AFRICA'S DEVELOPMENT DYNAMICS

INFRASTRUCTURE, GROWTH AND TRANSFORMATION

African Union

OECD DEVELOPMENT CENTRE

2025

Africa's Development Dynamics 2025

INFRASTRUCTURE, GROWTH AND TRANSFORMATION

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Please cite this publication as:
AUC/OECD (2025), *Africa's Development Dynamics 2025: Infrastructure, Growth and Transformation*, AUC, Addis Ababa/OECD Publishing, Paris, https://doi.org/10.1787/c2b40285-en.

ISBN 978-92-64-45219-0 (print)
ISBN 978-92-64-89282-8 (PDF)
ISBN 978-92-64-60281-6 (HTML)

Africa's Development Dynamics
ISSN 2790-2765 (print)
ISSN 2790-2773 (online)

African Union Commission
ISBN 978-92-95127-25-8 (print)
ISBN 978-92-95127-24-1 (PDF)

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Foreword

The annual flagship report *Africa's Development Dynamics* is a product of the longstanding partnership between the African Union Commission's Department of Economic Development, Trade, Tourism, Industry and Minerals and the OECD Development Centre. It brings together a team of academic researchers, economists, statisticians and other experts from African and partner countries.

The 2025 edition explores how African stakeholders can accelerate infrastructure development to achieve productive transformation and the Agenda 2063. The first chapter assesses the infrastructure investment needs to accelerate productive transformation and current financing conditions in the face of growing sovereign debt burdens, high cost of capital and declining development finance. It also evaluates the main environmental and social sustainability opportunities and risks associated with infrastructure development. The second chapter proposes priority policies to accelerate the development and implementation of infrastructure projects, drawing on lessons from across the continent and beyond. The ensuing chapters focus on the five African regions as defined by the Abuja Treaty: Southern, Central, East, North and West Africa. These chapters offer a regional perspective on the state of infrastructure, financing flows, infrastructure policies, development corridors, infrastructure project support and skills development.

This edition draws on a wide range of data sources and included primary data collection through semi-structured interviews and a survey. The analysis was conducted between September 2024 and June 2025, based on available studies and data. The OECD/AfIDA online survey on skill supply in the infrastructure sector was administered to a network of infrastructure developers, investors and experts. Twenty-eight responses were received by February 2025. Findings were corroborated through an expert workshop with 40 participants on 23 January 2025. Three semi-structured interviews took place in December 2024.

The statistical annex contains the latest economic, social and institutional indicators across African countries for which data are comparable. A list of data tables appears in the last pages of the report. The data are presented by country, region, regional economic community and relevant country groupings (e.g. resource endowment, levels of income, socio-economic development and fragility, ocean access, and language). The annex provides comparisons between Africa and different world regions as well as other relevant benchmarks. These data aim to inform decision makers, advisors, business analysts, private investors, journalists, non-governmental organisations and citizens around the globe who are interested in the development trajectories of African countries. It is revised online on an ongoing basis.

The full report is published in English, French and Portuguese. Additional figures and tables and the statistical annex are available on the websites of the African Union Commission and the OECD Development Centre.

Acknowledgements

The flagship economic report *Africa's Development Dynamics 2025: Infrastructure, Growth and Transformation* (AfDD 2025) was jointly prepared by the African Union Commission (AUC) and the OECD Development Centre. It is published under the aegis of H.E. Mahmoud Ali Youssouf, AUC Chairperson, and H.E. Mathias Cormann, OECD Secretary-General. It was guided by H.E. Albert M. Muchanga, Commissioner for Economic Development, Trade, Tourism, Industry and Minerals of the African Union, and by Ragnheiður Elín Árnadóttir, Director of the OECD Development Centre. The report was supervised by Djamel Ghrib, Director, Department of Economic Development, Trade, Tourism, Industry and Minerals, and by Patrick Ndzana Olomo, Acting Director, Economic Development, Integration and Trade and Head of Division for Economic Policy and Sustainable Development, Department of Economic Development, Trade, Tourism, Industry and Minerals, along with Federico Bonaglia, Deputy Director of the OECD Development Centre, and Arthur Minsat, Head of the OECD Development Centre's Africa Unit and Senior Economist.

The drafting team of the AUC consisted of Patrick Ndzana Olomo, Head of the Economic Policy and Sustainable Development Division, Rumbidzai Treddah Manhando, Economist, Luckystar Miyandazi, Tax and Domestic Revenue Mobilisation Adviser, and Ronnel Inonge Sisamu, Legal Advisor (Department of Economic Development, Trade, Tourism, Industry and Minerals). The team at the OECD Development Centre, led by Arthur Minsat, Head of the Africa Unit, with Nicolas Friederici, included Keiko Álvarez, Andrea Cinque, David Dadakpete, Seynabou Diop, Majda Eddaifi, Marie-Adjara Koné, Noémie Maring, Sébastien Markley, Francesco Napolitano, Ismail Qotbi, Elisa Saint Martin, Eva-Andrée Tiomo, and Bakary Traoré, with support from José Pineda (Senior Advisor, DevTech Systems). Anne-Marie Trang (OECD) and Mandy Mauyakufa (AUC) gave valuable support to the research, production, logistics and administrative work on the report.

Inputs and data were provided by AUDA-NEPAD, the World Bank's Infrastructure Finance, PPPs and Guarantees unit, the Japan International Cooperation Agency (JICA), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the European Centre for Development Policy Management (ECDPM). Aly El Domery (Agence Française de développement [AFD]), Mohammed Fangary (AFD), Mohamed Momatz Hegazy (Transport for Cairo [TfC]), Alain Mibulumukini, (Regulatory Authority for Outsourcing in the Private Sector [ARSP], DRC), and Salima Raoundi (Proparco – AFD]) shared their valuable expertise in interviews. A collaboration with the Africa Infrastructure Development Association (AfIDA), which included the joint organisation of an expert online workshop, the administration of an online survey and a substantive contribution, is gratefully acknowledged. Yassin Bendjebbour (GIZ), Richard Carey (African Center for Economic Transformation [ACET]), Sulaiman Cisse (Africa Finance Corporation [AFC]), Hubert Danso (Africa Investor (Ai) Group), Noble Ekajeh (Phoenix Edison), Vivek Mittal (AfIDA) and Freda Yawson (ACET) enriched the workshop with their active participation. Substantive contribution from by GIZ *Build4Skills* is gratefully acknowledged.

The continental chapters benefited from comments and inputs from the following experts: Richard Carey (ACET); Simon Alkali, Sulaiman Cisse (AFC); Anton Cartwright (African Centre for Cities); Vivek Mittal (AfIDA); Yeo Dossina (Arab Bank for Economic Development in Africa [BADEA]); Timo Behrens, Frederik

Gaul, Benjamin Laag, Marlis Sieburger, Stephan Worack (Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung [BMZ]); Abdelghni Lakhdar (Casablanca Finance City); Hiro Ito (European Bank for Reconstruction and Development [EBRD]); Jesús Manuel Gavilán Marín, Georgios Grapsas, Lars Gronvald, Claire Hunault, Camilla Kuckartz, Lina Liink, Peter Mariën, Marco Parolin, Riccardo Roba, Domenico Rosa, Jessica Schroeder, Mona Stein (European Commission); Damir Kurtagic, Simona Montanari (Delegation of the European Union to the African Union); Arnold Jacques de Dixmud (Delegation of the European Union to Burundi); Anders Djurfeldt, Agnès Duband (Delegation of the European Union to Ghana); Patrick Illing, Jérôme Pons (Delegation of the European Union to the Republic of Cameroon and Equatorial Guinea); Amelie Daas, Colin Gleichmann, John Hauert, Fabian Jaekel, Ayda Kasiri, Earl King, Micaela Mihov (GIZ); Benedikt Erforth, Alexander Stöcker, Tina Zintl (German Institute of Development and Sustainability [IDOS]); Elisa Gambino (Global Development Institute, University of Manchester); Thomas Pohl (Kreditanstalt für Wiederaufbau [KfW]); Sebastian Krantz (Kiel Institute for the World Economy [IfW Kiel]); Mondher Khanfir (Independent consultant); Salimata Doumbia (Independent consultant); Dan Preston (Indiana University); Justin Lin, Jia Yu (Institute for New Structural Economics [INSE]); Shuhei Ueno (Japan International Cooperation Agency [JICA]); Daisuke Kakuya, Kenichi Ogasawara (Ministry of Land, Infrastructure, Transport and Tourism, Japan); Juan Garin, Edwin Lau, Coralie Martin, Vasiliki Mavroeidi, Ida McDonnell, Annalisa Primi, Setsuko Saya, Manuel Toselli, Mamiko Yokoi-Arai (OECD); Katsuhito Miyake (The Overseas Construction Association of Japan Inc.); Thang Nguyen Quoc (Oxford Economics Asia); Jean-Pierre Guengant (Research Institute for Development [IRD]); Lee Everts (United Nations [UN]); Nuno Gil (University of Manchester). The peer review meeting was additionally attended by Yafika Chitanda, Grace Khoza (AfCFTA Secretariat); Tarig Ahmed, Emmanuel Eze, Joseph Nti (African Union); Bernard Cudjoe, Pamla Gopaul, Aboubacar Adamou Hamidou, Wahabou Ibrah, Simon Kisira, Mc Neil Mhango, Mutukwa Musole, Christelle Onana, Lukovi Seke (AUDA-NEPAD); Ehize Ilozavbie, Lucretia Fotmai (American Tower); Hamadou Seyni Siddo (Fonds Africain de Garantie et de Coopération Economique [FAGACE]); Lamine Dia and Sebastian Nieto Parra (OECD).

The report drew from the following consultations held in 2024 and 2025: the Emerging Markets Network (EMnet) Business Meeting on Africa (December 2024), the consultation workshop with AfIDA (January 2025), the AfDD 2025 peer review meeting of the two continental chapters (March 2025), the AfDD 2025 preview at the OECD Development Centre Governing Board Plenary Spring Session (May 2025), the AfDD 2025 preview at the G20 Development Working Group Ministerial Meeting in Skukuza (July 2025), and the AfDD 2025 preview at the Tokyo International Conference for Africa's Development (August 2025).

The involvement of the publications team was crucial to producing the report on time. The report was edited by Jill Gaston and translated by Marika Boiron, the OECD Translation Services and Serena Indij Da Costa. Delphine Grandrieux and Elizabeth Nash supervised the production and layout. Stephanie Coic created the infographics and the cover.

The AUC and the OECD Development Centre are grateful to the African Union Member States, European Commission (DG INTPA), Germany (BMZ/GIZ), Italy (Ministry of Foreign Affairs and International Co-operation) and Portugal (Camões – Instituto da Cooperação e da Língua, I.P., and the Ministry of Foreign Affairs) for their support and valuable feedback on this seventh annual edition of *Africa's Development Dynamics*.

Editorial

Better infrastructure can be a catalyst for Africa's productive transformation. Quality transport, energy, digital and water networks improve citizens' well-being and shape more productive economies. African policymakers have made big strides to accelerate infrastructure development, notably through the African Union's Programme for Infrastructure Development in Africa (PIDA). However, more than 2 out of 5 African people remain without access to basic infrastructure, especially electricity. If left unaddressed, we estimate the number of Africans without access to electricity will increase from 641 million today to one billion by 2050, or 11% of the world's population.

Our report finds that African economies require investments of USD 2.48 trillion between now and 2040 to develop their infrastructure to the level comparable to peer countries in other regions. Achieving such investment levels could boost growth by 4.5 percentage points per year. This in turn would allow Africa to surpass the African Union's Agenda 2063 target of 7% annual gross domestic product (GDP) and double the continent's GDP by 2040.

With the right policies, Africa can meet its needs for investment. The annual infrastructure investment need of USD 155 billion is equivalent to 5.6% of the continent's GDP in 2024. African governments spent an average of 1.3% of GDP (USD 34 billion) on infrastructure per year over the 2016-20 period. This is comparable to the global average, but below the levels of countries that have pursued infrastructure-led development such as China (6.7% of GDP) or Viet Nam (5.1% of GDP).

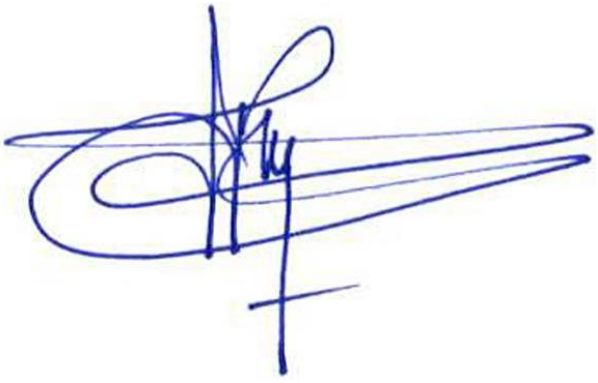
Public funding remains central: African governments and international public funders accounted for 89% of the average annual infrastructure spending in Africa between 2016 and 2020. African governments also spent seven times more on debt service than on infrastructure from 2019 to 2023.

Private finance can play an important role in addressing the current infrastructure investment gap. Private investment in African infrastructure fell from USD 1.8 billion in 2023 to USD 1.2 billion in 2024. Reversing this trend will require managing risks and risk perceptions that deter investors. Africa has the lowest default rates on infrastructure debt – less than 2%, compared to almost 5% in Asia and 10% in Latin America – yet we estimate the cost of capital to be 13% in Africa, well above the OECD average of 8% and the developing Asia average of 10%. Enhanced transparency of data and information on investment risks could lower risk perception and reduce the cost of capital. The joint African Union-OECD African Virtual Investment Platform, launched at this year's African Union Summit, is a step in this direction.

Africa's Development Dynamics 2025 proposes three main levers to boost infrastructure development:

- Improve debt financing conditions and investment rules to mobilise all resources, including from institutional investors.
- Enhance the strategic prioritisation of PIDA projects, especially in least developed countries and for regional integration.
- Strengthen the governance and project capacity of infrastructure developers and relevant government agencies.

This year marks a new turning point for financing Africa's infrastructure, with important milestones like the 4th International Conference on Financing for Development. The African Union Commission and the OECD Development Centre are proud to continue the partnership on this flagship report now in its seventh edition. *Africa's Development Dynamics* is the foundation of our joint work. As we deepen our collaboration, we are generating relevant new sources of data and intensifying the dialogue between policymakers, investors, and international partners. We trust that this report, like previous editions, will become an essential resource for our stakeholders in their quest to attain the goals of the African Union's Agenda 2063 and to improve the living standards for all Africans.



Mahmoud Ali Youssouf,

Chairperson,

African Union Commission

Mathias Cormann,

Secretary-General,

Organisation for Economic Co-operation and Development

Table of contents

FIGURES

TABLES

BOXES

Abbreviations and acronyms

ACET	African Center for Economic Transformation
AFC	Africa Finance Corporation
AfCFTA	African Continental Free Trade Area
AFD	Agence française de développement (French Development Agency)
AfDB	African Development Bank
AfIDA	Africa Infrastructure Development Association
AGIA	Alliance for Green Infrastructure in Africa
AIFP	Africa Infrastructure Fellowship Program
ALCB	African Local Currency Bond
ALGA	African Local Governments Academy
ALSF	African Legal Support Facility
ANWIN	The African Network of Women in Infrastructure
ASQIIA	Accelerating and Scaling-up Quality Infrastructure Investment in Africa
ATIDI	African Trade & Investment Development Insurance
AU	African Union
AUC	African Union Commission
AUDA-NEPAD	African Union Development Agency-New Partnership for Africa's Development
AVCA	African Private Capital Association
BRI	Belt and Road Initiative
CDM	Clean Development Mechanism
CEMAC	Economic and Monetary Community of Central Africa
CEREEAC	Central African Centre for Renewable Energy and Energy Efficiency
CETA	Construction Education and Training Authority
DAC	Development Assistance Committee
DRE	Distributed Renewable Energy

EAC	East African Community
EASTRIP	East Africa Skills for Transformation and Regional Integration
ECOWAS	Economic Community of West African States
ECCAS	Economic Community of Central African States
EDGE	Excellence in Design for Greater Efficiencies
ERCE	Energy Regulation Centre of Excellence
EU	European Union
GDP	Gross domestic product
GI-NBS	Green infrastructure and nature-based solutions
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German Agency for International Co-operation)
HDI	Human Development Index
ICA	Infrastructure Consortium for Africa
ICT	Information and communications technology
IEA	International Energy Agency
IFC	International Finance Corporation
IEEE	Institute of Electrical and Electronics Engineers
IFMEREE	Institutes of Renewable Energy and Energy Efficiency Training Jobs
IGAD	Intergovernmental Authority on Development
ILO	International Labour Organization
IMF	International Monetary Fund
ISO	International Organization for Standardization
JICA	Japan International Cooperation Agency
LAC	Latin America and the Caribbean
LAPSSETT	Lamu Port South – Sudan Ethiopia Transport
LDCs	Least Developed Countries
LFS	Labour Force Statistics
LGSC	Local Government Service Commission
MASEN	Moroccan Agency for Solar Energy
MIGA	Multilateral Investment Guarantee Agency
MILE	Municipal Institute of Learning
NEPAD-IPPF	New Partnership for Africa's Development – Infrastructure Project Preparation Facility
ODA	Official Development Assistance
ODF	Official Development Finance

OECD	Organisation for Economic Co-operation and Development
OSBPs	One-stop-border posts
PAP	Priority Action Plan
PGII	Partnership for Global Infrastructure and Investment
PIDA	Program for Infrastructure Development in Africa
PIMA	Public Investment Management Assessment
PPI	Private Participation in Infrastructure
PPF	Project preparation facilities
PPP	Public-Private-partnership
PQL	PIDA Quality Label
RDA	Road Development Agency
RIMP	Regional Infrastructure Masterplan
SADC	Southern Africa Development Community
SIFA	Skills Initiative for Africa
TVET	Technical and Vocational Education and Training
UCLG	United Cities and Local Governments
UEMOA	Union Économique et Monétaire Ouest-Africaine (West African Economic and Monetary Union)
UfM	Union for the Mediterranean
UN ECA	United Nations Economic Commission for Africa
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
WACC	Weighted average cost of capital
WAGRIC	West Africa Growth Ring Master Plan

Executive summary

Investing USD 155 billion each year in infrastructure development could boost Africa's annual gross domestic product (GDP) growth by 4.5 percentage points, doubling the continent's GDP by 2040. These gains would enable Africa to surpass the objective of 7% annual GDP growth set out in the African Union's Agenda 2063.

Such a push is within the reach of African countries. USD 155 billion per year is equivalent to 5.6% of the continent's GDP in 2024. According to the latest comparable data, its annual infrastructure investment – from private, government and development finance combined – averaged 3% of GDP (USD 83 billion) between 2016 and 2020, with African governments contributing on average 1.3% of their countries' GDP. In 2019-20, four African countries already allocated more than 5% of their GDP to infrastructure from government spending, approaching the levels of the People's Republic of China (6.7%) and Viet Nam (5.1%). A rise in total spending from 3% to 5.6% of GDP seems feasible for more African countries.

Increasing Africa's infrastructure investment to that level requires more financing from all sources, especially private capital. At 11% of the total, the share of private investment in Africa's infrastructure finance is lower than in other regions, and its absolute level is lower than would be expected given potential returns.

- Most African countries have not tapped into the tripling of global private infrastructure investment that occurred between 2013 and 2022: over that period, Africa attracted only 6-8% of the total. More recently, in 2024, rising costs and deteriorating macroeconomic conditions even led private capital deals in African infrastructure to fall from USD 1.8 billion in 2023 to USD 1.2 billion.
- This report estimates the weighted average cost of capital for infrastructure projects for 2023 to be highest in Africa, at 13%, compared to 10% in developing Asia and 8% in OECD countries. Africa's cost of commercial debt is at least 2.5 times higher than in OECD countries; its cost of equity is at least 1.6 times higher.
- Limited private investment in infrastructure can lead to higher costs for the African people. For example, the average cost of broadband Internet for African users per month was USD 56 in 2024, higher than in Latin America and the Caribbean (USD 46) and developing Asia (USD 17).
- Yet, the returns on investment of infrastructure projects in Africa – up to 20% – are among the world's most attractive.

Contributing 41% of the continent's total investment, African governments are playing a central role as infrastructure funders; however, shrinking fiscal space and rising sovereign debt burdens constrain government spending.

- In addition to direct budget allocations, Africa's public spending on infrastructure is channelled through state-owned entities (30%) and public-private partnerships (10%). In both cases, transparency, accountability, monitoring and evaluation are essential to reducing off-budget interventions such as fiscal injections or contract renegotiations.

- Between 2009-13 and 2019-23, the number of years it would take to repay the public debt using tax revenues in African countries increased from 2.8 years to nearly 5 years, rising faster than in developing Asia (1.3 years) and Latin America and the Caribbean (1.2 years). African countries that face the tightest conditions are also those that rank lowest on the United Nations Development Programme's Human Development Index: they would need more than 5 years to repay their debts. Over 2019-23, African governments spent seven times more on debt service than on infrastructure on average, and 15 of them allocated more public finance to interest payments than to infrastructure.

At 48% of Africa's total infrastructure investment, bilateral and multilateral development partners are currently the main funders, but the outlook for this source of finance is uncertain.

- According to OECD data, development finance flows disbursed for infrastructure in Africa increased from around USD 10 billion in 2010 to almost USD 15 billion in 2023. Development banks doubled infrastructure-related disbursements over the same period. In 2023, infrastructure represented 19% of total development finance transactions to Africa.
- However, the OECD projects a 9% to 17% drop in official development assistance (ODA) in 2025. This comes on top of a 9% drop in 2024. The outlook beyond 2025 remains highly uncertain. Declines in bilateral and multilateral funding could disproportionally affect African countries with lower development levels, which already receive less ODA than middle-income countries.

Given constrained resources, infrastructure that connects economic hubs should be prioritised as the most cost-effective path to productive transformation. This report finds that Africa's investment needs for achieving productive transformation are the largest for roads (32% of the total), followed by railways (24%), fibre-optic cables (23%) and solar power (17%). Depending on their infrastructure endowments, countries may identify different priorities for supporting regional and continental objectives. Better transport, digital and energy infrastructure can lower trade costs, stimulating Africa's participation in global value chains, deepening regional value chains and advancing industrialisation. Strengthening infrastructure within and between cities is also key, as by 2050, two out of three Africans will live in urban agglomerations, and the urban land area will more than double.

Integrating environmental and social risk management into infrastructure planning can help mitigate costs and improve sustainability. Policy design and implementation should better reflect and manage the vulnerabilities caused by climate change and social risks, including pollution, biodiversity loss, population growth, and the exclusion of rural populations and women. African countries would need to set aside at least USD 10 billion each year to recover asset loss and damage to infrastructure due to extreme weather events linked to climate change.

Infrastructure development requires credible, evidence-based policies and a careful prioritisation of projects that advance Africa's productive transformation. *Africa's Development Dynamics 2025* highlights two main areas to accelerate and scale up infrastructure development on the continent:

- **Aligning infrastructure development priorities with productive transformation goals can optimise the targeting and allocation of available financing.** To enhance productive transformation, policymakers can focus on development corridors and urban infrastructure that boost highly productive sectors and regional value chains, especially through the Programme for Infrastructure Development in Africa (PIDA) Priority Action Plan. To monitor progress, policymakers require more and better data on productive transformation outcomes, job creation targets, available skills, infrastructure development and its financing. Greater co-ordination across different government levels (e.g. through master plans) can strengthen institutional and financial backing. Increasing capacity and skills – technical and managerial – is a prerequisite for implementing infrastructure projects.

- **More effective infrastructure governance can accelerate project implementation, reduce costs and improve operational sustainability.** For instance, well-equipped public-private partnership units and project preparation facilities could better support large projects throughout their life cycle, lower costs, and strengthen the division of labour between public and private actors. Greater cost recovery and enhanced planning for maintenance are also essential for project sustainability: overall, 42% of the estimated investment need is for maintaining existing infrastructure. Credible African-led infrastructure certification, such as the PIDA Quality Label, can help improve project quality and bankability, in alignment with local contexts.

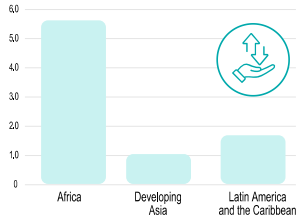
Infographic 1. Infrastructure, growth and transformation in Africa

MORE INVESTMENT IN INFRASTRUCTURE IS KEY TO BOOSTING AFRICA'S GROWTH AND TRANSFORMATION

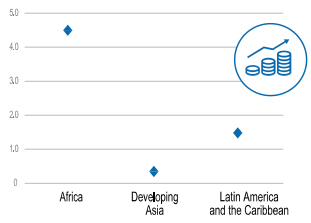
The economic dividends of infrastructure investment are higher in Africa

To achieve the **same level of transformation as their peers** (economies around the world with similar profiles), African economies need to invest on average **3X more than LAC and 5X more than developing Asia,** but the economic returns would be **much higher.**

Infrastructure investment needs are LARGEST for Africa...



... but so are the potential ECONOMIC RETURNS

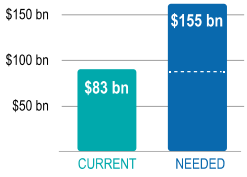


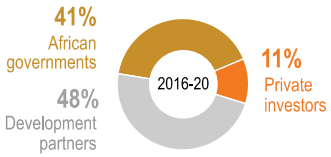
Double investment in infrastructure, attract more private finance

Over 2016-20:

Investment in Africa's infrastructure totalled **USD 83 billion** per year on average

53% of the **USD 155 billion needed** to catch up with its peers.



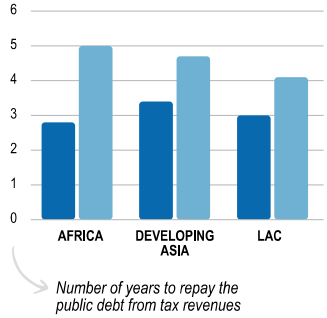


Private investors have been contributing a small portion

Three main barriers to investment

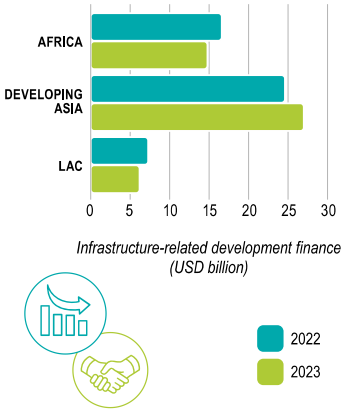
1

Governments face limited fiscal space and a high debt burden



2

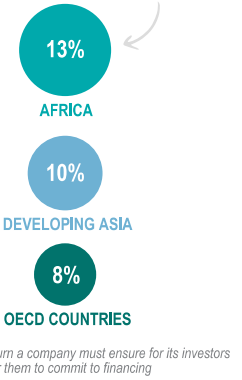
Development partners have reduced their investment in African infrastructure



3

Private investors are deterred by the high cost of capital

*Weighted average cost of capital (WACC) for infrastructure projects**

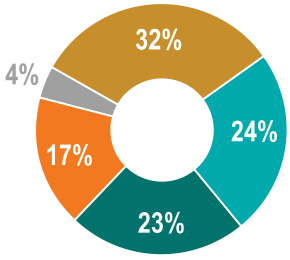


(*) the rate of return a company must ensure for its investors for them to commit to financing

Target projects with the biggest impact

To catch up with their peers, **African economies should prioritise the infrastructure types that are the most cost-effective for productive transformation.**

INVESTMENT NEEDS
(as a share of total, continental average)



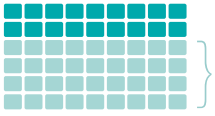
- Roads
- Railways
- Fibre-optic cables
- Solar power
- Other types*

(*) other energy sources, container ports and wastewater treatment plants.

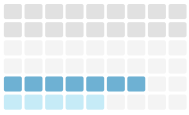
Improve infrastructure governance

STRENGTHEN CAPACITY

Out of **54 African governments,**



36 have designated PPP units



only **7** revise the fiscal risk of projects
5 conduct post-project evaluations and auditing
and **0** conduct civil consultations

ENSURE COST RECOVERY AND MAINTENANCE

Only 1 in 3

water and energy utilities in Africa

generates enough revenue to recover operating, maintenance and debt service costs

58%
for **NEW** infrastructure

42%
of Africa's investment needs is for maintaining **EXISTING** infrastructure

SIGNAL THE QUALITY AND BANKABILITY OF PROJECTS

Around **25% of the 400+ projects** selected for PIDA* Priority Action Plan (PAP)1 ***did NOT reach the feasibility stage***

On a positive note, as of 2025, **15** PIDA PAP2 projects have used the **PIDA Quality Label** to signal investment readiness

**Programme for Infrastructure Development in Africa*

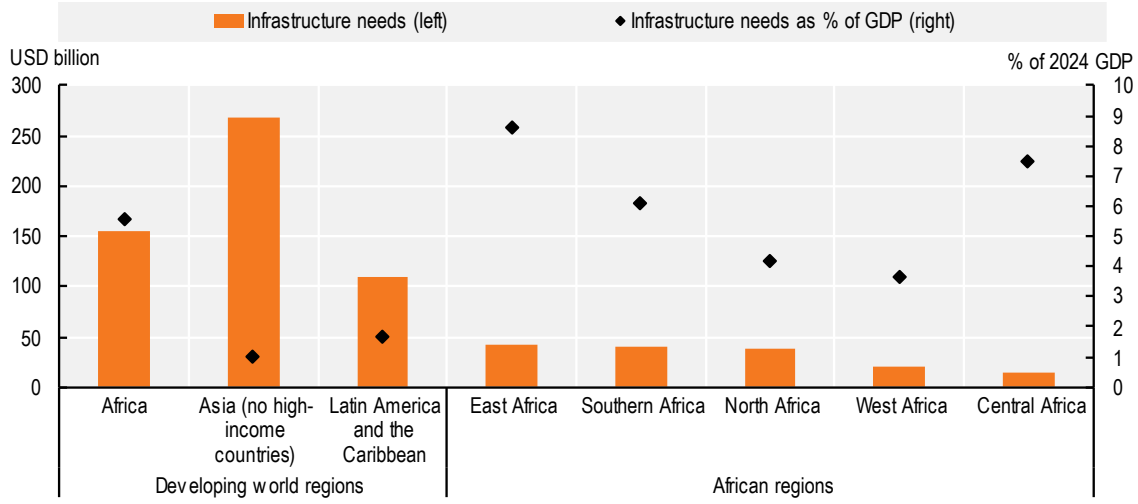
Overview

The *Africa's Development Dynamics 2025* report addresses the question of how African policymakers can accelerate infrastructure development to transform the economies of the continent and its five regions. In 2025, Africa's real gross domestic product (GDP) is projected to grow at 3.9%, outpacing the GDP growth of Latin America and the Caribbean (2.0%) but below that of developing Asia (4.4%). Investing in quality infrastructure can further boost economic growth, regional integration and employment. Integrated infrastructure networks can enhance firm productivity and connect trade networks, contributing to fulfilling the African Union's Agenda 2063 vision of "world-class infrastructure crisscrossing Africa" (AUC/OECD, 2019[1]; AU, 2015[2]). Infrastructure is also a precondition for productive transformation – the reallocation of capital and labour towards the more productive segments of an economy (AUC/OECD, 2019[1]). The report assesses investment and financing opportunities for Africa's infrastructure and offers policy options to improve the strategic prioritisation and effective governance of infrastructure projects.

Investing USD 155 billion per year in infrastructure development could more than double Africa's GDP by 2040

Infrastructure investments of USD 155 billion per year until 2040 will allow African economies to grow faster and achieve productive transformation. This report uses a novel methodology to estimate the investments needed for African countries to match the infrastructure of benchmark developing countries that achieved the highest levels of productive transformation.[1] Focusing on productive transformation – and the related infrastructure investment needs – is strategic to achieve Agenda 2063 and the United Nations (UN) Sustainable Development Goals (SDGs) (AUC/OECD, 2018[3]; 2023[4]). The results of the report's methodology suggest an average annual investment need of USD 155 billion until 2040. This annual need is equivalent to 5.6% of the continent's GDP in 2024. This figure is more than three times larger than that of Latin America and the Caribbean (1.7%) and five times larger than that of developing Asia (1.0%). East and Central Africa are the African regions with the largest infrastructure investment needs relative to their GDP, at 9% and 8%, respectively (Figure 1). Fifty-eight per cent of the investment needed to accelerate the continent's productive transformation is necessary for building new infrastructure, while 42% is essential for maintenance. This report's projections of Africa's infrastructure investment needs are comparable to those of other studies, though the underlying methodologies and research objectives vary.[2]

Figure 1. Annual infrastructure investment needed to achieve the productive transformation levels of benchmark countries by 2040, by world and African regions



Note: Infrastructure investment needs refer to modelled estimates of the total expenditures required to build new infrastructure to match the infrastructure levels of peer countries that perform well in productive transformation, while also maintaining existing infrastructure. See Annex 1.A for details. GDP = gross domestic product.
Source: Data sources for the investment needs estimations are listed in Annex 1.A.

StatLink https://stat.link/f62azr

If Africa could reach these investment levels, it would reap larger gains than other world regions, doubling its GDP by 2040. Filling estimated investment needs could raise Africa's average annual GDP growth by 4.5 percentage points by 2040, compared to 1.5 percentage points in Latin America and the Caribbean and 0.3 percentage points in developing Asia. Central Africa is the African region projected to experience the largest GDP increase (6.2 percentage points), followed by East Africa (6.0 percentage points), West Africa (5.4 percentage points), Southern Africa (4.2 percentage points) and North Africa (3.5 percentage points). Investing USD 155 billion per year would grow Africa's total GDP by an additional USD 2.83 trillion by 2040, more than double the USD 2.80 trillion in 2024. This big push from infrastructure would also help the continent surpass the Agenda 2063 objective of 7% annual GDP growth per year.

African governments spend less on infrastructure than other governments pursuing infrastructure-led development. According to the most recent comparable data, investments in Africa's infrastructure, from government, development partners and private sector, averaged USD 83 billion per year between 2016 and 2020, amounting to just over half of the investment need estimated in this report (ICA, 2022[5]). Forty-one per cent of this spending came from African governments, 48% from development funders and 11% from private investors. Over this period, African governments spent an average of 1.3% of their GDP (USD 34 billion) on infrastructure per year, far below the rates pursued by countries that have adopted an infrastructure-led approach to development, such as the People's Republic of China (hereafter "China") (6.7%) or Viet Nam (5.1%). By 2019-20, four African governments[3] had allocated more than 5% of their GDP to infrastructure. More countries can do so.

Limited fiscal space and growing sovereign debt burdens constrain African government spending on infrastructure. Between 2009-13 and 2019-23, the time it would take to repay the public debt using tax revenues increased from 2.8 years to nearly 5 years, rising faster than in developing Asia (+1.3 years) and in Latin America and the Caribbean (+1.2 years) (Kose et al., 2022[6]). African countries with low scores in the UNDP Human Development Index (HDI) face the tightest conditions. They would need over five years to repay their debts from 2019-23. In 2019-23, African governments spent on average seven times more on debt service than on infrastructure. The significant increase in debt service can be partly attributed

to the high interest rates applied to sovereign debt. Africa's top infrastructure financiers, such as the World Bank, China, the AfDB and bilateral creditors, apply vastly different interest rates to different countries, ranging from 0.2% to 7.7% (World Bank, 2024[7]). As a result, government spending on interest payments surpasses spending on infrastructure in 15 African countries.

Private investment in infrastructure remains limited, partly due to risk perceptions and macroeconomic conditions, which increase the cost of capital. Global private infrastructure investment tripled between 2013 and 2022; however, most African countries did not benefit. During this boom, Africa attracted only 6-8% of global annual investment (Auriol and Saussier, 2025[8]). The present report estimates the weighted average cost of capital for infrastructure projects to be 13% in Africa, compared to 10% in developing Asia and 8% in OECD countries. On average, the cost of equity is 1.6 times higher in Africa than in OECD countries, while the cost of debt is 2.5 times higher (Annex 1.B). The latter, measured by commercial lending rates, averaged 18.6% in Africa, compared to 11.4% in developing Asia and 7.2% in OECD countries.

Returns on infrastructure and reforms of regulatory frameworks can appeal to private investors. While infrastructure project costs and timelines can be up to 60% higher in Africa than in developed countries, expected returns on investment on infrastructure projects can reach up to 20%, some of the highest in the world (MiDA, 2018[9]). Infrastructure-related investments in Africa in energy, water and communications exhibit default rates of about 4-5% – the lowest value of all sectors – reflecting investors' cautious and highly selective approach to infrastructure projects. However, average default rates in the three sectors were higher in Africa, excluding North Africa, than in other world regions between 2013-23 (GEMs, 2024[10]). South Africa and Egypt managed to attract large shares of private infrastructure investment over 2013-23, accounting for 21% and 15%, respectively, of Africa's total.[4] Robust regulatory frameworks and active investment promotion supported initiatives such as South Africa's Renewable Energy Independent Power Producer Procurement Programme (REIPPP) and Egypt's issuance of Africa's first sovereign green bond.

The recent decline in development finance flows to infrastructure disproportionately affects countries with lower development levels. Despite notable growth in annual development finance for infrastructure, increasing by approximately USD 5 billion between 2010 and 2023, current geopolitical and macroeconomic conditions are placing increasing pressure on development co-operation. Overall disbursements already decreased from USD 16.6 billion in 2022 to USD 14.8 billion in 2023 (OECD, 2025[11]). Furthermore, preliminary estimates for 2024 suggest that net bilateral official development assistance (ODA) flows from members of the OECD Development Assistance Committee (DAC) to all sectors in Africa fell by 1% in real terms compared to 2023 (OECD, 2025[12]). African countries could face a projected 16-28% decline in ODA between 2023 and 2025 (OECD, 2025[13]). This decline primarily affects countries with lower development levels. In 2023, only ten African countries[5] (including four medium and high-HDI countries) captured 59% of official development finance for infrastructure.

Meeting Africa's infrastructure investment need requires improving sovereign debt conditions, addressing risk perceptions that deter private and public investors, increasing development finance, and expanding the role of large development funders. The priorities discussed at the Fourth International Conference on Financing for Development in Sevilla (FfD4), 30 June-3 July 2025, can serve as a concrete roadmap (UN, 2025[14]). Table 1 illustrates potential pathways to scale up infrastructure-related funding in Africa and mobilise USD 155 billion per year. Under current trends, around USD 90 billion per year would be mobilised for infrastructure development by 2040.

- **First, governments need better sovereign debt conditions and improved revenue collection to expand their fiscal space.** An additional USD 51 billion could be unlocked each year by: i) raising tax revenues from the current average of 16% of GDP to the average level of Latin America and the Caribbean (21.5%); ii) reducing debt servicing to the levels that African countries faced following the major debt relief initiatives of 2010; and iii) increasing the average allocation of

public spending on infrastructure by a mere 0.7 percentage points. Using the most recent data, from 2022, 6 of the 36 countries included in *Revenue Statistics in Africa 2024* recorded a tax-to-GDP ratio above 21.5%, while 19 had a ratio below 15% (OECD/AUC/ATAF, 2024[15]). FfD4 recommends doubling capacity support by 2030 to countries that aim to increase their tax-to-GDP ratio to at least 15%.

