member states (African Union, 2024a).

Despite their immense potential, MSMEs across the continent face persistent barriers that limit their participation in regional value chains. These obstacles include limited access to market information, high transaction and information costs, inadequate infrastructure, and challenges meeting regulatory requirements (Alemayehu, 2024). Digital transformation offers a powerful solution to help MSMEs overcome these structural constraints and integrate effectively into regional value chains. When MSMEs strategically adopt digital technologies, including e-commerce platforms, digital trade facilitation systems, and supply chain management tools, they enhance operational agility, reduce trade-related costs, and strengthen supply chain resilience. This enables them to overcome traditional barriers like high operation costs and logistical delays while navigating the regulatory and logistical complexities of regional integration under the AfCFTA framework (UNCTAD, 2022a; 2022b; Holopainen *et al*., 2024).

Several promising opportunities are emerging to accelerate MSME digital transformation. At the continental level, digital transformation has become a central pillar of Africa's development agenda. The African Union's "Digital Transformation Strategy for Africa" (2020-2030) and the "AfCFTA Protocol on Digital Trade" exemplify continental frameworks designed to create a conducive policy and regulatory environment, presenting a timely opportunity to accelerate MSME digital transformation and enhance their integration into regional value chains. Meanwhile, Africa's expanding digital infrastructure and connectivity – characterized by rising internet and mobile penetration rates, coupled with the proliferation of digital platforms such as mobile money services and e-commerce platforms – are unlocking new opportunities for MSMEs to overcome traditional financial and operational barriers, enhance productivity, and expand market access.

However, despite this progress, MSMEs still face critical structural barriers that limit their ability to use digital tools effectively. These challenges, including inadequate infrastructure, limited financial resources, widespread digital illiteracy and skills gaps, and fragmented digital systems with limited interoperability constrain the transformative potential of digital technologies for MSMEs. Addressing these barriers is essential to ensure inclusive

Digital technologies enhance operational agility, reduce trade-related costs, and strengthen supply chain resilience

Africa's expanding digital infrastructure and platforms **overcome traditional financial and operational barriers** digital transformation and equitable value chain integration across the continent.

Against this backdrop, this chapter examines how digital technologies and innovative finance can help MSMEs integrate into regional value and supply chains under the AfCFTA. Drawing on empirical evidence and country case studies, the chapter explores how digital technologies can overcome traditional barriers and enhance MSME competitiveness. The chapter provides an overview of the current digital transformation landscape across the continent, identifies key structural challenges to MSME digital transformation, and highlights critical enablers to unlock its transformative potential.

3.1 MSME Financing Landscape and Structural Barriers

More than half of MSMEs **need more financing than they can access**

Access to finance remains one of the most critical constraints facing firms across Africa, particularly MSMEs. This pattern reflects not only limited external financing options but also a risk-averse preference for self-reliance amid high credit barriers. This challenge persists despite widespread account ownership among formal firms. In 2023, approximately 86.4 per cent of formal enterprises in select African countries reported having access to a checking or savings account, mainly for facilitating liquidity management and basic transactions (World Bank Group, 2023a). However, this access to deposit services doesn't translate into comparable credit provision. An estimated 51 per cent of small-scale enterprises in the region report needing more financing than they can access, highlighting a persistent financing gap (Runde *et al*., 2021). The total credit shortfall for African small-scale firms reaches approximately US$300 billion, with 40 per cent of firms experiencing difficulty accessing formal finance (Johnson, 2025).

The overall financial resources available for lending, especially in the banking sector, remain severely limited across Africa. About 94 per cent of the 51 banks surveyed reported issuing loans to firms (including MSMEs) in the past 12 months[10]. However, credit to the private sector as a share of GDP tells a different story—it remains remarkably low throughout the continent at just 11 per cent in Central Africa, 17 per cent in West Africa, 21 per cent in East Africa, 20 per cent in Southern Africa (excluding South Africa), and 37 per cent in North Africa. Most banks rely heavily on deposit funding, with deposits accounting for an average of 77 per cent of total liabilities (European Investment Bank, 2024). Since income and savings rates remain low across the population, this dependency severely constrains the scale of funds available for private sector lending.

Stringent collateral requirements and complex Know-Your-Customer (KYC) protocols create another major barrier. The EIB's Banking in Africa Survey (2024) found that banks cited lack of acceptable collateral and poor credit histories as key impediments in 65 and 51 per cent of cases, respectively. In Ethiopia, collateral-related loan rejections for small firms reach as high as 87.9 per cent (World Bank, 2015). These requirements hit small and younger enterprises particularly hard since they typically lack sufficient assets to pledge as collateral. Banks also prioritize costly and time-intensive KYC procedures for larger, more established clients, which further marginalizes MSMEs.

Widespread informality makes the accessibility challenge even worse. Unregistered enterprises find themselves

[10] The European Investment Bank (EIB) conducted its ninth annual Banking in Africa survey with support from Making Finance Work for Africa. In February and March 2024, the EIB surveyed 51 banks across sub-Saharan Africa. While the survey focused on sub-Saharan Africa, it included North African banks with pan-African operations.

completely shut out of formal financing channels. Without legal status, financial documentation, or credit records, informal firms cannot access bank loans or lines of credit. They must rely on high-cost, unregulated funding sources instead, which increases their financial vulnerability and severely limits their ability to grow.

Even when financing becomes available, costs often remain prohibitively high for MSMEs across Africa. Interest rates throughout the region frequently reach double digits, driven by steep operational costs, inflationary pressures, and substantial risk premiums. Many African central banks have tightened monetary policies to combat inflation, which pushes lending rates even higher. Additionally, banks maintain wide net interest margins – the gap between what they pay to borrow money and what they charge to lend it – making credit even more expensive for MSMEs (European Investment Bank, 2024). These harsh conditions shut out many viable MSMEs from the growth-enabling finance they need.

Because of these barriers, MSME financing across Africa relies heavily on self-funding. In 2023, only 18.5 per cent of formal firms used bank credit to finance their investments. Internal resources funded a staggering 75.8 per cent of investment financing, while bank loans accounted for just 8.9 per cent (World Bank, 2023a). When firms do seek external finance, they often turn to informal channels such as moneylenders, friends, or relatives rather than traditional banking institutions.

In Tanzania, small firms face a critical financing gap, with 20.13 per cent viewing access to finance as a major obstacle and 25.50 per cent considering it a very severe obstacle (based on WBES Tanzania 2023). This forces most businesses to rely heavily on internal funding. Retained earnings account for 73.1 per cent of working capital for small firms, 80.69 per cent for medium firms, and 75.79 per cent for large firms.

When businesses do seek external funding, they turn primarily to informal sources. This pattern becomes even more pronounced for fixed asset financing among smaller enterprises: 82.2 per cent of small firms depend on informal sources like money lenders and relatives, compared to 76.5 per cent for medium firms and 73.7 per cent for large firms. Meanwhile, formal financing options remain scarce with bank loans covering just 1.3 per cent of small firms' fixed assets, while non-bank institutions serve only 4.3 per cent of small firms' working capital.

The formal credit landscape tells a stark story: 80.5 per cent of enterprises completely lack access to formal credit lines or loans (based on WBES Tanzania 2023). Among the fortunate few with access, 14.17 per cent secured loans only, while a tiny 1.33 per cent obtained both credit lines and loans. Informal enterprises face even steeper barriers, relying overwhelmingly on self-financing (75.23 per cent) and social networks (12.64 per cent from friends and relatives). Access to formal credit remains minimal: banks serve only 0.48 per cent of businesses, while microfinance institutions reach just 2.54 per cent despite their targeted mission[11].

Over 75 per cent of MSME investment financing in Africa **comes from internal resources**

Where formal lending does occur, private banks control the market, handling 59.6 per cent of all lending with average loans of 140 million Tanzanian Shilling (TZS) that clearly favor established firms. Even among businesses brave enough to apply for loans, uncertainty persists: while 69.23 per cent receive full approval and 8.97 per cent get partial approval, 6.41 per cent face outright rejection, highlighting how even willing participants can't count on system access.

Ethiopia mirrors this trend: 68 per cent of MSMEs finance primarily through personal savings, with 17 per cent relying on friends and family (UNDP 2023). Family networks prove crucial with 75 per cent of surveyed MSMEs using family

[11] See the World Bank Enterprise Surveys database at http://www.enterprisesurveys.org

financing for startups and expansions. Only 30 per cent of small firms have secured loans. Medium firms access formal bank loans more easily, while micro and small enterprises pay a 4.5 per cent premium for microfinance loans compared to bank rates (for example, 15 per cent versus 9.5 per cent in 2012). On average, 36 per cent of Ethiopian firms faced complete credit constraints, significantly higher than the average of 22.3 per cent in the region and with manufacturing firms slightly better positioned than firms in services (World Bank, 2015). The World Bank Global Findex Database recorded Ethiopia's financial inclusion at 46 per cent in 2022, which limits MSME uptake of innovative financing.

Uganda reinforces the self-financing pattern: 90 per cent of SME owners launch businesses with personal funds, and 81.4 per cent of firms fund more than half their working capital through retained earnings or internal funds. Despite a robust banking customer base (5 million accounts supporting 2.1 million MSMEs) and increased domestic credit to the private sector from 12.9 per cent of GDP in 2014 to 14.8 per cent of GDP in 2023 (UBA, 2023), formal credit penetration remains shallow. Uganda reports a stark $8.8 billion financing gap for MSMEs (24 per cent of GDP), with only 8.9 per cent accessing institutional loans or lines of credit (IFC 2023). About one-fifth (21.2 per cent) of firms financed their working capital through bank loans. About 55.7 per cent of MSMEs that obtained bank loans financed less than 40 per cent of their working capital, while 16.4 per cent had the majority of their working capital financed by bank loans. Supply chain finance meets only 15 per cent of MSME demand, highlighting significant unmet potential.