- **Second, transparent information on risks is key to reducing the cost of capital and boosting private investment.** Information on risks at the country and sectoral levels is often too limited to enable private investors to accurately identify opportunities and assess risks. As of 2024, only 33 African countries had ever received a credit rating (UNDP, 2024[16]). Even when available, data quality and methodologies raise concerns. A cost of capital commission, as proposed by the South African Presidency of the G20, or the African Union's forthcoming credit rating agency, could help address some of these issues. Joint initiatives, such as the African Virtual Investment Platform launched by the African Union and the OECD in 2025, could also help fill information gaps. If such efforts could double private investments as a share of GDP from 0.3% to 0.6% by 2040, an additional USD 8 billion per year would be mobilised.
- **Third, renewed international co-operation is needed to reverse the decline in bilateral official development assistance.** FfD4 highlighted the importance of international co-operation for infrastructure development. Notable commitments include: i) reversing reductions in official development assistance (ODA) to reach existing targets of 0.7% gross national income (GNI); ii) supporting the development of trade-related infrastructure and transport corridors; and iii) doubling Aid for Trade to least-developed countries by 2031, including a minimum allocation of 50% for trade-related infrastructure. Reversing the drop in ODA from members of the OECD DAC to reach the existing target of 0.7% of GNI by 2040 would unlock at least an additional USD 4 billion for infrastructure per year.
- **Fourth, the role of multilateral development banks and other large funders should be expanded.** Development banks had already doubled infrastructure-related disbursements from USD 4.2 billion in 2010 to USD 8.2 billion in 2023 (OECD, 2025[11]). While still reliant on bilateral contributions, as illustrated by the funding cuts to the African Development Bank in 2026 recommended by the United States (US),[6] development finance institutions could accelerate reforms to better leverage capital markets, ensuring more sustainable operations and greater development impact. Reallocation of special drawing rights through development finance institutions, as suggested by the South African Presidency of the G20, could also help. Initiatives such as the European Union's Global Gateway and the G7's Partnership for Global Infrastructure and Investment are supporting such efforts through direct project financing and de-risking of private investments from within and outside the continent. Overall, doubling multilateral finance to 1.1% of GDP until 2040 could raise an additional USD 6 billion per year.

Table 1. Increasingly ambitious scenarios to meet Africa's USD 155 billion annual infrastructure investment need by 2040

Source	Scenario 1: Financing under business as usual	Scenario 2: Keeping government infrastructure spending stable at 1.3% of GDP	Scenario 3: Increasing government infrastructure spending to 2% of GDP
African governments	58	+ 25 from higher tax revenue + debt reduction	+ 51 from higher tax revenue + debt reduction + shift in spending towards infrastructure
Private sector	13	+ 8 from higher private investment	
Development finance	19	+ 10 from higher bilateral and multilateral finance	
Total annual investment	USD 90 billion	USD 133 billion	USD 159 billion

Note: The table presents three scenarios to estimate how Africa could meet its USD 155 billion annual infrastructure investment need by 2040. All scenarios rely on gross domestic product (GDP) projections from the International Monetary Fund (until 2029) and linear extrapolations through 2040. In the first scenario, the shares of GDP allocated to infrastructure by governments, the private sector and development finance remain constant at pre-2024 levels. In the second scenario, while governments maintain infrastructure spending at 1.3% of GDP, they gradually increase their tax-to-GDP ratios from 16% in 2022 to 21.5% by 2040 (average for Latin America and the Caribbean). At the same time, debt servicing gradually drops from 25% of tax revenue in 2023 to 2010s levels of 9% by 2040. Private investment in infrastructure and multilateral finance as a share of GDP double by 2040, and bilateral official development assistance from members of the OECD Development Assistance Committee rises progressively to meet the United Nations target of 0.7% of gross national income by 2040. In the third scenario, governments progressively increase their infrastructure allocation from 1.3% to 2% of GDP by 2040; resource mobilisation, debt reduction, private investment and development finance increase as in Scenario 2.
Source: OECD (2025[11]), *Creditor Reporting System* (database), https://www.oecd.org/en/data/datasets/development-finance-statistics-data-on-flows-to-developing-countries.html; OECD/AUC/ATAF (2024[15]), *Revenue Statistics in Africa 2024*; ICA (2022[5]), *Infrastructure Financing Trends in Africa 2019-2020*; IMF (2025[17]), *World Economic Outlook Database*, https://www.imf.org/en/Publications/WEO/weo-database/2025/April.

Policies need to ensure that infrastructure development generates significant social returns, beyond economic growth. A systematic review of 110 studies conducted for this report[7] highlights that, in aggregate, infrastructure in African countries has had significant positive effects on human development, poverty reduction, and access to and quality of employment. For instance, every US dollar invested in climate-resilient water and sanitation infrastructure returns at least USD 7 in socio-economic gains through improvements in health and education, food security, and progress towards the SDGs (AU, 2023[18]). Evidence from 29 African countries suggests that the lack of reliable energy access, affecting 68% of African manufacturing firms, leads to a significant reduction in employment in non-agricultural occupations and skilled jobs (Mensah, 2024[19]).

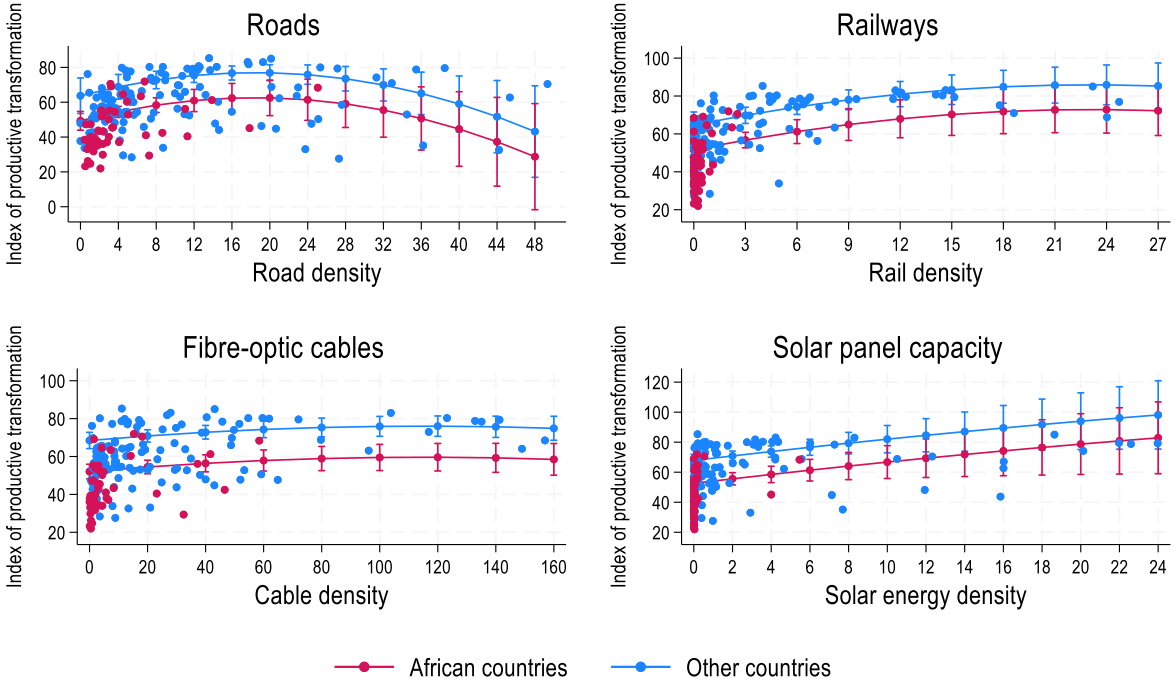
Targeting specific types of infrastructure, supporting value chains, narrowing rural-urban divides and managing sustainability risks can improve development outcomes

Given limited available financing, targeting infrastructure investment can help maximise gains. The magnitude of the benefits of infrastructure development varies within and across countries and over time, depending on initial endowments and the types of infrastructure targeted (Das, Stern and Timilsina, 2024[20]). Integrating complementary infrastructures may unlock larger gains. In East Africa, for instance, combining transport corridors with investments in energy infrastructure has increased the shift from low-productivity agriculture to manufacturing and services: the combination has reduced the share of agricultural employment by a factor of 2.5 compared to road investments alone (Dappe and Lebrand, 2021[21]).

The cost-effectiveness of different infrastructure types has varying impacts on productive transformation

Investments in specific types of infrastructure can be more cost-effective than others for achieving productive transformation. The results of the economic modelling conducted for this report (see Annex 1.A) suggest that only certain types of infrastructure have a direct, statistically significant relationship with productive transformation. This does not diminish the importance of other infrastructure types, which may yield other substantial socio-economic benefits, such as improved water and sanitation infrastructure resulting in a healthier population (Banerjee and Morella, 2011[22]). Still, to accelerate productive transformation, the estimated investment needs are especially large for roads (32% of the total), railways (24%), fibre-optic cables (23%) and solar panels (17%) (Figure 2).[8]

Figure 2. Relationship between the densities of selected infrastructure types and productive transformation across countries



Note: Lines show fitted values from regressions estimating the relationship between each type of infrastructure and the index of productive transformation. Bars show confidence intervals. Dots represent the raw data points. Details are in Annex 1.A.
Source: Data sources are listed in Annex 1.A.

The cost-effectiveness of infrastructure investments depends on a country's initial infrastructure endowment, with different types of infrastructure offering varying returns.[9] This report compiles unique infrastructure cost data (USD per additional kilometre or megawatt) to determine cost-effectiveness (Table 2; Annex 1.A). Road infrastructure is highly cost-effective in low-transport-density countries, where expanding road stocks yields strong returns. However, as road density increases, the marginal benefits decline, making further investments less cost-effective. On average, building railways and installing fibre-optic cables are cost-effective options for productive transformation. While railways have the highest unit costs, they also deliver substantial returns (they have the highest marginal effects) and pollute less than road transport. In contrast, fibre-optic cables offer lower returns but are also the least expensive

infrastructure type per unit. Solar energy also provides substantial benefits, especially in countries with high transport density.

Table 2. Cost-effectiveness of different infrastructure types to achieve productive transformation in African countries

Infrastructure type	Density	Example countries	Average marginal effect	Average cost-effectiveness ratio
Roads and railways	Low density	Angola, Chad, Democratic Republic of the Congo, Niger, Sudan	+1.37	**98**
		Burundi, Equatorial Guinea, Mauritius, Rwanda	+1.83	**135**
	Medium density	Benin, Djibouti, Ghana, Mauritania, South Africa, Uganda	+1.24	**110**
		Algeria, Côte d'Ivoire, Ethiopia, Mozambique, Zambia	+1.81	**137**
	High density	Gambia, Mauritius, Morocco, Rwanda, Seychelles, Tunisia	+0.24	**>300**
		Egypt, Eswatini, Kenya, Nigeria, Tanzania, Zimbabwe	+1.81	**142**
Fibre-optic cables	Same effect at different densities	All African countries	+0.13	**153**
Solar panels	Same effect at different densities	All African countries	+1.52	**210**

Note: The detailed methodology is explained in Annex 1.A.
Source: Data sources are listed in Annex 1.A.

Well-targeted infrastructure investments can boost regional value chains and narrow rural-urban divides

Better transport, digital and energy infrastructure would improve Africa's value chain integration and productivity. Integrating Africa's continental infrastructure across national borders could yield vast economic returns. Operationalising regional transport networks laid out in the Programme for Infrastructure Development in Africa (PIDA) is estimated to augment exports by 11.5% and the overall GDP growth rate by up to 2% (Fontagné et al., 2022[23]). In recent years, African countries that benefited from larger infrastructure loans towards transport, digital and energy infrastructure experienced an increase in their participation in global value chains in subsequent years, especially in downstream segments (Amendolagine, Presbitero and Rabellotti, 2024[24]).[10]

Strengthening infrastructure within and between cities is key for achieving productive transformation and narrowing rural-urban divides. By 2050, two out of three Africans will reside in an urban agglomeration, and the total urban land area is expected to more than double, accelerating the demand for urban infrastructure (OECD et al., 2025[25]). For instance, a 10% increase in urbanisation can raise electricity consumption by almost 4% (El-Bouayady et al., 2024[26]). At the same time, Africa is the only continent where the rural population will continue growing in absolute terms in parallel to increasing urbanisation. Therefore, additional infrastructure will also be necessary in rural areas. This was already the case in 2021, when less than 20% of rural households had access to electricity, compared to 80% in cities with over 1 million inhabitants (OECD/UN ECA/AfDB, 2022[27]). While reducing rural-urban inequality remains a key objective of African governments, infrastructure development is expected to benefit more individuals and firms in larger cities, due to higher population density and economic clustering, compared to smaller cities and rural areas. Strategic investment in intermediary cities[11] could be instrumental to strengthen inclusive rural-urban linkages, support the growth of productive activities, and boost local value chains and job creation.

Better integrating environmental and social risk management into infrastructure planning can help mitigate costs and improve sustainability

As climate change and population growth accelerate, infrastructure's environmental and social sustainability risks should be more actively managed. Achieving productive transformation requires balancing productivity growth with environmental and social sustainability outcomes. Climate change and population growth can exacerbate vulnerabilities and risks associated with infrastructure development, including pollution, biodiversity loss, and the exclusion of rural populations and women. The ability to mitigate these risks varies across countries, depending on available resources and capacities. Countries with low development levels often face the most significant risks and require policy attention.

With additional policy and financial support, green infrastructure addressing climate resilience and environmental and social sustainability risks can minimise economic losses and harm. Africa's infrastructure faces climate risks twice as high as those of Latin America and five times higher than those of Europe (OECD, 2024[28]). Extreme weather events have wide-ranging negative effects on infrastructure: they undermine infrastructure reliability, disrupt critical supply chains and inflate maintenance costs. Recent estimates show that African countries would need to set aside USD 10.2-11.4 billion each year to recover asset loss and damages due to climate change, mostly in energy (36%) and transport (25%) (CRDI, 2023[29]). Further expanding the reach of climate-related insurance could help limit these costs: in 2022, about 80% of all economic losses from natural catastrophes were uninsured. International initiatives, such as the Alliance for Green Infrastructure in Africa (AGIA), have contributed to the growing number of projects and funding allocated to green infrastructure and nature-based solutions. Between 2012 and 2023, 297 new projects were launched in 48 African countries, securing over USD 21 billion (Collins et al., 2025[30]).

Infrastructure development should also aim for better outcomes in terms of employment for informal workers and women. Population growth is causing growing pressures on the development of infrastructure in African countries. Between 2024 and 2050, Africa's population will grow by 63%, from about 1.50 billion to 2.45 billion inhabitants (UN DESA, 2025[31]). Infrastructure that provides new access to jobs, information, utilities and services can help increase human development. However, infrastructure investments can inadvertently increase inequality and fragmentation, for example, when they focus on populations and locations with prior economic advantages. Infrastructure requires careful planning and risk management to avoid widening these gaps. Affordable but effective gender-responsive measures include safe washing facilities along transport routes, inclusive land use planning, clear sightlines in public areas, and adequate lighting and security cameras. Between 2010 and 2023, the share of infrastructure projects in Africa financed by members of the OECD DAC integrating gender equality objectives increased from 18% to 25% (OECD, 2025[32]).

Strategic prioritisation towards productive transformation and effective governance are policy priorities for infrastructure development

Careful strategic prioritisation in support of productive transformation and effective governance of infrastructure projects are vital to make the most of scarce resources and meet growing demands. Infrastructure development faces several challenges, such as population growth, low-productivity urbanisation, climate change, fragmented cross-border infrastructure networks and stagnating international financing. Focusing on productive transformation can guide the prioritisation of projects in view of scarce resources. For instance, well-planned urban infrastructure can help translate urbanisation into sustained economic growth (AfDB/OECD/UNDP, 2016[33]). Specific investments in transport and energy infrastructure can drive transformation by developing rural-urban linkages, such as giving farm workers access to the service sector (Castells-Quintana, 2017[34]; Moneke, 2020[35]; UNECA, 2017[36]). Once selected, infrastructure projects require effective governance structures that emphasise decision making by the most relevant stakeholders and that acknowledge diverging interests and limited capacities.

Infrastructure strategies and planning can be better aligned with productive transformation goals at all levels

Africa's agenda to achieve productive transformation can more directly guide policymakers in prioritising infrastructure projects at the continental, regional, national and subnational levels. Many experiences, including from China, Europe, Korea, Mexico and Türkiye, highlight the importance of planning infrastructure investments in alignment with sectoral and industrial needs to achieve better productive transformation outcomes. In this vein, African policymakers can prioritise infrastructure projects that facilitate highly productive sectors and value chains based on continental agendas such as the African Union's (AU) plan for the Accelerated Industrial Development in Africa (AIDA). Once selected, infrastructure projects require institutional backing at all levels, especially at the national level, where political and budget decisions have direct impacts on project implementation. Bilateral co-operation frameworks between Africa and its development and trade partners, as well as international and region-to-region policy platforms such as the UN/AU Partnership on Africa's Integration and Development Agenda or the AU-EU Partnership, can ensure alignment of funding with African priorities.

Table 3. Selected development and transport corridors in Africa

Corridor	Region and countries	Impacts on productive transformation	Lessons and recommendations
Lobito-Kolwezi-Lubumbashi/Solwezi-Ndola	**Southern Africa** (Angola, Zambia) and the Democratic Republic of the Congo	• Enhancing export opportunities for the minerals value chains • Integrating regional value chains • Supporting small and medium-sized enterprises in agriculture and mining	• Develop reliable data and impact assessment tools to inform project implementation and monitoring • Strengthen regional ownership and effective governance mechanisms to streamline implementation and reduce risks related to geopolitical tensions
Libreville-Kribi-Douala-N'Djamena Corridor	**Central Africa** (Cameroon, Chad, Equatorial Guinea, Gabon, São Tomé and Príncipe)	• Strengthening connectivity between coastal ports and landlocked countries • Promoting regional trade and economic integration • Stimulating investment in key sectors such as agriculture (maize, rice and livestock)	• Strengthen urban-rural linkages to reap the benefits of the growing urban demand • Enhance co-ordination and ownership among member states • Ensure effective monitoring and governance
Dar Es Salaam-Nairobi-Addis Ababa-Berbera/Djibouti	**East Africa** (Tanzania, Kenya, Ethiopia, Somalia, Djibouti)	• Reducing transport costs for landlocked countries, which can account for up to 75% of the value of their exports • Lowering trade costs and boosting the agri-food value chains in the region and ties with Southern Africa	• Include maintenance in planning • Improve political stability • Harmonise transportation standards
Trans-Maghreb Multimodal Corridor	**North Africa** (Algeria, Egypt, Libya, Mauritania, Morocco, Tunisia)	• Simplifying border crossings, and improving efficiency for trade and mobility • Reducing transport costs and journey time	• Improve usage on secondary segments • Sharpen the focus on reducing trade costs
West Africa Growth Ring Corridor	**West Africa** (Burkina Faso, Côte d'Ivoire, Ghana, Togo)	• Bolstering regional integration and connectivity, including the Abidjan-Lagos Motorway • Developing strategic regional value chains, such as meat value chains	• Strengthen regional co-ordination and public-private partnership frameworks • Promote effective governance and implementation mechanisms

Source: Authors' compilation based on UEMOA/JICA (2018[37]), *The Project on the Corridor Development for West Africa Growth Ring Master Plan: Final Report Summary*; (EAC, 2012[38]), *East African Community Industrialisation Policy 2012-2032: Structural Transformation of the Manufacturing Sector through High Value Addition and Product Diversification based on Comparative and Competitive Advantages of the Region*; APRI (2024[39]), *Lobito Corridor – A Reality Check*; AfDB (2023[40]), *Cross-Border Road Corridors: Expanding Market Access in Africa and Nurturing Continental Integration*; EU (2022[41]), "Strategic corridors to improve Europe-Africa connectivity"; and UNECA (2021[42]), *Economic Opportunities Along the Central African Road-Corridor*.

Prioritising development corridor projects can support regional integration and productive transformation. As of 2025, at least 80 development corridors have either been planned, are under construction or are fully operational across Africa. Development corridors aim to stimulate economic integration, investment and development through complementary infrastructure, trade facilitation and sectoral development (e.g. agriculture, mining, manufacturing) across borders (Table 3). PIDA provides an African-wide framework to prioritise development corridor projects and accelerate continental integration. The second phase (2021-30) focuses on 69 priority projects based on regional and cross-border relevance. Expanding access to reliable impact data can facilitate the planning and monitoring of their developmental outcomes.

Co-ordinated planning and greater capacity at all levels can make infrastructure development more impactful. Cross-sectoral co-ordination across geographic levels (e.g. through master plans) can help overcome silos, lack of policy coherence and misaligned incentives. For instance, effective planning can ensure that regional development corridors extend their benefits to peripheral urban settlements. Strategic early investments, such as basic road grids or serviced plots, can save up to 99% of the cost associated with retrofitting infrastructure after unplanned growth (Collier et al., 2019[43]). Ensuring sufficient institutional, financial and human capacity is also essential to enable institutions, especially at the subnational level, to implement policies and plan infrastructure investments. Only 7 out of 36 African countries reported collecting subnational revenues in 2022 (OECD/AUC/ATAF, 2024[15]), while many cities face a shortage of skilled urban planners, with just 0.4 technical staff per 1 000 people compared to 8 in India and 36 in high-income countries (Cities Alliance, 2017[44]).

Effective infrastructure governance can accelerate projects and improve their operational sustainability

Efficient management and localised approaches are key to establishing effective infrastructure governance, especially in low-income countries. Recent evidence from 37 low-income countries globally suggests that up to 53% of investment resources may be wasted due to inefficient management of public investments (including in infrastructure); this results mainly from shortcomings in monitoring, maintenance funding, project selection and appraisal, and multi-year budgeting (Eltokhy et al., 2024[45]). International infrastructure governance standards take into account best practices such as detailed strategic plans, the establishment of separate governance bodies, and ample financing and management capacities (GI Hub, n.d.[46]; OECD, 2020[47]; OECD, 2024[48]). Yet, in African countries, these standards may need to be adapted to acknowledge capacity constraints, adverse incentives and power imbalances. Especially in low-income countries, a thorough understanding of local project stakeholders and implementation conditions can facilitate effective project governance and foster stakeholder coalitions that support projects throughout their duration (OECD/ACET/AUDA-NEPAD, forthcoming[49]).

Public-private partnership (PPP) units and project preparation facilities (PPFs) lack the resources necessary to carry out large infrastructure projects. Limited resources hinder African PPP units and PPFs from providing consistent technical support, project prioritisation and effective co-ordination. In 2021, Africa hosted 44% of PPFs globally; yet African PPFs supported fewer and lower-value projects than in other world regions (GI Hub, 2021[50]). Similarly, while 42 African countries have enacted PPP legislation, only a few attract private investments. Among the 36 African governments with designated PPP units, only 13% revise the fiscal risk of projects, 9% conduct post-project appraisals and audits, and none consult with affected communities about the impact of PPP projects (World Bank, 2025[51]).

Improving advanced planning of maintenance would increase operational sustainability. Maintenance remains under-prioritised in Africa, ranking the lowest among the International Monetary Fund's infrastructure governance project scores. Across developing countries, only about 14% of road capital expenditure goes to maintenance (Gorgulu, Foster and Rana, 2022[52]), far below the estimated

needs across African countries – excluding North Africa – of 31% for transport, 37% for water and sanitation, and 23% for energy and electricity (Rozenberg and Fay, 2019[53]).

Africa can augment its reliance on user fees to fund infrastructure. Under the right conditions, user fees can ensure sustainable funding for constructing and maintaining infrastructure. Yet, in Africa, only 15% of PPP infrastructure projects rely on user fees, while 40% depend on some form of public payments. In Latin America and the Caribbean, the corresponding figures are 29% and 24%, respectively (World Bank, 2025[54]). Public consultations with future paying users and discounts for commuters and local residents can be important levers to increase public acceptance (Osei-Kyei and Chan, 2015[55]).

African quality labels for infrastructure can be more widely adopted to communicate quality standards to investors. Credible and recognised certifications help improve project quality and bankability, especially at the preparation stage. However, complex certification processes may slow down implementation. The PIDA Quality Label (PQL), assigned by the African Union Development Agency – New Partnership for Africa's Development (AUDA-NEPAD) Service Delivery Mechanism, serves as a recognition of quality for prioritised PIDA projects. As of 2025, up to 15 projects have been awarded the label, and there is potential for its broader application across the 69 projects in the PIDA Priority Action Plan 2 pipeline. By expanding the scope of African-led labels like the PQL, countries can better communicate implementation standards to investors, facilitate access to resources and establish minimum quality benchmarks for infrastructure in alignment with local contexts. Additionally, global initiatives like the Blue Dot Network, launched in April 2024, can complement quality labels by applying the G20 Principles on Quality Infrastructure. They can also extend standards from the preparation to the implementation phase, thereby enhancing the overall credibility and funding potential of infrastructure projects.

Skills development in infrastructure requires prioritising. Less than 1% of official development finance disbursed for infrastructure in Africa was allocated to education and training in 2023. According to the survey conducted by the OECD and the Africa Infrastructure Development Association for this report, skill shortages are most often reported in the early phases of the infrastructure life cycle, hindering project preparation, making projects less bankable and increasing their costs. Gaps in managerial skills are among the most salient across the life cycle of infrastructure projects. However, many promising skills development initiatives already exist, offering an opportunity that private firms, policymakers and international partners can collaboratively build on. Communities of practice can also offer valuable access to policy lessons at the project level, including those related to skills.

Notes

[1] The detailed methodology is explained in Annex 1.A.

[2] The Global Infrastructure Hub (GI Hub, 2018[56]) projects USD 192 billion annually for 2025-40, while the African Development Bank (2018[57]) estimates USD 130-170 billion annually for 2018-30. Larger investments may be required to meet specific policy and climate goals: the African Development Bank (2024[58]) foresees the need for USD 410 billion for roads and energy by 2030 to meet infrastructure and energy-related SDGs and USD 72 billion by 2063. Rozenberg and Fay (2019[53]) estimate that achieving the SDGs and limiting climate change to an increase of 2° Celsius would require annual spending of 9.2% of GDP between 2015 and 2030 in Africa, excluding North Africa, which in 2024 was equivalent to USD 257 billion.

[3] Tanzania (5%), Zambia (5.6%), Lesotho (5.7%) and Comoros (7%).

[4] Private investments account for about 70% and 20% of total infrastructure investments in South Africa and Egypt, respectively, well above the African average of 11%.

[5] Côte d'Ivoire, Egypt, Ethiopia, Kenya, Mozambique, Morocco, Nigeria, Senegal, Tanzania and Tunisia.

[6] In May 2025, the United States government proposed reducing its contribution to the African Development Fund (the concessional lending arm of the African Development Bank) by approximately USD 555 million, equivalent to about 6-7% of the current funding cycle.

[7] From September 2024 to January 2025, a systematic literature review was conducted to address the research question "What are the positive and negative environmental, social and governance sustainability effects of economic infrastructure?" The review identified a total of 110 studies published since 2010, with 65 studies offering results that were relevant to the research question. Ninety-four studies were identified through a systematic keyword search on Google Scholar, 13 from Foster et al. (2023[59]), and 3 from ad hoc follow-up searches.

[8] The infrastructure types whose (capacity) densities were not found to be correlated with productive transformation are container ports, wastewater treatment plants, wind energy infrastructure, hydroelectric infrastructure and other renewable energy infrastructure.

[9] The magnitude of the effect of additional investments depends on how much of a certain infrastructure type a country already has, i.e. its level of density. The modelling defined the infrastructure densities as i) the length (in kilometres [km]) of roads, railways and fibre optic cables, and ii) the installed capacity in megawatts for solar and fossil fuel-based power generation, per 100 km² of non-desert land area.

[10] According to this study, which focuses on Chinese infrastructure lending in Africa and participation in global value chains, a one standard deviation increase in infrastructure lending was associated with a 0.11 standard deviation increase in global value chain participation after four years.

[11] Many varying definitions of intermediary cities exist. For more information, see OECD/PSI (2020[60]), which offers this definition: "Intermediary cities are agglomerations which – for geographic, historical and economic reasons – act as bridges between metropolitan and rural areas. They represent strategic nodes within urban networks at the national or international level. Their population can range from 50 000 to 1 million inhabitants."

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1 Developing Africa's infrastructure for productive transformation

This chapter assesses the investments in infrastructure that African countries can make to reach the levels of productive transformation of their peers in other world regions. First, it uses a unique methodology to estimate the continent's total investment needs for transport, energy and digital infrastructure and assesses opportunities to deepen regional value chains and rural-urban linkages. Second, the chapter identifies the sources of financing in view of sovereign debt burdens and reduced aid budgets. Third, it evaluates the main environmental and social sustainability opportunities and risks of infrastructure development.

In brief

Developing infrastructure is necessary for Africa to achieve productive transformation. With average annual investments of USD 155 billion until 2040, African countries could develop their infrastructure to a level comparable with peer countries in other world regions that have the highest levels of productive transformation. This investment could raise average annual gross domestic product (GDP) growth by 4.5 percentage points. This big push for infrastructure could thereby help surpass the African Union's Agenda 2063 objective of 7% annual GDP growth per year and double Africa's GDP by 2040.

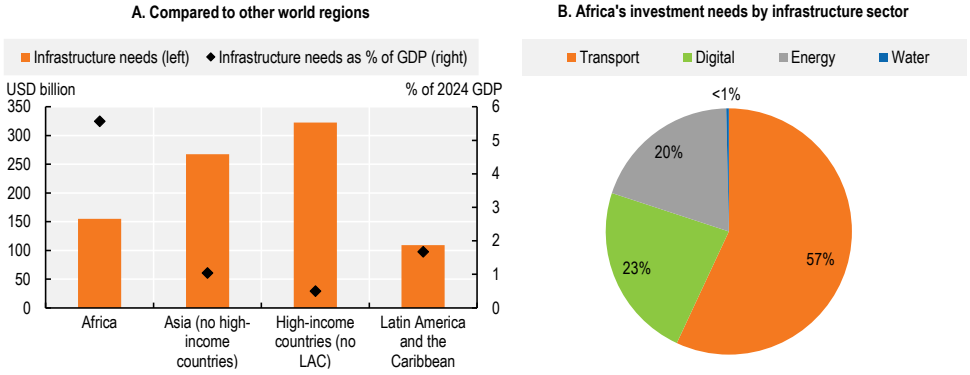
The continent's investment needs are especially large for cost-effective types of infrastructure, such as roads (32% of the total), railways (24%), fibre-optic cables (23%) and solar power (17%). Better transport, digital and energy infrastructure would improve Africa's value chain integration and productivity. Strengthening infrastructure within and between cities is key for productive transformation and narrowing rural-urban divides. Infrastructure maintenance remains important, making up 42% of the total investment needs.

To increase infrastructure financing to the required scale, sovereign debt conditions must improve, and the cost of capital be lowered. African governments spent around 1.3% of GDP (USD 34 billion) per year on infrastructure between 2016 and 2020, a share similar to other world regions but much less than the People's Republic of China (hereafter "China") (6.7%) and Viet Nam (5.1%). For private infrastructure investments, the cost of debt is at least 2.5 times higher in Africa than in OECD countries. While bilateral aid has been reduced due to shifting priorities, large development funders have increased their contributions.

Environmental and social sustainability risks of infrastructure can be better managed. Climate change and population growth can exacerbate vulnerabilities and negative outcomes, including pollution, biodiversity loss and the exclusion of rural populations and women. With additional policy and financial support, climate resilient and green infrastructure and nature-based solutions can minimise economic losses and harm.

Continental profile

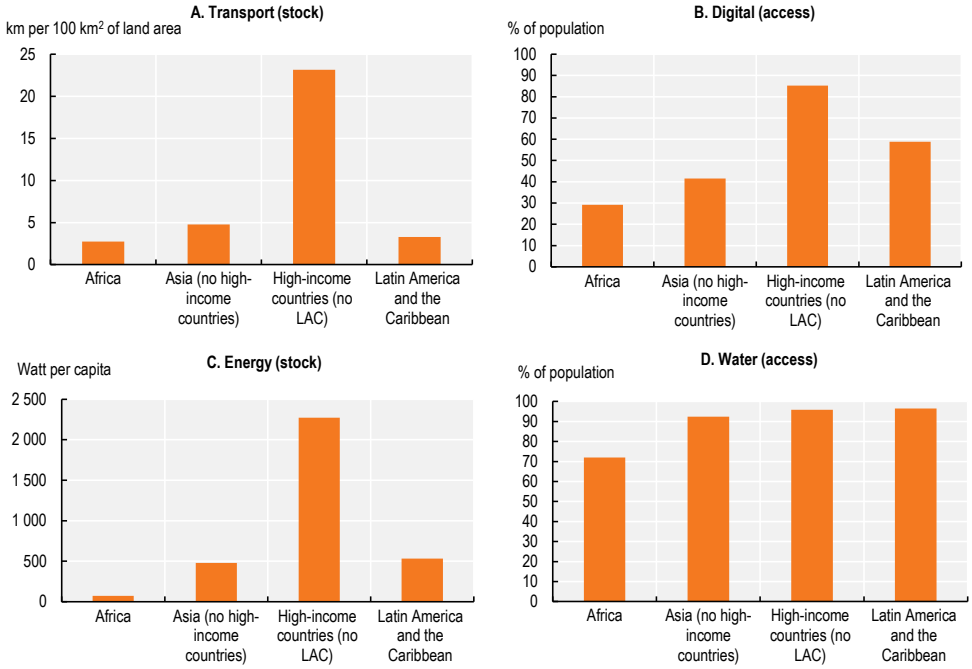
Figure 1.1. Annual infrastructure investment needed to achieve the productive transformation levels of benchmark countries by 2040



Note: LAC = Latin America and the Caribbean. Infrastructure investment needs refer to modelled estimates of the total expenditures required to build new infrastructure to match the infrastructure levels of peer countries that perform well in productive transformation, while also maintaining existing infrastructure. See Annex 1.A for details.
Source: Data sources for the investment needs estimations are listed in Annex 1.A.

StatLink https://stat.link/pgov8y

Figure 1.2. Average physical infrastructure stocks and access, by world region



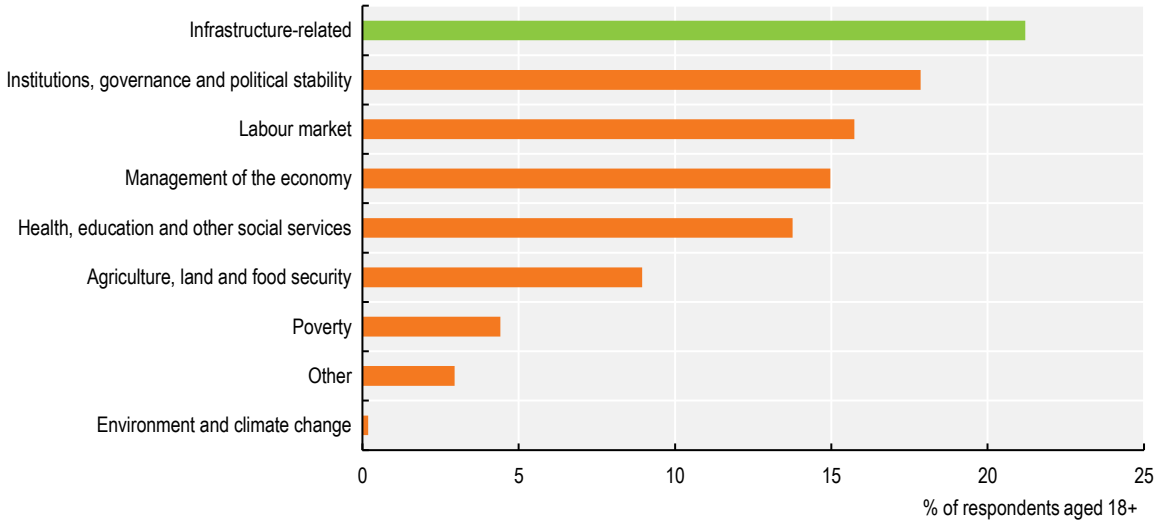
Note: LAC = Latin American and the Caribbean. Transport = kilometres (km) of paved roads and railways per 100 km² of non-desert land area. Digital = per cent of the population aged 15+ with access to the Internet. Energy = installed energy capacity as watt per capita. Water = per cent of the population with access to drinking water.
Source: Transport and energy indicators' sources are reported in Annex 1.A. Access to drinking water: Drinking water, sanitation and hygiene (WASH) estimates: UNICEF (2024[1]), *Drinking water, sanitation and hygiene in households by country, 2000-2022* (database), https://data.unicef.org/topic/water-and-sanitation/drinking-water/; Access to the Internet: Gallup (2020[2]), *Gallup World Poll 2020* (database), https://www.gallup.com/analytics/213617/gallup-analytics.aspx.

StatLink https://stat.link/t9kzrb

Infrastructure development is necessary to achieve Africa's productive transformation and Agenda 2063

Infrastructure development merits being a top priority for African policymakers, as it can boost growth, trade, job creation and firm productivity. Africans expect their governments to focus on infrastructure as a priority, according to this report's analysis of findings by Afrobarometer on the top national issue that Africans wish their governments would address (Figure 1.3). Infrastructure is an important enabler of economic growth, regional integration and employment. Since the physical stock of infrastructure[1] is more limited in Africa (Figure 1.2), infrastructure investments promise larger gains than in other world regions (Box 1.1). Integrated infrastructure networks can also boost firm productivity and help deliver well-connected trade networks, contributing directly to the fulfilment of the African Union's Agenda 2063 vision of "world-class infrastructure crisscrossing Africa" through enhanced connectivity by rail, road, sea and air and through the development of regional power pools and digital networks (AUC/OECD, 2019[3]; AU, 2015[4]).

Figure 1.3. Top national issue Africans think their governments should address



Note: The results are based on the question "In your opinion, what is the first most important problem facing this country that the government should address?" in a survey of 53 444 individuals aged 18+ from 39 African countries. The data are weighted to obtain a representative sample. The category "Infrastructure-related" comprises responses for "Electricity", "Infrastructure/Road and Transportation", "Water supply" and "Communications".
Source: Afrobarometer (2023[5]), *Merged Round 9* (database), https://www.afrobarometer.org/data/merged-data/.

StatLink https://stat.link/atgxid

Box 1.1. The role of infrastructure for Africa's productive transformation

The *Africa's Development Dynamics 2025* report addresses the question of how African policymakers can unlock infrastructure development to accelerate the productive transformation of the continent and its five regions. It focuses on economic infrastructure[1] which directly increases the productivity of firms and workers and indirectly promotes productive transformation over time. In line with the scope of the Programme for Infrastructure Development in

Africa (PIDA) and existing evidence of productivity effects, the report focuses on transport, energy, digital and water infrastructure.

Infrastructure is necessary for economic development. Infrastructure enables productive activities and access to goods and services for households and firms. Expanding the quantity and quality of infrastructure allows previously unexploited or underexploited resources and capital to be put to use, thereby augmenting production where possible, in turn increasing capital accumulation, economic growth and (on aggregate) socio-economic development (Familoni, 2006[6]). Despite the progress made in Sustainable Development Goal 9: Industry, innovation and infrastructure, the current pace of progress in Africa remains insufficient to achieve the goal by 2030 (Africa UN, 2025[7]).

Infrastructure is also a pre-condition for productive transformation. Productive transformation is the process of accumulating and diffusing organisational, production and technological capabilities, including reallocating capital and labour towards the more productive segments of an economy (AUC/OECD, 2019[3]). Transport infrastructure allows agricultural workers in rural areas to access more productive jobs, notably in services (Barrett et al., 2017[8]; Gollin and Rogerson, 2014[9]), while digital and energy infrastructure enable the use of modern technologies in agriculture and manufacturing and the growth of highly productive activities like the financial and digital economies (Herera Dappe and Lebrand, 2024[10]). Coupled with trade and tax reforms, infrastructure development can lead to productive transformation with more sustainable and equitable economic outcomes (Cateia and Fereira, 2023[11]). Table 1.1 illustrates aggregate economic impacts of infrastructure investments in transport, energy and digital infrastructure across developing countries.

Table 1.1. Economic effects of infrastructure in developing countries

	Effects: Increase in key development indicators associated with a 10% increase in infrastructure			
	Economic output	Employment	Trade	Population
Transport	0.1%	0.2%	0.26%	2.2%
Energy	0.5%	0.5%	/	/
Digital	0.3%	/	/	/

Note: "Increase in infrastructure" refers to public expenditure and physical stock combined. "Economic output" includes indicators of production, income, expenditures and productivity, in levels or growth rates. Only coefficients from macro-studies are reported. "Employment" includes wages and employment indicators. "Trade" includes exports and imports. "Population" includes changes in population and migration flows. "/" indicates missing data. No systematic results were available for water infrastructure.
Source: Foster et al. (2023[12]), *The Impact of Infrastructure on Development Outcomes: A Meta-Analysis*.

Infrastructure development comes with particular financing and planning challenges. Infrastructure development takes a long time and requires large upfront investments that are beyond the capacity of private enterprises. From 2016 to 2020, the public sector accounted for 89% of total commitments to infrastructure in Africa, with 42% coming from African governments and the rest from bilateral and multilateral stakeholders' data (ICA, 2022[13]). New infrastructure must be well-embedded in existing and future economic activities, while balancing growth and poverty alleviation and the needs of rural and urban populations (Canning and Bennathan, 2000[14]; Christiaensen and Todo, 2014[15]). Infrastructure planning requires co-ordination between governments across the local, national, regional and international levels, to avoid frictions and cumbersome processes (Gambino and Reboredo, 2022[16]).

Note: 1. Broadly, economic and social infrastructure can be defined as follows: Economic infrastructure includes transport (e.g. roads and ports), utilities and public works (e.g. energy and water supply, dams, sanitation and sewage, and waste collection), and digital and telecommunications (e.g. fixed and mobile telephony and Internet connectivity). Social infrastructure includes the provision of education (e.g. schools, universities and teachers) and health (e.g. clinics, doctors and pharmaceutical value chains).
Source: Authors' compilation.

An annual investment in infrastructure of USD 155 billion could boost African countries' productive transformation to match the levels of peer countries in other world regions. This report uses a unique methodological approach to estimate the investments needed to fill the gap in productive transformation between a given African country and benchmark countries (Box 1.2; Annex 1.A). The estimation considers scenarios that reflect closer and more distant time horizons of important African policy agendas, notably PIDA's target for 2012-40 and the Agenda 2063. The scenarios mirror the economic opportunity of pushing Africa's infrastructure development, contrasted with the respective investment costs.[2] They project the GDP growth that would result from the increases in infrastructure stock, in terms of both their immediate effects and their cumulative impact over time. Table 1.2 summarises the results.

Table 1.2. Estimated infrastructure investment needs and growth impacts until 2040 and 2063

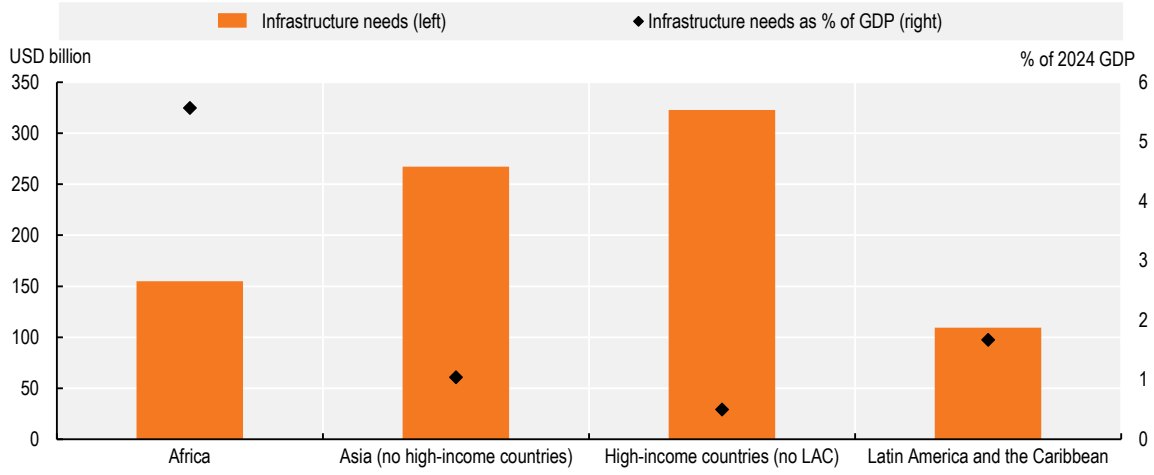
Time horizon to meet the total investment needs	Estimated annual investment needs	Estimated increase in annual GDP growth (immediate effects, in percentage points)	Estimated increase in long-term annual GDP growth (cumulative effects of annual investment, in percentage points)	Policy agendas with equal time horizons
2040	USD 155 billion	+1.8	+4.5	PIDA target for 2012-40
2063	USD 102 billion	+1.4	+3.9	Agenda 2063

Note: GDP = gross domestic product. The steps taken to calculate the investment needs and growth estimations are detailed in Annex 1.A. The estimated increase in annual growth captures the short-term effect of infrastructure on economic output. Long-term annual growth accounts for the cumulative impact of past investments in infrastructure as their benefits continue to materialise over time.
Source: Data sources for the estimations are listed in Annex 1.A.

These investments could more than double Africa's GDP by 2040 and enable African countries to achieve the objective of 7% annual growth outlined in Agenda 2063. By increasing annual GDP growth by 4.5 percentage points, an annual infrastructure investment of USD 155 billion would add USD 2.83 trillion to Africa's GDP by 2040, thereby more than doubling it compared to the USD 2.80 trillion in 2024. Assuming that the currently projected average annual GDP growth rate of 4.4% from 2025 to 2030 could be sustained, the investment would result in an 8.9% long-term GDP growth rate. Even an annual investment of USD 102 billion would lead to an overall growth rate of 8.3%. A cost-benefit analysis conducted for this report estimates that the USD 155 billion in annual investment would have a benefit-cost ratio of 1.13. This means that the cumulative GDP gains from the higher economic growth that would result from the investment until 2040 would exceed the infrastructure investment costs by 13% (see Annex 1.A for details).

Filling Africa's investment needs would require infrastructure spending on par with China or Viet Nam. The 2040 scenario requirement of USD 155 billion in annual investment is equivalent to 5.6% of Africa's GDP in 2024[3] and nearly double the total annual spending of USD 83 billion on average from 2016 to 2020 according to the most recent available data (ICA, 2022[13]). As a share of total GDP, Africa's investment need is three times larger than that of Latin America and the Caribbean and five times larger than that of developing Asia (Figure 1.4). In the 2063 scenario, African countries' requirement of USD 102 billion in annual investment equals 3.7% of the continent's GDP in 2024, or USD 19 billion in additional annual spending. Such a big push for infrastructure development appears possible if Africa's infrastructure spending can match that of countries that have successfully combined large infrastructure investments with productive transformation policies to boost economic development. African governments spent an average of 1.3% of GDP (USD 34 billion) on infrastructure per year over the 2016-20 period. This is comparable to the global average but far below the spending levels of countries pursuing an infrastructure-led approach to economic development, such as China (6.7% of GDP) and Viet Nam (5.1% of GDP) over the 2010-14 period.[4]

Figure 1.4. African countries' estimated annual investment needed by 2040 to reach the infrastructure stocks of peer countries that have top productive transformation



Note: Infrastructure investment needs refer to modelled estimates of the total expenditures required to both maintain existing infrastructure and provide enough new infrastructure to match the infrastructure levels of peer countries that perform well in productive transformation. See Annex 1.A for details.
Source: Data sources for the investment needs estimations are listed in Annex 1.A.

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Box 1.2. Methodology to estimate Africa's infrastructure investment needs

The *Africa's Development Dynamics 2025* report uses a unique methodology to estimate the infrastructure investments that African countries would need by 2030, 2040 and 2063 to close the infrastructure gaps with benchmark countries that have high levels of productive transformation. The following steps are involved (Annex 1.A for details):

1. A composite index of productive transformation is constructed from five indicators (e.g. value added of services and manufacturing, and exports diversification), assigning each country in the world a productive transformation score from 1 to 100.
2. An econometric model assesses i) the size and statistical significance of the effects of specific infrastructure types (e.g. roads and railways) on the composite index, and ii) any non-linear relationships.
3. Each country is matched with a benchmark – a comparable country that shares important characteristics, such as GDP, surface area and population, and that is more successful in achieving productive transformation.
4. An estimate is then made of how much each country's stock of physical infrastructure would need to increase to reach the level of its benchmark country. Infrastructure stocks are measured, for example, in kilometres of roads, railways and cables, and megawatts of energy infrastructure.
5. The estimated differences of infrastructure stocks between each country and its benchmark are then re-calibrated based on cost-effectiveness, using the strength of the relationship between a given type of infrastructure and productive transformation levels (established in step 2) and a set of original unit cost data.

6. To quantify the required investment, the estimated total infrastructure needs for each country are translated from stocks into monetary terms using the perpetual inventory method (OECD, 2009[17]). To approximate the additional cost for the maintenance and operation of infrastructure stocks, the annual depreciation value from the previous year is added to the investment need for additional infrastructure stock.

A limitation of the methodology is its reliance on historical data. The results are thus based on the assumption that the effects of infrastructure on productive transformation will be similar in the future to those in the past. However, how infrastructure actually contributes to productive transformation will depend on future developments, such as technological innovation and policies (see Rozenberg and Fay (2019[18]) for a detailed scenario analysis).

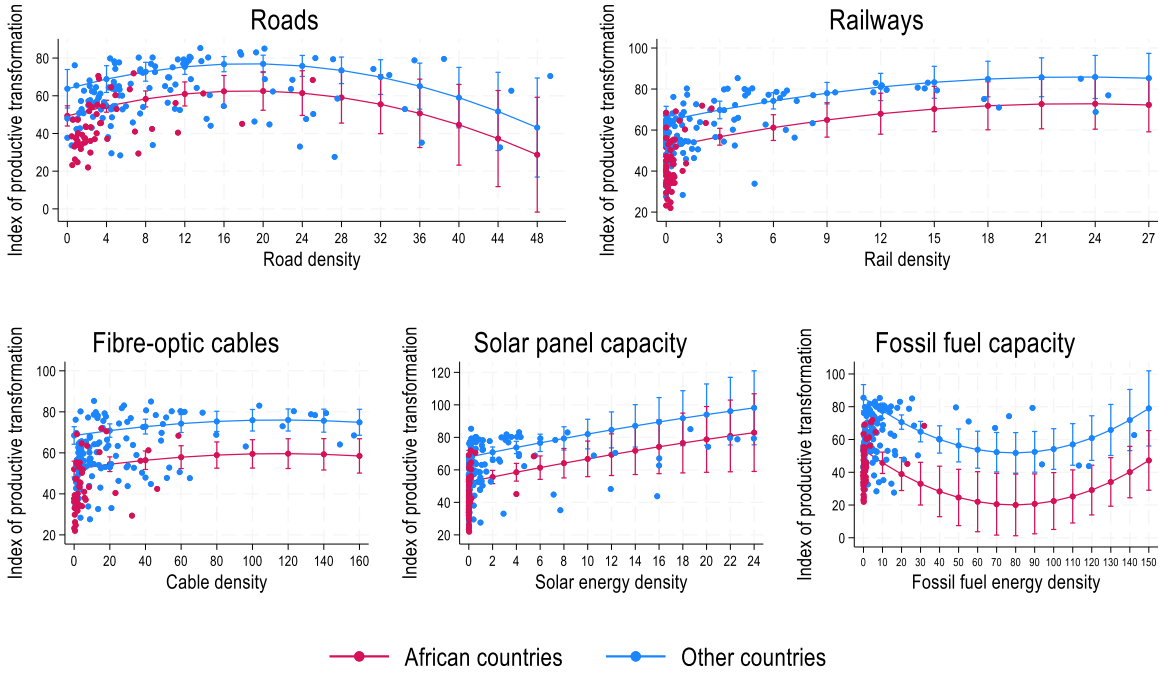
Source: Authors' compilation.

Investments in specific types of infrastructure can be more cost-effective than others for achieving productive transformation

Specific infrastructure types have a more direct relationship to productive transformation than others. The results of the economic modelling conducted for this report (Box 1.2; Annex 1.A) suggest that only certain types of infrastructure have a direct, statistically significant relationship with productive transformation. This does not diminish the importance of other infrastructure types, which may yield substantial socio-economic benefits in other areas, such as improved water and sanitation infrastructure resulting in a healthier population (Banerjee and Morella, 2011[19]).[5] However, in the context of productive transformation, only roads, railways, fibre-optic cables, installed solar power and fossil fuel capacity were found to be correlated with productive transformation.[6] The magnitude of the effect of additional investments depends on how much of a certain infrastructure type a country already has, i.e. its level of density (Figure 1.5; Annex 1.A). The modelling defined the infrastructure densities as i) the length (in kilometres [km]) of roads, railways and fibre optic cables, and ii) the installed capacity in megawatts (MW) for solar and fossil fuel-based power generation, per 100 km² of non-desert land area.

- Road density resulted in an inverse U-shape: benefits peak at around 18 km per 100 km^2 of land area.
- Railway density shows positive correlations with mildly diminishing returns.
- Fibre-optic cables and solar panels have a strong linear correlation with productive transformation, with consistent gains per unit increase.
- Installed power capacity from fossil fuel exhibits a U-shaped relationship: every additional megawatt is associated with a decrease in productive transformation until turning positive for countries with a fossil fuel density of 78 MW per 100 km^2 of land. (No African country surpasses this threshold, suggesting that additional fossil fuel capacity would be associated with lower productive transformation levels for any African country.)

Figure 1.5. Relationship between the densities of selected infrastructure types and productive transformation



Note: Only infrastructure types with significant marginal effects are displayed. Lines show fitted values from regressions estimating the relationship between each type of infrastructure and the index of productive transformation. Bars show confidence intervals. Dots represent the raw data points. Details are in Annex 1.A.
Source: Data sources are listed in Annex 1.A.

The cost-effectiveness of infrastructure investments depends on a country's initial infrastructure endowment, with different types of infrastructure offering varying returns. This report compiles unique infrastructure cost data (USD per additional kilometre or megawatt) to determine cost-effectiveness (Table 2; Annex 1.A). Road infrastructure is highly cost-effective in low-transport-density countries, where expanding road stocks yields strong returns. However, as road density increases, the marginal benefits decline, making further investments less cost-effective. On average, building railways and installing fibre-optic cables are cost-effective options for productive transformation. While railways have the highest unit costs, they also deliver substantial returns (they have the highest marginal effects). In contrast, fibre-optic cables offer the lowest returns but are also the least expensive infrastructure type per unit. Solar energy also provides substantial benefits, especially in countries with high transport density.

Table 1.3. Cost-effectiveness of different infrastructure types to achieve productive transformation

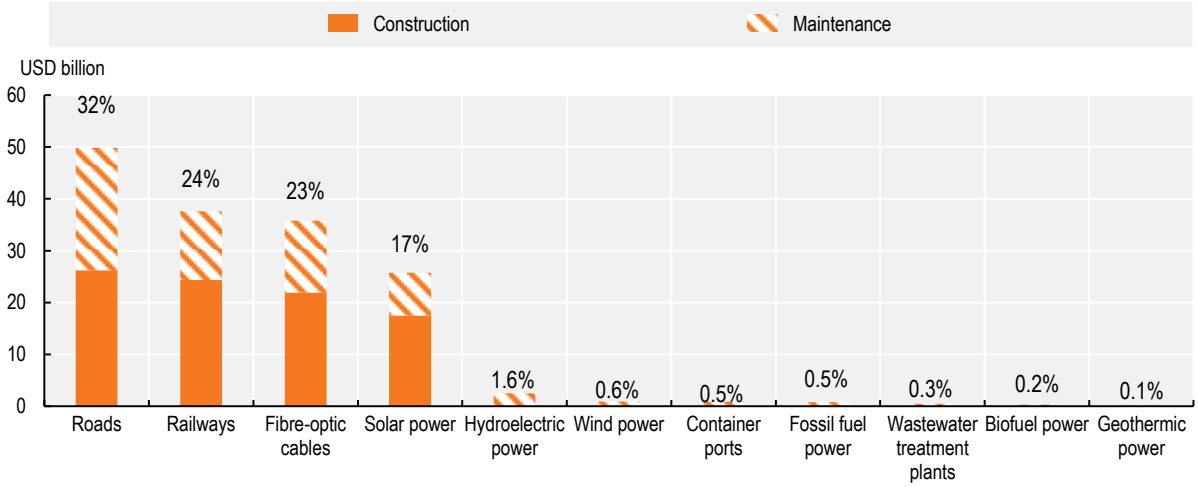
Infrastructure type	Density	Unit range	Example countries	Unit costs	Average marginal effect	**Average cost-effectiveness ratio**
Roads and railways	Low density	Roads: 0.4 to 2 km per 100 km^2 of land area	Angola, Chad, Sudan, Niger, DR Congo	662 771 per km	+1.37	**98**
		Railways: 0 to 0.2 km per 100 km^2 of land area	Burundi, Equatorial Guinea, Mauritius, Rwanda	1 348 000 per km	+1.83	**135**
	Medium density	Roads: 2 to 5 km per 100 km^2 of land area	Ghana, Benin, Djibouti, Uganda, Mauritania, South Africa	662 771 per km	+1.24	**110**
		Railways: 0.2 to 2 km per 100 km^2 of land area	Algeria, Côte d'Ivoire, Ethiopia, Mozambique, Zambia	1 348 000 per km	+1.81	**137**
	High density	Roads: 5 to 63 km per 100 km2 of land area	Morocco, Gambia, Mauritius, Seychelles, Rwanda, Tunisia	662 771 per km	+0.24	**>300**
		Railways: 2 to 24 km per 100 km^2 of land area	Egypt, Eswatini, Kenya, Nigeria, Tanzania, Zimbabwe	1 348 000 per km	+1.81	**142**
Fibre-optic cables	Same effect at different densities	0.04 to 58 km per 100 km^2 of land area	All African countries	72 320 per km	+0.13	**153**
Solar panels	Same effect at different densities	0 to 5 MW per 100 km^2 of land area	All African countries	1 250 000 per MW	+1.52	**210**

Note: The detailed methodology is explained in Annex 1.A.
Source: Data sources are listed in Annex 1.A.

Investing in transport, energy and digital infrastructure can boost regional value chains and firm productivity

Africa's investment needs for specific infrastructure types are the largest for roads, followed by railways, solar panels and fibre-optic cables. The monetary investments that African countries need to reach the infrastructure stocks of peer countries with top-performing productive transformation levels can be estimated based on the cost-effectiveness of each infrastructure type (Table 2). The continent's investment needs are particularly large for building and maintaining roads (32% of the total), railways, fibre-optic cables and its solar power capacity. Overall, 58% of the investment needs is for building new infrastructure and 42% for maintenance[7] (Figure 1.6).

Figure 1.6. African countries' estimated average annual investments needed by 2040 to reach the infrastructure stocks of peer countries that have top productive transformation, by infrastructure type



Note: Results show modelled estimates of the total expenditures required both to maintain existing infrastructure and to provide enough new infrastructure to match the infrastructure levels of similar high-performing countries in productive transformation, as determined by a methodology explained in Annex 1.A. Due to rounding, the percentages do not necessarily add up to 100%.
Source: Data sources are listed in Annex 1.A.

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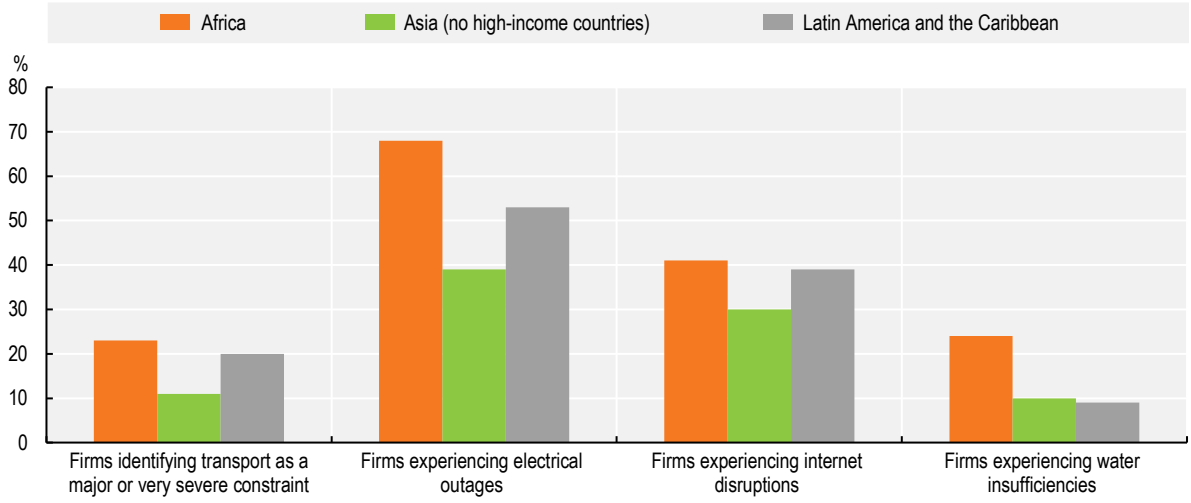
Transport infrastructure is a key enabler of productive transformation in Africa, as it supports both structural change and regional trade integration. For roads and railways to contribute to productive transformation, this report estimates average annual investment needs of, respectively, USD 50 billion and USD 38 billion. Such investments can generate multiple benefits: they can enable a structural change from agriculture to higher-value services and manufacturing while improving firm productivity through better access to inputs and markets (Fiorini and Sanfilippo, 2022[20]); they can also significantly reduce trade costs, which are over five times higher in Africa than in other world regions (Porteous, 2019[21]). By lowering these costs, improved transport infrastructure can boost intra-African trade – particularly in processed and semi-processed goods – and lead to higher export volumes (AUC/OECD, 2022[22]). For instance, operationalising regional transport networks laid out in the PIDA initiative is estimated to augment exports by 11.5% and overall GDP growth by up to 2% (Fontagné et al., 2022[23]).

Investment in energy infrastructure is vital to achieve productive transformation, meet access and clean energy goals and respond to growing demand. Africa's annual productive transformation investment need for energy infrastructure is estimated at USD 31 billion, with renewable energy infrastructure accounting for 97% of this amount. However, to reach Africa's overall energy access and clean energy goals, a further USD 180 billion of investments per year may be required until 2030 (IEA, 2024[24]). Currently, 44% of Africa's population does not have access to electricity,[8] and the percentage of manufacturing firms reporting outages (68%) is higher than in any other world region (Figure 1.7). Energy demand is predicted to increase by one-third between 2020 and 2030, and deploying new energy sources can support sustainable development (IEA, 2022[25]).

Figure 1.7. Infrastructure constraints reported by manufacturing firms in developing world regions, 2015-23 (latest year available)



Source: Authors' calculation based on World Bank (2024[26]), *Enterprise surveys* (database), https://www.enterprisesurveys.org/en/data/exploretopics/infrastructure-and-climate.

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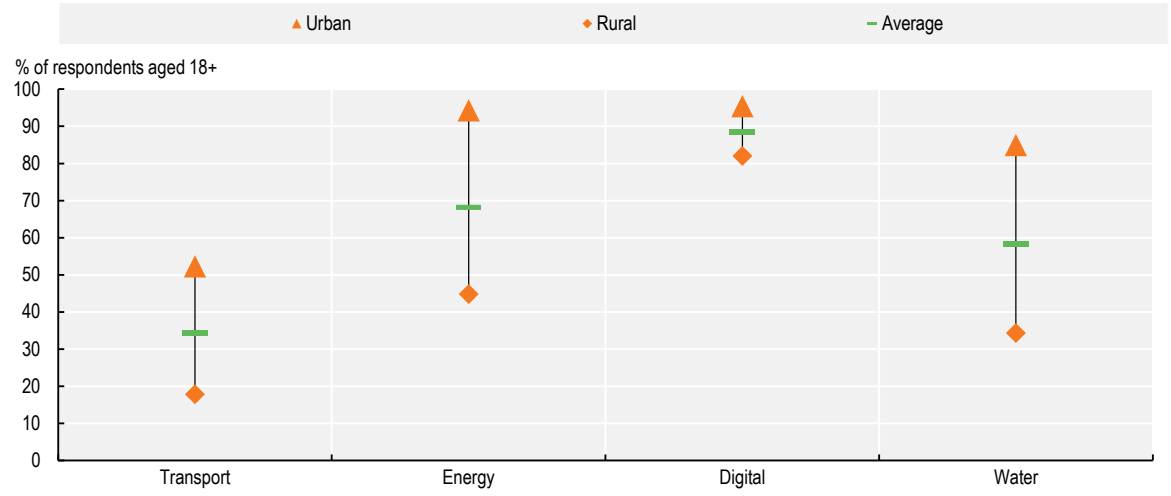
The development of digital infrastructure supports connectivity and regional integration. The continent's annual investment needed to achieve productive transformation through digital infrastructure is estimated to be USD 36 billion. This is smaller than the investment needed for transport, in part because significant gains in digital infrastructure development have already been made in the last decade. For instance, Africa's operational fibre-optic cable network reached 1.3 million km in 2024, compared to about 466 000 km in 2010. As a result, Internet access was multiplied by 4, reaching 41% in 2022. However, remaining concerns include affordability, the availability of localised digital services and the need to reach underserved populations (AUC/OECD, 2021[27]). In 2024, the average cost of broadband Internet per month for Internet users across 18 African countries was USD 56, higher than in Latin America and the Caribbean (USD 46) and developing Asia (USD 17).[9] Enhanced digital public infrastructure – systems that offer digital building blocks for businesses and enable public service delivery – can be an important complement to digital connectivity infrastructure. In particular, digital public infrastructure can streamline customs, allow for cross-border digital services and trade, support renewable energy system integration in Africa, and expand access to trade finance for small and medium-sized enterprises (ACET, 2025[28]).

While improved water infrastructure has limited effects on productive transformation, it is vital for the climate resilience of agriculture and other industries and for human well-being. Africa's water and sanitation investment need to fill the gap in productive transformation is estimated to be less than USD 1 billion per year. Yet, as the effects of climate change intensify, increasing water demand from individuals (especially in rural areas) and firms (particularly those requiring water for agricultural irrigation), further investments are likely to be necessary. Currently, agricultural activities account for 59% of Africa's total water usage, followed by municipalities (31%, including domestic use) and industries (10%) (OECD, 2021[29]). Investments in water-efficient irrigation systems can increase the productivity of land usage and help the continent adapt to the effects of climate change. In West Africa, for instance, only about 10% of irrigable land was irrigated in 2017 (AUC/OECD, 2022[22]).

Improving infrastructure within and between cities is key for productive transformation and narrowing rural-urban divides

Despite progress in rural areas, cities continue to offer far better access to infrastructure. Rural-urban divides are starkest for energy infrastructure: in 2021, less than 20% of rural households had access to electricity, compared to 58% of households in cities with fewer than 50 000 inhabitants and 80% in cities with over 1 million inhabitants. In the same year, only 7% of rural households could access piped water, compared to 25% in small cities and 33% in large cities (OECD/UN ECA/AfDB, 2022[30]). Representative survey results across 39 African countries confirm that rural-urban access divides are widest for water and energy infrastructure (51 and 49 percentage points, respectively), followed by access to a paved road (34 percentage points) at generally lower levels of access, while over 80% of rural respondents reported to have access to a mobile phone service (Figure 1.8).

Figure 1.8. Reported accessibility of urban and rural infrastructure in Africa



Note: The results are based on a survey of 53 444 individuals aged 18+ from covering 39 African countries. The data are weighted to obtain a representative sample. The selected questions are the following: Transport: "Thinking of your journey here [to the location where the survey is taken]: Was the road at the start point in the PSU/EA [primary sampling unit/enumeration area] paved or unpaved?"; Energy: "Is there an electricity grid that most houses can access in the primary sampling unit (PSU)/enumeration area (EA)"; Digital: "Is there a mobile phone service that most houses can access in the PSU/EA"; Water: "Is there piped water or a sewage system that most houses can access in the PSU/EA?".
Source: Authors' calculations based on Afrobarometer (2023[5]), *Merged Round 9* (database), https://www.afrobarometer.org/data/merged-data/.

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Infrastructure investments in urban clusters are more conducive to growth and productive transformation but should be well-planned to be cost-effective. Due to agglomeration economies (e.g. higher population density and economic clustering), a given quantity of infrastructure stock can benefit more individuals and firms in larger cities compared to smaller cities and rural areas (OECD/UN ECA/AfDB, 2022[30]). Rapid urbanisation also increases the demand for infrastructure and thereby the political and financial incentives to develop it. For example, a 10% increase in urbanisation can raise electricity consumption by 3.92% (El-Bouayady et al., 2024[31]). Between 2005 and 2016, almost half (45%) of urban infrastructure spending needs, approximately USD 320 billion, originated from cities with over 10 000 inhabitants/km^2 (OECD et al., 2025[32]). Urban infrastructure development can help reduce poverty and increase economic growth in African cities (Castells-Quintana, 2017[33]; Mallek et al., 2024[34]). However, planning and investing in urban infrastructure is far more cost-effective *ex ante* than intervening *ex post* (Africa Urban Forum, 2024[35]). In cities like Kigali, Lagos and Kampala, early investments – such

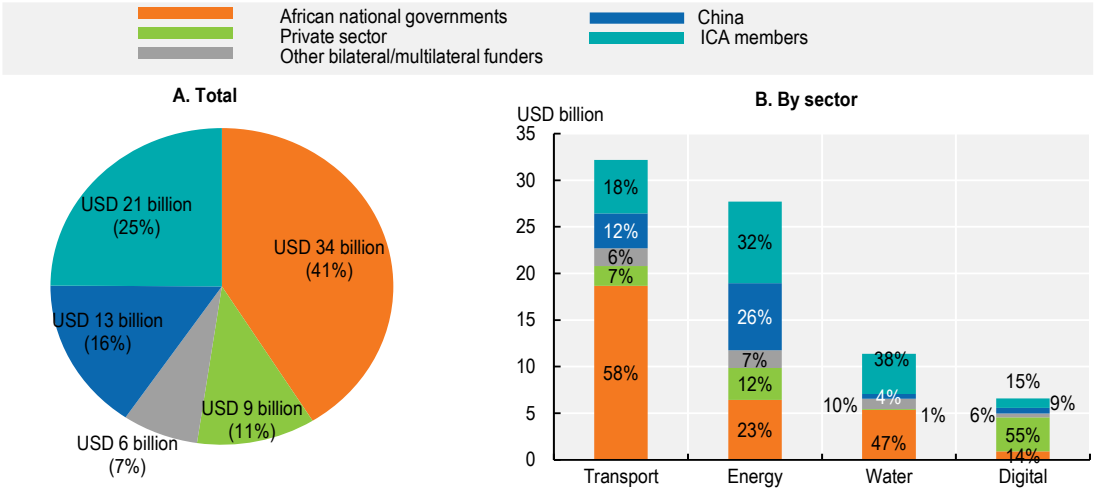
as basic road grids, around which settlements can be established more coherently, or serviced plots with utilities and land demarcation – can cost as little as 1% to 12% of the expense of building and servicing public housing after unplanned expansion (Collier et al., 2019[36]).

Strengthening infrastructure for intermediary cities[10] can reinforce rural-urban linkages and local capacities. Promoting productive activities in intermediary cities is crucial for strengthening Africa's rural-urban supply chains and helping local firms meet regional demand. Expanding transport networks can be particularly instrumental: for instance, a study focusing on Mozambique found that reducing farmers' travel time to the nearest intermediary city from 24 to 4 hours led to a 16-fold increase in the ratio of actual crop production over potential crop production (AfDB/OECD/UNDP, 2016[37]; Dorosh et al., 2012[38]). Improving firms' access to energy, water and digital technologies in intermediary cities can help foster the processing, storage and distribution capacities necessary for developing agricultural value chains and creating local employment (OECD/PSI, 2020[39]; AUC/OECD, 2022[22]).

To increase infrastructure financing to the required scale, sovereign debt conditions would need to be improved and the cost of capital lowered

African governments and development funders are the dominant sources of infrastructure financing. From 2016 to 2020, these two groups accounted for 89% of the USD 83 billion average annual commitments to infrastructure in Africa (Figure 1.9.A). Most of their investments target transport, energy and water infrastructure. In contrast, in digital infrastructure, private sector investments account for 55% of the total. Nonetheless, even this higher level of private sector investment in digital infrastructure remains below the 76% recorded across developing countries (World Bank (2017[40]); Figure 1.9.B).

Figure 1.9. Contribution to Africa's infrastructure financing, by source and sector, annual average 2016-20



Note: The members of ICA (Infrastructure Consortium for Africa) were the G20 countries, Spain, and several African and international development organisations and finance institutions. Due to rounding, the percentages in the columns of Panel B do not necessarily add up to 100%.

Source: ICA (2022[13]), *Infrastructure Financing Trends in Africa 2019-2020*, https://www.afdb.org/sites/default/files/documents/publications/04112022ift_africa_report_2019-2020-2_english.pdf.

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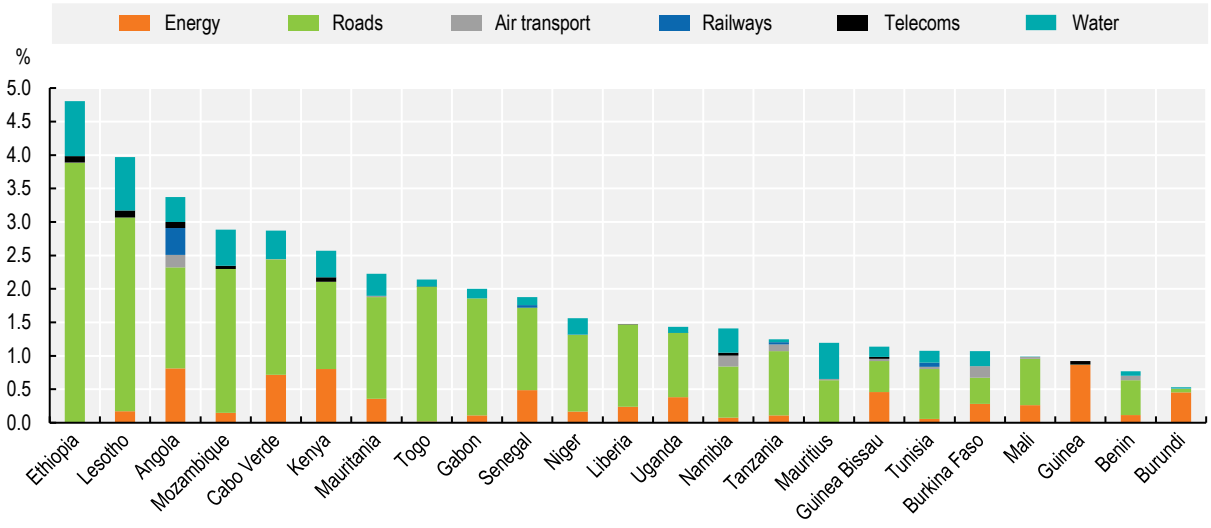
Limited fiscal space and growing sovereign debt burdens constrain African government spending on infrastructure

African governments allocate to infrastructure a share of their GDP which is similar to that of other world regions. Over 2010-17, direct budgeted spending from governments ranged from 0.5% to 4.0% of national GDP across 23 African countries, compared to 0.5% to 8.0% across 5 countries in developing Asia and 0.1% to 3.0% across 13 countries in Latin America and the Caribbean (Figure 1.10). This spending is similar to or above the amount high-income countries invest in transport infrastructure (averaging 0.9% over 2018-21) but below China's and Viet Nam's average infrastructure investments (at 6.7% and 5.1%, respectively over 2010-14).[11] In addition to direct budget allocations, public spending on infrastructure in Africa is channelled through state-owned enterprises (30%) and public-private partnerships (10%) which often require off-budget interventions such as fiscal injections or contract renegotiation (World Bank, 2017[40]; 2023[41]).

Figure 1.10. Direct government capital expenditure for infrastructure in selected African countries, average 2010-17 (% of gross domestic product)



Source: World Bank (2024[42]), *Boost initiative: Open Budget Portal* (database), https://www.worldbank.org/en/programs/boost-portal/boost-data-lab.

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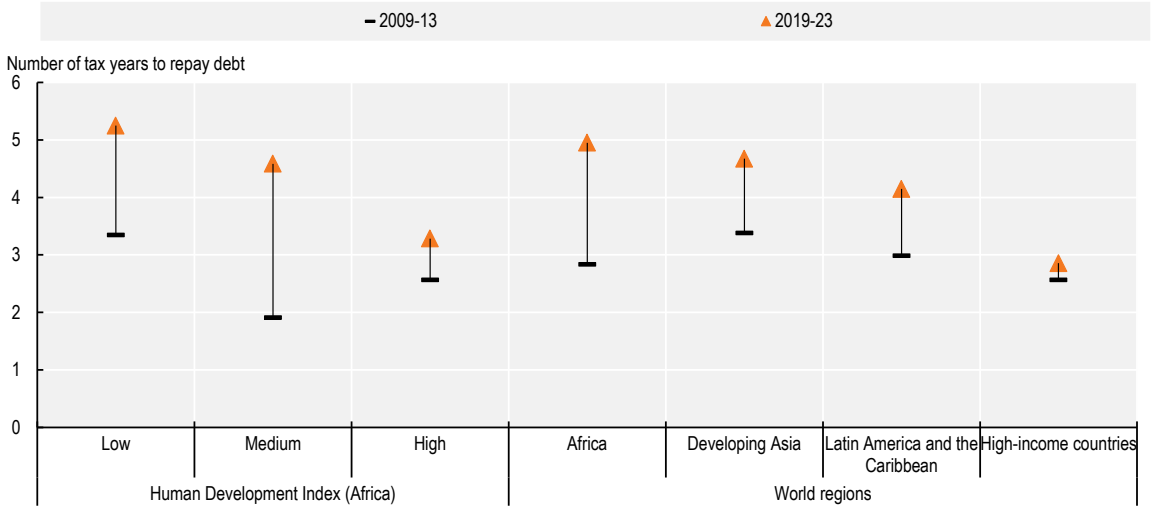
African countries face high debt burdens and fiscal tightness. The continent's sovereign debt burden is approaching the levels from before the major debt relief initiatives in the early 2000s. In 2024, public debt reached 67% of Africa's GDP – surpassing the 62% of 2000 – of which external debt accounted for around 22% of GDP. Eight African countries are in debt distress (out of 11 globally), and 15 others are facing a high risk of overall debt distress,[12] including 12 for which the risk arises from external debt positions (World Bank/IMF, 2025[43]). In addition, between 2009-13 and 2019-23, fiscal tightness – the number of tax years it would take to repay the public debt –increased on the continent by 2.1 years; Africa's fiscal tightness rose faster than in developing Asia (+1.3 years) and Latin America and the Caribbean (+1.2 years) (Figure 1.11). African countries with medium-level scores on the Human Development Index (HDI) saw the sharpest increase in fiscal tightness, rising from about 2 years to over 4.5 years. The increase for medium-HDI countries is linked to their reduced access to concessional low-interest debt and generally rising interest rates. Yet, African countries with low HDI scores face the tightest fiscal conditions, as they would need over 5 tax years to repay their debts, up from 3.2 years a decade ago.

Figure 1.11. Median increase in fiscal tightness, by income level and world region, 2009-13 versus 2019-23



Note: Fiscal tightness is represented as the number of tax years it would take to repay the public debt. See Aizenman and Jinjarak (2010[44]); Calderon et al. (2018[45]).
Source: Kose et al. (2022[46]), *A Cross-Country Database of Fiscal Space* (database), https://www.worldbank.org/en/research/brief/fiscal-space.