Malawi demonstrates progress but significant gaps remain: financial inclusion for MSMEs jumped from 23 per cent in 2012 to 54 per cent in 2019, largely thanks to mobile money and SACCOs (FinScope). Businesses using informal financial services also grew substantially, rising from 20 per cent in 2012 to 40 per cent in 2019 (Government of Malawi, 2019). However, startups still rely heavily on personal savings (29 per cent), asset sales (11 per cent), or salaries (11 per cent), while formal loans account for just 3 per cent of their funding.

This persistent financial exclusion limits African MSMEs' ability to drive structural transformation, create jobs, and diversify exports. The widespread reliance on self-financing reflects both the shortage of external financing options and a sensible, risk-averse response to systemic credit constraints. Without targeted reforms to expand access, reduce costs, and promote inclusion, limited financing will continue to stifle private sector development and inclusive growth.

3.2 Unlocking growth: MSMEs financing alternatives

To overcome constraints in traditional banking, African MSMEs can tap into alternative financing instruments including trade credit, supply chain finance (SCF), blended finance, sovereign wealth funds (SWFs), digital capital raising, private capital, and capital markets for both working capital and fixed capital investments.

3.2.1 Supply Chain Finance

Supply chain finance (SCF) offers a strategic way to ease financial constraints for African enterprises by aligning the flow of capital, goods, and information across value chains. Key instruments, including factoring, trade credit, and reverse factoring can boost operational efficiency while reducing liquidity pressures. Trade credit eliminates uncertainty about maintaining cash balances for payments, which improves operational and cost efficiency while providing greater operational flexibility (Dary *et al.*, 2024). Research shows that trade credit helps firms maintain their customer base (Cunat, 2007) and serves as both a tool to meet customer needs and insurance during economic shocks (Cunat 2007;

Bams *et al*. 2016; Dary *et al*., 2024). Ferrando and Mulier (2013) found that trade credit drives firm growth, with particularly strong effects for small firms. Among listed firms across 19 African countries, Dary *et al.* (2024) found that trade credit financing significantly and positively correlates with firm growth, measured by sales growth.

In production chains, firms naturally extend trade credit to customers while receiving it from suppliers. For example, a seller might offer trade credit to help a credit-constrained customer make purchases. When firms face financial constraints, trade credits can help them cover both fixed and variable costs needed to join or stay competitive in global supply chains (Thang and Ha, 2022).

Thang and Ha (2022) examined how global value chain participation affects trade credit use and extension, analyzing World Bank Enterprise Survey data from 55 countries. They found that firms participating in global value chains are more likely to receive trade credit from suppliers, extend it to customers, and engage in both activities simultaneously. These effects are particularly strong for financially constrained firms, especially small and medium-sized enterprises, since overcoming liquidity shortages often motivates their global supply chain participation.

Trade credit, where buyers defer or advance payments to suppliers, serves as a widespread and practical financing solution across Africa. In 2023, supplier credit funded about 4.3 per cent of fixed asset investments among firms in select African countries, while 24.2 per cent of firms used supplier or customer credit to finance working capital (World Bank, 2023a). This arrangement reduces uncertainty around maintaining cash balances for delivery payments, which boosts operational and cost efficiency while providing greater operational flexibility. Research demonstrates that trade credit supports company growth, particularly for small-scale enterprises (Ferrando and Mulier, 2013). It also functions as a strategic customer retention tool and provides informal insurance during economic downturns (Bams *et al*., 2016; Cunat, 2007).

Supply chain finance optimizes cash flow across value chains by enabling suppliers to receive early payments on their invoices, typically through financing from third-party institutions like banks or specialized fintech platforms. At the same time, buyers benefit by extending their payment terms, which improves their own liquidity management. This approach aligns capital flow with the movement of goods and information throughout the supply chain.

Empirical studies confirm that SCF delivers positive outcomes for firms and households in Africa, including increased trade volumes and stronger business performance (Kopparthi and Kagabo, 2012; Teh *et al*., 2016). Africa currently shows one of the highest growth rates in the global SCF market. Market estimates suggest 14–15 per cent growth in SCF usage between 2023 and 2024. South Africa leads the continent with a market value of US$44.9 million in 2023 and a projected compound annual growth rate of 8.5 per cent through 2033 (BCR Publishing, 2025).

In Uganda, more than two-thirds of banks offer invoice discounting and about one-third provide distributor finance. Banks also offer other SCF tools, including factoring, reverse factoring, and loans against receivables (IFC, 2023). However, SCF demand in Uganda far exceeds supply. For example, MSMEs that purchase goods and inputs from anchor firms typically must pay within 30 days, while they often receive payments from downstream buyers only after 90 days. These payment mismatches create severe working capital shortages for MSMEs. Nearly 60 per cent of MSMEs surveyed in Uganda offered discounts of 2–20 per cent to encourage early payments from downstream partners, highlighting their harsh liquidity constraints and urgent need for SCF solutions (IFC, 2023).

As of 2021, Uganda's total supply chain finance market reached an estimated US$2.1 billion, or 5.7 per cent of GDP,

Supply chain finance allows MSMEs to turn their position in a value chain into creditworthiness

with MSMEs accounting for 14 per cent of this market. However, banks supplied only US$238.2 million in outstanding SCF, accounting for just 11 per cent of total estimated demand.

Despite growth trends, SCF remains underutilized across many African countries. While total SCF demand on the continent reaches an estimated US$60 billion, formal financial providers currently meet only 7–25 per cent of this demand. Surveys from West African countries reveal that just 40 per cent of trade flows use bank intermediation, compared to the global average of 80 per cent (IFC and WTO, 2022). According to Afreximbank (2025), African banks allocate merely 18 per cent of their trade finance portfolios to intra-African trade. The SCF gap – the financing shortfall for instruments that bridge payment cycles between buyers and sellers – stands at US$100 billion, creating a significant barrier to African SME participation in regional and global value chains.

To bridge this gap, stakeholders increasingly embrace ecosystem-based and technology-driven SCF models. Between 2019 and 2021, the MEDA EASE project mobilized US$10 million in SCF financing for 100 SMEs across Kenya, Uganda, and Tanzania, averaging US$100,000 per enterprise. Digital solutions tailored to smaller suppliers' operational needs facilitated these transactions (MEDA, 2025). In Uganda, aggregators use business-to-business linkages to support MSMEs within their clusters. The most common arrangement involves hire purchase agreements, with interest rates ranging from 2 per cent to the market rate of 4.5 per cent. Equity Bank Uganda operates a business model that creates interconnected business ecosystems. This model connects distributors, manufacturers, and traders who benefit from banking services that build transaction histories while providing access to working capital and stock purchase liquidity.

Beyond immediate liquidity impacts, SCF drives broader development outcomes. It enables MSMEs to form industrial clusters and evolve into group financing mechanisms, where entire ecosystems (comprising distributors, manufacturers, and traders) benefit from pooled risk and coordinated credit assessments. This builds on SCF's central principle that a firm's value chain position serves as a creditworthiness proxy. Financial institutions can base lending decisions on trade relationship strength rather than relying solely on balance sheet metrics. Such innovations prove essential for extending finance to less formal or underbanked firms and for reducing MSME lending risks across the continent.

3.2.2 Capital raising instruments

Blended Finance

Blended finance – the strategic use of concessional capital from public or philanthropic sources to mobilize private sector investment – has emerged as a vital tool to de-risk investments and finance sustainable development across Africa. This approach leverages catalytic capital (grants, concessional debt or equity, guarantees, or risk insurance) to attract additional funding into high-impact but commercially challenging sectors. Blended finance proves particularly effective in supporting MSMEs in strategic areas like agriculture and energy—two sectors essential for inclusive growth. Most importantly, blended finance addresses the "missing middle" of MSMEs that are too large for microfinance but too small for commercial bank loans (Convergence, 2025).

Between 2022 and 2024, Africa remained the leading destination for blended finance globally, capturing more than half of all transactions worldwide. The region received US$6.3 billion in blended finance in 2024 alone, with an average deal size of US$46 million. Financial services attracted the largest share (41 per cent), followed by infrastructure (37 per cent). While multilateral institutions continue to dominate the supply of concessional capital, about 17 per cent of concessional commitments now stem from local, government-led initiatives (Convergence, 2025). Some of these initiatives include the Sustainable Energy Fund for Africa (SEFA), Financial Sector Deepening Africa (FSDA), and Infracredit Nigeria.

The model's operational success shines through initiatives like Daraja Impact in Tanzania, a partnership between the Swiss Agency for Development and Cooperation (SDC), Small Enterprise Assistance Funds (SEAF), and AlphaMundi Foundation (AMF). This collaboration combines SDC's grant funding and regional presence in Tanzania with SEAF/AMF's lending expertise, directly addressing the financing gap left by risk-averse commercial banks. Traditional commercial lenders often hesitate to provide financing to early-stage MSMEs, particularly in sub-Saharan Africa. By taking a more nuanced and flexible approach to MSME engagement, development actors like SDC can fill this critical financing gap.[12]

Private Capital

Private capital (including venture capital (VC), private equity (PE), and private debt) shows strong potential for supporting high-growth enterprises across Africa. On the fundraising front[13], African-focused fund managers closed US$4 billion across 22 funds in 2024, significantly exceeding the US$2.7 billion annual average from the previous five years (2019–2023) (AVCA, 2025). Private equity and infrastructure funds each contributed 30 per cent of this total, with venture capital and private debt making up the remainder. Among the major private equity funds raised was Metier Capital's US$219 million Growth Fund III in March 2024, which focuses on MSMEs across multiple industries. Notable venture capital funds include TLcom's TIDE Africa Fund II (US$154 million) and Partech Africa Fund II (US$302 million), both targeting digital startups. In private debt, the Transform Health Fund (US$111 million) and Africa Go Green Fund (US$166 million) demonstrate growing investor appetite for inclusive and green finance solutions (AVCA, 2025).

While venture capital remains relatively underdeveloped in Tanzania's entrepreneurial finance landscape, it represents a strategically important and evolving component for supporting high-potential enterprises. Key domestic players include GroFin Tanzania, Savannah Fund, and the Tanzanian Venture Capital Network. These organizations provide essential access to risk capital beyond traditional debt financing, particularly for innovative technology firms and businesses with scalable models.