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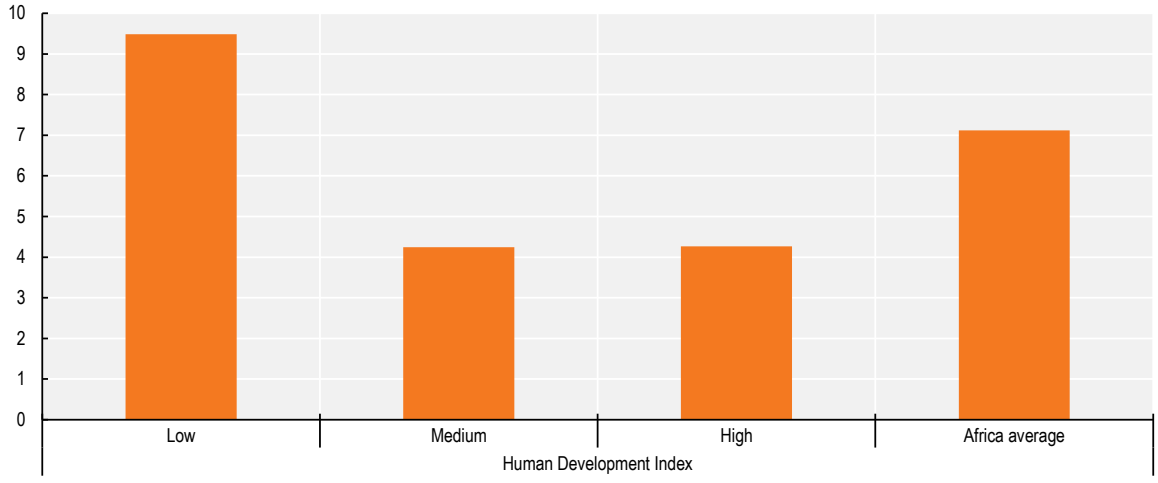
African governments, on average, spend more on debt service than on infrastructure, partly due to higher interest rates. Median debt service – ongoing loan repayments and interest payments for sovereign debt – grew from 3.5% of government expenditure in 2010 to 12% in 2024. Debt service payments amount to over 10% of public spending in 24 out of 49 African countries for which data is available. African governments spend, on average, 7 times more on debt service than on infrastructure. This ratio increases to 9.5 for low-HDI countries and about 4 for medium- to high-HDI countries (Figure 1.12). The large increase in overall debt service can be partly explained by the high interest rates applied to sovereign debt. Africa's top infrastructure financiers, such as the World Bank, China, the AfDB and bilateral creditors, apply vastly different interest rates to different African countries, ranging from 0.2% to 7.7% (World Bank, 2024[47]). Over 2018-22, 11 countries[13] borrowed from private creditors at interest rates above 5%. As a result, government spending just for interest payments surpasses spending on infrastructure in 15 African countries (on health in 25 countries and on education in 7 countries) (UNCTAD, 2024[48]).

Figure 1.12. Average spending by African countries on debt servicing as a multiple of government investment in infrastructure, 2019-23



Note: This indicator is calculated based on an average of available data over the past five years for public infrastructure spending (2019-20) and debt servicing (2019-23).
Source: Authors' calculation based on ICA (2022[13]), *Infrastructure Financing Trends in Africa 2019-2020*, and World Bank (2024[47]), *International Debt Statistics* (database), https://www.worldbank.org/en/programs/debt-statistics/ids.

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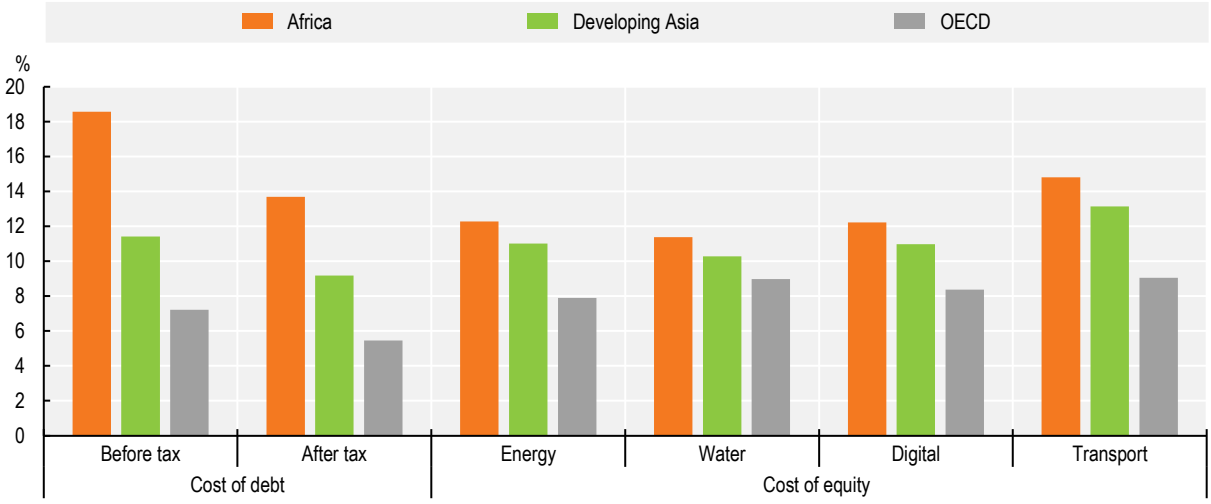
Private sector investments remain limited, partly due to risk perceptions and macroeconomic conditions, increasing the cost of capital

Most African countries are unable to tap into the growing pool of international and domestic private capital that could be allocated to infrastructure investments. Global private infrastructure investment[14] almost tripled in recent years, from approximately USD 160 billion in 2013 to USD 420 billion in 2022. During this period, Africa accounted for only 6-8% of annual investment, compared to 20-25% for Asia, North America and Western Europe (GI Hub, 2023[49]; Auriol and Saussier, 2025[50]). While the volume of private capital deals to Africa more than doubled between 2012-23, the average value of these deals remains low (AVCA, 2025[51]). Assets under management by African institutional investors have also increased in the last decade. However, less than 3% are allocated to infrastructure investment, below the target of the 5% Agenda of the African Union Development Agency – New Partnership for Africa's Development (AUDA-NEPAD) (AfDB/IFC, 2022[52]; AUDA-NEPAD, 2017[53]). High perceived risks contribute to limited investment flows and lead investors to demand higher returns. Infrastructure project costs and timelines are estimated to be as much as 60% higher in Africa than those in developed countries, while expected returns on early-stage infrastructure projects can reach up to 20% (BCG/AFC, 2017[54]; MiDA, 2018[55]).

Rising costs are contributing to a drop in private investment in African infrastructure projects. Private investments in infrastructure fell from USD 1.8 billion in 2023 to USD 1.2 billion in 2024, reflecting a general slowdown in private capital deals, particularly in large deals in the energy and digital sectors (AVCA, 2025[56]; 2024[57]). This slowdown is partially due to rising costs that make investments less profitable. Estimates suggest that the total cost for a typical solar project increased by 45% in 2023-24 due to deteriorating macroeconomic conditions, even before adjusting for currency cost (World Bank/PwC, 2024[58]).

For investments in infrastructure assets, the cost of capital for private investors is higher in Africa than in other world regions. The cost of capital is the minimum rate of return or profit a company needs to earn to generate financial value from its investment. A higher rate generally implies greater risks for the investor: the greater the risk, the higher the expected return must be for the investor to consider the investment worthwhile. This report estimates the weighted average cost of capital for infrastructure projects to be 13% in Africa, compared to 10% in developing Asia and 8% in OECD countries (Annex 1.B). On average, the cost of equity is 1.6 times higher in Africa than in OECD countries, while the cost of debt is 2.5 times higher. However, since several input data points were either missing sector-specific values or offered only developing country averages, these findings likely underestimate the actual cost of capital in African countries. This is suggested by a study focusing on the energy sector which estimated that the weighted average cost of capital for projects in some African countries can be up to 7 times as high as in developed economies (IEA, 2022[25]). Currently, equity investments remain far more prevalent than debt financing for private investors in Africa, accounting for 88% of private capital deal volume. This demonstrates the potential for high returns but also the need to develop infrastructure debt markets (AVCA, 2025[51]) (Figure 1.13).

Figure 1.13. Cost of debt and equity in infrastructure in Africa, developing Asia and the OECD, 2023



Note: The cost of debt corresponds to the interest rate that an investor will be able to secure from lenders proxied by commercial lending rates. The cost of equity captures the rate of return from an investment with zero risk in addition to the compensation expected by an investor from an equity investment relative to a risk-free investment based on sectoral and country risks. See Annex 1.B for the methodology.
Source: Authors' calculation based on Damadoran (2025[59]), *Discount rate estimation* (database), https://pages.stern.nyu.edu/~adamodar/; World Bank (2024[60]) World Development Indicators (database), https://databank.worldbank.org/source/world-development-indicators/Series/FR.INR.LEND; and Tax Foundation (2024[61]), *Corporate tax rates around the world* (database), https://taxfoundation.org/data/all/global/corporate-tax-rates-by-country-2024/.

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Private finance mobilised through development funding is concentrated in only a few African countries. Over 2013-23, almost USD 57 billion was mobilised from the private sector by official development finance for infrastructure in Africa (averaging USD 5.1 billion per year), mostly through the provision of guarantees (45% of the total), direct investment in companies or special purpose vehicles (32%) and syndicated loans (16%). Five countries – Ethiopia, Egypt, Nigeria, Kenya and Côte d'Ivoire, by order of magnitude – attracted 52% of the total, due to market size, bankable project pipelines and institutional capacity to regulate and manage financing effectively. The private investments mobilised targeted primarily the energy sector (52%) and digital infrastructure (25%), due to their higher profitability,

followed by transport (14%) and water (8%). Globally, Africa accounted for 38% of the amounts mobilised for infrastructure, compared to 25% in developing Asia and 26% in Latin America and the Caribbean. However, these higher amounts could reflect the larger attention to Africa from development financiers, driven by perceived barriers to private investments compared to other regions (OECD, 2025[62]). For example, the ratio in Africa between private capital mobilised through development finance institution interventions and public resources invested remains low, at 0.46, comparable to Southeast Asia and the Pacific (0.44) and lower than in Latin America and the Caribbean (0.66) (AIIB et al., 2023[63]).

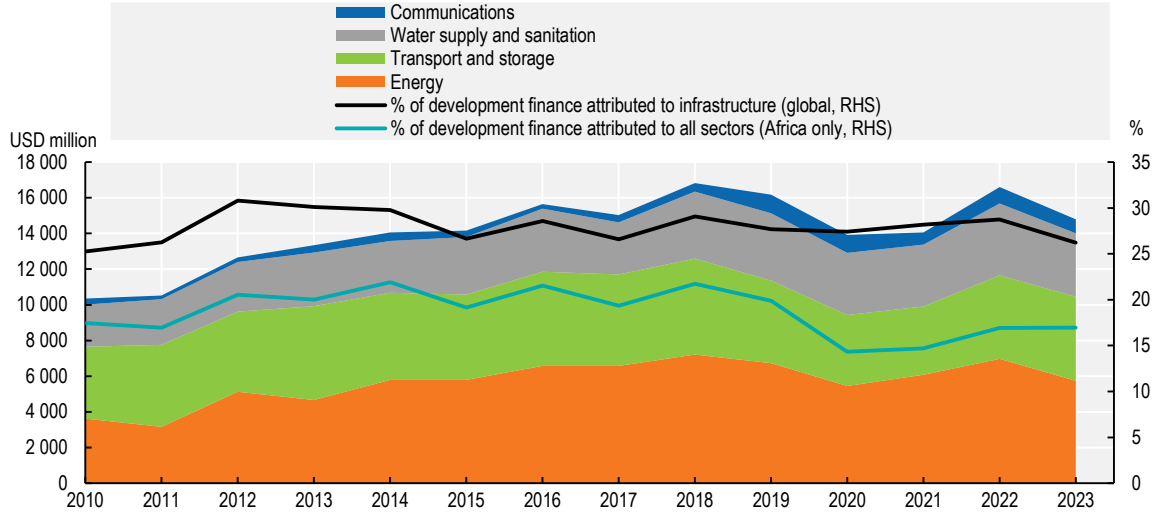
Transparent information on credit risk and infrastructure project performance could help reduce the cost of capital.[15] According to investor surveys, more information on credit risk at the country and sectoral levels would be required to better identify opportunities and assess risks (GEMs, 2024[64]). As of 2024, only 33 African countries had ever received a rating from one of the major global credit rating agencies (UNDP, 2024[65]). Even where credit ratings are available, subjectivities in the underlying assessment methodologies have been estimated to cost Africa USD 74.5 billion annually in excess interest and foregone funding (UNDP, 2023[66]), equivalent to 48% of the continent's annual infrastructure investment needed by 2040. A cost of capital commission, as proposed by the G20, could contribute to investigating claims through a review of the rating agencies' methodologies, macroprudential regulations and debt sustainability assessments (SAIIA, 2024[67]). The African Union Commission plans to establish an African Credit Rating Agency. The African Virtual Investment Platform of the African Union and the OECD offers more information for investors and examples of best practices.

Improved sustainability reporting, including on gender, could help attract additional investments and ensure better development outcomes. Enhanced environmental-, social- and governance-related information could help attract institutional and commercial investors, development agencies and philanthropists. Recent experiences show that disclosure requirements may inhibit institutional investors from holding assets in emerging markets where data availability is weaker (ODI, 2025[68]). Expert interviews suggest that the voluntary adoption of environmental, social and governance standards for infrastructure projects varies widely across the continent. Gender, in particular, is an important sustainability aspect. As of 2023, one-quarter of infrastructure projects in Africa financed by members of the OECD Development Assistance Committee (DAC) integrated gender equality objectives, up from 18% in 2010 (OECD, 2025[69]). For example, the 2X Challenge aims to mobilise USD 20 billion (2024-27) for women's empowerment through investments that meet global gender standards – such as ensuring at least 20% female representation in senior management and 30% among full-time staff in infrastructure projects (Biegel et al., 2024[70]).

While bilateral development funders have shifted their priorities, large development funders have increased their commitments to infrastructure

Official development finance dedicated to infrastructure has increased in the last decade, due to rising commitments for energy and digital infrastructure. Official development assistance and other official financial flows towards infrastructure in Africa increased from around USD 10 billion in 2010 to almost USD 15 billion in 2023. While official flows recovered following a decrease during the COVID-19 pandemic, they remain at risk due to current macroeconomic and geopolitical conditions. The share of infrastructure-related disbursements to Africa remained stable throughout the 2010-23 period. In 2023, they accounted for 19% of total development finance transactions to Africa and 26% of global disbursements to infrastructure (which totalled USD 56.4 billion). Energy received the largest amount, growing from USD 3.6 billion in 2010 to USD 5.7 billion in 2023, followed by transport and storage (USD 4.7 billion in 2023), water and sanitation (USD 3.5 billion), and communications (USD 0.7 billion) (Figure 1.14). While disbursements for communications (used here to approximate digital infrastructure) remain small in absolute terms, development finance commitments to this segment have increased sixfold in just seven years (2016-23).

Figure 1.14. Official development finance disbursements targeting infrastructure in Africa, 2010-23



Note: RHS = right-hand scale. Official development finance disbursements include official development assistance (ODA) and other official financial flows (OOF) that do not meet the conditions for eligibility as ODA (either because they are not primarily aimed at development, or because they have a grant element of less than 25%). "Communications" includes Communications policy and administrative management, Telecommunications, Radio/television/print media, information and communication technologies (ICT), and Education and training in ICT, telecommunications and media. "Transport and storage" includes Transport policy and administrative management, Road transport, Rail transport, Water transport, Air transport, Storage, and Education and training in transport and storage. "Water supply and sanitation" includes Water sector policy and administrative management, Water resources conservation (including data collection), Water supply and sanitation – large systems, Water supply – large systems, Basic drinking water supply and basic sanitation, Basic drinking water supply, and Education and training in water supply and sanitation. "Energy" includes Energy policy, Energy generation – renewable sources, Energy generation – non-renewable sources, Hybrid energy plants, Nuclear energy plants and Energy distribution.
Source: OECD (2025[71]), *Creditor reporting system* (database), https://www.oecd.org/en/data/datasets/development-finance-statistics-data-on-flows-to-developing-countries.html.

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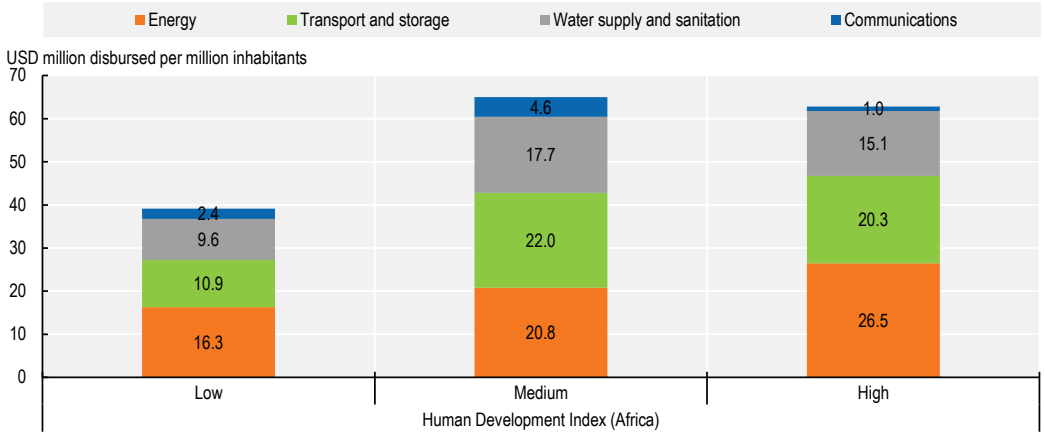
The allocation of development finance to infrastructure remains unequal across African countries, with those with low levels of development receiving comparatively little. Increasing risk perception has negatively impacted the most fragile countries.[16] In 2022-23, the proportion of DAC members' official development assistance (ODA) for this group reached its lowest level in the last 20 years (OECD, 2025[72]). In 2023, only 10 African countries[17] (including four medium and high-HDI countries), captured 59% of official development finance to infrastructure. Relative to population size, low-HDI countries received USD 39.1 million per million inhabitants, compared to USD 65 million for medium-HDI and USD 62.7 million for high-HDI countries. The contrast is especially stark in the energy sector, where only USD 16.3 million per million inhabitants were disbursed to low-HDI countries, compared to USD 22.0 million and USD 20.3 million in medium and high-HDI countries, respectively (Figure 1.15).

Figure 1.15. Official development finance disbursements for infrastructure in Africa, 2019-23



Source: OECD (2025[71]), *Creditor reporting system* (database), https://www.oecd.org/en/publications/creditor-reporting-system_22180907.html.

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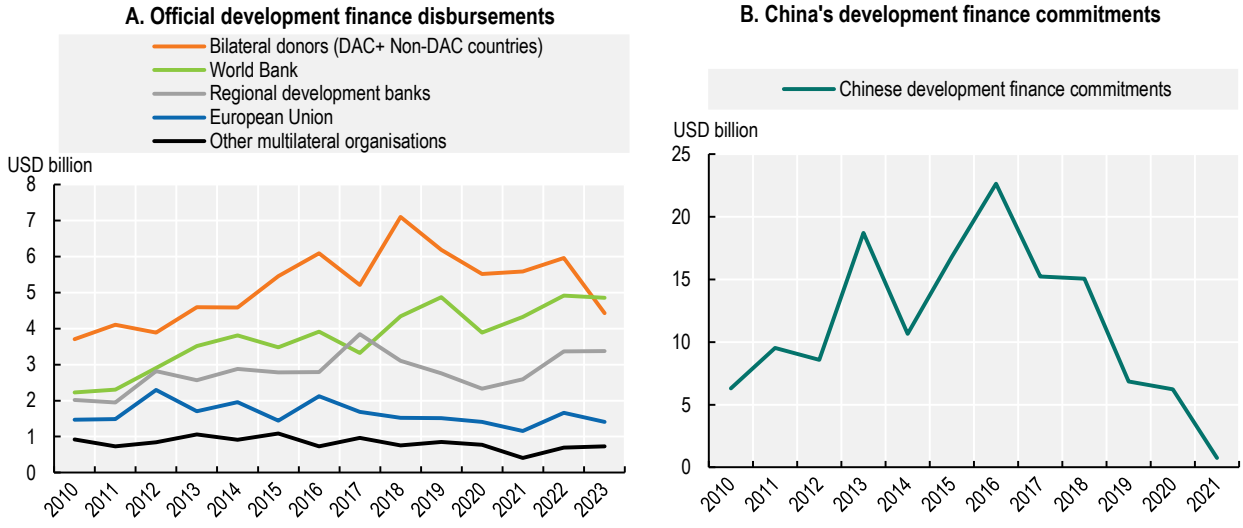
Lower development finance budgets and shifting political priorities have led to a reduction in bilateral contributions to infrastructure development. While still accounting for 30% of total official development finance disbursements reported to the OECD, bilateral donors reduced disbursements from their peak of over USD 7 billion in 2018 to just USD 4.4 billion in 2023 (Figure 1.16.A). For 2024, preliminary estimates suggest that net bilateral ODA flows from DAC members to all sectors in Africa fell by 1% in real terms compared to 2023 (OECD, 2025[73]). Reduced development finance budgets may engender a further prioritisation of humanitarian assistance and social sectors (such as education or social protection) over economic infrastructure and services (UNCTAD, 2025[74]).

China has been reducing its development finance commitments to Africa's infrastructure since 2016 (Figure 1.16.B). The Belt and Road Initiative (BRI) launched in 2013, contributed to the rapid development of large-scale infrastructure projects. However, it received criticism for its lack of adherence to environmental, social, and governance standards and its role in growing African governments' sovereign debt burden (Springer et al., 2023[75]). Following the COVID-19 crisis, China shifted its focus inward and is expected to limit its economic engagement in Africa to smaller and more targeted projects (Ray, 2023[76]).

Figure 1.16. Bilateral and multilateral development finance for infrastructure in Africa, 2010-23



Note: DAC = OECD Development Assistance Committee. Official development finance disbursements include official development assistance (ODA) and other official financial flows that do not meet the conditions for eligibility as ODA (either because they are not primarily aimed at development, or because they have a grant element of less than 25%). Analysis of China's development finance relies on AidData (see Custer et al. (2024[77]) for details).

Source: OECD (2025[71]), *Creditor reporting system* (database), https://www.oecd.org/en/publications/creditor-reporting-system_22180907.html; AidData (2024[78]), *Global Chinese Development Finance* (database), https://china.aiddata.org/.

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Multilateral and regional development finance institutions have grown in importance, while default rate data could be used to improve the targeting and efficiency of private investment mobilisation. Development banks doubled infrastructure-related disbursements from USD 4.2 billion in 2010 to USD 8.2 billion in 2023 (Figure 1.16.A). Development banks and other development finance institutions have room to further scale up direct financing and de-risking of projects to mobilise institutional and commercial investments from within and outside the continent. In particular, the growing participation of regional development finance institutions can help identify ways to increase private sector participation tailored to local contexts (Table 1.4). Using information on default and recovery rates from private deals facilitated by multilateral development banks and development finance institutions can also enable investments. Recent data on investment risks suggest that infrastructure-related investments in Africa in energy, utilities and communications exhibit default rates of about 4-5% – the lowest value of all sectors. Such low default rates are suggestive of investors' caution and of potentially missed opportunities. However, default rates in the three sectors were higher for Africa than for other regions (GEMs, 2024[64]).

Table 1.4. Selected African-led instruments to mobilise investments for infrastructure

Instrument	Purpose (benefits/risks)	Rationale for African countries	Examples of African-led instruments	Outcomes
Project preparation	Supporting organisations conduct activities prior to financial close, such as establishing the enabling environment, defining project parameters, running feasibility assessments, performing financial structuring and ensuring community acceptance.	• Project preparation costs range between 5% and 15% of total project costs. Project preparation can take up to ten years to complete (Prinsloo, 2019[79]). • Infrastructure project costs and timelines are estimated to be as much as 60% higher in Africa than those in developed countries (BCG/AFC, 2017[54]).	The New Partnership for Africa's Development – Infrastructure Project Preparation Facility (NEPAD-IPPF) is a special multi-donor fund established in 2005 and hosted by the AfDB.	Between 2004 and 2022, NEPAD-IPPF approved 106 grants totalling USD 115 million, leveraging USD 11 billion in investment financing (AfDB, 2022[80]).
Portfolio pooling and blended finance funds	Development financiers cover debt tranches that are unsecured and have lower repayment priority (e.g. first loss and junior tranches) to buffer the risk for commercial investors in the senior tranches. These pooling mechanisms mitigate concerns around small ticket size, risk exposure, limited sector and regional knowledge, as well as high transaction costs.	• The weighted average cost of capital in infrastructure is higher in Africa, at 13%, than in developing Asia (10%) and in OECD countries (8%).	In 2022, the Eastern and Southern Africa Trade and Development Bank introduced "Class C shares" to attract institutional investors.	These Class C shares raised USD 1.5 billion from institutional and impact investors.
Guarantees and insurance	Guarantees and insurance cover all or a part of project risks and include: • sovereign guarantees • political risk insurances • credit guarantees • export credit guarantees • portfolio guarantees • counterparty guarantees • liquidity facilities • convertible instruments.	• Guarantees for climate-related projects (mostly for renewable energy) target only commercial risks (CPI, 2024[81]). • Real and perceived macroeconomic and political risks raise the cost of capital (AUC/OECD, 2023[82]). • African least developed countries (LDCs), many of which face political unrest, account for only 15% of projects covered by political risk insurance (UNCTAD, 2025[83]).	In 2024, the World Bank's Multilateral Investment Guarantee Agency (MIGA), and the African Trade & Investment Development Insurance (ATIDI), a pan-African multilateral financial institution, signed a three-year partnership to accelerate foreign direct investment across Africa (MIGA, 2024[84]). Many of its projects target LDCs.	In 2023, the ATIDI predominantly insured political risk transactions (75%). It has increased its overall portfolio by nearly 20% (ATIDI, 2024[85]). In Benin, ATIDI supported the refinancing and re-profiling of existing loans to provide financial flexibility for key infrastructure projects, including road and irrigation upgrades. ATIDI's Regional Liquidity Support Facility offers specific risk mitigation for renewable energy.
Local currency financing and capital market development	Local currency financing can help mobilise domestic funding for infrastructure development. Effective implementation requires robust financial infrastructure, sound macroeconomic policies and the gradual development of local capital markets (Horrocks et al., 2025[86]).	• Large-scale infrastructure projects require a combination of local and hard currency resources (Horrocks et al., 2025[86]). • From 2018 to 2022, 74% of private infrastructure investment in developing countries were denominated in foreign currencies, mainly United States (US) dollars (65%), with only 25% in local currency, mostly in South Africa (GI Hub, 2024[87]).	The African Local Currency Bond (ALCB) Fund works with African issuers, investors and intermediaries to bring new bond transactions to market, aiming to deepen local capital market ecosystems. As part of the European Union's Global Gateway, Germany (KfW) will provide guarantees of up to EUR 100 million to investors lending to the fund until 2027.	As of early 2025, the ALCBF has invested in 12 projects linked to infrastructure across 8 African countries. In 2022, the fund supported Standard Bank Namibia's green bond issuances of NAD 400 million (about USD 21 million), which financed renewable energy projects, contributing to climate protection and energy supply improvements in Southern Africa (Standard Bank, 2022[88]).

Source: Authors' compilation.

The European Union's Global Gateway and the Partnership for Global Infrastructure and Investment have expanded financing for Africa's infrastructure, emphasising strategic value chains. The European Union's Global Gateway, introduced in 2021, and the G7's Partnership for Global Infrastructure and Investment, initiated in 2022, aim to promote infrastructure development, green energy and digital connectivity throughout Africa. These initiatives focus on similar sectors, such as energy, the digital economy, transportation and healthcare, and promote adherence to quality infrastructure and sustainability principles (see Chapter 2). While both initiatives serve to co-ordinate international strategies, the Global Gateway programme, including through the European Union's delegations, pursues a more hands-on approach in Africa, directly supporting priority value chains through 12 strategic priority corridors (EU, 2023[89]; ITC, 2022[90]). Beyond the provision of financing, the programme seeks to strengthen mutually beneficial trade relations and advance the near-shoring of Europe's production, for instance, of green hydrogen. Global Gateway aims to leverage the European Union's grant financing with direct investments and risk-sharing instruments offered by the European Fund for Sustainable Development Plus, to ultimately mobilise investments of up to EUR 150 billion in the years 2021-27. At the end of 2024, Global Gateway had allocated close to EUR 624 million in grants to regional infrastructure projects, mostly in the energy sector (EUR 311 million) and the transport sector (EUR 304 million) (AUDA-NEPAD YouTube channel, 2024[91]). These investments were part of the EUR 750 million committed in 2021 to mobilise infrastructure investments through blending approaches. As of 2024, an additional EUR 600 million was approved.

As climate change and population growth are accelerating, infrastructure's sustainability risks can be more actively managed

To balance infrastructure's effects on productive transformation and growth, environmental and social sustainability risks can be better managed, especially in African countries with lower levels of development. While productive transformation is an essential policy agenda for Africa (AUC/OECD, 2018[92]; 2019[3]), it may require being balanced with environmental and social sustainability outcomes.[18] Infrastructure development can do more to actively reduce common sustainability risks that have materialised in African countries. Risks and the ability to mitigate them vary across countries and depend on available resources and capacities (see Chapter 2 for more details). African countries with low development levels are more vulnerable to the consequences of climate change and population growth, which create rising demands on infrastructure. Africa faces the largest loss and damage due to climate change of all world regions, and the continent is unlikely to achieve Sustainable Development Goal indicators related to economic loss from natural disasters (Africa UN, 2025[7]).[19]

Infrastructure in African countries has typically had mixed outcomes for social sustainability and mostly negative ones for environmental sustainability. According to a systematic review of 110 academic papers conducted for this report,[20] in aggregate, infrastructure in African countries has had significant positive effects on resource efficiency (environmental outcomes), human development, poverty reduction, access to and quality of employment, and access to energy and basic services (social outcomes). However, common negative effects include increased carbon emissions, biodiversity and habitat loss (environmental outcomes), displacement of poor populations and reinforcement of gender divides in earnings, and increasing inequalities (social outcomes) (Table 1.5). For instance, transport contributed to 289 premature deaths per million population due to ambient particle matter in 2019 (see also Roy (unpublished[93])).

Table 1.5. Environmental and social sustainability outcomes of infrastructure

Sustainability category	Sustainability aspect	Positive/negative outcome	Key finding	Number of supporting studies (number of contradicting studies)
Environmental	Overall environmental quality	Mostly negative (2)	Infrastructure is negatively related to environmental quality, while urbanisation moderates the negative effects of digital and water infrastructure.	3 (1)
	Carbon dioxide (CO_2) emissions	Mostly negative (2)	While digital infrastructure can mitigate CO_2 emissions through more efficient resource use, infrastructure development generally exacerbates them by increasing carbon intensity.	2
	Biodiversity and habitat loss	Negative (1)	Infrastructure development is associated with biodiversity and habitat loss, ecosystem degradation, fragmentation and destruction, and deforestation.	4
			Ecological vulnerability varies; infrastructure development can be biased towards the most biodiverse (untouched) habitats.	1
Social	Human development and inclusion	Mostly positive (4)	Infrastructure has positive effects on human development, inclusive growth and economic equality, especially digital infrastructure, rural-urban transport linkages and energy access infrastructure. However, inequalities may increase as a result of national and regional investment priorities.	7 (1)
	Poverty	Mostly positive (4)	Infrastructure such as the following can help alleviate poverty: - roads in rural areas: creating access to markets, education and job opportunities, industrialisation However, they can also result in loss of agricultural income and expose poor households to increased competition	8 (1)
			- energy: greatest effects upwards of a threshold of socio-economic development	1
			- digital: workforce participation and better information and knowledge sharing	2
			- water: second strongest effect only after transport.	1
	Employment and job creation	Positive (5)	Transport infrastructure enables access to non-farm job opportunities.	3
			Energy infrastructure leads to movement from farm jobs to higher-earning jobs; outages affect high-skilled jobs more.	2
			Ecological infrastructure has short-term positive employment effects.	1
	Gender	Mixed (3)	Transport, energy and digital infrastructure can increase work opportunities and empowerment for women through better access to jobs and time savings. However, infrastructure (especially digital platforms) may increase men's earnings and job opportunities more than women's.	4 (1)
	Land use and displacement	Mostly negative (2)	Construction of infrastructure and gentrification can lead to the displacement of poor populations. However, new infrastructure can increase land value.	2
	Health	Mixed (3)	Transport: air pollution vs. reduction of dust; access to health care facilities.	2
		Positive (5)	Energy: lack of infrastructure associated with lower life expectancy and child mortality.	1

Note: Based on a systematic literature review of 110 academic articles. Key findings represent stylised facts derived from 65 studies that were deemed relevant and sufficiently rigorous. Of those, a large share of studies (29) were conducted at the national level of analysis, using various regression techniques. Unless indicated, sustainability outcomes were not specific to transport, energy, digital or water infrastructure.
Source: Authors' compilation.

Overall, transport, energy and digital infrastructure have substantial positive social sustainability effects, but inadvertent effects in the form of rural-urban and regional inequalities should be considered with care. Transport, energy and digital infrastructure that provides new access to jobs, information, utilities and services can help increase human development, alleviate poverty and create employment (Acheampong, Erdiaw-Kwasie and Abunyewah, 2021[94]; Mallek et al., 2024[34]; Ali et al., 2015[95]). However, infrastructure investments can inadvertently increase inequality and fragmentation, for example when they focus on populations and locations with prior economic advantages (Desalegn and Solomon, 2022[96]; Gambino and Reboredo, 2024[97]). Infrastructure investments can have opposing effects on peripheral places, depending on the setting. For example, while a study in Tanzania found that roads for rural populations increased competition and thereby reduced aggregate household earnings (Dumas and Játiva, 2025[98]), a study in Kenya showed how the port infrastructure of Lamu, a coastal peripheral city, increased its influence vis-à-vis the capital (Chiyemura, Gambino and Zajontz, 2023[99]). Infrastructure therefore requires careful planning and risk management (see Chapter 2 for details).

Infrastructure development can increase formal employment, but existing informal livelihoods require attention. Infrastructure improvements in African countries have consistently improved formal employment opportunities (Moneke, 2020[100]; Mensah, 2024[101]). For instance, household surveys of populations affected by 103 Chinese-supported transport projects and 69 energy and water projects found, by the second year after implementation, a 6 percentage point increase in employment for transport and an 8 percentage point increase for energy and water, with more lasting and pronounced effects for formal employment than for informal (mostly focused on construction) (An, Guo and Jiang, 2025[102]). However, an overall increase in formal employment can mask the displacement of informal livelihoods, for instance, where informal street vendors depend on slow-moving traffic on smaller roads (Gambino and Reboredo, 2024[97]).

Gender-responsive infrastructure development can improve women's access to formal employment and safety. While infrastructure improvements can enhance economic inclusion, projects primarily benefit formal industries, which are often male-dominated, reinforcing existing gender inequalities (Marire and Iqbal, 2024[103]). A lack of essential services, such as childcare facilities and safe public transport, restrict women's ability to transition into formal employment. Without targeted interventions such as gender-responsive urban planning and improved water infrastructure, infrastructure development risks widening these disparities (Small and van der Meulen Rodgers, 2023[104]). Low-cost but effective gender-responsive measures include providing access to safe and secure washing facilities along transport corridors, considering everyone, not just land owners (predominantly male), in land use planning, ensuring clear lines of sight in public spaces, and installing sufficient street lighting and security cameras (Chege, 2021[105]).

Investments in transport and water infrastructure can significantly reduce the burden of unpaid domestic labour and increase women's working hours, though not always their pay (Marire and Iqbal, 2024[103]). In many African countries, inadequate infrastructure forces women to allocate a disproportionate amount of time to domestic tasks. For example, in Benin and Madagascar, women spend approximately 273 and 164 hours per year, respectively, collecting water – equivalent to 14.4% and 8.8% of their total working time (Agenor and Canuto, 2012[106]). Households in southern Zambia that gained access to piped water were found to reduce their water-fetching time by 80%, with the majority of the time saved benefiting women and girls (Winter, Darmstadt and Davis, 2021[107]). Similarly, an increase in electrification for rural populations in South Africa translated into a 1.3 percentage point rise in employment for men and a 1.8 percentage point increase for women. However, hourly wages rose for men by around 16% but fell for women by around 20% (Dinkelmann, 2011[108]).

Planned action to make infrastructure more climate-resilient would prevent significant losses. Damages from extreme weather undermine infrastructure reliability, disrupt critical supply chains and inflate maintenance costs. Recent estimates show that African countries would need to set aside

USD 10.2-11.4 billion each year to recover asset loss and damages due to climate change, mostly in energy (36%) and transport (25%) (CRDI, 2023[109]). Road repair and maintenance costs could increase by 270% (African Climate Resiliency, 2016[110]). In view of long project planning phases, infrastructure developers in Africa need to anticipate drastically changing local contexts to minimise maintenance costs while supporting capacity and inclusivity (Mayaki, 2014[111]).

> *A study of 20 roads and 20 railway lines highly exposed to floods spanning across Kenya, Tanzania, Uganda and Zambia showed that strengthening their resilience would cost USD 101 million but would avoid losses as high as USD 1.1 billion across future climate scenarios (Hickford et al., 2023[112]).*

Green infrastructure and nature-based solutions (GI-NBS) could be further expanded with more funding. GI-NBS consist of infrastructure that is environmentally and socially more sustainable than traditional infrastructure because it offers certain benefits (e.g. capturing rainwater for freshwater provision and preserving green spaces), reducing harm and pollution (e.g. low-carbon construction materials) and increasing climate resilience (e.g. maintenance using locally available materials and flood buffers). Practical experience shows that GI-NBS in Africa have been effective at reducing risks of low-intensity hazards, especially when financial contributions from the public sector were balanced with in-kind contributions (such as labour and organising) from beneficiaries (Dupar, Henriette and Hubbard, 2023[113]). A review of 492 project case studies of water-focused GI-NBS in Africa found that the solutions reliably improve water quality, while their ability to increase water quantity and prevent floods was more mixed and context-dependent (Acreman, Smith and Charters, 2021[114]). Both the number of projects and total funding have grown steadily: a recent study covering 48 African countries between 2012 and 2023 found that 297 new projects were launched, securing over USD 21 billion (Collins et al., 2025[115]). Until recently, access to finance for GI-NBS has mostly been fragmented (Pettinotti and Quevedo, 2023[116]), but new international initiatives seek to blend and expand funding.

> *The Alliance for Green Infrastructure in Africa (AGIA) seeks to enable investments in green and climate-resilient infrastructure projects in domains such as renewable energy, green hydrogen, sustainable transport, e-mobility solutions and energy storage. The Alliance was launched at COP27 in Egypt under the leadership of the African Development Bank, the African Union and Africa50, in partnership with African institutional investors and development funders (including the Agence française de développement, European Investment Bank, European Bank for Reconstruction and Development, and Private Infrastructure Development Group). By the end of 2024, USD 265 million in pledges had been secured towards a first fund of USD 275-300 million (AfDB, n.d.[117]; Africa50, n.d.[118]) .*

Annex 1.A. Methodology to estimate African countries' infrastructure investment needs

The estimation of the infrastructure investment needs of African countries and the cost-effectiveness of specific types of infrastructure presented in this chapter offers a methodological innovation beyond the approach used by the Global Infrastructure Hub (GI Hub, 2018[119]). The methodology uses up-to-date data that were collected and compiled for this report. The full methodology and data sources are available online at https://www.oecd.org/en/publications/africa-s-development-dynamics-2025_c2b40285-en/support-materials.html.

Annex 1.B. Evaluating the weighted average cost of capital of infrastructure assets in African countries

This report provides an estimate of the weighted average cost of capital (WACC) – i.e. the minimum rate of return or profit a company needs to earn to generate financial value from its investment – for infrastructure projects in African countries. While the present methodology employs a current and established approach to WACC calculations, the results can only serve as approximations of the real WACC, due to data limitations and the multiple factors influencing specific project-level values (e.g. country-specific risks, company-specific financial positions and technology-specific aspects).