There is also a notable shift toward local capital mobilization. Africa-based investors, including pension funds and insurance companies, increased their share of total fundraising commitments from 14 per cent in 2022 to 19 per cent in 2024. This growth signals strengthening domestic confidence in the private capital ecosystem, while Development Finance Institutions (DFIs) remained the largest contributors at 42 per cent (AVCA, 2025). DFIs and government-backed investment vehicles play a crucial role in creating markets for MSMEs. Take the Uganda Development Corporation (UDC), which acts as a catalyst for crowding capital into strategic sectors. Through equity investments, joint ventures, and lease financing, UDC supports agro-processing and manufacturing firms that serve as anchor companies for MSMEs. The corporation expanded its portfolio from 11 to 16 investments between 2022–2023, targeting agro-processing and manufacturing enterprises

[12] https://medium.com/@Zuw508/strengthening-tanzanian-smes-the-game-changing-potential-of-blended-finance-e81971518f79

[13] The geographical analysis of investments and exits in the AVCA (2025) report is guided by the tangible African footprint of portfolio companies. Therefore, included in the analysis are: companies headquartered in Africa, companies headquartered outside Africa but with significant operations within African countries. Excluded from the analysis are companies headquartered outside Africa exploring market entry on the continent or those offering products and services to African consumers without physical presence in Africa (AVCA, 2025).

that anchor regional value chains. As of June 2024, UDC's investees employed 4,194 people, procured 14,629 MT of agricultural commodities, and generated US$3.8 million in export earnings (Uganda Development Corporation, 2024).

Capital Markets

While Africa's capital markets remain small compared to other regions, they still offer potential to support MSME finance and access to broader markets. In 2024, total stock market capitalization across Africa reached an estimated US$437 billion—far below the US$19.3 trillion in emerging markets more broadly (European Investment Bank, 2024). Recent global financial tightening in advanced economies has triggered capital outflows from African markets, as investors seek safer, higher-yield assets.

For most MSMEs, access to public capital markets remains out of reach due to their size, compliance burdens, and limited investor appetite. However, SME-dedicated exchange segments such as the Nairobi Securities Exchange's Growth Enterprise Market Segment (GEM) are emerging as platforms for more inclusive access. Financial markets provide essential infrastructure for liquidity, risk management, and regulatory oversight, which can reduce financing costs and enhance credibility for firms able to issue bonds or equity instruments.

Commodity exchanges don't directly finance MSMEs, but they can boost creditworthiness by providing reliable pricing and market access, particularly valuable in agriculture. This enhanced visibility helps SMEs when applying for loans and working capital by lowering the risk that lenders perceive.

Tanzania's Mercantile Exchange (TMX) exemplifies this approach. Established in 2014 as a public-private partnership between the government, TIB Development Bank, and Public Service Pension Fund (PSPF), TMX represents a strategic push to formalize agricultural commodity trading. Modeled after Ethiopia's exchange, TMX began operations in 2019 with floor auctions for sesame seeds and cashew nuts, planning to eventually shift to an electronic system integrated with the Moshi Coffee Exchange.

While TMX doesn't directly finance MSMEs, it supports them indirectly by creating a transparent marketplace that improves access to buyers and fair pricing. This enhanced market visibility can strengthen their creditworthiness and make them more attractive to financial institutions. For example, a sesame farmer who secures predictable prices through TMX can use this stability to negotiate better loan terms with local banks. Beyond pricing benefits, TMX engagement gives SMEs valuable market insights and trading opportunities that strengthen their financial profiles and open doors to external financing.

In contrast, Uganda's secondary capital market remains largely untapped by SMEs despite favorable regulations. These businesses face significant barriers to public listings: limited broker-dealer capacity, high compliance costs for International Financial Reporting Standards (IFRS), and inadequate financial literacy. As a result, viable alternatives have gained traction, including venture capital, private equity, project bonds, and joint ventures which offer financing paths that sidestep stock exchange listings while supporting growth-stage SMEs. Uganda's Capital Markets Authority (CMA, 2017) highlights how these options provide flexible capital without the compliance burdens of public markets, though they demand strategic partnerships and investor readiness.

Digital Capital Raising

Digital capital raising is gaining momentum as a game-changing channel for MSME finance, particularly in underserved markets. This ecosystem brings together fintech platforms, mobile money systems, and regulatory innovations that collectively expand access to alternative financing beyond traditional banking. The financial models include crowdlending for SMEs and freelancers, equity-based or reward-based crowdfunding and crowd-investing, plus personal loans. Fintechs and non-bank digital payment providers primarily offer these services, connecting scattered funders directly with entrepreneurs while bypassing traditional banking systems. Africa's digital capital raising market is projected to reach US$274 million in 2025 (Statista, 2025).

A growing number of African regulators now authorize non-bank entities to issue e-money and provide credit services through partnerships with licensed financial institutions. Payment Instrument Issuers, for example, have expanded into lending by using mobile wallets and transaction histories as alternative credit scores. These platforms have strong potential to boost financial inclusion since they primarily serve MSMEs, freelancers, and individuals shut out from formal credit markets. These fintech-led models often operate in low-income or unbanked communities where traditional banks don't venture.

Ethiopia exemplifies this shift. New regulations allow non-financial players to become e-money issuers (UNCDF, 2023). The National Bank of Ethiopia's proclamation positions Payment Instrument Issuers and fintechs to strengthen financial inclusion. Both the Government of Ethiopia (through the Ministry of Innovation and Technology) and Payment Instrument Issuers are driving initiatives that move away from traditional collateral requirements toward more innovative financing approaches. Payment Instrument Issuers now offer various products including inward remittances, insurance, merchant credit, and short-term operation loans. Fintechs specifically target the unbanked population, ensuring access to financial services where traditional banks lack incentives to serve. In Ethiopia, fintechs now provide collateral-free micro-loans to MSMEs by partnering with business associations for creditworthiness assessments.

In Tanzania, the digital capital raising market reached US$10.36 million in 2024 (Statista). This growth comes from strategic public-private partnerships, particularly the Memorandum of Understanding between the government and Financial Sector Deepening Trust (FSDT). This collaboration combines FSDT's technical expertise with government regulatory frameworks[14] to build a fintech ecosystem that now includes 33 active startups (UNCDF Fintech Assessment). Regulatory updates have driven this progress: the 2020 shift to Payment Instrument Issuers (PIIs) enabled non-financial entities to issue e-money, creating space for innovative products like mobile wallets and remittance-linked loans. These changes directly address financial inclusion for unbanked populations, expanding beyond Tanzania's previous focus on basic mobile money services (airtime purchases, cash transfers).

In Uganda, digitization follows a bank-led approach. Commercial banks work together through the Bankers Association's shared platform, providing mobile-accessible SME products. This supports a regulated microfinance boom: StartupBlink (2024) documents 150+ startups operating under Uganda Microfinance Regulatory Authority oversight, delivering tiered services for underserved segments[15].

Despite this remarkable progress, mobile money's success in payments hasn't yet created strong capital-raising tools. UNCDF

Digital capital raising is gaining momentum as a game-changing channel for MSME finance, **particularly in underserved markets**

In Tanzania, the digital capital raising market reached **$10.36 million in 2024**

[14] https://thefintechtimes.com/tanzania-and-its-fintech-ecosystem-in-2022/

[15] Uganda's financial sector operates across multiple tiers. Tier I includes commercial banks (including Islamic banking). Tier II encompasses credit institutions. Tier III covers microfinance deposit-taking institutions (MDIs). Tier IV consists of microfinance institutions and money lenders: non-deposit taking microfinance institutions, SACCOs, self-help groups, community-based microfinance institutions, and money lenders. Beyond these four tiers, two additional categories exist: i) investment funds that trade company shares and securities in both public and private markets, including private equity and venture capital funds, plus collective investment schemes (CIS); and ii) other specialized sectors including insurance, hire purchase and asset finance, real estate and project finance, and development finance institutions (DFIs) (Taslaf Advocates, 2024).

(2023) notes that mobile money primarily involves cash out, with cash-in coming from social transfers and peer-to-peer transfers. This reveals an unmet need for integrated solutions that combine transactions with credit, insurance, or investment features.

3.3 In focus: Addressing financing barriers for MSMEs in Ethiopia

Younger and smaller firms in Ethiopia face loan rejection rates of up to 87.9 per cent

In Ethiopia, as in many other countries in Africa, financing remains essential for starting and growing a business. For example, administrative costs for new businesses include renting spaces, investing in equipment and raw materials, and covering day-to-day operating expenses. The total cost of starting a Private Limited Company (PLC) in Addis Ababa reached 45.4 per cent of income per capita in 2020 according to the Doing Business Score, exceeding the continental average of about 36.3 per cent (World Bank, 2020). Companies therefore face significant costs to register officially, which—combined with difficulties obtaining loans—creates strong incentives to remain unregistered.

Generally, small firms face higher risks of complete credit constraints than larger firms. The World Bank (2015) found that at least 40 per cent of surveyed small-scale firms were fully credit constrained. When examining all firm sizes, manufacturing companies tend to experience fewer credit constraints than service sector businesses. The survey identified financing as a critical challenge for Ethiopian firms, with 36 per cent facing complete credit constraints—significantly above the regional average of 22.3 per cent (World Bank, 2015; 2020).

Most Ethiopian firms rely on personal savings for financing, with about 68 per cent using this approach, while 17 per cent depend on savings from friends and family (UNDP, 2023). Only 30 per cent of small firms secured loans according to the World Bank Enterprise survey, though manufacturing firms performed better at nearly 50 per cent. Service industry firms are even less likely to obtain bank credit. Gebreeyesus *et al*. (2018) found that micro and small firms primarily use Micro Finance Institutes, while medium-sized firms access most loans through formal banks. However, smaller firms face a significant disadvantage: micro finance institutes in Ethiopia charge interest rates averaging 4.5 percentage points higher than banks. In 2012, banks offered loans to large firms at 9.5 per cent interest rates, while MFIs averaged 15 per cent (World Bank, 2023e).

Loan rejection rates highlight how firm age affects access to credit. Younger firms (0-5 years old) experienced rejection rates of 55.9 per cent, compared to only 32.5 per cent for older firms (World Bank, 2023e). Firm size shows similar patterns: 87.9 per cent of small firms had loan applications rejected, along with 57.3 per cent of micro firms[16], while medium and large enterprises faced rejection rates of just 6.2 per cent and 10.4 per cent respectively.

Financing is essential for various business needs, from covering high compliance costs and operational expenses like bribes (which the World Enterprise Survey 2015 found affected more than a quarter of all firms) to purchasing equipment. Machinery and equipment represent the largest portion of firms' investments in Ethiopia (Gebreeyesus *et al*., 2018). In 2014-2015, for example, machinery and equipment made up nearly 50 per cent of all investments by firms in the sample. The authors observe fluctuations in these shares over time, which they attribute to the higher costs firms face early in their lifecycles when machinery and equipment are particularly crucial. This focus on technology and equipment investment may also explain why manufacturing firms face fewer credit constraints, since Gebreeyesus *et al*. (2018) found that the primary reason firms don't apply for loans is their lack of collateral (44 per cent of

[16] Note: the survey only includes micro firms from Addis Ababa.

all firms), with this barrier being especially pronounced for micro and small firms (47 per cent and 42 per cent respectively).

As demonstrated above, older and larger firms enjoy significant advantages over younger and smaller firms, with easier access to formal loans and fewer credit constraints. This disparity may explain Ethiopia's missing middle—the lack of medium-sized firms (World Bank, 2023e). The report reveals that while numerous micro and small enterprises exist alongside some established large firms (together creating most jobs between 2000-2011), medium-sized firms are notably absent. This gap means small firms have limited opportunities to grow into larger enterprises and either fail to survive or remain stagnant. A major factor driving this pattern is small businesses' limited access to financial opportunities, creating a vicious cycle where small firms enter the market, struggle to grow, and either remain small or fail entirely.

To expand financial access in Ethiopia, agency and mobile banking began in earnest in 2012 (UNCDF, 2023). According to UNCDF (2023), agency banking and mobile banking in Ethiopia have followed distinct development paths, with mobile banking only gaining momentum after the introduction of tele-birr in 2021. Agency banking, however, was primarily driven by the Commercial Bank of Ethiopia (CBE)'s launch of the CBE birr[17] in 2017.

In 2020, Ethiopia repealed its mobile and agency banking directive and replaced it with the Payment Instrument Issuers framework, which opened the door for non-financial companies to become e-money issuers (UNCDF, 2023). This change also authorized payment instrument issuers to offer additional alternative services. While the National Bank of Ethiopia regulates these payment instrument issuers, many can be classified as start-ups based on their characteristics, based primarily on their firm size. Start-ups operating in financial services typically fall under the broader Fintech category.

The National Bank of Ethiopia's proclamation positions Payment Instrument Issuers, or Fintechs, as key drivers of financial inclusion. These companies specifically target Ethiopia's unbanked population with innovative services, reaching customers in areas where traditional banks find little incentive to operate. This focus makes Fintechs particularly well-suited to deliver financial solutions for MSMEs throughout Ethiopia.

Fintechs and mobile banking services are emerging as critical tools **to reach Ethiopia's unbanked MSMEs**

3.4 Digital Technologies as Catalysts for Value Chain Integration

Digital transformation or the process of using digital technologies to improve business operations and customer experience (Microsoft, 2022) offers MSMEs a strategic path to overcome structural barriers and integrate into regional value chains, especially under the AfCFTA. Digital technologies can catalyze MSME competitiveness and value chain integration by cutting trade-related barriers and costs, expanding market reach, and promoting financial inclusion through digital financial services.

E-commerce platforms serve as critical enablers by expanding market access and reach, cutting establishment and operational costs, and encouraging greater participation in international value chains (UNCTAD, 2022f). Empirical evidence demonstrates how digital connectivity and e-commerce platforms help MSMEs participate in and integrate with value chains. Using firm-level data from the World Bank's Enterprise Survey, Lanz *et al*. (2018) show that digital connectivity enables manufacturing SMEs from developing countries to join international value chains.

[17] CBE Birr is a mobile banking service with a network of agents, and is streamed by Commercial Bank of Ethiopia - https://combanketh.et/cbe-birr/

Pan *et al*. (2025) similarly argue that cross-border e-commerce helps MSMEs overcome internationalization barriers and integrate effectively into regional and global value chains by reducing trade-related costs and offering greater control than traditional market entry approaches.

Furthermore, digital platforms, automated systems, and supply chain management tools help bridge geographic and operational gaps, connecting MSMEs to larger value chain players. Digital trade facilitation systems and data management solutions strengthen supply chain resilience—particularly crucial for developing economies that remain highly vulnerable to external shocks (UNCTAD 2022a; 2022b). These technologies enable MSMEs to overcome traditional barriers like high operational costs and logistical delays while building stronger inter-firm relationships through real-time transparency, faster customs clearance and pre-arrival processing, and robust risk management (Holopainen *et al*., 2023).

Frontier technologies like Internet of Things (IoT) and Artificial Intelligence (AI) further support MSME integration by closing spatial gaps and streamlining production and delivery processes. Digital logistics powered by IoT and AI enable much closer tracking and management of shipments and inventory, giving MSMEs new opportunities to improve operational decision-making and cut trade-related costs (WTO, 2019; Lema and Rabellotti, 2023). Additionally, digital data from mobile and web platforms equips MSMEs with powerful capabilities including predictive sales modeling, inventory optimization, enterprise resource planning, materials requirements planning, and regional expansion planning—all essential for navigating complex trade procedures and regulatory differences under the AfCFTA.

Digital financial technologies, most notably mobile money, accelerate MSME integration into value chains by expanding access to finance, boosting firm performance, streamlining international transactions, and reducing operational risks. Evidence from Somalia shows that a 1 per cent increase in mobile money usage among small and medium enterprises correlates with an 11.14 per cent increase in business growth (Mohamed, 2023). Cross-country evidence from select African countries further reveals that mobile money usage reduces financial constraints, improves liquidity, and drives innovation across firms (Lorenz and Pommet, 2020; Osei-Tutu and Taylor, 2024). In Kenya, businesses using mobile money services proved more likely to innovate in products and processes compared to their counterparts (Tiwasing *et al*., 2024).

Furthermore, digital transactions, including mobile money transfers, online payments, and digital wallets, play an integral role in promoting MSME integration by reducing trade-related frictions, lowering transaction costs, and enhancing the efficiency and interoperability of international transactions. For instance, the Pan-African Payment and Settlement System (PAPSS), a centralized payment and settlement system for intra-African trade in goods and services under the AfCFTA, provides a strategic opportunity to boost intra-African trade and MSME regional value chain integration by reducing reliance on foreign currencies, lowering transaction costs, and enhancing financial inclusion (International Trade Administration, 2022; Muleya, 2024).

Collectively, these digital technologies help MSMEs overcome traditional barriers, streamline operations, enhance their competitiveness, and effectively engage in regional value chains, positioning them as key stakeholders in Africa's digital transformation and economic integration under the AfCFTA.

Current State of MSME Digital Adoption in Africa

The current state of MSME digital adoption across Africa reflects both promising trends and persistent structural constraints. While expanding digital infrastructure and connectivity, along with the proliferation of mobile money and e-commerce platforms, offer pathways for transformation, actual adoption by MSMEs remains uneven and limited in scope. Moreover, although governments increasingly recognize digital technologies as enablers of competitiveness and market access and include them as key pillars of national development strategies, significant disparities persist across countries, industries, and firms.

Digital connectivity, encompassing both fixed and mobile broadband, serves as an essential foundation for digital transformation (ITU, 2024). However, evidence shows that digital connectivity remains a significant challenge across the continent. While internet penetration in the region has grown faster than the global average, the continent's overall penetration rate reached only 38 per cent in 2024, which is well below the global average of 68 per cent. This makes Africa the region with the lowest internet penetration rate worldwide (ITU, 2025).

The picture becomes more complex when examining individual countries. Among the surveyed economies, Tanzania and Uganda achieved relatively strong penetration rates of approximately 50 per cent, while Ethiopia lagged far behind at just 19.4 per cent. These cross-country gaps reflect deeper internal digital divides based on firm size and formality levels. Small and informal enterprises consistently struggle with affordability constraints, digital illiteracy, and inadequate infrastructure. These persistent barriers create significant obstacles to digital transformation for MSMEs across Africa, limiting their ability to harness digital technologies and participate in regional value chains.

Tanzania's experience illustrates these disparities clearly. Despite the country's national internet penetration rate reaching 50 per cent in 2023, internet access among formal MSMEs lagged at just 39.3 per cent (World Bank, 2023a; 2023f). The divide becomes even starker at the firm level, where only 21.5 per cent of small enterprises and 10.17 per cent of informal business owners reported having internet access (World Bank, 2023b). These gaps reveal deeper structural barriers that prevent widespread digital adoption, including affordability constraints, low digital literacy, and limited awareness of how digital tools can benefit businesses (GSMA, 2025).

Digital finance has emerged as a critical lever for reducing social inequality and fostering economic growth globally, particularly in emerging markets and developing economies. Digital finance providers play a vital role in enhancing credit access and improving the financial health of MSMEs (Johri *et al.*, 2024; Cambridge Centre for Alternative Finance and Asian Development Bank Institute, 2025). Mobile money has led this transformation in Africa, where its adoption has driven financial inclusion over the past decade (World Bank, 2021). In 2023, mobile money daily transactions in Africa reached more than US$2.5 billion (GSMA, 2024).

However, despite this rapid expansion, mobile money's use for business-level transactions remains limited. Structural barriers, including high transaction costs, strict Know-Your-Customer (KYC) requirements, and lack of interoperability across digital financial systems, continue to prevent widespread adoption among MSMEs. Tanzania illustrates this challenge: although 45 per cent of adults hold mobile money accounts – exceeding the global average of 33 per cent – only 35 per cent of firms report using these services for commercial purposes (World Bank, 2023a).