The WACC is typically computed according to the following formula (see, for example, Dato et al. (2024[120]); IEA (2023[121]); Calcaterra et al. (2024[122])).

WACC = Share of debt * Cost of debt * (1 – Corporate tax rate) + Share of equity * Cost of equity

The **cost of debt** corresponds to the interest rate that an investor can secure from lenders. In the present approach, it is proxied by commercial lending rates available at the country level that were sourced from World Bank (2024[60]), in line with the approach of other authors (see Dato et al. (2024[120])). Since interest payments are tax deductible in most countries, the cost of debt is expressed on an after-tax basis, relying on corporate tax rates sourced from the Tax Foundation (2024[61]).

The **cost of equity** is assessed through the asset pricing model, in the following way:

Cost of equity = Risk-free rate + β * Equity risk premium

- The risk-free rate is the return that can be earned by investing in a risk-free asset. The present methodology uses the ten-year US government bond yield. This rate is based on Bloomberg (2025[123]).
- Beta (β) refers to the volatility or riskiness of a financial stock in a given sector relative to all other stocks on the market. Beta is thereby the main parameter that is specific to the sector of interest (energy, water, digital or transport). Beta values were calculated by Damadoran (2025[124]) from all publicly traded companies listed at the start of 2025 on S&P Capital IQ, augmented with data from a Bloomberg terminal. Betas are available for global, emerging and other selected markets (China, Europe, India and the United States). For the present approach, betas for emerging markets are used as a rough proxy: In 2025, the sample included 2 475 firms from Africa and the Middle East, accounting for 9.3% of firms within the emerging markets category. The other firms were from Asia (38.7%), China (28%), India (18%), and Latin America and the Caribbean (3.7%) (Damadoran, 2025[124]). The selected betas are averaged over the last five-year period (Annex Table 1.B.1.)

Annex Table 1.B.1. Selected betas used to compute cost of equity at sectoral level, 2020-25

Energy	Digital	Water	Transport
Green and renewable energy	Telecom (wireless)	Utility (water)	Air transport
Power	Telecom (services)	Engineering/construction	Rail
Utility (general)	Engineering/construction		Road
Engineering/construction			Engineering/construction

Source: Damodaran (2025[125]), "Damodaran online", stern.nyu.edu (website), https://pages.stern.nyu.edu/~adamodar/ (accessed on 25 March 2025).

The **equity risk premium** (ERP) is defined as the yield that can be earned in addition to the risk-free rate by investing in a riskier equity investment. The report relies on estimates from Damodaran (2025[125]) for country-level ERPs, which are computed in the following way:

- **Step 1**: Estimate the mature market risk premium by computing the rate of return of the S&P 500 (stock market index tracking the stock performance of 500 of the largest companies listed on stock exchanges in the United States), calculated against the rate of return of the ten-year US treasury bond.
- **Step 2:** Estimate the default spread for the country of interest based on the local currency sovereign rating from Moody's (or the S&P rating converted into Moody's). Each rating class is associated with an estimate of typical spreads computed by averaging credit default swap spreads and sovereign USD bond spreads by rating class, at the start of every year.
- **Step 3:** Convert the default spread into a country risk premium. Damodaran (2025[124]) scales the default spread up to reflect the higher risk of equity in the market, relative to the default spread. Damodaran (2025[124]) uses the ratio of the S&P Emerging Market Equity Index standard deviation to the iShares Emerging Market Bond Index standard deviation.
- **Step 4:** Add the mature market premium from step 1 to the country risk premium from step 3 to arrive at a total equity risk premium.
- **Step 5:** If no sovereign rating is available for a given country, the country risk score from the Political Risk Services (PRS) database is used to determine the ERP based on that of countries with sovereign ratings and similar country risk scores according to the PRS.

Finally, the methodology assumes an 80:20 debt-equity ratio to calculate the WACC, following patterns of private investment in infrastructure projects observed in the literature (see GI Hub (2023[126]); World Water Council (2018[127]); UNECA et al. (2021[128]); IEA (2019[129])).

Notes

[1] Throughout the chapter, the term "stock" refers to physical stock of infrastructure, unless explicitly stated otherwise.

[2] Despite differences in methodology and benchmarking, this report's projections of Africa's infrastructure investment needs are broadly consistent with other studies focusing on Africa. The Global Infrastructure Hub (2018[119]) projects USD 192 billion for 2025-40, while the African Development Bank (2018[131]) estimates USD 130-170 billion annually for 2018-30. Larger investments may be required to meet specific policy and climate goals: the African Development Bank (2024[132]) foresees the need for USD 410 billion

for roads and energy by 2030 to meet infrastructure and energy-related SDGs and USD 72 billion by 2063. Rozenberg and Fay (2019[18]) estimate that achieving the SDGs and limiting climate change to 2°C would require annual spending of 9.2% of GDP between 2015 and 2030 in Africa, excluding North Africa, which in 2024 was equivalent to USD 257 billion.

[3] Eritrea, South Sudan, Central Africa Republic, Seychelles and Djibouti are excluded from this calculation due to missing data.

[4] Authors' calculations based on ADB (2017[133]). More recent data for all types of infrastructure is unavailable. However, data for China's investments on transport infrastructure suggests that spending may have further increased, with only transport infrastructure spending reaching 5.8% of China's GDP in 2020 (OECD/ITF, 2024[136]).

[5] The need to balance infrastructure's effects on growth and productive transformation with environmental and social sustainability outcomes is discussed in the last section of this chapter and in Chapter 2.

[6] The infrastructure types whose (capacity) densities were not found to be correlated with productive transformation are container ports, wastewater treatment plants, wind energy infrastructure, hydroelectric infrastructure and other renewable energy infrastructure.

[7] Maintenance is approximated by the total value of depreciation of infrastructure stock.

[8] Authors' calculations based on IEA (2023[121]).

[9] Authors' calculations of average costs of consuming 60 megabits or more, having an unlimited data subscription or a cable/ADSL subscription in the period of April 2024-April 2025 (NUMBEO, 2025[134]).

[10] Many varying definitions of intermediary cities exist. "Intermediary cities are agglomerations which – for geographic, historical and economic reasons – act as bridges between metropolitan and rural areas. They represent strategic nodes within urban networks at the national or international level. Their population can range from 50 000 to 1 million inhabitants". For more information see OECD/ PSI (2020[39]), p. 81.

[11] Authors' calculation based on OECD/ITF (2024[135]) and ADB (2017[133]). More recent data for all types of infrastructure is unavailable. However, data for China's investments on transport infrastructure suggests that spending may have further increased, with only transport infrastructure spending reaching 5.8% of China's GDP in 2020 (OECD/ITF, 2024[136]).

[12] As of April 2025, the Republic of the Congo, Djibouti, Ethiopia, Malawi, São Tomé and Príncipe, Sudan, Zambia and Zimbabwe were in debt distress. Burundi, Cabo Verde, Cameroon, the Central African Republic, Chad, Comoros, Gambia, Ghana, Guinea-Bissau, Kenya, Liberia, Mozambique, Sierra Leone, South Sudan and Togo were at high risk of overall debt distress.

[13] Angola, Egypt, Gabon, Ghana, Kenya, Madagascar, Niger, Nigeria, Tanzania, Tunisia and Zambia.

[14] GI Hub (2023[126]) focuses on project-based private investment. It refers to private sector investment in primary market projects, including greenfield projects (new projects on undeveloped sites), brownfield projects (construction on previously developed sites, such as upgrades) and investment via the privatisation of public sector assets.

[15] Determining the cost of capital of an infrastructure project relies on two kinds of information: i) the cost of debt, assessed primarily through credit ratings or alternatively by evaluating the financial stability, the ability to repay and the overall creditworthiness of a country relative to similar borrowers; and ii) the cost of equity, assessed by appraising country risks (i.e. political, macroeconomic/financial, legal and regulatory, business environment, and environmental-, social- and governance-related) and project-related risks (i.e. commercial, construction and operational) (PwC, 2024[130]).

[16] Fragility, according to the OECD, is the combination of exposure to risk and insufficient coping capacities of the state, system and/or communities to manage, absorb or mitigate those risks. It occurs in a spectrum of intensity across six dimensions: economic, environmental, human, political, security and societal.

[17] Côte d'Ivoire, Egypt, Ethiopia, Kenya, Mozambique, Morocco, Nigeria, Senegal, Tanzania and Tunisia.

[18] Environmental and social sustainability outcomes were not factored into the economic modelling underlying this chapter's first section (Box 1.2). The modelling results of investment needs can therefore be seen as a lower bound, given that mitigating sustainability risks may require additional investments.

[19] For instance, as of April 2025, indicator 11.5.2 "Economic loss from disasters" and Indicator 1.5.2 "Economic loss and affected infrastructure & services from disasters" ranked first and third, respectively, out of a total of 247 indicators in terms of their gaps in achievement.

[20] From September 2024 to January 2025, a systematic literature review was conducted to address the research question,"What are the positive and negative environmental, social and governance sustainability effects of economic infrastructure?" The review identified a total of 110 studies published since 2010, with 65 studies offering results that were relevant to the research question. Ninety-four studies were identified through a systematic keyword search on Google Scholar, 13 from Foster et al. (2023[12]) and 3 from ad hoc follow-up searches.

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2 Policies to accelerate and scale up Africa's infrastructure projects

This chapter identifies policies that can accelerate and scale up the development of infrastructure projects in African countries. It analyses how regional, national and subnational infrastructure policies can increase productive transformation. The chapter also addresses how effective infrastructure governance can accelerate project implementation and sustainability. It examines strategies and planning related to development corridors, cost recovery, maintenance and quality certifications.

In brief

The development of infrastructure in African countries faces major strategic challenges, in particular population growth, low-productivity urbanisation and fragmented cross-border infrastructure networks. To turn these challenges into opportunities, infrastructure development in African countries requires credible evidence-based policies and the careful prioritisation of projects that advance the continent's productive transformation.

Regional, national and subnational policies that strategically prioritise infrastructure projects can contribute towards Africa's productive transformation, and effective governance can serve to implement the projects efficiently and sustainably with the resources available:

- **Strategic prioritisation:** The second phase of the Programme for Infrastructure Development in Africa (PIDA) can even more rigorously prioritise projects that focus on productive transformation than the first phase. Policymakers can also give greater priority to development corridors and urban infrastructure development that align with PIDA priorities and facilitate highly productive sectors and regional value chains. Further data on achieving productive transformation, job creation targets, infrastructure development and its financing would help policymakers monitor progress. Policies need to be co-ordinated and planned across geographic levels (e.g. through master plans). Once selected, infrastructure projects require strong institutional backing at all levels, especially at the national level, where political and budget decisions have the most direct impact on project implementation.
- **Effective governance**: Selected infrastructure projects require governance structures that emphasise efficient decision-making by the most relevant stakeholders and that acknowledge diverging interests and limited capacities. Public-private partnership units and project preparation facilities can be better equipped to support large and complex projects throughout their duration, reducing costs and waste during later project stages. Improved cost recovery and better planning for maintenance costs are essential for operational project sustainability. African-led infrastructure quality labels can be expanded to facilitate the allocation of additional project support resources, promote the communication of implementation standards to investors and set minimum standards for quality infrastructure.

Infrastructure development in African countries faces strategic challenges, such as population growth, low-productivity urbanisation, fragmented cross-border infrastructure networks and stagnating international financing. Population growth is causing growing pressures on the development of infrastructure in African countries. Between 2024 and 2050, Africa's population will grow by 63%, from about 1.50 billion to 2.45 billion inhabitants (UN DESA, 2025[1]). Around 80% of this demographic growth is happening in urban areas: by 2050, two out of three Africans will live in an urban agglomeration, and the total urban land area will more than double (OECD et al., 2025[2]). Unlike in other world regions, urbanisation in African countries is not directly associated with increasing productivity (Castells-Quintana, 2017[3]). Furthermore, the rural population will continue to grow in absolute terms (AUC/OECD, 2018[4]). Beyond national borders, Africa's continental infrastructure is not well-integrated, in large part as a result of the legacies of colonialism and raw resource extraction (Bersaglio and Enns, 2019[5]; Graff, 2024[6]). Many African governments' ability to finance infrastructure is constrained by their growing sovereign debt. In addition, financing from international private investors and development for infrastructure have stagnated or even been reduced, in part due to changing geopolitical considerations and sustained risk perceptions (see Chapter 1 for details on the financing challenge) (AUC/OECD, 2023[7]).

The megatrends of climate change and the rise of artificial intelligence create further demands on, and uncertainty for, infrastructure development in African countries. Africa's infrastructure faces climate risks twice as high as that of Latin America and five times higher than that of Europe (OECD, 2024[8]). Climate-related events already result in global economic losses averaging 2-5% of gross domestic product (GDP) annually across the African continent (WMO, 2024[9]). Extreme weather events have wide-ranging negative effects on infrastructure; for instance, losses of hydropower revenues are estimated to lie between 5% and 60% for affected African countries (Cervigni et al., 2015[10]). While many African countries have made major progress in digitalising their economies (AUC/OECD, 2021[11]), rapidly increasing demand for artificial intelligence services poses new challenges. Africa currently accounts for fewer than 2% of all data centres worldwide (Data Center Map, n.d.[12]). While the number of data centres is growing rapidly – at least 110 currently exist, and 56 are being built – significant upgrades to energy grids will be required to enable their further expansion across African countries (BusinessWire, 2025[13]; BusinessWire, 2025[14]). Strategic investments in climate resilience and in digital and energy infrastructure will certainly grow in importance, but the fast pace of change also creates uncertainty about where specifically they should focus.

Turning these challenges into opportunities requires evidence-based policy choices and careful prioritisation. Among the African priorities encapsulated by PIDA, three are likely to generate high multiplier effects for economic development: specific infrastructure types, regional integration and urban infrastructure (Chapter 1). Nevertheless, prioritising infrastructure projects entails a further careful assessment of policy trade-offs. For example, while cross-border infrastructure and urban agglomeration drive productivity and growth, they may result in the exclusion of large rural populations (Dorosh and Thurlow, 2014[15]; Krantz, 2024[16]). The time needed to carefully plan for quality assurance and environmental sustainability may exceed the cost of inaction when, in at least 7 African countries, populations are doubling every 25 years (Gil, Stafford and Musonda, 2019[17]). The guiding principles are thus prioritisation, local ownership, transparency and accountability, and resource efficiency.

Achieving productive transformation can guide the prioritisation of infrastructure projects. Productive transformation refers to the process of accumulating and diffusing organisational, production and technological capabilities, including reallocating capital and labour towards the more productive segments of an economy (AUC/OECD, 2019[18]). Investing in infrastructure that targets productive transformation can help address strategic challenges like population growth, urbanisation and regional fragmentation. For instance, well-planned urban infrastructure can help translate urbanisation into sustained economic growth (AfDB/OECD/UNDP, 2016[19]). Specific investments in transport and energy infrastructure can drive transformation by developing rural-urban linkages such as giving farm workers access to the service sector (Castells-Quintana, 2017[3]; Moneke, 2020[20]; UNECA, 2017[21]).

Regional infrastructure projects are also critical for productive transformation. They can complement the reduction of tariffs through the African Continental Free Trade Area (AfCFTA), thereby enabling trade and the development of regional value chains (UNECA, 2022[22]; AUC/OECD, 2022[23]).

This chapter provides policymakers insights on how to prioritise infrastructure projects towards productive transformation and implement them efficiently and rapidly through effective governance, given available resources:

- **Strategic prioritisation:** The prioritisation of projects under PIDA Priority Action Plan 2 (PAP2) was a necessary step in the right direction. PIDA's First 10-Year Implementation Report showed that progress was not advancing fast enough to meet the programme's objectives by 2030 (AUDA-NEPAD, 2023[24]). The more rigorous prioritisation of projects under PIDA PAP2 compared to PIDA PAP1 reduced the number of priority projects from some 433 for the period 2012-20 to 69 for 2021-30. Development corridors and urban infrastructure development that align with continental, regional and national productive transformation strategies (including priority sectors and regional value chains) could be given further priority to accelerate progress. More data on the achievement of productive transformation, job creation targets, infrastructure development and its financing would help policymakers better monitor development progress. Policies require co-ordination and planning across geographic levels (e.g. through master plans). Selected projects must have ample institutional backing at all levels, but especially at the national level, where political and budget decisions have the most direct impact on project implementation. Strengthening institutional capacity and skills is a prerequisite for implementation.
- **Effective governance:** Once selected, infrastructure projects require governance structures that emphasise efficient decision-making by the most relevant stakeholders and acknowledge diverging interests and limited capacities. Public-private partnership units and project preparation facilities can be better equipped to support large and complex projects throughout their duration, reducing cost and waste during later project stages. Improved cost recovery and better planning for maintenance costs are essential for project sustainability. African-led infrastructure quality labels can be expanded to enable not just allocating additional project support resources but also communicating quality standards to investors and ensuring minimum sustainability standards.

Infrastructure strategies and planning can be better aligned with productive transformation goals at all levels

Africa's agenda to achieve productive transformation can more directly guide policymakers in prioritising infrastructure projects at the regional, national and subnational levels. Agenda 2063 aspires to an "integrative infrastructure that criss-crosses the continent […] to support Africa's accelerated integration and growth, technological transformation, trade and development" (AUC, 2015[25]). Africa's productive transformation agenda is further codified in continental policies (like the Accelerated Industrial Development for Africa Strategy and the AfCFTA) and national plans (see OECD (2023[26]). Many experiences, including from the People's Republic of China (hereafter "China"), Europe, Korea, Mexico and the Republic of Türkiye, highlight the importance of planning infrastructure investments in alignment with sectoral and industrial needs to achieve better productive transformation outcomes (UNCTAD, 2018[27]). In each of these countries, infrastructure development relied on a clear strategy, followed by an assessment of infrastructure needs, which informed government planning and financial requirements from public and private sources. At least 40 African countries have published national development plans that cover infrastructure needs, but too few of them include priority project lists, discuss infrastructure complementarities at different geographic levels, allocate multi-year budgets and identify clear links to productive transformation objectives (IMF, 2025[28]; InfraCompass, 2020[29]; UNCTAD, 2018[27]).

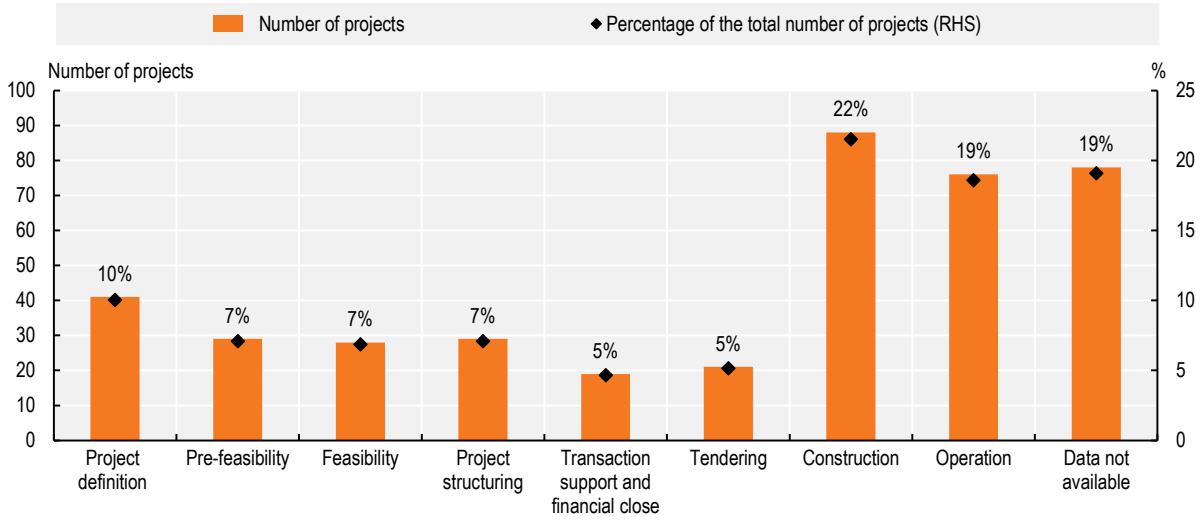
Development corridor projects can be prioritised in support of regional integration and productive transformation

Development corridors have become a flagship policy instrument to achieve regional integration and productive transformation. As of 2025, at least 80 development corridors either have been planned, are under construction or are fully operational across Africa. Thorn et al. (2022[30]) state that "infrastructure corridors generally deliver services such as energy, water, waste management, transport, and telecommunications; and [they] often lead to spatial development between rural peripheries and urban growth poles […] [while] development corridors are larger, often transnational, geographical areas targeted for domestic and international investment". Development corridors in Africa also often involve the promotion of economic sectors that target strategic value chains through the development of industrial parks, special economic zones, resort cities or dry ports:

> *The West Africa Growth Ring Corridor encompasses four major corridors that span Burkina Faso, Côte d'Ivoire, Ghana, and Togo. The Corridor Development Master Plan, developed between 2015 and 2018, outlines infrastructure projects aimed at bolstering regional integration and connectivity, including the Abidjan-Lagos Motorway. Beyond regional infrastructure, it also integrates the development of strategic regional value chains, such as meat value chains, by including national-level projects, including loading and off-loading facilities for cattle at railway stations, cattle markets, and slaughterhouse complexes (UEMOA/JICA, 2018[31]).*
>
> *In East Africa, the Northern Corridor links Burundi, the Democratic Republic of the Congo, Rwanda, South Sudan and Uganda to the port of Mombasa in Kenya. Full implementation would contribute to reducing transport costs, especially for landlocked countries, which can account for up to 75% of the value of their exports (EAC, 2012[32]). The corridor also presents opportunities to boost the agri-food value chains in the region and ties with Southern Africa (CBC, 2019[33]). In 2025, member states approved the development of a regional logistics hub within the Naivasha Special Economic Zone, which would further contribute to reducing trade costs (NCTCA, 2025[34]).*

PIDA provides a continental framework to prioritise development corridor projects. PIDA is a continent-wide initiative aimed at accelerating cross-border infrastructure development. It aligns with pan-African initiatives, such as the Trans-African Highway network, the Single African Air Transport Market and the Continental High-Speed Rail Project. PIDA Priority Action Plan 1 (PIDA PAP1), which ran from 2012 to 2020, identified 51 cross-border infrastructure programmes, composed of 409 individual projects. Despite the progress achieved – including the development of over 16 000 kilometres (km) of roads, 4 000 km of railways and 3 500 km of transmission lines – only 18% of the targeted projects were operational by 2025 (Figure 2.1). Building on lessons from the first phase, PIDA PAP2 (2021-30) prioritises 69 projects that consider national and regional priorities and cross-border relevance (except for island countries) as the main eligibility criteria. The criteria for the initial project selection include i) synergies with existing infrastructure; ii) job creation; iii) rural-urban connectivity; iv) youth and gender mainstreaming; v) climate resilience; and vi) financial viability and readiness for private sector investment (AU, 2020[35]; AUDA-NEPAD, 2023[24]). PIDA PAP2 relies on diverse instruments, often developed together with international partners, to facilitate project preparation and implementation, such as the PIDA Service Delivery Mechanism or the PIDA Job Creation Toolkit (Traoré et al., 2024[36]) (Box 2.1).

Figure 2.1. PIDA PAP1 projects by development stage



Note: PIDA PAP1 = Programme for Infrastructure Development in Africa Priority Action Plan. RHS = right-hand side. Data retrieved in April 2025.
Source: AUDA-NEPAD (2025[37]), *PIDA Projects Dashboard* (database), https://www.au-pida.org/pida-projects/.

StatLink https://stat.link/fczy9i

Box 2.1. The PIDA Job Creation Toolkit

The PIDA Job Creation Toolkit (AUDA-NEPAD, n.d.[38]) helps policymakers and infrastructure developers to assess and maximise the potential job creation of an infrastructure project. The toolkit uses an elaborate model based on country- and sector-specific input-output tables to assess the economy-wide effects of large infrastructure projects. The model was derived by drawing on existing impact evaluations, extensive expert interviews and a literature review, and the methodology is updated regularly.

As of 2023, PIDA projects had generated about 162 000 jobs (AUDA-NEPAD, 2023[24]). Employment estimates from 94 PIDA projects across 34 countries suggest that up to 15 million additional jobs could be created through the construction, operation and maintenance of these projects. For instance, the North-South Corridor, which comprises 16 projects spanning 8 countries, is expected to create 4.5 million jobs throughout the project's entire duration. In addition, about 130 000 jobs could be created in other sectors including agri-food, mining and trade. Employment estimates can enable co-ordinating countries to plan government interventions in response to labour demand (AUDA-NEPAD, 2020[39]).

Source: Authors' compilation based on inputs from AUDA-NEPAD and GIZ.

Strong political and fiscal commitment at the national level is instrumental in implementing regional and cross-border projects. Several regional economic communities, such as the Southern African Development Community and the Intergovernmental Authority on Development, published regional infrastructure development strategies in recent years (SADC, 2012[40]; IGAD, 2022[41]). However, the integration of such strategies at the national level remains limited, slowing down the implementation of PIDA projects. Indeed, reviews of institutional arrangements across five development corridors reveal the limited interface between the governance structures of cross-border infrastructure programmes and regional and national strategies. Continued political endorsement at the national level is important, as countries' interests in investing in regional infrastructure vary. Countries involved in more than one regional economic community, such as Angola, Burundi and Rwanda, tend to give priority to regional projects with

countries with which they have the strongest trade ties, indicating the importance of regional value chains for project selection (Lisinge and van Dijk, 2021[42]). However, fiscal limitations may sometimes prompt countries to limit their involvement in regional initiatives that rely on the actions of third countries and that do not appear to offer immediate benefits (Medinilla, Byiers and Karaki, 2019[43]).

Planning and monitoring, including through digital innovations, are required to generate reliable impact data and improve the economic and social outcomes of development corridors. Global experience suggests that the inadvertent negative development outcomes of corridors require careful management: while the average impact of development corridors on economic welfare tends to be positive, the economic and social outcomes differ greatly between subnational locations or population groups (Roberts et al., 2018[44]). The impact of corridors on development in African countries has not yet been comprehensively assessed for several reasons: development corridors are relatively recent and slow to implement, reliable data are lacking, and there are overall methodological challenges to isolating their effects. In one survey of core stakeholders of corridors,[1] about 40% of respondents stated they believe that adequate monitoring and evaluation mechanisms are lacking (Lisinge and van Dijk, 2021[42]). Implementing development corridors can improve if policy and planning consider such concerns at an early stage (Table 2.1). Using digital innovations and big data can further assist in monitoring and managing corridors.

> *Corridor transport observatories, as implemented in the Northern and Central Corridors in East Africa, collect near real-time data, which provide insights into the extent of delays experienced along a corridor across 51 borders in 15 countries. The data feed into the corridor management's decision-making to improve its performance (World Bank, 2024[45]).*

Table 2.1. Policy and planning considerations for development corridor implementation

	Risks	Policy and planning considerations to alleviate risks
Economic	• Delays and cost overruns are common features of large-scale projects: a global study shows that only 8.5% of over 16 000 megaprojects were delivered on time, on budget and with the promised service. Dams, railways and airports often suffer the most from delays due to their "one-off" nature (Flyvbjerg and Gardner, 2023[46]). • Limited consideration of regional projects in national plans can result in poor linkages with national and rural networks, reducing their benefits for local firms.	• Ensure coherence across international, national and local planning • Link infrastructure development to strategies for productive transformation (e.g. integration of regional value chains) • Assess economic benefits and costs associated with the development corridor • Secure strong political endorsement and project management capacity at the national and local levels • Guarantee policy, legal and regulatory alignment at the regional level • Ensure a financial structure with strong government ownership and involve private sector actors (e.g. through public-private partnerships) and development partners to mobilise additional capital
Social	• Development corridors can lead to significant social challenges such as job losses, displacements of local communities, increases in socio-economic inequalities, exclusion of poor rural communities, and changes to local culture and community dynamics (Bignoli, 2024[47]).	• Focus on governance, inclusivity and equality • Conduct consultations with civil society organisations and non-governmental organisations • Develop frameworks for accountability, policy monitoring and local ownership (e.g. policy dialogues)
Environmental	• If not planned properly, infrastructure development can result in loss of natural habitat and biodiversity and in environmental degradation, further impacting human health and well-being (Chapter 1). An assessment of 33 planned or existing development corridors in Africa showed that their construction would have adverse environmental outcomes, disrupting over 400 protected areas while requiring rigorous mitigation and protection measures to avoid irreversible environmental damage (Laurance et al., 2015[48]).	• Conduct environmental impact assessments focusing on biodiversity and conservation • Address future climate risks and water resources management • Include nature-based solutions in development corridor projects

Source: Authors' compilation based on Hobbs and Juffe Bignoli (2022[49]), *Impact Assessment for Corridors: From Infrastructure to Development Corridors* and G20 et al. (2024[50]), *Delivering Cross-Border Infrastructure: Conceptual Framework and Illustrative Case Studies.*

Strengthening the capacity of regional institutions to manage projects, in alignment with national governments, can enhance the effectiveness of implementation. Institutional arrangements to implement cross-border and regional infrastructure projects are often hindered by the limited capacity of regional economic communities to manage them. Less than 40% of the surveyed stakeholders[2] involved in implementing development corridors consider institutional arrangements to be effective. While regional economic communities are well-positioned to develop frameworks for co-ordination and to negotiate with external partners (e.g. development banks and the private sector), they often lack the capacity and legitimacy to implement regional projects independently. Hence, establishing dedicated focal points at the country level (e.g. dedicated implementation units) could help increase national ownership and ensure initial funding, ultimately accelerating the implementation of regional projects (Lisinge and van Dijk, 2021[42]). Development partners can also provide financial and tailored technical assistance to regional economic communities and institutional bodies managing corridors to strengthen their capacity to oversee and co-ordinate regional projects (Box 2.2).

> *In 2020, the PIDA Service Delivery Mechanism Experts Service Pool became fully operational, supporting 10 out of 89 PIDA projects with early-stage advisory services. It relies on a competitively contracted pool of experts that assists regional and national infrastructure project owners (member states, regional economic communities, river basin authorities, etc.) with advisory services to accelerate project processing times from the concept stage to the financial close (AUDA-NEPAD, 2023[24]).*

Box 2.2. Support for development corridors by development partners

Development partners typically align with African priorities by offering support to corridors sponsored by the African Union and regional economic communities, selecting those corridors that meet their own strategic objectives. From the 55 corridors listed in official documents of the African Union and regional economic communities (i.e. PIDA PAP; Tripartite Transport and Transit Facilitation Programme, etc.), the European Union (EU) and its member states identified 12 priority corridors as part of the EU Global Gateway strategy that would contribute to i) Europe-Africa connectivity; ii) peace and security; iii) green and resilient mobility; and iv) employment creation. Four corridors are located in West Africa, three in Central Africa, two in East Africa, two in Southern Africa and one in North and East Africa (EU, 2022[51]). Similarly, Japan assists in the implementation of ten development corridors. As of 2025, Japanese co-operation has been most active in three priority corridors selected based on i) alignment with regional development initiatives; ii) trade and economic potential; iii) infrastructure gaps; and iv) Japan's existing interventions and strategic interests (JICA, 2022[52]).

For priority projects, development partners can help mobilise finance, including private investments. By 2021, commitments to PIDA priority projects had reached USD 82 billion (falling short of the USD 229 billion target), with 42% coming from African governments, 55% from bilateral and multilateral partners (including 24% from China) and only 3% from the private sector (AUDA-NEPAD, 2023[24]). The participation of development finance institutions alongside that of international partners can support African institutions in mobilising private investments tailored to local contexts. The G7 Partnership for Global Infrastructure and Investment (PGII) and the EU are working together with the African Finance Corporation and the African Development Bank (AfDB) to mobilise investments for connectivity and clean energy supply chains within the Lobito Corridor (AFC, 2023[53]; AfDB, 2023[54]). Similarly, the European Fund for Sustainable Development Plus financing tool, linked to the Global Gateway, provides risk-sharing instruments of up to EUR 40 billion, which are expected to mobilise up to EUR 135 billion of public and private financing via blending facilities and guarantees.

In addition to mobilising financial support, development partners offer substantial technical assistance for corridors. At the planning stage, bilateral partners, such as the Japan International Cooperation Agency (JICA), provide technical support to governments and regional economic communities in formulating corridor development master plans that cover 20-30-year time periods (JICA, 2018[55]). Technical assistance can also take the form of tools and policy platforms which co-ordinate stakeholders and facilitate implementation. For example, Germany (through the Deutsche Gesellschaft für Internationale Zusammenarbeit [GIZ]) made major contributions to the development of tools within PIDA, including the PIDA Job Creation Toolkit, the Service Delivery Mechanism and its PIDA Quality Label and the Expert Service Pool, as well as networks such as the Continental Business Network and the African Network of Women in Infrastructure. Development partners can also collaborate with regional economic communities on regulatory issues related to the corridors. The EU, for instance, is currently assisting the Economic Community of West African States (ECOWAS) in developing a new co-ordination mechanism and governance structure to address trade barriers across the four priority corridors in West Africa.

Source: Authors' compilation.

Regional institutions can improve their impact by facilitating the joint rollout of hard and soft infrastructure through harmonised regulations. Hard infrastructure includes roads, rail or ports, while soft infrastructure encompasses legislative frameworks such as customs regulations or investment promotion initiatives. Upgrading road sections (i.e. increasing the number of lanes, improving road quality and removing obstacles) of the Dakar-Lagos development corridor brought significant economic benefits relative to investment costs. These benefits were doubled and more widely spread when combined with measures to reduce border delays, such as the operationalisation of one-stop-border posts (OSBPs) (Lebrand and Sylvie, 2021[56]). Implementing OSBPs is one of PIDA's priorities to support such combined efforts. In East Africa, a survey of eight OSBPs showed an average 42% reduction in dwell times since their operationalisation. These results were in part due to the implementation of customs procedures that were harmonised through the East African Community (EAC) OSBP Act (2016) and EAC OSBP regulations (2017), serving to ensure consistency and efficiency in clearing goods (AUDA-NEPAD/JICA, 2024[57]).

Comprehensive guidelines for gender mainstreaming in PIDA projects exist, but monitoring their progress can be improved. The African Network of Women in Infrastructure (ANWIN), launched during PIDA Week in Cairo in 2019, is a platform that offers advisory services, knowledge sharing and capacity-building to PIDA projects and beyond to improve gender-responsiveness across the infrastructure life cycle (AUDA-NEPAD, 2025[58]). As one of its first actions, ANWIN proposed a comprehensive set of guidelines for Gender Responsive Infrastructure Development. Notably, the guidelines suggest tracking any gender-sensitive procurement-related actions (e.g. training female business owners to obtain necessary certifications or requiring a track record of gender-inclusive activities from bidders) when selecting PIDA PAP2 projects; they also promote the gender-specific monitoring and evaluation of projects (e.g. disaggregation of impact data by sex) (PIDA, 2020[59]). Beyond early high-level commitments (PIDA, 2020[60]), putting the guidelines into action and monitoring progress towards their goals remain ongoing tasks.

Aligning subnational infrastructure planning with national development plans can extend productive transformation beyond large urban areas

Responding to the speed and scale of Africa's urban expansion requires careful multi-level infrastructure planning. Urbanisation is happening at a faster pace than in other world regions, driven by rapid demographic growth and the expansion of urban land areas. By 2050, two-thirds of the African

population, or 1.4 billion people, will live in an urban agglomeration. Large agglomerations, merging entire urban networks, are set to emerge, as exemplified by Burundi, where urban expansion is projected to cover almost the entire country by mid-century (OECD et al., 2025[2]). While urbanisation can support productive transformation (Chapter 1), adequate planning is essential at all levels, including subnational, national and regional:

- Within cities, urban planning should provide basic infrastructure for all inhabitants, thereby reducing congestion and fragmentation that undermine agglomeration economies (AfDB/OECD/UNDP, 2016[19]). Adequate infrastructure will also be key to support the development of productive activities, including local processing, storage and distribution necessary for the development of value chains.
- At the subnational, national and regional levels, co-ordinated infrastructure investments can connect intermediary cities, small towns and rural areas with large economic hubs like capital cities. Experience from Ghana and Kenya shows how development corridors – namely the Abidjan-Lagos and LAPSSETT corridors – can catalyse the proliferation of new urban spaces around the corridors, which, without adequate planning, do not stand to benefit from the transformative effects (Gillespie and Mwau, 2024[61]).

Co-ordinating investments across different types of infrastructure, while considering existing informal service providers, can improve urban development. Urban planning can increase the efficiency of infrastructure investments by ensuring integrated development across sectors (OECD et al., 2025[2]). For instance, in the water sector, one-third of 36 surveyed African cities implemented cross-sectoral co-ordination tools, including joint planning or programmes, partnerships, a dialogue platform, or co-ordination groups. Among them, 80% reported that these initiatives helped overcome the silos that are often at the root of poor planning, of a lack of policy coherence and of misaligned incentives (OECD, 2021[62]). Interviews conducted for this report also revealed the need to consider interactions with existing infrastructure networks and systems. For example, urban planners can adapt urban development to the local context by accounting for informal transportation when assessing the viability of introducing bus rapid transit (BRT) systems.

> *Urban expansion in Ghana is increasing the need for reliable and accessible transport networks. Currently, 28% and 35% of Accra's and Kumasi's population live at a distance beyond a 30-minute walk of any market, school or healthcare facility. While setting up an efficient BRT system represents a priority, expanding the existing network of trotros (i.e. minibuses for 14 to 24 passengers) could also represent a promising avenue to tackle the challenge (Anderson, B. et al., 2024[63]).*

Aligning subnational planning with productive transformation objectives will help extend economic effects beyond large urban centres. Despite the rapid growth of large urban agglomerations, 62% of Africa's population – or 1.3 billion people – is projected to continue to live in intermediary cities, small towns and rural areas by 2050 (OECD et al., 2025[2]). Yet, currently, most urban plans stop at the administrative city boundaries regardless of whether they mirror functional urban areas (like metropolitan areas), and they neglect linkages between urban and rural areas. An integrated approach between subnational and national planning can help connect productive transformation objectives with urban and rural planning, thereby increasing coherence in infrastructure development. In 2021, some 38 African countries were identified as having a national urban strategy. The strategies of Eswatini, Morocco, Senegal, Seychelles and South Africa had implementation plans and sufficient institutional, financial and human capacities (UCLG/Cities Alliance, 2021[64]). Accounting for the social and environmental returns of infrastructure projects, especially in rural areas, can help governments assess the need for public sector financing and improve prioritisation.

> *In Ethiopia, the National Urban Development Spatial Plan 2035 (NUDSP) focuses on strengthening linkages between spatial planning, economic development and urbanisation. It highlights the importance of i) development corridors within the country; ii) transport connectivity between intermediary cities and rural hinterlands; iii) the transformation of existing large rural settlements into towns; and iv) the formation of new*

urban settlements associated with projects in the industrial, agriculture, mining and energy generation sectors (AUC/UNECA/UN-HABITAT, 2020[65]; Monkhouse, 2018[66]).

The Uganda Digital Acceleration Project (UDAP) was created to overcome significant bottlenecks to private participation in last-mile connectivity projects. They include the high costs of connecting rural and peri-urban households, local populations' limited willingness to pay and the lack of appropriate incentives. To overcome these challenges, the Ugandan government has prioritised public investments in optical fibre cable to cover an additional 63 districts, build 21 transmission sites and extend last-mile connectivity to 2 800 sites across the country under UDAP (Parliament of Uganda, 2024[67]).