Beyond mobile finance, MSMEs show limited adoption of digital tools, systems, and processes in their business operations. This represents a missed opportunity, as digital integration has been identified as a critical strategy for enhancing MSME competitiveness and value chain integration. Ethiopia provides a telling example: while service-sector MSMEs readily adopted digital technologies for financial management, client engagement, and payment systems, manufacturing enterprises primarily used digital technologies only for basic communication activities (GSMA, 2023a). This pattern reveals that digital technology

Despite rapid growth in digital infrastructure, **adoption among MSMEs is uneven** adoption across many MSMEs remains in its early stages, limiting its potential to transform production efficiency, supply chain management, and market access.

Empirical evidence reveals growing but uneven e-commerce development across the continent. E-commerce and digital trade serve as catalysts for expanding market access, reducing trade transaction costs by minimizing information asymmetries, and helping firms integrate into regional and global value chains (UNCTAD 2017; UNECA *et al*., 2019). Countries like Ethiopia, Malawi, Tanzania, and Uganda have seen notable increases in e-commerce adoption among MSMEs. In Uganda, 58 per cent of internet-connected businesses received online orders, demonstrating the potential for wider e-commerce adoption (Government of Uganda, 2023).

Persistent gaps in internet access, unreliable electricity, and high data costs continue to block MSMEs from fully harnessing digital technologies

Yet despite a 240.44 per cent surge in online purchasing and payment usage across Africa between 2014 and 2017, the continent captured less than 2 per cent of global e-commerce transactions in 2017, underscoring limited e-commerce utilization regionwide (Ducass and Kwadjane, 2015; WTO, 2020). This restricted adoption stems from persistent challenges: a small pool of potential buyers and sellers due to low internet penetration, limited financial access, weak logistics systems, and stark digital gender divides (Lemma, Mendez-Parra and Naliaka, 2022). UNCTAD (2021b) reports that Africa faces the world's largest digital gender gaps, with a gender parity score of just 0.54 in 2019, reflecting major disparities in digital technology access and use between men and women.

3.5 Structural barriers to digital transformation

While digital transformation offers significant potential to boost MSME competitiveness and enable regional value chain integration, progress remains largely stalled due to persistent structural challenges. African MSMEs continue facing interconnected obstacles – inadequate infrastructure, limited financial resources, and human capital gaps – that prevent effective digital technology adoption and use.

Infrastructure Deficits

Infrastructure deficits, including limited internet access and unreliable electricity, remain a fundamental challenge to digital transformation across the continent. Despite notable progress in recent years, Africa's internet penetration rate stood at 38 per cent in 2024, significantly below the global average of 68 per cent (ITU, 2025). Fixed broadband infrastructure, which is a critical enabler of stable, high-speed internet essential for adopting advanced digital systems, remains severely limited. According to ITU (2025), with less than 1 subscription per 100 inhabitants, fixed broadband plays a negligible role in the African digital landscape, severely constraining the continent's digital transformation efforts.

Significant disparities in internet adoption persist both across and within countries, particularly along urban-rural and gender lines. In 2024, internet usage among urban populations reached 57 per cent, compared to 23 per cent in rural areas, creating the world's largest urban-rural digital divide (ITU, 2025). Notable disparities also emerged across surveyed economies. For instance, Uganda recorded an estimated 23.7 million broadband subscribers, translating to a 55 per cent internet penetration rate, while internet penetration rates in Ethiopia and Malawi stood at 19.4 and 22 per cent respectively, highlighting the uneven progress in digital infrastructure development across the continent.

Reliable electricity serves as a fundamental prerequisite for digital transformation, ensuring internet connectivity, powering digital devices, and supporting the adoption and usage of digital tools necessary for business operations. Without stable and consistent electricity access, MSMEs face frequent production disruptions and limited access to digital platforms, undermining their competitiveness and capacity to participate effectively in regional value chains. Electricity reliability remains a foundational challenge across Africa. As of 2023, an estimated 600 million people in the region – approximately 53 per cent of the population – lacked electricity access (UNCTAD, 2023). Even among households with electricity access, supply reliability remains constrained. On average, only 33 per cent of households live in areas with reliable electricity, a figure that drops sharply to 18 per cent in rural areas (Blimpo *et al*., 2020).

Across the surveyed economies, unreliable electricity remains a major obstacle to MSME operations and digital transformation. Frequent power outages disrupt production cycles and prevent businesses from adopting the digital technologies they need for operational efficiency and market expansion. In Ethiopia, 85 per cent of manufacturing firms identified electricity as a major constraint to their operations. Uganda presents an even starker picture: only 20 per cent of the population connects to the national grid, severely limiting digital enablement for enterprises, especially in rural areas (Government of Uganda, 2017). Meanwhile, Tanzania shows how electricity access constrains enterprise growth across all firm sizes, with just about 12 per cent of small firms and 10 per cent of medium-sized enterprises citing electricity as their most pressing constraint (see chapter 2). These findings reveal broader infrastructure limitations that directly impact firm productivity, digital technology adoption, and the ability to integrate into regional and global value chains.

Limited financial resources

Restricted access to financial resources creates a major structural barrier to MSME digital transformation across Africa. The high costs of adopting digital technologies, including mobile connectivity and digital devices, often exceed what resource-constrained MSMEs can afford. In Africa, mobile connectivity affordability, measured by the price of one gigabyte (GB) of mobile data, remains a persistent challenge (World Bank, 2024b). The Alliance for Affordable Internet (2020) found that only 14 out of 48 surveyed African countries provide affordable internet, defined as 1GB of mobile prepaid broadband costing 2 per cent or less of average monthly income. In 2019, the average cost of 1GB in Africa reached 10.5 per cent of monthly per capita gross national income—far exceeding the United Nations Broadband Commission's affordability target (World Bank, 2024b). Even in countries with relatively low prices, affordability remains elusive. Ethiopia reported a considerably low average price of US$0.88 per 1GB compared to the continental average of US$4.48 (Adam *et al*., 2024), yet 58 per cent of internet users in the country still identified data costs as their biggest usage obstacle. This shows that even "low-cost" services remain out of reach for many resource-constrained MSMEs. Beyond connectivity costs, high upfront expenses for digital devices and software, combined with ongoing costs for system upgrades and maintenance, create additional barriers to widespread digital technology adoption.

Moreover, these financial constraints worsen due to the widespread informality of the MSME sector. As discussed in Chapter II, informality represents the dominant operational mode for the vast majority of MSMEs across the continent. This informality prevents MSMEs from accessing essential financial services, including government grants, bank loans, and formal credit schemes. As a result, their capacity to leverage digital technologies remains limited, thus restricting their ability to boost productivity, scale operations, and effectively integrate into regional value chains.

Gaps in Human Capital

Digital illiteracy and technical skill shortages pose another significant challenge to the effective adoption and usage of digital technologies across the continent. As Kimuli *et al*. (2021) highlight, access to digital technologies alone doesn't translate to productivity gains and business growth unless combined with the necessary technical skills and knowledge to effectively

Digital illiteracy and technical skill shortages pose another significant challenge to the effective adoption of digital technologies across the continent

leverage and integrate them into business operations. Digital literacy plays a critical role in mediating between technology access and actual impact. For instance, Okello *et al*. (2024) found that biometric fintech adoption, including mobile money, only enhanced financial inclusion when users possessed adequate digital skills.

Despite the importance of digital literacy and technical skills in facilitating digital transformation, Africa continues to lag behind global averages in digital proficiency. In 2022, African countries scored between 1.8 and 5.0 on the Digital Skills Gap Index, below the global average of 6.0 (World Bank, 2023g). Out of the world's 20 countries with the weakest digital skills, 12 are in Africa, with only 11 per cent of Africa's tertiary education graduates receiving formal digital training (Boston Consulting Group, 2022; World Bank, 2023g). The continent also continues to exhibit a large digital divide, particularly along gender and rural-urban lines, with a 43 per cent gap in internet access (World Bank, 2023g).

Investments in digital infrastructure, from national broadband backbones to regional data centers, **are laying the foundation for inclusive MSME digital transformation**

Across the surveyed economies, digital illiteracy and technical skill shortages continue to hinder digital transformation efforts. In Uganda, while the adult literacy rate showed significant progress – rising from 69 per cent in 2016 to 81 per cent in 2022 – digital proficiency remains limited, restricting how effectively businesses use digital technologies in their operations (World Bank, 2022). In Ethiopia, most micro-entrepreneurs lack skills for advanced business applications, limiting their ability to use technologies for marketing, e-commerce, or daily business operations (GSMA, 2023a).

3.6 Key Enablers of MSME Digital Transformation

Despite these structural barriers to digital transformation, several promising opportunities are emerging across the continent to support MSME digital transformation and regional integration. This section explores key enablers across four critical pillars: digital infrastructure, e-commerce platforms, digital transactions, and frontier technology.

Digital Infrastructure

Digital infrastructure encompasses the physical hardware and associated software that enables seamless operation of information and communication systems, including fixed broadband networks, mobile communications infrastructure, data centers, and cloud computing facilities (ITU, 2019). This infrastructure plays an essential role in unlocking the benefits of the digital economy and ensuring inclusive digital transformation.

At the continental level, digital infrastructure forms one of the foundational pillars of the African Union's Digital Transformation Strategy for Africa (2020-2030). The strategy highlights the critical importance of affordable, accessible, and reliable infrastructure in achieving inclusive digital transformation and outlines policy recommendations to close infrastructure gaps and ensure universal and secure broadband access across demographic, gender, and geographic lines (African Union, 2020). Additionally, the AfCFTA Protocol on Digital Trade emphasizes digital infrastructure as a key driver of regional integration. Through this protocol, African member states commit to promoting investment in digital infrastructure, ensuring interoperability and interconnectivity between different digital systems among member states, and facilitating shared digital infrastructure through the development of regional data centers, cloud systems, and network infrastructure (African Union, 2024b; Lemma, 2024).

At the national level, governments across the region have launched ambitious programmes to strengthen digital infrastructure and foster digital inclusion. In Tanzania, strategic investments in digital infrastructure have been prioritized to accelerate national connectivity and establish the country as a regional ICT hub. Central to this effort is the National ICT Broadband Backbone (NICTBB), a state-led initiative that has established high-speed fibre-optic connectivity across regional headquarters and extended linkages to seven neighbouring countries. This backbone network serves as the critical physical foundation for cross-border data exchange and digital service delivery, supporting Tanzania's ambition to position itself as a central hub in East Africa's digital ecosystem (GSMA, 2023b). To address connectivity gaps in rural areas, the government has intensified efforts under the NICTBB's expansion phase, aiming to achieve universal fiber-optic coverage to all wards by 2026. This infrastructure initiative is complemented by the Digital Tanzania project, which focuses on reducing internet costs, extending access in rural areas, and enhancing digital literacy through skills training programs.

Similarly, Uganda's digital transformation framework is outlined in its Digital Transformation Roadmap, which consists of five key pillars: digital infrastructure and connectivity; digital services; cyber-security and data protection and privacy; digital skills; and innovation and entrepreneurship (Government of Uganda, 2023). The Roadmap identifies several strategic enablers to support inclusive digital transformation, including expanding the National Backbone Infrastructure, developing a digital addressing platform to support last-mile delivery, and establishing a national payment switch to facilitate interoperability among payment instruments and bank accounts (Government of Uganda, 2023). Through these enablers, the government aims to achieve a 60 per cent internet penetration rate and 90 per cent broadband coverage in the country by 2028 (Government of Uganda, 2023).

Digital Transactions

Digital transactions are rapidly becoming central to Africa's commercial landscape, facilitating cross-border trade, e-commerce and underpinning broader digital transformation agendas. The ongoing negotiations on the AfCFTA E-Trade Protocol signal a continental shift toward formalizing digital commerce, encompassing not only bank-linked payments but all traceable transactions for goods and services, which enhances tax compliance and international transaction security. This evolution reflects Africa's growing participation in the global digital economy, where electronic payments and data flows are increasingly integral to business operations.

E-commerce platforms drive inclusive digital transformation by reducing entry barriers, streamlining procurement and sales processes, boosting productivity, and encouraging women entrepreneurs to participate (GSMA, 2023c). Across the continent, the e-commerce landscape is experiencing substantial growth. The digital economy is expected to contribute US$180 billion annually to the African economy, rising to US$712 billion per year by 2050 (IFC and Google, 2020). Between 2015 and 2022, investors poured over US$4.2 billion into e-commerce and digital retail across Africa, demonstrating e-commerce's significant potential (GSMA, 2023c).

In Ethiopia, Malawi, Tanzania, and Uganda, e-commerce is gaining momentum and offering MSMEs new pathways to access regional and international markets, integrate into value chains, and strengthen their competitiveness through digital trade channels. Malawi's e-commerce portal, launched by the Malawi Posts Corporation, exemplifies this trend by serving as a unified digital marketplace where local producers can reach broader markets. The platform enables digital transactions and creates traceable records, which supports MSME creditworthiness, logistics integration, and access to business support services.

Legal and regulatory reforms across surveyed economies are reinforcing efforts to scale digital transactions. The Malawi Communications Regulatory Authority supports Malawi Post Corporation's e-commerce hub initiative by prioritizing digital identity verification linked to national ID systems, which streamlines Know Your Customer processes for mobile operators and financial institutions. Regulatory reforms further strengthen this initiative, including the Data Protection Bill (2023), the Electronic Transactions and Cyber Security Act (2016), and Digital Innovation and Entrepreneurship Bill (2024). Uganda has established similar frameworks through the Data Protection and Privacy Act (2019) and Electronic Transactions Act (2011), which provide a legal foundation for digital transactions. While these national frameworks effectively balance innovation with consumer protection, further harmonization with regional standards is needed to fully unlock cross-border digital trade potential under AfCFTA.

Frontier Technologies

Frontier technologies such as AI, blockchain, and 5G hold transformative potential for MSMEs, enabling smarter operations, **improved market intelligence, and deeper integration into regional value chains**

Although still in early stages, frontier technologies such as artificial intelligence (AI), the Internet of Things (IoT), blockchain, and 5G infrastructure hold transformative potential for MSMEs across Africa. These technologies can boost firm-level productivity, facilitate market intelligence, and streamline operational processes, ultimately enhancing MSME competitiveness and supporting regional value chain integration.

The potential for AI to strengthen MSME competitiveness is particularly significant. By leveraging AI-driven analytics, firms can optimize inventory management, enhance customer segmentation, streamline operations, gain market intelligence, and identify regulatory challenges. These capabilities prove extremely relevant under the AfCFTA, where MSMEs must navigate complex regulatory environments and increasingly dynamic cross-border markets. Beyond AI, blockchain technologies offer robust solutions for supply chain traceability—particularly valuable for export-oriented MSMEs. Additionally, advancements in 5G infrastructure can reduce connectivity barriers, ensuring seamless e-commerce participation and facilitating broader market access.

Early signs of adoption are emerging across the surveyed economies. In Tanzania, for example, AI and big data are already reshaping business models in mobile finance, logistics optimization, and agent banking. However, widespread adoption of frontier technologies requires targeted policy support, regulatory enhancement, and digital skills investment. While Tanzania's Five-Year Development Plan (FYDP III) identifies AI, blockchain, and big data as strategic priorities, concrete implementation strategies and sectoral roadmaps remain underdeveloped. This reflects the early-stage nature of frontier technology adoption across the region. Current applications of frontier technologies are largely pilot-based, with innovations concentrated in healthcare diagnostics, adaptive learning platforms, and precision agriculture through local innovation hubs such as Tanzania AI Lab and Sahara Ventures.

While these initiatives signal strong potential, scaling up frontier technologies remains challenging due to regulatory uncertainties, limited talent pools, and financing constraints. Unlocking the full potential of frontier technologies for MSMEs requires targeted investments in digital skills development, supportive policy frameworks, and stronger linkages between innovation ecosystems and existing enterprise support systems.

3.7 In Focus: Digitization of MSMEs in Uganda

MSMEs in Uganda show low levels of technology adoption, particularly in telecommunications and business operations. However, a survey conducted by the National Council for Science and Technology between 2011 and 2014 revealed that enterprises in the industry and services sectors invested US$290 million and US$510 million, respectively, in technological innovation, primarily focusing on machinery, equipment, and software. The survey also found that 59.2 per cent of enterprises in the industry sector and 44.1 per cent in the services sector engaged in product and process innovation. In contrast, 14.3 per cent of enterprises in industry and 26.2 per cent in services reported having no innovation activities (UNCTAD, 2020).

A majority of MSMEs (53 per cent) lack access to smartphones or computers for their business operations (Government of Uganda, 2024b). While Uganda's mobile infrastructure covers 84 per cent of the population, only 55 per cent of businesses have internet access, and just one in three maintains a business website. The country has approximately 23.7 million broadband subscribers, providing 55 internet connections for every 100 Ugandans (Government of Uganda, 2023a).

However, digitization's value extends far beyond simply using technology to transform business operations. Digital trends and the growing concentration of users on digital platforms are reshaping e-commerce and trade patterns, even in countries not fully integrated into large online networks. According to World Development Indicators (World Bank, 2023f), Uganda recorded 42.1 million mobile subscriptions and 2,512 secure internet servers in 2023. Ugandan entrepreneurs increasingly encounter digitally delivered services and participate in digitally enabled networks to buy or sell products. Business registration and customs declarations, for instance, can now be completed online. MSMEs can harness digital transformation through multiple channels, including mobile services, e-commerce platforms, and direct access to professional business services.

Many established commercial banks now offer MSMEs financial products specifically designed for microbusinesses. Most services operate through mobile phone or online platforms that function either independently or connect to a shared platform hosted by the Bankers Association of Uganda. The formal banking system's pooled resources provide greater liquidity and minimize interest rate spreads through economies of scale. An estimated 2.1 million MSMEs benefit from the approximately 5 million Ugandans who maintain banking relationships. While people commonly hold accounts across multiple banks, potentially reducing the unique client base, the World Bank (2023f) reports that 65.91 per cent of Ugandans aged 15 and over have accounts at financial institutions or with mobile money service providers. The 2018 Finscope study further revealed that 75 per cent of adult Ugandans (14.4 million) were financially served (Government of Uganda and FSDUganda, 2018).

The formal banking system has shifted toward digitizing services through online and mobile channels. The number of adults with at least one regulated deposit account has grown from around 5 million in June 2016 to over 15 million in June 2022. Uganda's financial inclusion scorecard shows that active accounts have increased sharply, with deposit accounts and credit accounts growing by 8 and 9 per cent, respectively, between 2014–2019. Agent banking and mobile money agents increased by 187 per cent and 17 per cent, respectively, over the same period. Between October 2021 and October 2022, the number of active debit cards rose by 28 per cent to 3,562,424, while point-of-sale transactions remained modest at 67,538 (UBA, 2023).

The incompatibility of payment systems and online platforms poses the main challenge facing the financial services sector. Commercial banks with multi-country presence offer flexibility for international payments. For example, Equity Bank's one bank facility works because of the EAC Protocol on financial services and guidance on foreign currency dealing in the region. Transaction limits restrict sales volume but serve other regulatory purposes, including preventing illicit financial transactions; though this comes at the expense of legitimate transactions that may be mistaken for money laundering conduits. Launching one central switch for the payments system could help if supported by harmonized regional policies such as the system already in place within the East African Community (EAC). Building and strengthening the Pan-African Payment and Settlement System (PAPSS) and other shared agency platforms may be necessary to fast-track this process.

Technological innovations have opened doors for small Ugandan businesses to reach markets far beyond Africa. Fashion ventures, for example, now mobilize local designers to deliver their products to customers across Asia, the Americas, and Africa. One initiative currently supplies 60 per cent of its products to customers in Uganda, Kenya, the United States, and Zimbabwe. While they process payments online, platforms like Flutterwave – a Nigerian-based private company that provides payment infrastructure for global merchants and payment service providers – could help them expand their international reach even further. However, informality in digital trade remains the main challenge, worsened by unclear e-commerce policies, domestic regulations on international payments, and cybersecurity concerns. Countries must tackle the international payments challenge comprehensively, addressing foreign exchange laws, tax cooperation, and service delivery modes.