Financial transfers and government capacity are important to enable subnational institutions to implement policies and plan infrastructure investments (Table 2.2)**.** According to the *City Enabling Environment Ratings*, a comprehensive evaluation of subnational government capacity, 42 out of 53 African countries made progress in improving their institutional environments between 2012 and 2021, with notable advances in financial transfers, transparency and citizen participation. However, many African cities grapple with unpredictable financial transfers, capacity shortages and fragmented governance structures, hindering their ability to implement urban policies effectively and plan long-term infrastructure investments. Only a few countries – such as South Africa, Zambia and Zimbabwe – provided municipalities autonomy over revenue collection (i.e. tax base, rates and fees) and access to financial markets (UCLG/Cities Alliance, 2021[64]). In *Revenue Statistics in Africa*, a mere seven African countries reported collecting subnational revenues (OECD/AUC/ATAF, 2024[68]).[3] Similarly, most cities lack skilled urban planners, with only 0.4 managerial and technical staff per 1 000 people in Ghana, Mozambique and Uganda, compared 8 to 1 000 in India and 36 in high-income countries.

The Urban Resilience Fund (TURF), launched by the investment management firm Meridiam in partnership with The Rockefeller Foundation and the United Nations Capital Development Fund (UNCDF), offers financial and technical resources to African cities to implement sustainable infrastructure projects, for instance, for urban mobility, the energy transition or social infrastructure. The fund has closed a first round of investments of USD 290 million (Löffler and Haas, 2023[69]).

Since 2019, the AfDB has operated a dedicated Urban and Municipal Development Fund that offers funding and assistance to national and local governments seeking to improve cities' resilience, liveability and productivity. The fund's Oversight Committee has selected six large African cities where it will identify transformative infrastructure projects able to attract public and private sector investments, targeting the inclusion of up to 35 cities by 2027 (AfDB, 2024[70]; Swiss Development Cooperation, 2024[71]).

Since 2022, the European Commission and the Agence Française de Développement (AFD) have been collaborating on a EUR 30 million guarantee programme called Cityiriz. The initiative aims to support the development of domestic banking markets to decrease local public debt, particularly in intermediary cities, by reducing the risk of lending for private and public African banks through the provision of guarantees and technical assistance (EU, n.d.[72]; AFD, n.d.[73]).

Table 2.2. Policy levers to reinforce subnational capacity for infrastructure development

Challenge	Policy solutions	Examples in Africa
Financing	• Fiscal multi-level governance[1] • Local taxation and revenue collection • Facilitated access to credit and investment	• In Kenya, the 2010 Constitution required the national government to allocate at least 15% of its revenue to county governments to enhance local financial autonomy. By 2021, the contribution reached KES 370 billion (approximately USD 3.7 billion), nearly double the amount allocated at its inception in 2013. • In Uganda, the local government revenue mobilisation strategy managed to increase tax compliance by 30% in three years by introducing digital tax collection systems.
Human capacity	• Training and recruitment of urban planners and municipal staff • Education and professional programmes in urban management	• The African Local Governments Academy (ALGA) provides training to elected local officials and staff. Since 2016, the ALGA has issued 1 044 training certificates and organised numerous capacity-building activities, directly benefiting over 7 000 participants. • In South Africa, the Municipal Institute of Learning (MILE) was founded in 2009 as a knowledge management initiative of the eThekwini Municipality to enhance the capacity of officials within the municipality and in other African cities and agencies involved in local government. Jointly with universities, research institutes and international development agencies, MILE workshops seek to increase technical and in-demand skills including in road safety and the green and digital domains.
Institutional capacity	• Promotion of multi-level governance • Establishment of metropolitan authorities for better co-ordination • Strengthening of legal frameworks for urban planning	• In Benin, the Urban Development Strategy for the Cotonou Agglomeration (2011) enhances co-operation between Cotonou, Abomey-Calavi and Sèmè Podji to address urban growth challenges. This metropolitan region functions as a unified urban area, with municipalities working together on infrastructure, mobility and risk management. • In Morocco, the Rabat-Salé metropolitan area follows a decentralised governance model involving multiple administrative bodies to improve service co-ordination, infrastructure development and urban management. In 2020, the Rabat-Salé Urban Agency introduced Morocco's first digital twin platform, enabling better planning and simulation of urban projects.

Note: 1. Multi-level governance refers to "the relationship between elected governments situated at different administrative levels. It concerns layers of actors who interact with each other across levels of government (vertically), among relevant actors at the same level (horizontally), or in a network" (OECD, 2022[74]).
Source: Authors' compilation based on OECD et al. (2025[2]) *Africa's Urbanisation Dynamics 2025: Planning for Urban Expansion*; AfDB/OECD/UNDP (2016[19]) *African Economic Outlook 2016: Sustainable Cities and Structural Transformation* and UCLG/Cities Alliance (2021[64]). *Assessing the Institutional Environment of Cities and Subnational Governments in Africa*.

Effective infrastructure governance can accelerate projects and improve their operational sustainability

Better infrastructure governance and sustained institutional support can make infrastructure projects more efficient

With improved infrastructure governance, countries in Africa – especially low-income countries – could achieve far better outcomes with the same resources. Infrastructure governance refers to "the policies, frameworks, norms, processes and tools, used by public bodies to plan, make decisions, implement and monitor the entire life cycle of public infrastructure" (OECD, 2022[74]). The primary governance issues for African infrastructure projects have historically included cost overruns, delays, missing managerial capacities (especially in planning), state capture and insufficient stakeholder engagement (Sekasi et al., 2024[75]). Recent evidence from 37 low-income countries suggests that up to 53% of investment resources may be wasted as a result of inefficient management of public investments (including in infrastructure), resulting mainly from shortcomings in monitoring, maintenance funding, project selection and appraisal, and multi-year budgeting (Eltokhy et al., 2024[76]).

Limited capacities can prevent project implementation from adhering to elaborate top-down plans and international governance standards. International governance standards for infrastructure projects

prescribe best practices such as strategic plans and decision-making with broad-based stakeholder participation, the establishment of separate governance bodies, and ample financing and management capacities for the duration of a project (GIH, n.d.[77]; OECD, 2020[78]; OECD, 2024[79]). However, in African countries, top-down governance structures – even if they meet institutional requirements on paper – have often failed to factor in local and national agendas and limited available finance, leading to an implementation gap (AfDB/OECD/UNDP, 2016[19]; Gil, Stafford and Musonda, 2019[17]; Thusi, Qwabe and Ojogiwa, 2024[80]). For example, despite the progress achieved in the first ten years of PIDA (PIDA PAP1), the preparation and implementation of projects fell behind the initial schedule (Signé, 2017[81]). Around 25% of the over 400 projects selected for PIDA PAP1 did not reach the feasibility stage due to a lack of maturity (AUDA-NEPAD, 2023[24]).

Localised, context-specific governance of infrastructure projects can be effective, even in challenging settings. In practice, pragmatic and context-specific governance models which acknowledge capacity constraints, adverse incentives and power imbalances can be effective in African contexts. For instance, cross-border projects can benefit from a local understanding of which contributions from different states are essential to arrive at a collective advantage, allowing stakeholders to address bottlenecks (Byiers et al., 2021[82]; Lisinge and van Dijk, 2021[42]). Especially in low-income countries, a thorough understanding of local project stakeholders (including their interests and capacities) and implementation conditions can facilitate effective project governance and allow the formation of stakeholder coalitions that support projects throughout their duration (OECD/ACET/AUDA-NEPAD, forthcoming[83]).

Viewing infrastructure as a "club good" can help clarify stakeholder incentives and effective structures for collaboration. In economics, club goods refer to goods that are non-rivalrous but exclusive in consumption. In a "club" approach, infrastructure project owners voluntarily invite a limited set of engaged stakeholders to actively participate in project governance. This approach can be both more effective and efficient than the mandatory, broad-based consultation of all project stakeholders, as it involves a few relevant stakeholders more directly in project implementation while reducing the risk of lengthy negotiations and legal disputes with peripheral and opportunistic stakeholders (Gil and Beckman, 2025[84]). Understanding African cross-border infrastructure projects as club goods can also show how national contributions combine in different ways to create shared value for participating countries. For example, a transport corridor will only be as useful for any participating country as the contribution by the "weakest link", while in a mobile roaming network, all countries may equally benefit from the best national provider's offering (Byiers et al., 2021[82]). Outside of Africa, development corporations – organisational structures that govern club goods – have successfully been implemented to manage infrastructure holistically for neighbourhoods or points of interest within cities, with some positive results, for instance in the Caribbean (Dodman, 2008[85]).

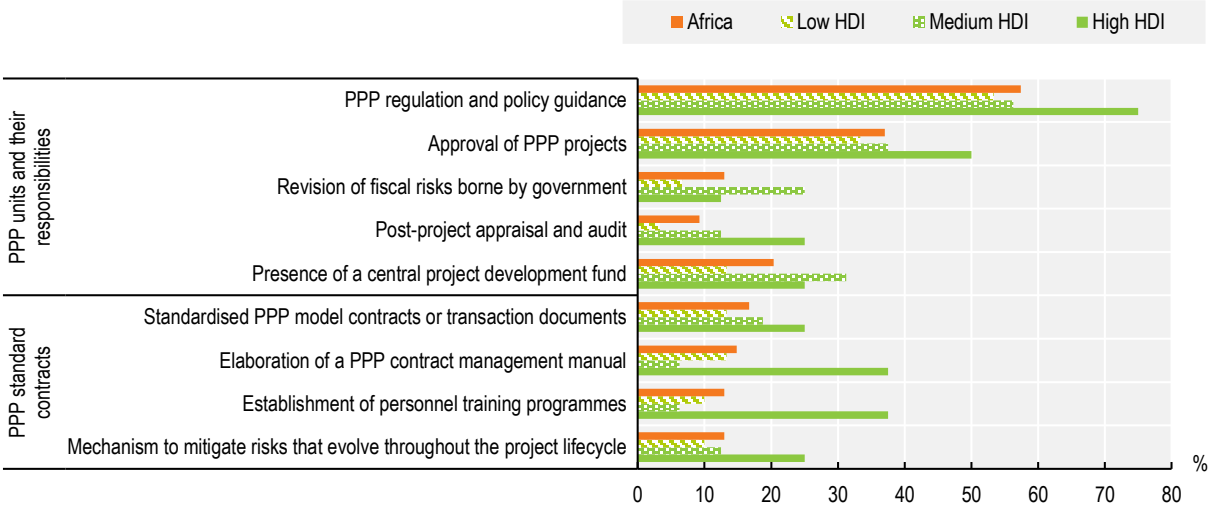
Project preparation facilities (PPFs) for infrastructure are numerous in Africa but often lack sufficient funding and co-ordination. Governance challenges are often heightened for large and complex infrastructure projects, as they require implementation capacities that are limited in African countries (Gregory, 2020[86]). The purpose of PPFs is to add capacity in such situations. According to a global stocktaking of infrastructure PPFs in 2021, 44% of all PPFs are in Africa. However, PPFs in Africa on average support fewer projects with lower financial value than in other world regions (GIH, 2021[87]). Similar to public-private partnership (PPP) units, PPFs in Africa often lack the resources necessary to offer sustained, detailed technical and operational support, and they struggle to prioritise projects and collaborate with each other (AfDB/ICA, 2019[88]; CCFLA, 2024[89]).

> *In 2021, Senegal reformed its regulatory framework regarding infrastructure projects' preparation, procurement and contract management. These reforms included the implementation of a support fund for project preparation and an expansion of the required pre-feasibility studies to assess the financial and operational viability of projects. Fiscal affordability, including the identification of the required long-term public commitments and bankability assessments, is mandatory prior to launching the procurement procedure. Senegal plans to improve*

information disclosure by publishing tender documents and the terms of PPP contracts on the regulator's website (World Bank, 2023[90]).

With the right reforms, PPP units can expand their offering of governance tools that mitigate fiscal risks and contractual challenges for large and complex projects. PPP units are specialised government entities designed to facilitate the development of PPP programmes and provide administrative and technical support. Estimates show that institutional reforms improving, for example, controls on corruption, rule of law, quality of regulations and accountability of public organisations could unlock at least USD 20 billion in infrastructure investments from the private sector in four years (Chinzara, Dessus and Dreyhaupt, 2023[91]), as such reforms enable the private sector to take increasing risks (Kouton, Sanogo and Djomgoue, 2023[92]). While 42 African countries have enacted PPP legislation, only a few attract private investments, which suggests room for other reforms (ALSF, 2024[93]). Similarly, while 36 African governments (67%) have designated PPP units, only the units of 7 countries (13%) revise the fiscal risk of projects, 5 (9%) conduct post-project appraisals and auditing, and none consult with affected communities about the impact of PPP projects.[4] Limited institutional support can be a particular concern in African countries with low human development levels. While these countries are on average as likely to have a PPP unit as other African countries, they are significantly less likely to offer risk mitigation, contract management and personnel training (Figure 2.2).

Figure 2.2. Presence and responsibilities of public-private partnership units in African countries



Note: HDI = Human Development Index. PPP = public-private partnership. The selected entries showed the most significant institutional bottlenecks in low-development countries.
Source: Authors' calculation based on World Bank (2025[94]), *Benchmarking Infrastructure Development (BID)* (database), https://bpp.worldbank.org/en/global.

StatLink https://stat.link/469cnl

The development of technical, advisory and business skills in public administrations, especially in PPP units, can mitigate project risks. PPP projects are often legally and technically complex. Technical skills are required in public agencies involved in the prioritisation and planning stages. These are needed for rigorous *ex ante* evaluations such as value-for-money analyses and for contract design skills that ensure proper risk transfer and avoid concession contract renegotiations. Furthermore, expertise in regulatory reforms, concessional arrangements, procurement processes and negotiating with external actors is critical to reducing execution bottlenecks and later project risks for governments (OECD/ACET, 2020[95]). Least-developed countries in particular require skills development to allow officials to structure

projects for climate resilience (OECD, 2024[79]). The OECD and Africa Infrastructure Development Association (AfIDA) expert meeting and survey conducted in preparation for this report[5] showed similar insights: while technical qualifications such as engineering and urban planning can be found in government agencies, business development and commercial skills are often lacking, which hinders PPPs. Policy training and communities of practice can support skills development for PPP units and other entities.

> *The ALSF Academy helps build capacity via a three-level certification programme. The web-based repository contains e-learning courses and other support material to help stakeholders improve knowledge and skills in, among other things, infrastructure and PPPs, mining, oil and gas, power, sovereign debt, and dispute resolution.*
>
> *Since 2023, the Accelerating and Scaling-up Quality Infrastructure Investment in Africa (ASQIIA) project, jointly implemented by the African Center for Economic Transformation (ACET), the African Union Development Agency – New Partnership for Africa's Development (AUDA-NEPAD) and the OECD Development Centre, enables managers from African PPP units, line ministries and dedicated agencies to learn from each other's experiences through interactive peer-learning workshops in areas such as project design, project preparation and implementation. Dedicated training modules and interactive discussions with practitioners from leading regional financial institutions and the private sector allow them to share up-to-date information on countries' priority project pipelines and related opportunities for investment.*

Gender-sensitive skills development could increase the skill supply for infrastructure-related jobs. Using the construction sector to approximate the infrastructure sector, women comprise only 4% of workers in Africa, compared to 8% in developing Asia and 11% in high-income countries. The low share of female workers can be partially explained by restrictive social norms and perceptions associated with manual jobs (OECD, 2021[96]). In a global survey of experts working in renewable energy, over 60% of African respondents identified social norms and 50% a lack of relevant skills as major barriers preventing women from accessing jobs in the sector. More than 80% of African survey participants emphasised that skills development and training for women should be the top policy priority to enhance their labour market opportunities (IRENA, 2019[97]). Gender-sensitive initiatives are emerging.

> *Since 2017, an EU-funded project in the Gambia has sought to rehabilitate over 100 km of feeder roads, by employing women in construction work for the first time; the women represent 60% of the team (UNOPS, 2019[98]). The project aims to improve the country's food security by connecting small-scale farmers with major motorways.*

Improving cost recovery and advance planning of maintenance can ensure operational sustainability

Various pathways for generating revenues from infrastructure projects can be explored, but the financial burden on poorer users is an important trade-off. Charging infrastructure users direct fees can be less viable and less socially desirable in Africa compared to other world regions. In Africa, only 15% of PPP projects rely on user fees (such as tolls), while the main revenue source of 40% of the continent's PPP projects are payments from public purchase agreements (i.e. contractual arrangements in which governments agree to make regular payments to the private partner). In Latin America and the Caribbean, the corresponding figures are 29% and 24%, respectively.[6] For PPPs in particular, governments must carefully justify the dual financial burden on citizens – through both taxes and direct fees – by realistically assessing revenue potential, fiscal risks tied to long-term public purchase agreements, and the cost of managing complex partnerships versus direct public provision. Public consultations with future paying users and discounts to commuters and local residents are important levers to increase public acceptance (Osei-Kyei and Chan, 2015[99]). In addition to direct user fees, mechanisms to monetise the indirect value creation of infrastructure projects (like land and commercial value or carbon credits) and to make user fee collection more efficient (like smart meters and e-tolls) can be explored to improve cost recovery (Table 2.3).

> *In the case of the Lekki Toll Road in Lagos, Nigeria, initially high toll fees led to public outcry, prompting the government to subsidise the fees. In the end, this created a potentially higher burden for public budgets than direct public financing of the road might have caused (Osei-Kyei and Chan, 2015[99]).*

Table 2.3. Examples of mechanisms to improve cost recovery from infrastructure projects

Cost recovery type	Description	Infrastructure sector	Revenue potential	Trade-offs	Example
Land and commercial values	Recovery of increasing property values via taxation, land sales, leases or value-sharing agreements with private developers, especially in cities	Transport, energy	High	Gentrification crowding out poor inhabitants	Bahir Dar, an intermediary city in Ethiopia, collected USD 7.8 million in 2020 from land leases, accounting for 62% of the local budget and covering over 40% of local infrastructure investment. Similarly in Sierra Leone, Freetown created a tax cadastre of properties using hand-held GPS units, tripling property tax revenue and increasing transparency (African Union, 2024[100]).
Carbon credit sales	Monetising of carbon savings by trading credits in carbon markets	Energy	Medium	Accessibility of carbon markets, measurement of credits	In Kenya, KenGen developed and registered six clean energy projects (geothermal, hydropower and wind) through the United Nations-led Clean Development Mechanism (CDM). The projects enabled the company to issue carbon valued at USD 3.8 million (KenGen, 2021[101]).
Smart meters	Real-time tracking of consumption to allow for automated bill payment and price adjustments	Energy, water	Low	Installation cost, personnel training	In Kenya, the Nairobi City Water and Sewerage Company (NCWSC) and the Nakuru Water and Sanitation Services Company (NAWASSCO) have adopted smart water meters, improving billing and revenue collection and reducing water wastage (GSMA, 2022[102]). It has first been implemented for some 10 000 top water users, with the aim to develop it for another 90 000 users (Business Daily, 2014[103]).
E-toll systems	Automated toll payments for registered drivers	Transport	Medium	User acceptance, exclusion of poor users	Zambia has successfully implemented 20 inland toll gates and an automated e-Toll payment system. Managed by the Road Development Agency (RDA), the toll gates have boosted revenue collections and enhanced efficiencies in the maintenance of its 67 671 km road network

Source: Authors' compilation.

Energy and water utilities can improve their pricing and billing to reduce strain on government budgets. In the energy and water sectors, only one in three utilities recovers its operating, maintenance and debt service costs (World Bank, 2024[104]; GSMA, 2022[102]). In Kenya, fiscal injections to state-owned enterprises in infrastructure sectors account for 0.26% of GDP, a size comparable to other developing countries, with equity injections ranging from 1.6% to 4% of the government budget (World Bank, 2023[105]). Estimates from 2016 show that the median hidden cost incurred by energy utilities across 39 African countries range from 0.42% of GDP from under-pricing, 0.31% from technical losses, 0.22% from over-staffing to 0.15% from foregone bill collection (Trimble et al., 2016[106]). Digital technologies, including smart meters, can assist with billing and the tracking of technical issues, provided they are adapted to the local context. Their successful implementation relies on technology development strategies (e.g. whether the technologies are developed in-house or acquired), adequate training and reskilling of the workforce to use new systems, and a supportive regulatory framework (ESMAP, 2024[107]).

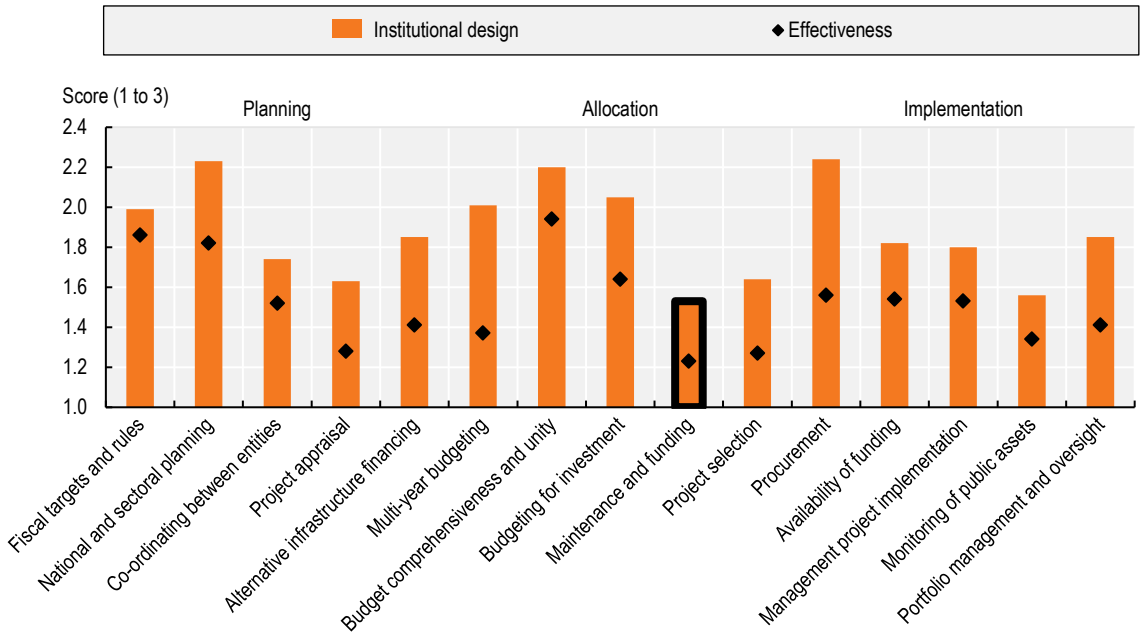
African countries allocate too few funds to maintenance. Across 46 developing countries, estimates show that governments typically allocate only about 14% of the capital expenditure for roads to maintenance (Gorgulu, Foster and Rana, 2022[108]). Yet, the estimated share of funding that should be dedicated to maintenance to achieve policy goals stands at 31% in the transport sector, 37% in water and sanitation and 23% in energy and electricity in African countries – excluding those in North Africa (Rozenberg and Fay, 2019[109]).

Advance planning for maintenance hinges on standardised and transparent approaches to assess maintenance needs and on establishing clear funding mechanisms. Across 31 African countries, maintenance ranks the lowest among the International Monetary Fund's infrastructure governance project scores (Figure 2.3). Institutional design – for the maintenance category, this is the ability of countries to apply consistent methodologies to estimate and plan for both routine and capital-intensive maintenance – scores low at 1.53 points. As a comparison, for European countries, the score is 1.93 points. Africa's low score is partly due to the absence of regional and international harmonised standards. For instance, some regional economic communities like the West African Economic and Monetary Union (WAEMU) and the Economic and Monetary Community of Central Africa (CEMAC) have issued methodological directives on public investment, but these do not cover maintenance (Eltokhy et al., 2024[76]). In the 31 countries, the effectiveness score, i.e. the implementation capacity, is also low, largely due to the limited inclusion of maintenance in public budgets (Blazey, Gonguet and Stokoe, 2020[110]). If maintenance is included at all, it is often confined to roads and remains vulnerable to annual budget decisions and competing spending priorities. Addressing these bottlenecks requires at least two key improvements:

1. adopting standardised and transparent approaches for evaluating infrastructure maintenance needs across all infrastructure sectors
2. establishing clear funding mechanisms, both within annual budgets and through dedicated earmarked funds and user fees.

> *South Africa's National Infrastructure Maintenance Strategy requires every sector and institution (from municipalities to state-owned enterprises) to develop infrastructure asset management plans that inventory assets, assess their condition, and forecast maintenance and rehabilitation needs over time (Department of Public Works, 2007[111]).*
>
> *The Uganda Road Fund (URF) is mandated to finance routine and periodic maintenance of public roads across the country. URF exclusively secures its finances from road user charges, including fuel levies, vehicle transit fees, road licenses, axle load fines, toll fees and other related charges (Uganda Road Fund, n.d.[112]).*

Figure 2.3. Average Public Investment Management Assessment (PIMA) scores for infrastructure among 31 African countries



Note: Scores are ranked as: 1) not met, 2) partially met and 3) fully met. Data do not cover North African countries.
Source: *IMF (2025), Public Investment Management Assessment (PIMA)* (database), https://infrastructuregovern.imf.org/content/PIMA/Home/PimaTool/What-is-PIMA.html.

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Quality certifications that support African priorities and are fit for local conditions can help accelerate and scale up infrastructure development

Infrastructure developers must quickly provide a large stock of quality infrastructure for Africa's development and productive transformation. Project certification is useful to ensure projects meet quality standards, which remains key to attract funding. Nevertheless, quality certification can take time and hamper project implementation. Infrastructure projects in African countries encounter barriers to receiving certifications that entail administrative and training efforts, disclosure and data requirements, and costs, all of which may not be fit for purpose given Africa's high demand for infrastructure (Gil, Stafford and Musonda, 2019[17]). Hence, many global certifications for quality infrastructure are not widely used in Africa and are too specific for mobilising investors for African Union priorities. Overcoming these challenges requires prioritising projects in line with Africa's development plans, by and large, identified under the PIDA programme.

The PIDA Quality Label (PQL) is a useful tool to attract funding for bankable PIDA infrastructure projects at the preparation stage. The PQL is a certification for early-stage PIDA projects (concept proposal, feasibility and structuring – leading up to financial close) (Box 2.3). It aims to improve the quality and bankability of the PIDA pipeline. Assigned by the AUDA-NEPAD Service Delivery Mechanism, the PQL represents an African recognition of quality for prioritised PIDA projects, reflecting their adherence to international best practices in project preparation and structuring (AUDA-NEPAD, 2023[24]). About 12-15 projects are reported to have been certified with the PQL as of 2025 (PIDA, 2025[113]). This scope could be much expanded since the PIDA PAP2 includes some 69 projects, most of them at the preparation stage. The PQL can become a more widely established quality seal, assuring minimum standards for

government-funded infrastructure projects and serving as a marker for bankability and eligibility for funding from development finance institutions (OECD/ACET, 2020[95]; Dash et al., 2021[114]).

Box 2.3. The three stages of the PIDA Quality Label

The PIDA Quality Label (PQL) is a project preparation tool offered to selected PIDA projects as part of the Service Delivery Mechanism, established by AUDA-NEPAD in 2014 with backing from GIZ. As part of the Service Delivery Mechanism, the PQL unit is located within AUDA-NEPAD's Directorate for Programme Delivery and Co-ordination. The PQL comprises three stages, with an award being given at the successful completion of each stage.

1. In the Project Definition stage, the PQL deploys a Quick Check Methodology based on a set of criteria that streamlines the assessment to be conducted in 30 days. The criteria are clustered into two lenses and five dimensions: under the strategic context lens are regional priority, sector readiness and private sector interest; and under the project lens are project readiness and public-private partnership attractiveness. The Quick Check Methodology is used for both project eligibility and appraisal, to verify compliance with basic entry criteria and to examine early-stage weaknesses and strengths. The findings are summarised, and a roadmap for accessing project preparation facilities (PPFs) is prepared; these are included in a Project Concept Memorandum, which constitutes the PQL1 Award.
2. The Pre-feasibility stage entails two activities. The first involves identifying potential PPFs to finance feasibility studies and ensuring that the project meets their eligibility criteria. The second entails assessing the project's soundness, maturity and viability. Accordingly, the PQL2 Award – which takes six to nine months to secure – is completed with a certification to show a project's readiness to enter a PPF's portfolio and a Project Information Memorandum for project financing.
3. Finally, in the Feasibility and Bankability stage, the PQL focuses on carrying out feasibility studies with PPF funding, project structuring and bankability and on finding project financing options based on its commercial and non-commercial components. The PQL3 Award consists of the project's financial agreement, which must be reached within two years.

Source: OECD/ACET/AUDA-NEPAD (2021[115]), "High Level Implementation Plan for "Accelerating and Scaling Up Quality Infrastructure Investment for in Africa".

International quality infrastructure certifications can be expanded to project implementation stages. International certifications represent broad quality principles (Box 2.4) in concrete terms by requiring a project's adherence to specific technical standards. Since certifications typically entail in-depth external verification and accountability after the feasibility stage, they can serve as a dependable and reliable signal for investors, communicating financial viability and alignment with goals of sustainability. Many certification tools exist, but they are applied to too few projects:

- The Blue Dot Network, launched in April 2024, synthesises existing standards derived from the G20's *Principles for Quality Infrastructure Investment*. It complements certifications that focus on either technical project quality or environmental sustainability. Participating projects fulfil key international standards for quality infrastructure investment, across ten Blue Dot Network elements (Blue Dot Network, 2024[116]). The Network's elements are now being applied to PQL projects, extending the certification for these projects from the preparation to the implementation stage.
- The FAST-Infra Sustainable Infrastructure Label seeks to designate bankable projects to promote local involvement, including development finance institutions. It uses 14 criteria measuring sustainability's environmental, social, governance, and adaptation and resilience dimensions. The

label draws from more than 25 international regulatory frameworks, guidelines and taxonomies. Eighteen projects in 16 countries have been certified, including 8 in Africa: in Côte d'Ivoire, Egypt, Gabon, Kenya, Senegal, South Africa, Tanzania and Uganda. In South Africa, project developer Mzansi Clean Energy Capital earned the label for its solar-hybrid mini-grid pilot. Mzansi's pilot aims to serve 725 households, prevent 5 kilotons of carbon dioxide emissions annually and deliver 12 megawatts of solar energy, through a USD 35 million fund (Fast-Infra SI Label, 2021[117]).

- ISO 14001 of the International Organization for Standardization provides a framework to implement an environmental management system. Its cost ranges between USD 3 000 and USD 10 000 every three years. This ISO has been used for over 300 000 certifications and 500 000 sites, including more than 4 000 certificates and 6 000 projects in Africa, such as Water Senegal, which provides drinking water with a potability level of 99.1% to 5 million people (ISO, 2023[118]).
- The Green Terminal Label aims to reduce the carbon footprint of port activities, by providing a label across 8 pillars. Each annual cycle includes a self-assessment and a labelling audit by a third party. Ten out of 11 projects certified with the Green Label are in Africa: 3 in Côte d'Ivoire, and 1 each in Benin, Cameroon, Gabon, Ghana, Guinea, Senegal and Sierra Leone. For example, Sierra Leone's port of Freetown obtained the Green Terminal Label in 2022 based on a reduction of its environmental impact by almost 30% since 2019, including through the installation of a 100% LED lighting system and a 1 200 square metre reforestation project along the port's terminal wall (Africa Global Logistics, 2021[119]).
- EDGE (Excellence in Design for Greater Efficiencies) provides a green building certification created by the International Finance Corporation to recognise building projects that use less energy, less water and greener materials. To be certified, projects must reduce their use of energy, water and carbon from building materials to less than 20% of the amounts required by local standards; EDGE measures the projects' improvements. The cost for registration is USD 350 and for certification between USD 2 900 and USD 7 250, depending on the project's size. It is used in more than 100 countries, including 15 countries in Africa for a total of 69 projects. For example, in Madagascar, as of 2019, the Antananarivo International Airport had made savings of 33% in energy, 49% in water and 37% in carbon embodied in materials. It did so while employing a 95% Malagasy workforce and implementing other measures to protect the environment (EDGE, n.d[120]).

Box 2.4. The G20's Principles for Quality Infrastructure Investment

"Quality infrastructure" is an established concept to emphasise the quality of execution and wider impacts of infrastructure projects. While initially focusing narrowly on a project's technical standards and performance, the G7's agreement on the Ise-Shima Principles for Promoting Quality Infrastructure Investment marked the inclusion of environmental and social impacts.

To steer infrastructure investments towards sustainable growth, the G20 introduced the Principles for Quality Infrastructure Investment at the 2019 G20 Osaka Summit:

1. maximise the positive impact of infrastructure to achieve sustainable growth and development
2. raise economic efficiency in view of life-cycle cost
3. integrate environmental considerations in infrastructure investments
4. build resilience against natural disasters and other risks
5. integrate social considerations in infrastructure investments
6. strengthen infrastructure governance.

These principles capture cross-cutting dimensions of quality including climate change, gender equality, debt sustainability and governance – factors that are also essential for mobilising capital and narrowing the infrastructure financing gap. Through the principles, countries can align their development goals with international standards and track progress through a common set of indicators (Table 2.4) while creating favourable investment opportunities.

Table 2.4. Indicators for assessing the Principles for Quality Infrastructure Investment

Principle	Sustainable growth and development	Economic efficiency	Environmental considerations	Resilience	Social considerations	Governance
Example indicators	Jobs created and supported, development of employee skills, time between contract signature and financial close	Internal rate of return, economic rate of return	Greenhouse gas emissions avoided, local air pollutants reduced	Budget committed to disaster and climate resilience measures	Jobs created and supported for women, stakeholder engagement	Governance body members that have received anti-corruption training, fiscal sustainability

Source: G20 (2022[121]), *Compendium of Quality Infrastructure Investment Indicators*, https://cdn.gihub.org/umbraco/media/4761/compendium-of-qii-indicators.pdf.

Source: Japan MILT (2021[122]), *Japan's "Quality Infrastructure" Around the World: Compendium of Good Practices*; G20 (2022[121]), *Compendium of Quality Infrastructure Investment Indicators,* https://cdn.gihub.org/umbraco/media/4761/compendium-of-qii-indicators.pdf.

Annex 2.A. Building African expertise to deliver infrastructure projects

Accelerating and scaling up infrastructure projects requires developing African expertise to implement them, particularly the priority projects identified by PIDA PAP2 (2021-30) (OECD/ACET, 2020[95]). Currently, many of the skills needed are lacking in African labour markets, and data on skill gaps are limited (AUC/OECD, 2024[123]). However, many promising skills development initiatives already exist, offering an opportunity that private firms, policymakers and international partners can collaboratively build on, in order to deliver Africa's priority infrastructure projects.

Skill shortages in management and project preparation hinder early infrastructure development

Gaps in managerial skills are among the most salient across the life cycle of infrastructure projects. They cut across project prioritisation and definition; funding and financing; pre-feasibility and design; procurement, contracting and licensing; construction and implementation; operations and maintenance; monitoring and evaluation; and decommissioning. Project managers are at the core of effective project governance, managing a project's complexity and technical requirements while engaging with stakeholders. Sekasi et al. (2024[75]) identified lack of managerial skills as one of the significant challenges in African transport infrastructure megaprojects, leading to poor project planning, execution and oversight.

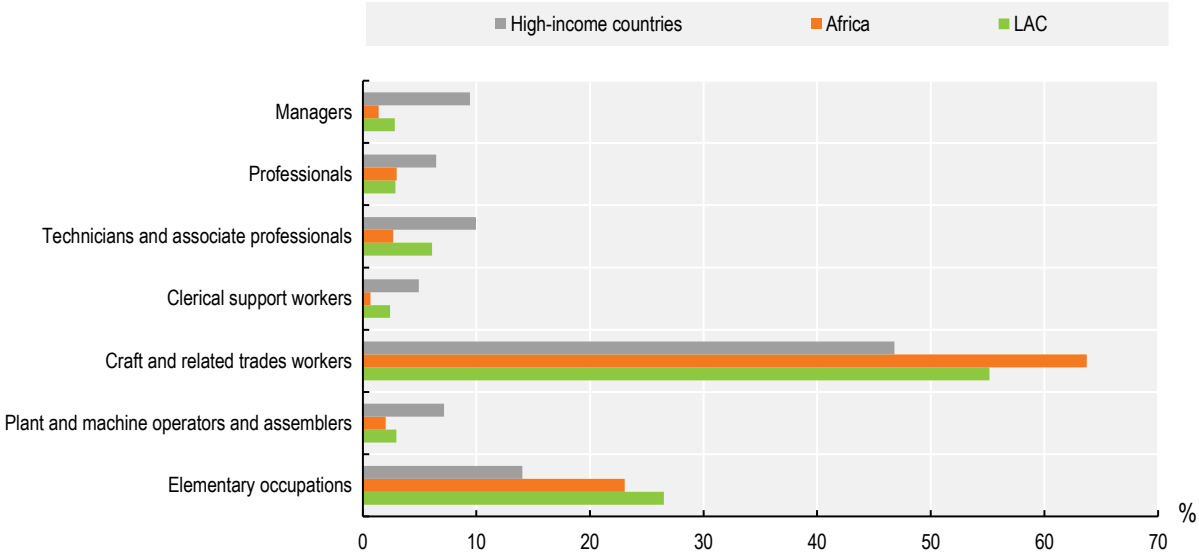
Infrastructure development by sub-national governments faces a pronounced project management skill gap. Administrators in cities often lack the required management and technical skills to seek financing for infrastructure projects, requiring them to recruit costly outside advisers (Löffler and Haas, 2023[69]). A study of local government capacity in 16 African cities measured the difference between actual staffing numbers per 1 000 population and a benchmark for cities in developing countries with comparable populations and areas. The measured cities in Ghana, Mozambique and Uganda showed a ratio of 0.4 managerial and technical staff per 1 000 population, while the cities in Ethiopia had around 1.4 per 1 000.[7] In contrast, this ratio was 8 to 1 000 in India and 36 to 1 000 in high-income countries (Cities Alliance, 2017[124]). Training for local governments can help, like the MILE project in South Africa. Another example is the Local Government Service Commission (LGSC) of Mauritius, established in 1976, which supports skills development by enabling federated states to recruit management staff from local governments (UCLG/Cities Alliance, 2021[64]).

The high demand for managerial skills will continue in the future. PMI (2021[125]) estimates that Nigeria and South Africa need 87 000 new project management positions per year on average between 2019 and 2030. The construction sector drives 25% of this demand.[8] Managers who can navigate local, cross-border and global frameworks will be in high demand (OECD/AfIDA, 2025[126]).

Skill shortages are most often reported in the early phases of the infrastructure life cycle, hindering project preparation, making projects less bankable and increasing their costs. Project preparation requires a wide range of skills and expertise – spanning technical, social, environmental and financial areas. According to the OECD/AfIDA survey, skill shortages are most prevalent in the early project phases: financing, pre-feasibility, and construction and implementation (before operation, maintenance and de-commissioning).[9] Leigland and Roberts (2007[127]) estimate that this skills gap has led to increased project preparation expenditures of nearly 10% of a project's investment cost in Africa – higher than the standard 5% cost.

In the construction sector, high-skill occupations (managers, professionals and technicians) seem less represented in Africa. While data on skills in infrastructure are lacking, occupational data exist for a sector like construction for 35 African countries. African construction employs mostly medium-skilled professionals, nearly 70% of the total. Relative to other world regions, the share of managers, clerical support workers, plant and machine operators and assemblers, professionals, and technicians is lower in Africa than in high-income countries. In contrast, the proportion of craft and related trades workers is much higher in Africa, also compared to Latin America and the Caribbean (Annex Figure 2.A.1).