When businesses use digital technologies effectively, they can boost efficiency in production, marketing, and sales across all sectors. Websites and mobile applications generate vast amounts of data and digital records that become valuable business assets. Companies that embrace online and mobile marketing can manage stock orders and collect market data, helping them forecast sales volumes more accurately and manage inventory better. Among Ugandan businesses with internet access, 58 per cent have received orders online, showing e-commerce's tremendous potential (Government of Uganda, 2023a). As Uganda develops its e-commerce policy, considering how digital data can promote domestic growth and regional market expansion will be crucial. E-commerce evolves rapidly and can help solve many challenges small-scale traders face, including language barriers, trade regulation uncertainties, and complex border processes.

Among Ugandan businesses with internet access, 58 per cent have received orders online, demonstrating e-commerce's tremendous potential to expand market reach and drive MSME growth

While physical shipping and transportation remain necessary, technology infrastructure must function smoothly for e-commerce to thrive. Additionally, businesses need readily available support for cross-border payments and ancillary services like multimodal transport systems, warehousing, cold storage facilities, and logistics providers. E-commerce also depends on high sales volumes and strong consumer demand, which require solid consumer purchasing power. With East Africa's projected economic growth and evolving consumer attitudes toward digitally enabled trade, Ugandan MSMEs can benefit from this expanding market. To succeed, they must invest in quality products and acquire the technology and infrastructure needed to engage in e-commerce effectively.

In Uganda, the National Information and Technology Authority-Uganda (NITA-Uganda) regulates information technology services as a statutory body operating under the NITA-U Act 2009. The Authority oversees several key areas: IT hardware and software standards in public procurement, electronic signature infrastructure regulation, and other electronic transaction matters. NITA-Uganda also promotes and provides technical guidance for establishing e-Government, e-Commerce, and other e-Transactions throughout the country (Government of Uganda, 2009).

Several additional regulations shape Uganda's e-commerce landscape. The Data Protection and Privacy Act 2019 governs data collection and processing, data security, data subject rights, data protection registration, and related offenses (Government of Uganda, 2019b). Furthermore, NITA-U regulates electronic transactions through three key pieces of legislation: the Electronic Transactions Act 2011, the Electronic Transactions Regulations 2013, and the Electronic Signatures Regulations 2013 (Government of Uganda, 2013a, 2013b, 2011).

4.

Conclusion and Recommendations


Preferences
Window
Help
Part List
Tools
Front
Side
Back
Side 2
Reset Colors

4. Conclusion and Recommendations

The integration of micro, small, and medium-sized enterprises (MSMEs) into regional value and supply chains offers one of the most promising pathways for inclusive and sustainable growth across Africa. The African Continental Free Trade Area (AfCFTA) creates a historic opportunity to unlock this potential by eliminating tariff and non-tariff barriers, enabling seamless cross-border trade, and driving regional industrialization. Yet MSMEs in Ethiopia, Malawi, Tanzania, and Uganda still grapple with deep-rooted structural challenges: limited access to finance, inadequate infrastructure, weak standards compliance, and persistent skills and digital gaps.

Digital transformation stands out as a critical solution to these challenges. When MSMEs adopt e-commerce platforms, digital payment systems, supply chain management tools, and emerging technologies like AI and blockchain, they can overcome traditional barriers of scale, cost, and geography. However, uneven digital adoption, infrastructure gaps, poor interoperability between digital systems, and weak policy coordination risk excluding MSMEs from the full benefits of AfCFTA-driven integration.

Africa's digital transformation agenda must place MSMEs at its center. The success of the AfCFTA hinges on MSMEs' ability not just to access regional markets, but to actively shape them. This demands deliberate policy action that combines investment in both hard and soft infrastructure, harmonizes digital and trade regulations, and provides sustained capacity-building for enterprises. Through strategic use of digital tools and regional integration frameworks, MSMEs can become the backbone of Africa's inclusive industrialization and sustainable development.

A comprehensive approach is essential – one that weaves together regulatory reforms, digital infrastructure investment, skills development, improved access to finance, and standardized regulations. Strong public-private partnerships, cross-border policy alignment, and innovative financing solutions must drive this transformation. This concluding chapter outlines key measures that can accelerate African MSME integration into regional value and supply chains. It also spotlights existing initiatives and identifies new ones needed to boost MSME growth and competitiveness in regional markets.

Harmonize Standards and Certification Systems

In Africa, MSMEs often struggle with compliance due to fragmented standards and costly certification processes. In Malawi, for instance, exporters face delays and high costs because the Malawi Bureau of Standards lacks all required certifications recognized by neighboring countries. Streamlining export certification by fast-tracking mutual recognition of standards under AfCFTA and regional blocs (EAC, COMESA, SADC) or establishing regional laboratories and mobile testing facilities can help cut costs and improve standardization and certification services for MSMEs, easing their integration into regional value and supply chains.

Strengthen MSME Clusters and Industrial Linkages

African MSMEs often lack the scale to participate directly in exports but can thrive through industrial clustering and supplier linkages. Developing sector-based industrial parks and clusters that promote supplier development programs—connecting MSMEs to lead firms in agro-processing, textiles, and light manufacturing—and facilitating regional buyer–supplier matchmaking platforms can help promote backward linkages (inputs and services) and forward linkages (distribution and logistics). For instance, Ethiopia's Bole Lemi Industrial Park has enabled MSMEs to integrate by providing catering, transport, and packaging services to medium-sized firms.

Facilitate Access to Finance and Innovative Financing Mechanisms

MSMEs face a financing gap estimated at $300 billion continent-wide, with collateral requirements and high lending rates keeping them out of formal credit. It is therefore critical to scale up various financing instruments targeting MSMEs in regional trade, including credit guarantee schemes, supply chain finance, blended finance instruments, and digital financing services such as fintech-based credit scoring. Uganda's AfCFTA Strategy (2024) includes a BDS framework to empower SMEs with financial readiness. Similarly, Ethiopia's microfinance institutions could be strengthened through partnerships with digital lenders to expand MSME financing access.

Promote Regional Digital Trade Platforms and Marketplaces

Regional digital trade hubs that provide logistics integration, online payments, and dispute resolution mechanisms are key for facilitating cross-border trade and related transactions in Africa. They also strengthen last-mile delivery for MSMEs across regional markets. For instance, Ethiopia's state-led e-commerce platforms, with startups spanning finance, logistics, agriculture, and healthcare, provide technology tools that enable traditional MSMEs to digitize operations and access new markets. These platforms could be connected to AfCFTA-wide digital marketplaces, enabling textile MSMEs to reach buyers in other African countries.

Expand Digital Infrastructure and Services

Digital transformation, when inclusive, acts as a powerful catalyst for MSME integration into regional value chains by reducing transaction costs, improving market access, enabling compliance with standards, and building resilience against economic shocks. Expanding affordable digital infrastructure through investments in universal broadband and cross-border internet backbones, like Tanzania's National ICT Broadband Backbone, helps boost business connectivity. Encouraging innovation hubs and regional incubators to support MSMEs in leveraging frontier technologies for supply chain traceability and productivity gains can help close the digital divide and foster digital entrepreneurship. Regional incubators could help MSMEs test blockchain for traceability, AI for logistics, and IoT for smart farming. Uganda's coffee sector, which exports both regionally and globally, could use blockchain traceability to meet quality standards and enhance competitiveness.

Enhance business and institutional readiness

Limited entrepreneurial capabilities remain a critical constraint across Africa. Targeted policy interventions are needed to enhance workforce readiness and managerial competencies. Malawi's MSME Policy (2019) adopts a comprehensive regulatory and institutional approach, emphasizing enhanced marketing skills in rural and peri-urban areas while incentivizing knowledge transfer from larger firms to SMEs and establishing innovation challenge funds. Uganda's Presidential Industrial Hubs Programme operates 19 facilities nationwide, equipping 12,000 youth annually with practical skills in light manufacturing, agro-processing, and digital technologies.

Administrative reforms in registration systems and public procurement frameworks are emerging as pivotal tools to enhance SME competitiveness across Africa. In Tanzania, sequential initiatives—including the Business Environment Strengthening for Tanzania (BEST) program, Big Results Now (2014), and the Blueprint for Regulatory Reforms (2018)—have streamlined business registration, licensing, and compliance. These reforms aim to elevate Tanzania's regional competitiveness by digitizing processes and eliminating redundant procedures, directly enhancing SME formalization and market entry.

Creating peer-learning ecosystems where entrepreneurs exchange market intelligence and navigate cross-border trade barriers also contributes to accelerating African MSMEs' integration into global value chains and harnessing opportunities under the AfCFTA. UNCTAD's Empretec program exemplifies this potential, operating across 40 countries with a network of over 400,000 entrepreneurs (empretecos). In Africa, Empretec centers in 13 nations—including Uganda, Tanzania, Kenya, and Malawi—provide structured training in business development, financial management, and e-commerce adoption.

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Annex: Revealed comparative advantage index (UNCTAD Statistics)

The Revealed comparative advantage (RCA) is based on Ricardian trade theory, which posits that patterns of trade among countries are governed by their relative differences in productivity. Although such productivity differences are difficult to observe, an RCA metric can be readily calculated using trade data to "reveal" such differences. While the metric can be used to provide a general indication and first approximation of a country's competitive export strengths, it should be noted that applied national measures which affect competitiveness such as tariffs, non-tariff measures, subsidies and others are not taken into account in the RCA metric. Trade data used are based on the three-digit level of the SITC commodity classification, Revision 3.

The RCA metric

Country A is said to have a revealed comparative advantage in a given product i when its ratio of exports of product i to its total exports of all goods (products) exceeds the same ratio for the world as a whole:

$$RCA_{Ai} = \frac{\frac{X_{Ai}}{\sum_{j \epsilon P} X_{Aj}}}{\frac{X_{wi}}{\sum_{j \epsilon P} X_{wj}}} \geqslant 1$$

Where

- *P* is the set of all products (with $i \in P$),
- X_{Ai} is the country A›s exports of product *i*,
- X_{wi} is the worlds›s exports of product *I*,
- $\Sigma_{j \in P} X_{Aj}$ is the country A›s total exports (of all products *j* in *P*), and
- $\Sigma_{j \in P} X_{wj}$ is the world›s total exports (of all products *j* in *P*).