Annex Figure 2.A.1. Occupations in construction employment, by region, 2019-23



Note: LAC = Latin America and the Caribbean. The breakdown of occupations is based on the four-level ISCO-08 job and skill level classification, where a skill is defined as the ability to carry out the tasks and duties of a job. Skill level 1 (low-skill): Elementary occupations; Skill levels 2 and 3 (medium-skill): Plant and machine operators and assemblers, Craft and related trade workers and Clerical support workers; Skills level 4 (high-skill): Technicians and associate professionals, Professionals and Managers. Data are based on Labour Force Statistics (LFS) - Labour Force Sample Survey, Household Income and Expenditure Surveys (HIES) - Living Standards Survey and Population Censuses (PC).
Source: ILOSTAT (2023[128]), *Labour Force Statistics (LFS) Employment by economic activity and occupation (thousands)* (database), https://ilostat.ilo.org/data/ (accessed November 2024).

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Training providers and infrastructure developers can collaborate more closely to bridge skill gaps, especially in managerial skills

Training and education providers can give higher priority to skill gaps in the project management, negotiation and business development of infrastructure. National skill providers focus mainly on responding to technical needs, while project management, negotiating and business skills are typically supported through time-bound funding from international partners and facilities (PPIAF/ICA, 2006[129]). Skill providers – including community education and training colleges, the continental network of Centres of Excellence, technical and vocational education and training institutions, and National Construction Authorities (e.g. in Kenya, Nigeria and South Africa) – could integrate more studies to develop managerial and business skills into their training curricula, data collection and policy dialogue, with the aim building long-term capacity (Annex Table 2.A.1).

Annex Table 2.A.1. Selected skills development programmes in infrastructure

Programme title and scope	Main features
National level	
The FOCI Skills Academy (FSA) (Nigeria)	• Provides training on technical, green and digital skills • Was established by Nigeria's Federation of Construction Industry (FOCI) in 2020 • Develops training curricula and agrees to appropriate assessment methods for apprenticeships and for training of trainers • Offers competency-based dual vocational and technical training to strengthen the construction industry, promote social equity and empower youth
Construction Education and Training Authority (CETA) (South Africa)	• Provides training on technical skills • Implements the objectives of the National Skills Development Strategy (NSDS III) • Conducts research on the skills that employers need • Develops education and training programmes to address skill shortages
National Construction Authority (Kenya)	• Provides training on technical skills • Facilitates and builds capacity in construction • Conducts surveys and holds the biennial International Construction Research Exhibition and Conference (ICoRCE)
Institutes of Renewable Energy and Energy Efficiency Training Jobs (IFMEREE) (Morocco)	• Provides training on technical and green skills • Supports the national objectives of increasing the share of renewable energies in electricity production to 52% by 2030, which would allow the creation of more than 50 000 new jobs in this sector • Is located in Oujda, Tangiers and Ouarzazate • Works in partnership with the European Union
Miundo Misingi Hub (Kenya)	• Provides training on technical and green skills • Offers training in infrastructure project finance and public-private partnerships (PPPs) • Partners with the Institute for Sustainable Infrastructure for projects to obtain the *Envision* accreditation and sustainability rating
Buildher (Kenya)	• Provides training on technical and soft skills • Aims to increase women's participation in skilled construction roles to 10% by 2030, from 3% at present. Empowers women through 12-month vocational training in construction and life skills • Has seen a 67% increase in employer productivity attributed to its female trainees • Has contributed to 60% of partnering employers having adopted gender practices towards better pay, health and safety
Regional level	
East Africa Skills for Transformation and Regional Integration (EASTRIP) Project (Ethiopia, Kenya and Tanzania)	• Provides training on technical and digital skills • Offers training for technicians in transport, energy and information and communications technology (as well as manufacturing, tourism and agriculture) • Has developed over 367 accredited or industry-certified programmes since 2018 • Supports 16 Regional Flagship TVET Institutes (RFTIs), which feature industry advisory boards and monitor graduate employment data
Energy Regulation Centre of Excellence (ERCE) (Tanzania)	• Provides training on technical, soft and managerial skills • Seeks to build a pool of experts in the East African Community to develop integrated, competitive energy markets
Continental level	
African Legal Support Facility (ALSF) Academy	• Provides training on technical and managerial (negotiation) skills • E-Learning Platform catering for government officials and lawyers in five key sectors: infrastructure and PPPs, power, mining, oil and gas, and sovereign debt • Works with the East Africa Law Society (EALS), the Southern African Development Community Lawyers Association (SADCLA), the International Training Centre in Africa for Francophone Lawyers (CIFAF) and the African Business Law Firms Association (ABLFA).
Africa Infrastructure Fellowship Program (AIFP)	• Provides training on technical skills • Trains African senior civil servants involved in the procurement of PPPs • Is financed by the Global Infrastructure Hub, Meridiam and the World Economic Forum
Build4Skills project (Kenya, Senegal and South Africa)	• Provides training on technical, green, soft and managerial (leadership) skills • Uses construction sites mainly financed by multilateral development banks (MDBs) to provide work-based training to TVET students • Aims at integrating traineeships as a requirement in tendering documents for infrastructure

	projects of MDBs • Is led by GIZ, in co-operation with MDBs and ministries of education
Financing Facility for Skills Development of the Skills Initiative for Africa (SIFA) (KfW Development Bank)	• Provides training on technical, digital and soft (entrepreneurial) skills • Is implemented by AUDA-NEPAD, with financing from Germany and the European Union through the KfW Development Bank • Supports innovative skills development in TVET in eight partner countries (Cameroon, Ethiopia, Ghana, Kenya, Nigeria, South Africa, Togo and Tunisia) • Seeks to promote TVET solutions geared towards female entrepreneurship and employability, digital skills, and the informal sector through the current Funding Window (FW3)

Source: Authors' compilation.

On-the-job training, combined with new training tools such as micro-credentials, can help African countries respond to continuous demand for infrastructure skills, including skills needed beyond project feasibility phases. Practical training is favoured by employers seeking to reskill or upskill when infrastructure skill needs shift rapidly. For example, in a 2016-17 survey of around 1 000 Chinese companies in 8 African countries, 53% of firms in the construction sector said they provided apprenticeship training (Sun, Jayaram and Kassiri, 2017[130]). TVET training and micro-credentials, obtained in a short time span, offer complementary opportunities for skill enhancement, like crafting training modules on skills in maintenance for road transport and electricity supply. Collaboration among international partners and commensurate financial resources are key. However, less than 1% of official development finance disbursed in each of the areas of water and sanitation, information and communications technology, transport and energy was allocated to education and training in 2023 (OECD, 2024[131]).

> *Using its "school site" approach, the International Labour Organization had trained 900 youth in 10 career sectors in Mauritania's building and public works sector and provided access to 12 villages as of 2017. This training approach covers both theoretical and practical in professions related to construction and maintenance (ILO, 2018[132]).*
>
> *The Build4Skills programme – in collaboration with multilateral development banks such as the African Development Bank and the Asian Development Bank – advocates for traineeships as a requirement in infrastructure public tenders. Bidders must demonstrate how they will use the "TVET by default" in their projects while generating wider societal benefits aimed at the youth, disadvantaged groups and women. It is active in Kenya, Senegal and South Africa (ADB, 2024[133]).*

As solutions-oriented platforms, communities of practice (CoPs) offer valuable access to policy lessons at the project level, including those related to skills. CoPs are distributed networks that can fulfil three key functions in infrastructure: i) materialising investments in infrastructure; ii) influencing changes to the policy enabling environment; and iii) improving public sector capacity. These communities often collaborate with national skill providers, enhancing curricula and widening the reach of training. A handful are active in Africa's infrastructure development (see the ASQIIA example above and Annex Box 2.A.1).

> *The Scaling CoP covers not only infrastructure but also transversal issues such as climate change, education, gender equality and youth employment. It seeks to identify sustainable development drivers and pathways whose proven efficiency is scalable (Scaling, 2025[134]).*

Annex Box 2.A.1. The Catapult Accelerator: Community building for infrastructure projects

The Catapult Accelerator programme, organised by the Africa Infrastructure Development Association (AfIDA), aims to create an ecosystem of skills and expertise, to fast-track the development of innovative infrastructure projects. One of its initiatives is a collaboration with the Minerals Council of South Africa (MCSA), where AfIDA and the MCSA organise pitch sessions for financiers, experts and government representatives. Between 2023-25, 30 projects from 18 countries have been presented at 9 pitch sessions. The programme seeks to raise a combined USD 20 billion for projects covering energy, digital-ICT, water, irrigation, rail, airport, special economic zones and new cities. A noteworthy project by the Lebalelo Water User Association (LWUA) serves mines, industry, small businesses and a community of 490 000 residents in South Africa, with mines accounting for 80% of the utilities for the LWUA.

Source: AfIDA contribution.

Notes

[1] The survey included 51 experts and senior officials of member states, regional economic communities and other inter-governmental organisations, and AfDB. All experts were involved in at least one of three corridors: the Abidjan-Lagos Corridor, the North-South Corridor and the Central African Transport Master Plan.

[2] The survey included 51 experts and senior officials of member states, regional economic communities and other inter-governmental organisations, and AfDB. All experts were involved in at least one of three corridors: the Abidjan-Lagos Corridor, the North-South Corridor and the Central African Transport Master Plan.

[3] Eswatini, Mauritius, Morocco, Nigeria, Somalia and South Africa reported subnational tax revenues; Eswatini, Kenya, Mauritius, Morocco, Nigeria and Somalia reported subnational non-tax revenues (OECD/AUC/ATAF, 2024[68]).

[4] Authors' calculations based on (World Bank, 2025[94]).

[5] Twenty-eight responses were received by February 2025 from the OECD/AfIDA survey administered to a network of infrastructure developers, investors and experts. Findings were corroborated through an expert workshop with 40 participants on 23 January 2025.

[6] Authors' calculations based on World Bank (2025[135]).

[7] Cities covered in the study were Dire Dawa and Mekelle (Ethiopia); Kumasi, Tamale, Bolga and Sunyani (Ghana); Tete, Nacala and Nampula (Mozambique); and Entebbe, Fort Portal, Tororo, Jinja, Gulu, Arua and Hoima (Uganda). Staff data were collected on managerial and technical functions in finance, revenue, planning, public works, environmental health and solid waste management.

[8] By comparison, the estimate for the same time period is 132 000 in Germany and the United Kingdom and 128 000 in Canada and the United States (PMI, 2021[125]).

[9] The OECD/AfIDA survey was administered from December 2024 to March 2025 to a network of infrastructure developers, investors and experts.

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3 Infrastructure and productive transformation in Southern Africa

This chapter presents how infrastructure contributes to productive transformation in Southern Africa (Angola, Botswana, Eswatini, Lesotho, Malawi, Mozambique, Namibia, South Africa, Zambia and Zimbabwe). First, it highlights the infrastructure investment need and current financing in the region and individual countries. Second, it outlines the degree to which regional and national infrastructure plans contribute to productive transformation. Third, it shows how development corridors can accelerate productive transformation and enhance countries' integration into regional and global markets.

In brief

Large-scale infrastructure investment is a key driver of productive transformation in Southern Africa. The region's infrastructure investment need is estimated at USD 40 billion per year by 2040, equivalent to 6.1% of its gross domestic product (GDP). An annual investment of this amount would increase the region's annual GDP growth by 4.2 percentage points on average.

Southern Africa is on the right track, but there remains significant room to scale up infrastructure spending to unlock the region's full transformation potential. In 2024, Southern Africa was the African region with the highest government spending on infrastructure, at 2.4% of GDP. Between 2013 and 2023, the region received the highest share of Africa's private investment projects in infrastructure: 31%.

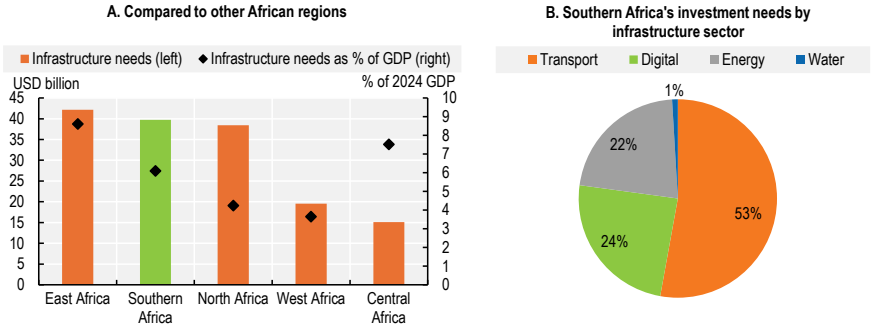
Sustaining the necessary investment levels will require aligning financial and institutional capacities with productive transformation objectives at the national and regional levels. To do so, skills development is essential, as it can help overcome implementation barriers and improve the operational sustainability of infrastructure projects.

- At the regional level, the Southern African Regional Infrastructure Development Master Plan (RIDMP) can support productive transformation, but its implementation is held back by limited financing and skills capacity. In 2019, 70% of RIDMP projects lacked funding, and only 12% were supported through national budgets.
- National infrastructure development plans can more directly target productive transformation. For example, Namibia and South Africa have included green hydrogen infrastructure in their national plans to strengthen energy security and promote economic diversification.

Southern African development corridors can accelerate productive transformation and enhance trade efficiency between landlocked and coastal countries if aligned with local needs. For example, the Lobito Corridor promises to boost regional trade by reducing shipping time from 45 days to 48 hours. However, better impact assessment tools and multistakeholder co-ordination mechanisms are needed to realise the region's full potential for productive transformation.

Southern Africa regional profile

Figure 3.1. Annual infrastructure investment needed for Southern Africa to achieve the productive transformation levels of benchmark countries by 2040



Note: Infrastructure investment needs refer to modelled estimates of the total expenditures required to build new infrastructure to match the infrastructure levels of peer countries that perform well in productive transformation while also maintaining existing infrastructure. See Annex 1.A for details.
Source: Data sources for the investment needs estimations are listed in Annex 1.A.

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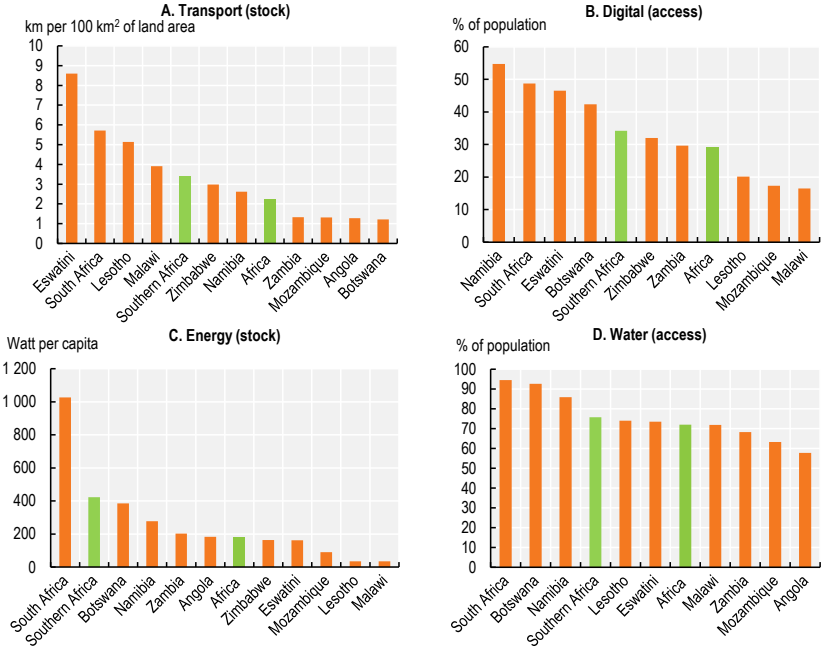
Figure 3.2. Average physical infrastructure stocks and access across Southern African countries compared to Africa



Note: Transport = kilometres (km) of paved roads and railways per 100 km² of non-desert land area. Digital = per cent of the population aged 15+ with Internet access. Energy = installed energy capacity as watt per capita. Water = per cent of the population with access to drinking water. For transport and energy stocks, the averages for Southern Africa and Africa are population-weighted. For transport and energy stocks, the values for Southern Africa and Africa reflect aggregated totals relative to population or area, depending on the indicator. For digital and water access, the values for Southern Africa and Africa represent unweighted averages of country values.
Source: Transport and energy indicators' sources are reported in Annex 1.A. Water: Drinking water, sanitation and hygiene (WASH) estimates, from UNICEF (2024[1]), *Drinking water, sanitation and hygiene in households by country, 2000-2022* (database), https://data.unicef.org/topic/water-and-sanitation/drinking-water/; Digital: from Gallup (2020[2]), *Gallup World Poll 2020* (database), https://www.gallup.com/analytics/213617/gallup-analytics.aspx.

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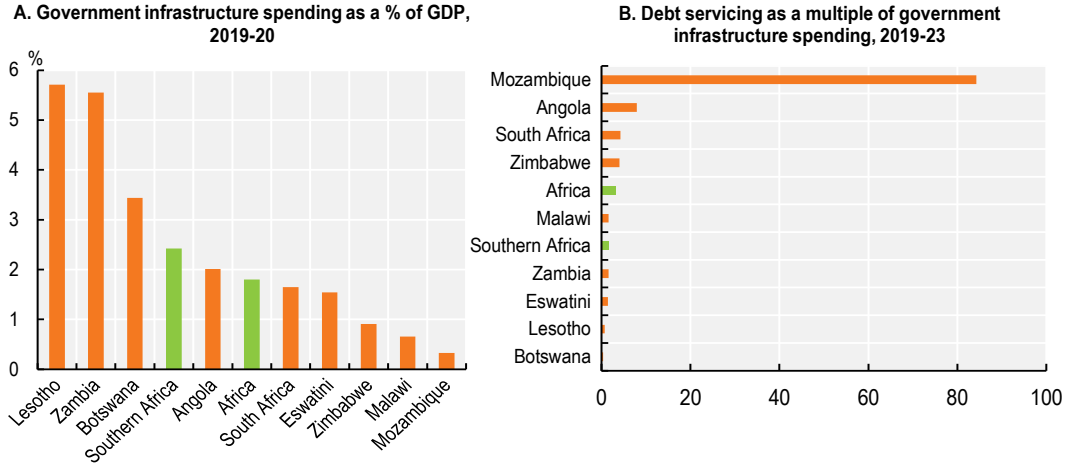
Southern Africa has stronger infrastructure and higher spending than the African average, yet greater investment could drive deeper productive transformation

Some South African countries already have good infrastructure networks, but the region could still invest more to boost productive transformation. While there are differences across the region, Southern African countries have, on average, better access to and higher physical stocks of infrastructure than the African average (Figure 3.2). For example, Botswana's levels of digital, water and energy infrastructure are similar to those of developing Asia, and South Africa has higher levels (Chapter 1). However, Angola and Mozambique tend to be below the continent's average. To close the gap with peer countries in other world regions that have high levels of productive transformation (Annex 1.A), Southern Africa will need to invest around USD 40 billion per year by 2040, equivalent to 6.1% of the region's GDP in 2024 (Figure 3.1). This is higher than the value for all of Africa (5.6%). The higher investment need reflects the fact that the largest Southern African economies are upper middle-income countries (Botswana, Namibia and South Africa), leading their peers to also fall within that income-level, while most other African countries have lower- or lower-middle-income countries as peers. Investing USD 40 billion per year by 2040 is estimated to increase the region's annual GDP growth by 4.2 percentage points on average.

Southern African countries have a lower debt service-to-infrastructure spending ratio than the African average, with large differences across countries. Southern Africa is the continent's region with the highest rate of government spending on infrastructure, at 2.4% of GDP. This is more than twice as much as Central Africa (1.1%). Excluding Mozambique, in 2019-23, Southern Africa spent 2.7 times more on debt servicing than on infrastructure, the lowest average among all African regions (Figure 3.3). However, Mozambique stands out also as it spent over USD 4 billion – or 84 times more – on its sovereign debt than on infrastructure, the highest debt service-to-infrastructure spending ratio of all African countries. In contrast, Botswana had the third lowest ratio of debt service to infrastructure spending on the continent (0.35).

Figure 3.3. Government spending in infrastructure and debt servicing in Southern Africa

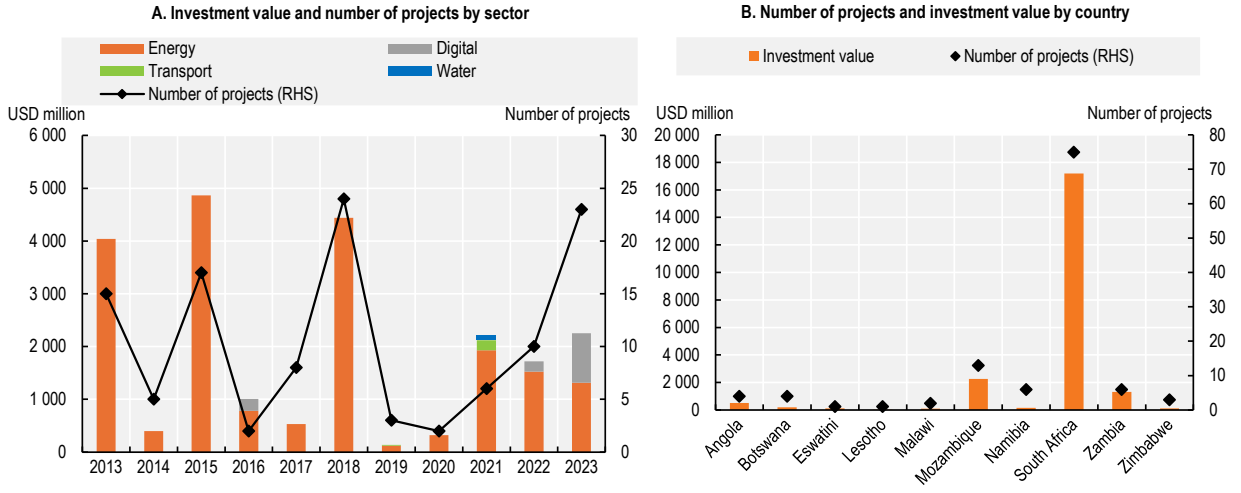


Note: GDP = gross domestic product. The indicator in Panel B is calculated based on an average of available data over the past five years for public infrastructure spending (2019-20) and debt servicing (2019-23). Median values are displayed for Africa and Southern Africa in Panel B to account for extreme cases. The selected countries are presented based on data availability.
Source: Authors' calculation based on ICA (2022[3]), *Infrastructure Financing Trends in Africa 2019-2020*, and World Bank (2024[4]), *International Debt Statistics* (database), https://www.worldbank.org/en/programs/debt-statistics/ids.

StatLink https://stat.link/b71z3w

Southern Africa has the highest private participation in infrastructure (PPI) projects on the continent. Between 2013 and 2023, Southern Africa attracted 115 PPI projects – representing 31% of all such projects in Africa during this period, above all other African regions – with a total investment of USD 6.6 billion. Ninety-nine (86%) of these projects were in energy (Figure 3.4). South Africa records the highest number of projects and ranks first in terms of total PPI investment received, accounting for 80% of the total PPI investment value in the region and 75 projects out the 115.

Figure 3.4. Infrastructure investments with private participation in Southern Africa, 2013-23



Note: RHS = right-hand side.
Source: World Bank (2024[5]), *Private Participation in Infrastructure* (database), https://ppi.worldbank.org/en/ppi.

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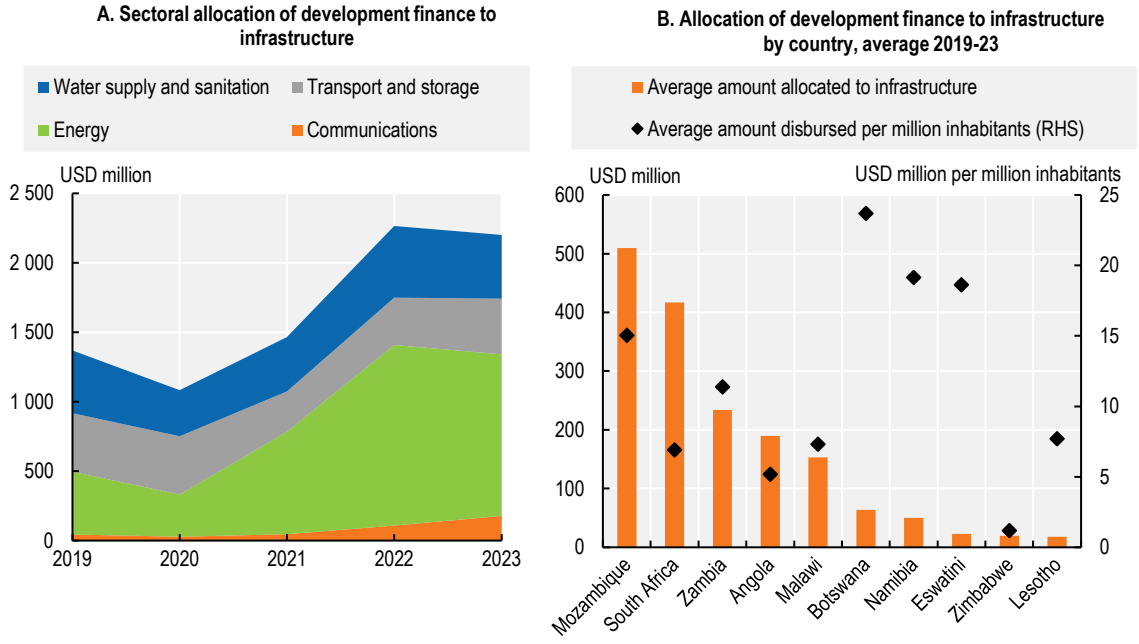
Despite differences across countries, Southern Africa has the lowest inflow of official development finance (ODF) for infrastructure relative to GDP of all African regions. ODF averaged USD 1.6 billion per year between 2019 and 2023, equivalent to 0.3% of the region's annual GDP. This was the lowest share among all African regions, compared to a continental average of 0.8% of GDP. Only Malawi and Mozambique had average shares of ODF allocated to infrastructure over 1% of GDP in the period. ODF to the region was mainly allocated to energy, transport and storage (70% of total ODF) (Figure 3.5). With an average of USD 509.8 million per year, Mozambique accounted for 30% of the total ODF of the region. It also stands out for receiving ODF equivalent to 3% of its GDP, which is 10 times more than its public infrastructure spending.

Between 2020 and 2023, 25% of official development assistance (ODA) for infrastructure provided by OECD DAC members included gender equality objectives. This is the third highest share, after Central Africa (35%) and East Africa (33%). Nonetheless, gender considerations in infrastructure projects greatly differ across countries. In South Africa, only 10% of the total ODA supported infrastructure projects that included gender mainstreaming, against 97% in Lesotho.[1]

Figure 3.5. Official development finance disbursements targeting infrastructure in Southern Africa, 2019-23



Note: RHS = right-hand scale. Official development finance disbursements include official development assistance (ODA) and other official financial flows that do not meet the conditions for eligibility as ODA (either because they are not primarily aimed at development, or because they have a grant element of less than 25%).
Source: OECD (2025[6]), *Creditor Reporting System* (database), https://www.oecd.org/en/data/datasets/development-finance-statistics-data-on-flows-to-developing-countries.html.

StatLink https://stat.link/b5wd8f

Sustaining the necessary investment levels will require Southern African countries to align financial and institutional capacities with productive transformation

Aligning Southern Africa's infrastructure plans with productive transformation and effective skills development can boost trade, productivity and energy diversification

Fully implementing Southern Africa's infrastructure plans can foster regional integration and countries' development. A harmonised regional plan for infrastructure development is key to trade facilitation and regional integration. At the national level, infrastructure plans can align their infrastructure priorities with national development goals. Yet, implementation challenges such as lack of political incentives and lack of skills hinder the full delivery of infrastructure benefits for productive transformation in Southern Africa (Table 3.1).

Table 3.1. Impacts and challenges of infrastructure development policies across regional and national levels in Southern Africa

Level	Impact on productive transformation	Implementation challenges	Examples
Regional	• Facilitating trade • Identifying priority sectors for regional integration • Ensuring energy security, linking countries' diverse energy mixes	• Low political implementation incentive for national governments • Financial misalignment with national budgets • Lack of skills and capacity	• SADC Regional Infrastructure Development Master Plan (RIDMP) (2012-27) • Renewable Energy and Energy Efficiency Strategy & Action Plan: REEESAP 2016-2030
National	• Promoting industrial diversification • Diversifying and securing energy supplies • Improving transport systems to support productive sectors (e.g. agriculture, tourism, oil and mining) • Focusing on country-specific productive sectors: e.g. Namibia's and South Africa's attention to green hydrogen infrastructure, and Malawi's strategic shift from roads to rail and inland water	• Misalignment with regional and continental infrastructure plans • Lack of private sector investment • Lack of involvement of rural communities and women	• Harambee Prosperity Plan II (2021-2025) • South Africa's National Infrastructure Plan 2050 • Malawi's National Transport Master Plan (2017-2037)

Note: SADC, the Southern African Development Community, is made up of 16 countries: Angola, Botswana, Comoros, Democratic Republic of the Congo, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Zambia and Zimbabwe.
Source: Authors' elaboration based on SADC Regional Infrastructure Development Master Plan (2019[7]); SADC Secretariat (2012[8]), *Regional Infrastructure Development Master Plan ICT Sector Plan*; SADC Secretariat (2016[9]), *Renewable Energy and Energy Efficiency Strategy & Action Plan (2016-2030)*; GIS Reports website (2021[10]), "Political roadblocks to Southern Africa's digital revolution"; NEPAD Business Foundation (2022[11]), *SADC ICT Infrastructure Strategy*; Government of South Africa (2022[12]), *National Infrastructure Plan 2050 (NIP 2050) Phase 1*; Government of Namibia (2021[13]), *Harambee Prosperity Plan II (2021-2025)*; Government of Botswana (2023[14]), *Second Transitional National Development Plan (2023-2025)*; ECDPM website (2018[15]), "SADC industrialisation: Where regional agendas meet domestic interests"; Government of Malawi (2020[16]), *National Transport Master Plan (2017-2037)*.

The Southern African Regional Infrastructure Development Master Plan (RIDMP) can support productive transformation, but its implementation is held back by limited financing and capacity. Adopted in 2012 by SADC member states, RIDMP is the continent's earliest comprehensive infrastructure framework, covering six priority sectors – energy, water, transport, meteorology, tourism, and information and communications technology, each having a dedicated plan with specific targets for 2027. These plans aim to address key competitiveness challenges by lowering business costs, improving regional integration and easing funding constraints. However, in 2019, only 5% of RIDMP projects had been completed, with the majority still at the pre-feasibility or feasibility stage. A major barrier was financing: 70% of projects lacked funding, and only 12% were supported through national budgets, highlighting a mismatch between national priorities and available resources. Additionally, capacity and skill shortages continue to impede progress across the RIDMP and its sectoral components (SADC, 2019[7]). Establishing dedicated focal points at the country level (e.g. implementation units) could strengthen national ownership, secure initial funding and speed up regional project implementation (Chapter 2).

At the national level, infrastructure development plans can align their infrastructure priorities with national development goals to leverage their country-specific priorities. These plans clearly define implementation agencies and monitoring bodies, like inter-ministerial bodies, and all include institutional reforms. SADC countries aim to align their infrastructure priorities with national development goals, as part of national infrastructure plans (as is the case in South Africa and Zimbabwe), within broader national development plans (as in Botswana, Namibia and Zambia) or sector-specific plans, mostly in energy and transport (as in Malawi). Despite this structured framework, most countries face financial and human resource constraints. To address these limitations, some national plans underscore the importance of international development partnerships and private sector participation or of better planning and greater expenditure in crucial project phases such as maintenance (e.g. Botswana, Malawi and South Africa).

Botswana's Second Transitional National Development Plan (2023-2025) promotes infrastructure development to reinforce industrialisation, boost a diversified, export-led private sector and strengthen regional trade, notably through projects like the Trans-Kalahari Railway linking Southern Africa to Namibian ports and the Mosetse-Kazungula-Livingstone Railway connecting Botswana, the Democratic Republic of the Congo and Zambia (Government of Botswana, 2023[14]).

The National Transport Master Plan (2017-2037) of Malawi has the objective of improving transport systems in support of growth sectors by reducing costs through a shift from roads to rail and inland waterways, boosting rural economic participation, and strengthening regional integration and trade (Government of Malawi, 2020[16]).

South Africa's National Infrastructure Plan 2050 aims to provide energy, water, freight and digital infrastructure to support global and regional value chains, promote industrial diversification, and strengthen regional integration in line with the goals of SADC and the African Continental Free Trade Area (Government of South Africa, 2022[12]). As of 2023, 88 Strategic Infrastructure Projects had been implemented or launched (South African Government, 2023[17]).

Technical and green skills development can help overcome barriers created by skill shortages in Southern Africa. Skill shortages are found to affect decision-making and the approval of infrastructure projects in the region, inducing lengthy negotiations, inappropriate decisions, and inadequacies in contract and performance management (SADC, 2019[7]). To overcome these shortages, some Southern African countries have implemented skill-building initiatives and facilities, particularly those that promote technical and green skills for infrastructure (Table 3.2).

Table 3.2. Notable skills and capacity development programmes in infrastructure in Southern Africa

Programme	Main features	Partners	Types of skills promoted
Southern African Solar Thermal Training and Demonstration Initiative (SOLTRAIN) (2009-26)	• **Objective:** SOLTRAIN supports SADC countries in transitioning from a largely fossil-based energy supply to a sustainable supply structure based on solar thermal. • **Impact:** To date, 5 000 experts have received solar thermal training, including in co-operation with TVET schools and solar technology companies, representing 33.3 gigawatt hours of electricity reduced annually.	Austrian Development Agency (ADA), Austria's Institute for Sustainable Technologies (AEE) and 9 partners in Southern Africa	Technical, green
COMESA's Regional Infrastructure Finance Facility (RIFF) Project (IDA-eligible countries in Eastern and Southern Africa, including **Eswatini, Malawi** and **Zambia**)	• **Objectives:** The Trade and Development Bank (TDB) receives technical assistance for: i) pipeline development, project development and portfolio management; and ii) environmental and social management capacity. COMESA's Secretariat receives training in off-grid energy, public-private partnerships, and environmental and social safeguards. • **Expected impact:** Between 2020 and 2025, the RIFF is expected to contribute to improved enabling environments and to the availability of long-term finance for private investment in renewable energy and in infrastructure in general.	World Bank, COMESA and TDB	Technical
Skills to Build initiative (**Mozambique**) (2017-24)	• **Objectives:** The Skills to Build initiative offers modular technical and green skills training (e.g. masonry, water and sanitation management, occupational safety and photovoltaic energy) and competence-based certification. • The initiative includes **skills programmes** such as i) the recognition of prior learning, targeting 500 existing construction workers of which 50 are women; and ii) the integration of construction-related skills training into Mozambique's national TVET system towards a sustainable skill supply mechanism.	Mozambique's National Authority of Professional Education (ANEP), training providers and private sector, Medicor Foundation, Happel Foundation, U.W. Linsi-Stiftung, and Swiss Agency for Development and Cooperation (SDC)	Technical, green, entrepreneurial

Build4Skills project (Kenya, Senegal and **South Africa**)	• Build4Skills offers **skills pathways** by i) using construction sites mainly financed by MDBs to provide work-based training to TVET students; and ii) including traineeships as a requirement in tendering documents for infrastructure projects of MDBs.	GIZ, in co-operation with MDBs, and ministries of education	Technical, green, soft (work-readiness training, leadership and self-confidence training, pedagogy, occupational health and safety training for in-company trainers)

Note: COMESA = Common Market for Eastern and Southern Africa; IDA = International Development Association; TVET = technical and vocational education and training. MDB = multilateral development bank; GIZ = German Corporation for International Cooperation.
Source: COMESA website (2025[18]), "The Regional Infrastructure Finance Facility (RIFF) Project"; ADB (2024[19]), *Build4Skills: Integrating Traineeships into ADB-Supported Infrastructure Projects – A Handbook for Project Processing Teams and Project Implementation Units*; Africa Rise (2023[20]), *Study on Job Opportunities for Women in the Transformation towards a Green Economy (Final Report)*; SOLTRAIN website (2025[21]), *(Home page)*.

Southern African corridors can accelerate productive transformation and enhance countries' integration into regional and global markets

Southern Africa's corridors focusing on critical raw materials and green economy can boost productive transformation if they are aligned with local needs (Table 3.3). Connecting different Southern African countries along diverse segments of regional and global value chains improves the trade efficiency of the region. Strong regional collaboration through SADC and support by international partners are common features of Southern African corridors. While exports of critical raw materials dominate in corridors like Lobito (Box 3.1), others, like Maputo, focus on integrating agrifood value chains. Differences emerge in local impacts: for example, the Maputo Corridor faces challenges in job creation due to the local labour force lacking specific skills, and the Nacala Corridor has been underutilised, despite heavy investments. Notable positive impacts include reduced transport costs and improved border efficiency, with the Maputo Corridor achieving clearances in under 30 minutes. Practical experience from these corridors reveals the importance of effective co-ordination mechanisms, impact assessment tools and capacity-building, and investments that align with regional and national development strategies and translate into broad-based local benefits.

Table 3.3. Selected development corridors in Southern Africa

Corridor	Participating countries	Partners	Envisioned impacts on productive transformation and regional integration	Lessons and impacts

Maputo-Gaborone-Walvis Bay (ports, rail, green transport, rapid bus transport)	Botswana, Eswatini, Mozambique, Namibia, South Africa	National governments, European Union (EU), SADC *Gaborone-Walvis Bay Corridor:* Walvis Bay Corridor Group	• Enhancing trade efficiency between landlocked countries and ports
			• Reducing transportation costs
			• Promoting regional integration
				Economic impacts:
				• Strengthened green hydrogen (GH2) and sustainable critical raw materials value chains
				• *Gaborone-Walvis Bay Corridor:* Reduced commercial clearance to 20-30 minutes at border points with the introduction of the Single Administration Document (SAD 500)
				• *Maputo Development Corridor (MDC)*:
				  • Created jobs that mostly targeted high-skilled labour, which was not readily available locally, thereby benefiting people outside the MDC
				  • Found to benefit large business actors and exclude informal cross-border traders (mainly women)

Lobito-Kolwezi-Lubumbashi/Solwezi-Ndola (rail, roads, bridges, transport of minerals)	Angola, Democratic Republic of the Congo, Zambia	National governments, international sponsors (EU, Italy, United States, African Finance Corporation, African Development Bank [AfDB]), private sector consortium (Trafigura, Mota-Engil and Vecturis)	• Enhancing export opportunities for the minerals value chains • Integrating regional value chains • Supporting small and medium-sized enterprises in agriculture and mining	**Lessons:** • Develop reliable data and impact assessment tools to inform project implementation and monitoring • Strengthen regional ownership and effective governance mechanisms to streamline implementation and reduce risks related to global geopolitical tensions
Durban-Lusaka-Lubumbashi (roads, rail, ports, logistic hubs, border facilities)	Botswana, Democratic Republic of the Congo, South Africa, Zambia, Zimbabwe	National governments, EU, SADC	• Connecting SADC landlocked countries with access to Durban's Port • Boosting the green transition (i.e. agri-products, green hydrogen, critical raw materials, electric vehicles) • Facilitating trade flow from inland regions to ports • Supporting industrial growth	**Lessons:** • Plan for continuous infrastructure maintenance and investment • Recognise the importance of public-private partnerships in corridor development
Nacala Corridor (road, passenger and freight railway, ports, airport, waterway)	Malawi, Mozambique Zambia	National governments, governments of China and Qatar, international sponsors (AfDB; World Bank; EU, Arab Bank for Economic Development in Africa, Kuwait Fund for Arab Economic Development, Saudi Fund, Japan International Cooperation Agency, KfW, European Investment Bank, GIZ	• Reducing transportation costs • Improving road safety • Boosting agricultural production and trade in the region	**Economic impacts:** Did not lead to sustained investments in the corridor nor sector diversification after the initial export boost in coal. Decreased the Nacala Port's attractiveness compared to other regional corridors (e.g. Beira and North-South Corridors) due to inadequate infrastructure. **Environmental impact**: Caused increased air pollution during corridor construction (e.g. Moatize coal mine) **Lesson:** Underscore the importance of trilateral co-operation in corridor management

Source: OECD (2025[22]), "The Lobito Corridor (draft)"; APRI website (2024[23]), "Lobito Corridor - A Reality Check"; European Commission website (2023[24]), "Connecting the Democratic Republic of the Congo, Zambia, and Angola to Global Markets through the Lobito Corridor"; WBCG (2019[25]), *A Guide to the Walvis Bay Corridors: Facilitating Free Flow of Trade to and from the SADC Region*; Dzumbira, Geyer, Jr., and Geyer (2017[26]), "Measuring the spatial economic impact of the Maputo Development Corridor"; UN (2024[27]), "Potential Impact of the Lobito Corridor and Support to the Regional Transformation Agenda"; Thorn et al. (2022[28]), "The African Development Corridors Database: A new tool to assess the impacts of infrastructure investments"; Söderbaum and Taylor (2008[29]), *African Development Corridors Database* (database), http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A280482&dswid=1017; JICA (2022[30]), *Data Collection Survey on Corridor Development in Africa: Final Report*; AfDB (2023[31]), *Cross-border Road Corridors: Expanding Market Access in Africa and Nurturing Continental Integration*; UNCTAD/ISDB (2022[32]), *The Trans-Saharan Road Corridor Towards an Economic Corridor: Commercializing and Managing the Trans-Saharan Road*.