When a country has a revealed comparative advantage for a given product (RCA >1), it is inferred to be a competitive producer and exporter of that product relative to a country producing and exporting that good at or below the world average. A country with a revealed comparative advantage in product *i* is considered to have an export strength in that product. The higher the value of a country's RCA for product *i*, the higher its export strength in product *i*.

In order to identify niche market opportunities in intra-African trade for an African country, we calculate a revised version of the Revealed Comparative Advantage (RCA). The traditional index measures the extent to which a country has a comparative advantage in exporting a particular product compared to the global average. However, since exports of African countries to the world are concentrated in raw materials, the traditional measure might not be illustrative of export opportunities to the continent. In fact, UNCTAD (2021a) highlighted that intra-African trade is characterized by a higher share of processed goods. A product with a high RCA_{Africa} suggests strong demand and competitiveness within African markets, especially under frameworks like the AfCFTA. By focusing on such products, the country can diversify risk, gain more market access, and enhance resilience against external shocks, thus securing growth opportunities in both global and regional trade environments.

Therefore, we calculate the intra-African RCA as follows:

$$RCA_{Africa} = \Big/ \frac{\text{Value of a country's exports of a product to Africa}}{\text{Value of a country's total exports to Africa}} \Big/ \frac{\text{Value of intra-Africa exports of that product}}{\text{Value of intra-Africa total exports}}$$

The tables below provide the top ten products for which the focus countries of this paper (Ethiopia, Malawi, Tanzania and Uganda) have a competitive advantage relative to other Africa countries when export those products to Africa.

Table 5
Ethiopia top 10 intra-Africa RCA (2023)

Product Group	Product Type (HS6 ID)	Export value to Africa (US$)	Intra-Africa RCA
Textiles and textile articles	Monofilament, synthetic; of 67 decitex or more and of which no cross-sectional dimension exceeds 1mm, strip and the like (e.g. artificial straw), of synthetic textile materials with width not over 5mm (HS 540500)	32'033.96	247.71
Vegetable products	Vegetables; edible, n.e.c. in chapter 07, fresh or chilled (HS 070999)	181'650'486.98	240.66
Live animals; animal products	Mammals; live, camels and other camelids (Camelidae) (HS 010613)	1'317'595.26	233.37
Vegetable products	Oil seeds; castor oil seeds, whether or not broken (HS 120730)	1'117'734.71	227.92
Miscellaneous manufactured articles	Vegetable, mineral carving material and articles of these materials, moulded or carved articles of wax, stearin, natural gums, resins or modelling pastes, worked unhardened gelatin (not heading no. 3503) (HS 960200)	231'481.40	214.83
Raw hides and skins, leather, furskins and articles thereof	Hides and skins; other than whole, but including butts, bends and bellies, of bovine (including. buffalo) and equine animals, fresh, salted or preserved, but not tanned, parchment dressed or further prepared, whether or not dehaired or split (HS 410190)	622'085.29	207.16
Base metals and articles of base metal	Zinc; waste and scrap (HS 790200)	47'315.28	193.78
Vegetable Products	Vegetables, alliaceous; leeks and other kinds n.e.c. in heading no. 0703, fresh or chilled (HS 070390)	477'401.49	190.59
Vegetable Products	Vegetables; cabbage (head) lettuce (lactuca sativa), fresh or chilled (HS 070511)	4'630'551.18	188.33
Products of the chemical or allied industries	Radioactive elements, isotopes, compounds n.e.c. in heading no. 2844, alloys, dispersions (including cermets), ceramic products, mixtures containing the elements, isotopes, compounds; radioactive residues (HS 284444)	248'584.07	183.41

Table 6
Malawi top 10 intra-Africa RCA (2023)

Products Group	Product Type (HS6 ID)	Export value to Africa (US$)	Intra-Africa RCA
Pulp of wood or of other fibrous cellulosic material	Pulp; of fibrous cellulosic material, other than of bamboo or fibres derived from recovered (waste and scrap) paper or paperboard or from cotton linters pulp, mechanical (HS 470691)	274.31	271.61
Products of the chemical or allied industries	Residual products of the chemical or allied industries, not elsewhere specified or included; (other than sewage sludge, municipal waste or waste covered by 27.10); other wastes n.e.c. in 3825; except those mainly containing organic constituents (HS 382569)	74.63	271.61
Base metals and articles of base metal	Tin; waste and scrap (HS 800200)	16.01	271.61
Raw hides and skins, leather, furskins and articles thereof	Tanned or crust hides and skins; of goats or kids, without hair on, whether or not split, but not further prepared, in the dry state (crust) (HS 410622)	40'530.83	270.50
Prepared foodstuffs; Beverages, spirits and vinegar; Tobacco and manufactured tobacco substitutes	Tobacco; homogenised or reconstituted (HS 240391)	1'955'482.47	265.88
Vegetable products	Vegetables, leguminous; pigeon peas (Cajanus cajan), shelled, whether or not skinned or split, dried (HS 071360)	7'517'104.07	255.48
Vegetable products	Nuts, edible; macadamia, fresh or dried, shelled (HS 080262)	4'937'486.77	209.92
Vehicles, aircraft, vessels and associated transport equipment	Railway or tramway maintenance or service vehicles; whether or not self-propelled (e.g. workshops, cranes, ballast tampers, trackliners, testing coaches and track inspection vehicles) (HS 860400)	3'702'874.64	201.84
Plastic and articles thereof; rubber and articles thereof	Rubber; natural (excluding latex, technically specified natural rubber and smoked sheets), in primary forms or in plates, sheets or strip (HS 400129)	4'115'046.13	174.00
Base metals and articles of base metal	Ferrous waste and scrap; of tinned iron or steel (HS 720430)	3'292'488.54	144.12

Table 7
Tanzania top 10 intra-Africa RCA (2023)

Products Group	Product Type (HS6 ID)	Export value to Africa (US$)	Intra-Africa RCA
Live animals; animal products	Aquatic invertebrates; sea urchins (Strongylocentrotus spp., Paracentrotus lividus, Loxechinus albus, Echinus esculentus), frozen (HS 030822)	35'306.12	37.55
Products of the chemical or allied industries	Tin ores and concentrates (260900)	260'745.57	37.51
Textiles and textile articles	Jute and other textile bast fibres; raw or retted, but not spun, (excluding flax, hemp (cannabis sativa L.), and ramie) (HS 530310)	5'565'606.89	37.17
Vegetable products	Vegetables, leguminous; beans (vigna spp., phaseolus spp.), shelled or unshelled, uncooked or cooked by steaming or boiling in water, frozen (071022)	21'375'085.44	36.97
Textiles and textile articles	Fabrics, woven; plain weave, printed, of polyester staple fibres, containing less than 85 per cent by weight of such fibres, mixed mainly or solely with cotton, not exceeding 170g/m^2 (HS 551341)	5'581'715.85	36.80
Prepared foodstuffs; Beverages, spirits and vinegar; Tobacco and manufactured tobacco substitutes	Cigars, cigarillos and cheroots; containing tobacco substitutes including the weight of every band, wrapper or attachment thereto (HS 240290)	10'768'420.40	35.84
Vegetable products	Spices; cardamoms, neither crushed nor ground (090831)	144'699.98	35.09
Anima or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	Microbial fats and oils and their fractions; partly or wholly hydrogenated, inter-esterified, re-esterified or elaidinised, whether or not refined, but not further prepared (HS 151630)	789'444.94	34.49
Products of the chemical or allied industries	Medicaments; containing alkaloids or their derivatives, containing ephedrine or its salts, for therapeutic or prophylactic uses, (not packaged for retail sale) (HS 300341)	489'792.20	33.95
Textiles and textile articles	Fabrics, woven; of yarns of different colours, containing 85 per cent or more by weight of artificial staple fibres (551613)	69'924.70	33.83

Table 8
Uganda top 10 intra-Africa RCA (2023)

Products Group	Product Type (HS6 ID)	Export value to Africa (US$)	Intra-Africa RCA
Raw hides and skins, leather, furskins and articles thereof	Tanned or crust hides and skins; of swine, without hair on, whether or not split, but not further prepared, in the wet state (including wet-blue) (HS 410631)	23'650.34	39.54
Live animals; animal products	Fish fillets; fresh or chilled, of the families Bregmacerotidae, Euclichthyidae, Gadidae, Macrouridae, Melanonidae, Merlucciidae, Moridae, and Muraenolepididae (HS 030444)	44'518.72	39.54
Products of the chemical or allied industries	Mixtures containing halogenated derivatives of methane, ethane or propane, not elsewhere specified or included; containing carbon tetrachloride (HS 382713)	740.00	39.54
Textiles and textile articles	Yarn, artificial; filament, monofilament (less than 67 decitex), single, n.e.c. in heading no. 5403, not for retail sale, not sewing thread (HS 540339)	7'161.00	39.35
Mineral products	Asbestos; other than crocidolite (blue asbestos) (HS 252490)	12'366.78	39.24
Base metals and articles of base metal	Ferrous products; obtained by direct reduction of iron ore, in lumps, pellets or similar forms (HS 720310)	27'842'139.65	38.81
Wood and articles of wood	Blockboard, laminboard and battenboard; with both outer plies of coniferous wood (HS 441259)	128'360.09	38.39
Products of the chemical or allied industries	Fish; edible offal, other than shark fins, fish heads, tails and maws (HS 030579)	1'041'592.55	38.20
Vegetable products	Cereals; rye, seed (HS 100210)	8'508.34	37.76
Anima or vegetable fats and oils and their cleavage products; prepared edible fats; animal or vegetable waxes	Vegetable oils; sesame oil and its fractions, whether or not refined, but not chemically modified (HS 151550)	395'681.23	37.71

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Layout and Printing at United Nations, Geneva
2515861 **(E)** – October 2025 – 225

UNCTAD/ALDC/2025/2

United Nations publication
Sales No. E.25.II.D.40

ISBN 978-92-1-159561-1