Box 3.1. The Lobito Corridor

The Lobito Corridor is a 1 300 kilometre (km) strategic railway line connecting the port of Lobito on Angola's Atlantic coast with the mining regions of the Democratic Republic of the Congo (DR Congo) and the North-Western Province of Zambia. The corridor was once a key export route for minerals, linking landlocked countries in Central and Southern Africa to the Atlantic and to Western markets. Decades of civil conflict in Angola caused severe damage to the railway, reducing operations to just 34 km and shifting Zambia's copper exports to the Beira and Dar es Salaam Corridors (OECD, 2025[22]).

Interest in the Lobito Corridor has increased, as major international and regional organisations are committing political and financial support. In late 2023, the governments of Angola, DR Congo and Zambia signed a memorandum of understanding with the United States, the European Commission, the African Development Bank and the African Finance Corporation to support the development of the Lobito Corridor, including through a new greenfield railway project connecting Zambia with the Lobito rail line in Angola (Lobito Corridor Investment Promotion Authority, 2023[33]). Since then, the initiative has become a major flagship project of both the European Union's Global Gateway and the G7 Partnership for Global Infrastructure and Investment. As of today, international partners have committed nearly USD 6 billion (Wala Chabala and Hofmeyr, 2025[34]). The project promises to be an opportunity to strengthen critical minerals supply chains and regional economic integration while offering an alternative to the People's Republic of China (hereafter "China")'s trade infrastructure investments in the region (Rogers, 2025[35]; Way, 2024[36]).

The Lobito Corridor has the potential to become a trade route that can support both productive transformation in Southern Africa and the region's integration into global markets. Ensuring synergies between the Lobito Corridor and relevant initiatives on local value addition will be key for productive transformation. In the face of the global critical mineral crisis, building local refining capacity could support industrialisation and job creation in the region while reducing both production and environmental costs.[1] The DR Congo holds approximately 80% of the world's cobalt but only 3% of the battery and electric vehicle value chain. Also, Zambia is Africa's second-largest producer of copper, which accounted for 72% of the country's total exports in 2022 (King, 2024[37]; EITI, 2023[38]). Since 2021, the DR Congo and Zambia have taken concrete steps to establish a cross-border battery and electric vehicle Special Economic Zone, an initiative that could strongly benefit from new trading opportunities along the Lobito Corridor (UNECA, 2024[39]; AUC/OECD, 2024[40]). The Angolan government will develop a master plan to make the corridor a strategic platform to enable private sector investment across multiple industries, including agriculture, manufacturing, tourism and technology (Bekele, 2024[41]).

Better co-ordination and a clear and coherent action plan could address limited data availability and fragmented governance. According to estimates, the full realisation of the corridor project will reduce transit time from 45 days to 48 hours. However, project governance, prioritisation and duplication present challenges: at least 14 agreements and memorandums of agreement related to the Lobito Corridor were signed among multiple public and private actors between 2022 and 2024 (Karkare and Byiers, 2025[42]; Wala Chabala and Hofmeyr, 2025[34]). Furthermore, little information is publicly available about the broader development impact of the announced investments (US Department of State, 2024[43]). Regional bodies, such as SADC which helped establish the Lobito Corridor Transit Transport Facilitation Agency in January 2023, are well-positioned to provide a multi-stakeholder co-ordination platform to facilitate data and information sharing and set up a common action plan that is integrated into national and regional development strategies.

1. For example, building a battery precursor facility in the DR Congo costs a third of an equivalent installation in China or the United States; moreover, a local plant using hydroelectric power would reduce emissions by 30% compared to present processing (BloombergNEF, 2021[44]). Resource-rich neighbouring countries, such as Madagascar, Mozambique, Tanzania, Zambia and Zimbabwe, could provide other key raw materials (e.g. copper, manganese and nickel) that account for significant expenses in refining, with clear benefits for regional integration (King, 2024[37]).

Notes

[1] Authors' calculation based on OECD (2025[45]).

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4 Infrastructure and productive transformation in Central Africa

This chapter identifies how infrastructure development can contribute to productive transformation in Central Africa (Burundi, Cameroon, Central African Republic, Chad, Republic of the Congo, Democratic Republic of the Congo, Equatorial Guinea, Gabon, and São Tomé and Príncipe). The chapter first examines infrastructure investment needs and current financing in Central Africa as a whole and in the individual countries. Next, it looks at the degree to which regional and national infrastructure plans contribute to productive transformation. It then underlines the importance of planning, budgeting and monitoring capacities for infrastructure development in the region.

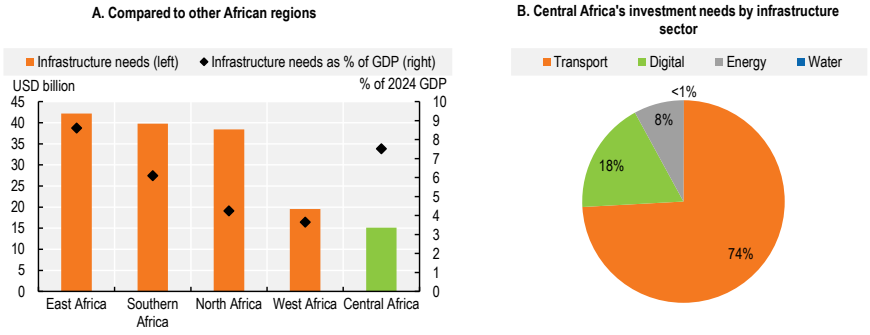
In brief

Investment in transport and digital infrastructure can accelerate Central Africa's productive transformation. Up to now, infrastructure gaps have severely limited intra-regional trade, which accounted for only 1.6% of Central Africa's total exports in 2023. To close this gap, annual investments of USD 15 billion by 2040 are needed, mainly in transport (74%) and digital (18%) infrastructure. This level of investment could enable the region to reach productivity levels seen in comparable developing countries and boost gross domestic product (GDP) growth by an average of 6.2 percentage points per year. However, financing remains a significant hurdle: between 2016 and 2020, Central Africa mobilised about USD 6 billion annually, equivalent to only 7% of total commitments to infrastructure development in Africa.

Strategic prioritisation and effective governance are essential to improve the allocation and mobilisation of infrastructure financing. Progress towards developing regional infrastructure has been hindered by low-quality planning, overlapping regional memberships and weak commitment by national actors. A unified, cross-sectoral infrastructure strategy focused on priority value chains and carefully selected, bankable projects can help attract more financing, as demonstrated by Phases 1 and 2 of the Integration Projects initiative of the Central African Economic and Monetary Community (CEMAC). A supportive institutional framework with strong budgeting, implementation and monitoring capacities is also critical to building investor confidence. In 2023, the public-private partnership units or similar agencies in only three out of six surveyed countries aligned infrastructure projects with private participation to national priorities. Most projects lacked robust financial, social and environmental sustainability assessments.

Central Africa regional profile

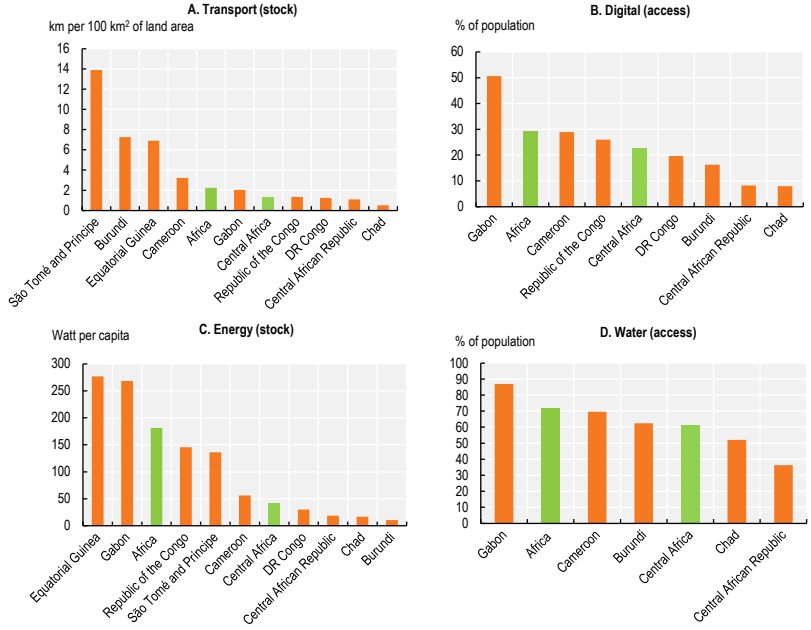
Figure 4.1. Annual infrastructure investment needed for Central Africa to achieve the productive transformation levels of benchmark countries by 2040



Note: GDP = gross domestic product. Infrastructure investment needs refer to modelled estimates of the total expenditures required to build new infrastructure to match the infrastructure levels of peer countries that perform well in productive transformation while also maintaining existing infrastructure. See Annex 1.A for details.
Source: Data sources for the investment needs estimations are listed in Annex 1.A.

StatLink https://stat.link/efo85p

Figure 4.2. Average physical infrastructure stocks and access across Central African countries compared to Africa



Note: Transport = kilometres (km) of paved roads and railways per 100 km² of non-desert land area. Digital = per cent of the population aged 15+ with Internet access. Energy = installed energy capacity as watt per capita. Water = per cent of the population with access to drinking water. For transport and energy stocks, the averages for Central Africa and Africa are population-weighted. For transport and energy stocks, values for Central Africa and Africa reflect aggregated totals relative to population or area, depending on the indicator. For digital and water access, the values for Central Africa and Africa represent unweighted averages of country values.
Source: Transport and energy indicators' sources are reported in Annex 1.A. Access to drinking water: Drinking water, sanitation and hygiene (WASH) estimates, from UNICEF (2024[1]), *Drinking water, sanitation and hygiene in households by country, 2000-2022* (database), https://data.unicef.org/topic/water-and-sanitation/drinking-water/. Digital: from Gallup World (2020[2]), *Gallup World Poll* (database), https://www.gallup.com/analytics/213617/gallup-analytics.aspx.

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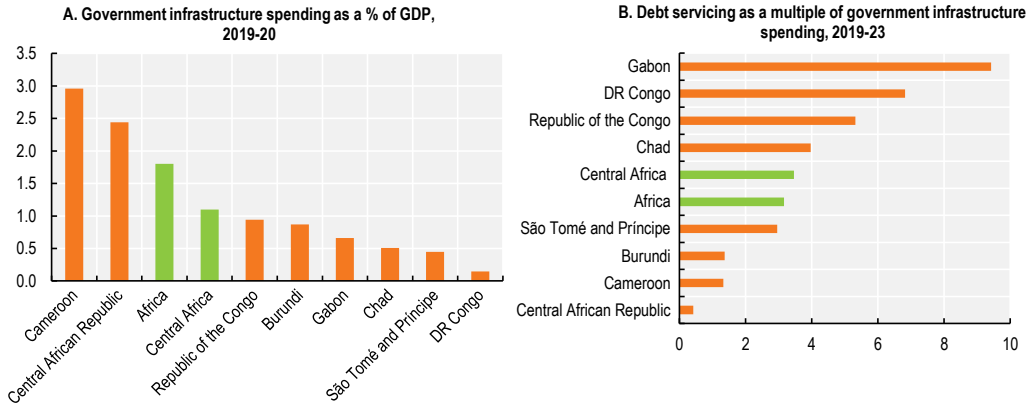
Investment in transport and digital infrastructure connecting economic hubs can support Central Africa's productive transformation

Central African countries require significant infrastructure investments to drive productive transformation. To achieve the levels of productive transformation observed in developing peer countries in other world regions, Central African countries will need to invest approximately USD 15 billion per year by 2040 (Annex 1.A). This figure represents the lowest investment need of any African region in absolute terms, which is due to the relatively small sizes of Central African economies and low maintenance requirements resulting from limited physical stocks of infrastructure. However, it is still equivalent to 6.1% of the region's GDP in 2024, higher than the continental average of 5.6% (Figure 4.1). The Democratic Republic of the Congo (DR Congo) accounts for 64% of the total investment needs, followed by Chad (12%) and Cameroon (8%). Reaching these investment targets could increase the region's annual GDP growth by an average of 6.2 percentage points. Still, between 2016 and 2020, Central Africa mobilised the lowest share of infrastructure-related finance across African regions, averaging USD 6 billion per year (or 7% of the region's total commitments) (ICA, 2022[3]).

Increasing investments in transport and digital infrastructure will be key to connecting economic hubs in the region. Central African countries remain below the continental average in both the quantity and quality of infrastructure across all sectors (Figure 4.2). Limited transport and digital connectivity remains a significant obstacle to regional integration, hindering efforts to bridge the large distances between fragmented economic hubs, often separated by environmentally sensitive areas such as the forests in the Congo River Basin. Notably, 16% of the region's road network is paved, and only about 20% of the population has access to the Internet (AfDB, 2023[4]). These infrastructure gaps limit regional trade, which accounted for only 1.6% of Central Africa's total exports in 2023. Reflecting these challenges, transport and digital infrastructure account for 74% and 18%, respectively, of the region's required investments (Figure 4.1).

Rising debt burdens constrain the ability of Central African governments to invest in infrastructure. Central Africa records the lowest public infrastructure spending across the continent, averaging 1.1% of GDP in 2019-20, a level similar to that of North Africa (1.2%) but significantly lower than Southern Africa (2.4%). Low investment levels can be partially attributed to high debt burdens, as Central African countries spend 3.5 times more on debt servicing – ongoing loan repayments and interest payments for sovereign debt – than on infrastructure investment. This is akin to the median ratio in North Africa (which spends 3.6 times more) but higher than the ratios observed in East and West Africa (2.5 times more) and Southern Africa (1.6 times more). Overall, median debt service grew from 3.0% of government expenditure in 2010 to 11.1% in 2024, with spikes as high as 25% in the Republic of the Congo. Countries allocating higher shares of their GDP to infrastructure, such as Cameroon (3.0%) and the Central African Republic (2.4%), dedicate amounts to debt servicing that are similar to infrastructure spending (Figure 4.3). In contrast, the DR Congo and Gabon, which dedicate less than 1% of their GDP to infrastructure expenditure, spend 7 to 9 times more on debt servicing than on infrastructure development. While Gabon saw its debt service rise from 13.6% of government expenditure in 2010 to 46.6% in 2020, limited public investments in the DR Congo might reflect a prioritisation of other sectors in government spending.

Figure 4.3. Government spending in infrastructure and debt servicing in Central Africa



Note: GDP = gross domestic product. The indicator in Panel B is calculated based on an average of available data over the past five years for public infrastructure spending (2019-20) and debt servicing (2019-23). Median values are displayed for Africa and Central Africa in Panel B to account for extreme cases.

Source: Authors' calculations based on ICA (2022[3]), *Infrastructure Financing Trends in Africa 2019-2020* and World Bank (2024[5]), *International Debt Statistics* (database), https://www.worldbank.org/en/programs/debt-statistics/ids.

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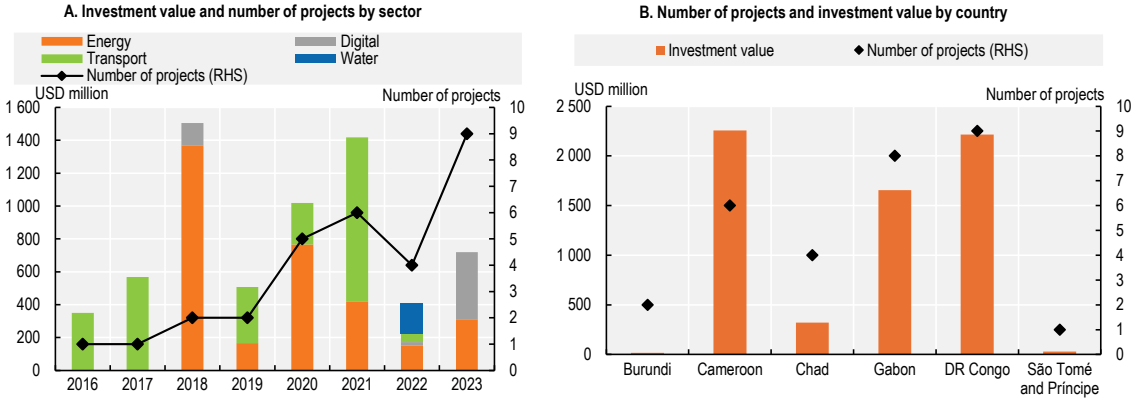
Private participation in infrastructure investments is limited, focusing only on a few countries. Private participation in infrastructure in Central Africa is the lowest across Africa, with only USD 6.4 billion invested between 2016 and 2023, mostly in the sectors of energy (49%) and transport (39%) (Figure 4.4). Cameroon, the DR Congo and Gabon attracted 94% of the value invested and 75% of Central Africa's projects. Weak governance is often cited as a significant challenge in the region, with legal, political and institutional uncertainty discouraging potential investors. Reports on private capital activity in Africa suggest that Central African countries registered only 3 private capital deals in 2024 compared to 129 in Southern Africa, 105 in West Africa, 99 in East Africa and 77 in North Africa (AVCA, 2025[6]). According to the Worldwide Governance Indicators – a compilation of data on governance quality – Central Africa ranked the lowest across African regions in 2023 in areas such as control of corruption, regulatory quality or government effectiveness (World Bank, 2025[7]). Based on one study, improving institutional quality could increase private investments in infrastructure by as much as 1.5 percentage points of GDP in countries such as Gabon (Chinzara, Dessus and Dreyhaupt, 2023[8]).

Figure 4.4. Infrastructure investments with private participation in Central Africa, 2016-23



Note: RHS = right-hand scale.

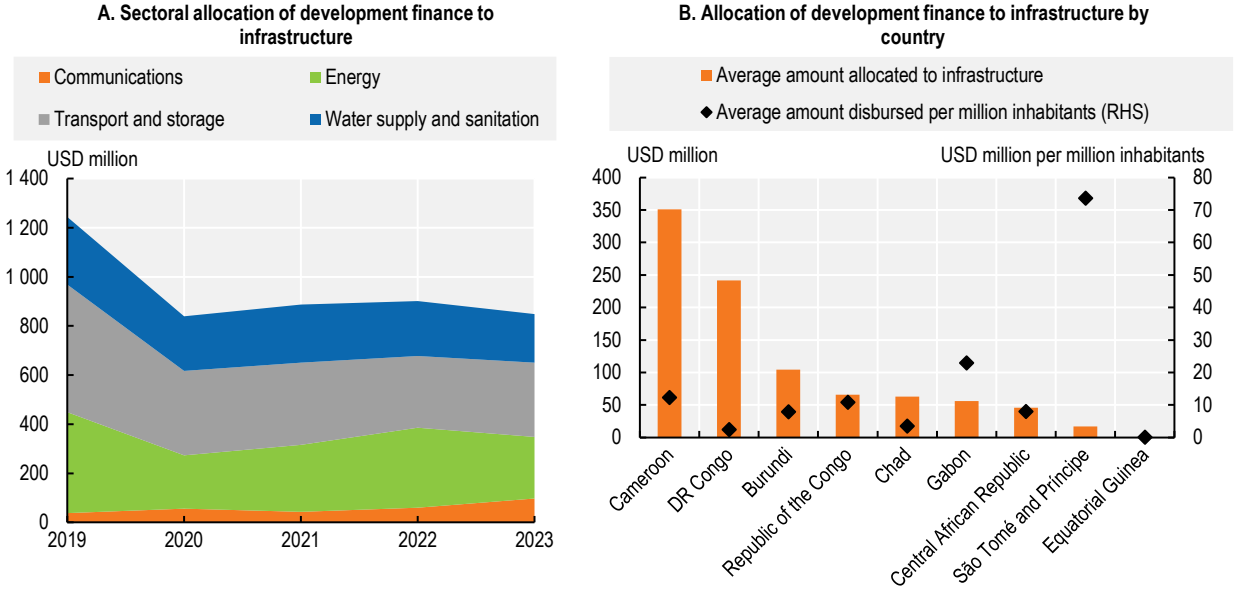
Source: World Bank (2024[9]), *Private Participation in Infrastructure* (database), https://ppi.worldbank.org/en/ppi.

StatLink https://stat.link/rsm2tk

Relative to the size of its population, Central Africa receives only limited development finance for infrastructure. Official development finance (ODF) averaged USD 944 million per year between 2019 and 2023, equivalent to 0.6% of the region's annual GDP. It stagnated at about USD 800 million per year in 2020, targeting primarily transport and energy (Figure 4.5). In 2019-23, in per capita terms, Central Africa received approximately USD 5 million per million inhabitants, compared to around USD 8-9 million in East, Southern and West Africa and as much as USD 17 million in North Africa. Allocation is unequal within the region, with Cameroon and the DR Congo capturing 62% of total ODF over the period. In contrast, fragile countries like Chad and the Central African Republic, which, respectively, recorded the second and fourth largest investment needs in the region, accounted for only about 11% of total disbursements.

Gender considerations in infrastructure projects are more prevalent in Central Africa than elsewhere in the continent. Thirty-five per cent of the official development assistance for infrastructure provided by members of the OECD Development Assistance Committee over 2020-23 integrated gender objectives in some form, the highest share of all African regions (OECD, 2025[10]). This emphasis could result from the relatively low number of projects in Central Africa, prompting donors to pay more attention to gender issues and maximise development impact.

Figure 4.5. Official development finance disbursements targeting infrastructure in Central Africa, 2019-23



Note: RHS = right-hand scale. Official development finance disbursements include official development assistance (ODA) and other official financial flows that do not meet the conditions for eligibility as ODA (either because they are not primarily aimed at development, or because they have a grant element of less than 25%).
Source: OECD (2025[11]), *Creditor Reporting System* (database), https://www.oecd.org/en/data/datasets/development-finance-statistics-data-on-flows-to-developing-countries.html.

StatLink https://stat.link/vmnwcl

Strategic prioritisation and strengthened capacities to implement projects are essential for more effective infrastructure development

Focusing on development corridors and enhancing co-ordination across all levels of government can help with prioritising infrastructure projects

Central Africa's regional infrastructure planning has been fragmented, slowing down implementation. Regional infrastructure development efforts have relied on multiple sectoral plans of bodies whose members differ: the Economic and Monetary Community of Central Africa (CEMAC), the Economic Community of Central African States (ECCAS) and the East African Community (EAC).[1] Their sectoral plans sometimes lack a cross-sectoral vision on infrastructure and clear links to productive transformation (Table 4.1). Despite prioritisation efforts, the implementation of regional programmes has mostly stalled. This is exemplified by the selection, in 2008, of 55 priority transport projects from the initial list of 184 projects in the Consensual Transport Master Plan for Central Africa (PDCT-AC) framework. By 2015, only 36 of the 55 priority projects had been implemented or had secured financing (ECA, 2015[12]). Similarly, evaluations of regional water infrastructure projects conducted in 2018 showed that Central Africa was lagging behind all other African regions in its implementation of cross border water management systems (AMCOW, 2018[13]). Uncertainties in institutional, political and macroeconomic contexts, as well as the limited national ownership and commitments in regional projects, have discouraged public and private investors, leaving many programmes at a standstill.

> *In DR Congo, the Grand Inga Dam project illustrates the difficulty of financing and accelerating the implementation of cross-border projects in Central Africa. The plan is to expand the dam, although two dams, Inga I and II, already exist and currently operate below their maximum capacity due to insufficient maintenance. This shows the need to strengthen infrastructure governance and budget planning. The Grand Inga Dam will become the largest hydroelectric power station in the world, with a 40 to 70 gigawatt capacity and an overall estimated cost of USD 80 billion. However, the project has been delayed multiple times since its inception following the withdrawal of several international partners over disagreements and governance concerns (Copperbelt Katanga Mining, 2025[14]).*
>
> *The Ruzizi hydropower station project between Burundi, the DR Congo and Rwanda aims to strengthen the integration of energy infrastructure in the region. It has been selected as a priority project under the Programme for Infrastructure Development in Africa Priority Action Plan 2 (PIDA PAP2). It also benefits from the support of international partners such as the European Commission through the European Union's Global Gateway. However, political tensions and security concerns could delay financing and implementation (AEP, 2025[15]).*

Table 4.1. Impacts and challenges of infrastructure development policies across regional and national levels in Central Africa

Level	Impact on productive transformation	Implementation challenges	Examples
Regional	• Promoting regional trade and mobility • Developing electricity production and transmission infrastructures • Harmonising regulatory and legislative frameworks for the development of regional electricity and digital markets	• Multiplicity of regional initiatives and differing memberships • Limited cross-sectoral planning • Limited national ownership of and commitments to regional projects • Lack of monitoring mechanisms • Financial misalignment with national budgets • Lack of skills and capacities	• ECCAS Consensual Transport Master Plan for Central Africa (PDCT-AC) (2004) • ECCAS Regional Action Plan for Integrated Water Resources Management in Central Africa (2015) • ECCAS Regional Strategic Energy Policy Document (DSPER) 2014-2030 • ECCAS Consensual Master Plan for the Development of Electronic Communications Infrastructure in Central Africa (PCDIC) (2019) • CEMAC Economic and Financial Reform Program (PREF-CEMAC) (2016) • EAC East African Power Master Plan (2013)

National	• Promoting industrial and export diversification • Diversifying and securing energy supplies • Improving transport systems to support productive sectors	• Misalignment with regional and continental infrastructure plans • Governance challenges and a lack of clear regulatory frameworks limiting private sector investment • Limited alignment between national and sub-national priorities • Insufficient institutional, human and financial capacities	• Cameroon's Sectoral Infrastructure Development Strategy (2020-2030) • Gabon's National Infrastructure Master Plan • São Tomé and Príncipe's National Renewable Energy Action Plan and National Energy Efficiency Action Plan (2021-2030/2050)

Source: Authors' compilation based on regional and national development plans.

Further prioritising projects can help channel finance more efficiently and increase mobilisation. In 2019, CEMAC member states adopted a first cross-sectoral programme outlining 11 priority projects to bolster regional integration, estimated at EUR 3.3 billion. To ensure sufficient financial backing, these priority projects were selected based on a criterion of bankability, after feasibility studies, risk assessments and environmental evaluations were completed. In addition, in 2020, CEMAC organised a first donor roundtable with potential international funders during which EUR 3.9 billion were mobilised. About 63% of the funds were provided by regional development finance institutions (the African Development Bank [AfDB], the Development Bank of the Central African States [BDEAC] and Afreximbank) (CEMAC, 2023[16]). By the end of 2024, 80% of the priority projects had begun, with an implementation rate of 67%, marking encouraging progress (Republic of Cameroon, 2024[17]). Building on this momentum, CEMAC member states defined a second set of 13 priority projects, originally estimated at EUR 8.8 billion, for which EUR 9.2 billion were mobilised in 2023 (CEMAC, 2023[16]). Similarly, the prioritisation of projects drawn from existing regional plans in continental initiatives, such as PIDA), could accelerate their implementation (PIDA, n.d.[18]).

> *The development of data centres within the ECCAS region is one of the priorities laid out in the Consensual Master Plan for the Development of Electronic Communications Infrastructure in Central Africa established in 2019. Estimated at USD 92.5 million, the project was included in PIDA PAP2 in 2020. The initiative encompasses the construction of six new data centres in Burundi, the Central African Republic, Chad, Equatorial Guinea, Gabon, and São Tomé and Príncipe. It also involves the enhancement of existing facilities in Cameroon, the Republic of the Congo and the DR Congo (PIDA, n.d.[19]).*

Upgrading transport corridors into development corridors could help revive the implementation of regional projects and boost value chains. In 2020, ECCAS member states called for an overhaul of the PDCT-AC to move from a transport corridor to a development corridor approach. The purpose is to strengthen the focus on the development potential of regional infrastructure and enhance cross-sectoral co-ordination, with support from international partners, such as the United Nations Economic Commission for Africa, the AfDB and the European Commission (UNECA, 2020[20]) (Table 4.2). This is the case of the Lobito Corridor, which connects the DR Congo with Southern African countries and aims to encourage the development of critical mineral value chains through infrastructure development, trade and customs facilitation measures, and education and training for job creation (see Chapter 3 for further details). Similarly, with additional support measures, the Libreville-Kribi-Douala-N'Djamena transport corridor could significantly strengthen the maize, rice and livestock value chains in the region by connecting areas of production to urban centres with high consumer demand (UNECA, 2021[21]).

> *The function of the Libreville-Brazzaville-Pointe Noire-Bangui-N'Djamena Corridor is to connect the Central African Republic, Chad, the Republic of the Congo and Gabon through road infrastructure. The corridor will feature bus stations, weighing stations, toll booths and border control points to ensure its efficient management. In 2022, Arise Integrated Industrial platforms (ARISE-IIP) engaged with the Government of the Republic of the Congo in a public-private partnership to develop industrial zones in Pointe-Noire and Ouésso and a mineral port. The aim is to support the local transformation of raw minerals, timber and agriproducts and make them high-added value products. ARISE-IIP offers an example of promising projects to complement transport corridors and unlock their full potential as development corridors (ARISE IIP, 2022[22]).*

Table 4.2. Selected transport and development corridors in Central Africa

Transport or development corridor	Countries covered	Partners	Envisioned impact on productive transformation and regional integration	Impact
Libreville-Kribi-Douala-N'Djamena Corridor	Cameroon, Chad, Equatorial Guinea, Gabon, São Tomé and Príncipe	National governments of Cameroon, Chad and Gabon, AFD, AfDB, EU, EIB, World Bank, ECCAS, PPP investors	• Strengthen connectivity between coastal ports and landlocked countries • Promote regional trade and economic integration • Stimulate investment in key sectors such as agriculture and mining • Integrate regional markets	• Travel time on the Maroua-Pouss section was cut from 4 hours to 2 hours between 2015 and 2020. • The average border crossing time dropped from 30 hours to 10 hours.
Douala-Kribi-Kampala Corridor	Cameroon, Republic of the Congo, Central African Republic, Uganda	National governments, EU, AFD, ECCAS, CHEC, PPP investors	• Strengthen connectivity between coastal ports and landlocked countries • Promote regional trade and economic integration • Stimulate investment in key sectors such as agriculture and mining	• Since 2018, at least 2 million tonnes of timber have passed through the ports of Douala and Kribi every year, mainly destined for China, Viet Nam and Europe. • 40 companies have been operating in the Kribi industrial zone, notably in the agrifood, cement, automotive assembly and wood sectors.
Libreville-Brazzaville-Pointe Noire-Bangui-N'Djamena Corridor	Central African Republic, Chad, Republic of the Congo, Gabon	National governments, CEMAC, AU	• Facilitate the movement of goods and people across borders • Enhance regional economic development • Support post-conflict reconstruction efforts	• The truck journey from Ndendé to Dolisie dropped from 3 days in 2013 to 4.5 hours in 2019. • The transit traffic share increased from 5% in 2013 to 35% in 2019. • Total travel time on key routes was cut from 6 hours to 2 hours. • Border crossing time was reduced from 48 hours to 3 hours.
Yaoundé-Brazzaville-Kinshasa Corridor	Cameroon, Republic of the Congo, DR Congo	National governments of Cameroon, Republic of the Congo and DR Congo, ECCAS, AU	• Enhance connectivity between major cities in Central Africa • Promote regional economic integration • Support diversification of economies	• Freight traffic between Pointe-Noire and Kinshasa increased from 2.2 million to 4.5 million tonnes. • Truck travel time from Yaoundé to Brazzaville was reduced from 4 days in 2012 to 1 day in 2020. • Total travel time on key segments dropped from 20 hours to 7 hours. • The average border crossing time fell from 48 hours to just 3 hours.

Note: DR Congo = Democratic Republic of the Congo. AFD = Agence Française de Développement. AfDB = African Development Bank. EU = European Union. EIB = European Investment Bank. ECCAS = Economic Community of Central African States. PPP = public-private partnership. CHEC = China Harbour Engineering Company. CEMAC = Central African Economic and Monetary Community. AU = African Union.
Source: AfDB (2023[4]), *Cross-Border Road Corridors: Expanding Market Access in Africa and Nurturing Continental Integration*; EU (2023[23]), *EU-Africa: Global Gateway Investment Package - Strategic Corridors*; AfDB (2019[24]), *Cross-Border Road Corridors: The Quest to Integrate Africa.*

Better co-ordination between regional and national plans could extend economic benefits beyond large urban centres. National infrastructure priorities are established through various policy documents, such as national development plans that integrate infrastructure development objectives (in the Central African Republic and Equatorial Guinea), dedicated national infrastructure development plans (in Burundi, Cameroon and Gabon) or sector-specific infrastructure plans (in São Tomé and Príncipe) (Table 4.3). At the sub-national level, increased co-ordination between local government entities can help tap latent opportunities. In Cameroon, for example, improving transport infrastructure between Douala, Edéa and Kribi and enhancing skills could contribute to developing the country's nascent pharmaceutical value chains by

supporting activities such as research and development, the manufacturing of pharmaceutical products and active ingredients, and packaging (UNECA, 2021[21]). To be effective, local governments require sufficient co-ordination and capacity. In 2022, United Cities and Local Governments of Africa rated the average quality of the institutional environment offered to subnational governments in Central African countries as the lowest across the continent (UCLG/Cities Alliance, 2021[25]).

> *Cameroon's Priority Investment Programme 2024-2026 outlines a strategic roadmap to bolster national development through targeted infrastructure projects. This triennial plan, managed by the Ministry of Economy, Planning, and Regional Development, encompasses 72 projects, including 43 ongoing and 29 new initiatives. The programrme aligns with the country's Vision 2035 and the National Development Strategy 2020-2030 as well as regional infrastructure development plans, including projects such as the extension of the railway network from Ngaoundéré (Cameroon) to N'djamena (Chad).*

Better capacities for planning, budgeting and monitoring can accelerate infrastructure project implementation

Current institutional and financial capacities are often insufficient to ensure the successful implementation of infrastructure development plans. In the context of the PDCT-AC, limited capacities have constrained countries' abilities to produce feasibility studies, which in turn have discouraged potential donors and investors. Except in Cameroon, the PDCT-AC also lacked national institutions responsible for monitoring the implementation of development plans, thereby depriving policymakers of information on the state of progress and the difficulties encountered. Delayed payment of members' contributions has further constrained the functioning of the Operational Monitoring Committee in charge of overseeing the implementation of the PDCT-AC (UNECA, 2015[26]).

> *In 2022, the Public Investment Management Assessment conducted in the DR Congo revealed weaknesses throughout the life cycle of infrastructure projects, including a lack of a clear legal framework for project evaluation and selection, institutional fragmentation leading to an unclear allocation of roles as well as an implementation of projects based on finance availability rather than approved budget (IMF, 2022[27]). Among the reforms adopted in 2023 to address these challenges, the Public Investment Management Decree introduced a Planning, Programming, Budgeting, and Monitoring-Evaluation system and the use of a consolidated Public Investment Program database, assigning unique identification codes to projects throughout their life cycle (Government of the DR Congo, 2024[28]).*

Strengthening regulatory frameworks could stimulate private sector participation to support regional and national infrastructure projects. National infrastructure plans highlight the importance of public-private partnerships (PPPs) by giving them priority for large public infrastructure projects (such as in Burundi and Cameroon) and establishing conditions for private sector development (such as in the Central African Republic). Still, except for Cameroon, which established its PPP unit in 2006, Central Africa's PPP institutional ecosystem is relatively young, with the first PPP units emerging in 2016-17 (Table 4.3). As of 2023, only three out of six countries in the region ensured alignment between PPP projects and national priorities, while the use of financial, social or environmental sustainability assessments of PPP projects remains limited in most countries.

Effective mechanisms for skills development can strengthen infrastructure ecosystems in the region and promote inclusive job creation. Programmes that develop infrastructure-related abilities focus primarily on technical skills and, to a lesser extent, green, digital and project management skills (Table 4.4). Two of these projects are directly linked to the implementation of national infrastructure plans, notably Gabon's National Infrastructure Master Plan and São Tomé and Príncipe's energy plan. Some countries also actively promote gender inclusiveness in infrastructure. In Gabon, for instance, the Transgabonaise, which connects Libreville to Franceville, has created over 1 000 direct and indirect jobs – of which 35% are held by women – and 600 people have received training for self-employment to create income-generating activities beyond infrastructure (Meridiam, 2023[29]; EU, 2025[30]).

Table 4.3. Selected indicators of governments' preparation and management capacities of public-private partnerships in infrastructure

Public-private partnership (PPP) phase	Thematic area	Survey question	Burundi	Cameroon	Chad	DR Congo	Republic of the Congo	Gabon
Preparation	Regulatory and institutional frameworks	Specialised government entity facilitating the PPP programme (launch year)	Agence d'Appui à la Réalisation des contrats de partenariat public-privé (ARCP) (2016)	Support Council for the Realisation of Partnership Contracts (CARPA) (2006)	National Commission for Public Private Partnerships and the Coordination and Support Unit for PPPs (2017)	Unit of Advice and Coordination of Public-Private Partnerships (UC-PPP) (2021)	Not applicable	PPP Unit within the National Agency for Promotion of Investment (ANPI-Gabon) (2019)
		The government ensures that PPP projects are consistent with other public priorities **via a (un)specific procedure** to achieve that goal	Neither	Neither	Unspecific procedure	Unspecific procedure	Neither	Unspecific procedure
	Assessments	Number of assessments conducted when identifying and preparing a PPP to inform the decision to proceed with it	5/9	7/9	7/9	5/9	2/9	3/9
Contract management	PPP capacity and training	Establishment of **initial/continued** training for personnel	No	No	No	No	No	No
		PPP contract management team members are required to meet **detailed or sufficient** qualifications	Neither	Neither	Neither	Neither	Detailed	Detailed
	Monitoring and evaluation (M&E)	M&E mechanism **after** the PPP project construction	Yes	Yes	Yes	Yes	Yes	Yes
		Performance is assessed against output/key performance indicators set out in the tender documents and the PPP contract	Yes	Yes	Yes	Yes	Yes	No

Note: This table is based on a survey by the World Bank entitled the Benchmarking Infrastructure Development (BID) 2023 which cover six of the nine countries in the Central African region. The survey identifies nine choices under assessments conducted: cost-benefit analysis, fiscal affordability, risk identification, comparative procurement assessment, procurement strategy, financial viability/bankability, market sounding, environmental impact and social impact.

Source: World Bank (2025[31]), *The World Bank Benchmarking Infrastructure Development (BID)* (database), https://bpp.worldbank.org/en/global.

Table 4.4. Selected skills and capacity development programmes in infrastructure in Central Africa

Programme	Main features	Types of skills promoted	Key stakeholders involved
Central African Centre for Renewable Energy and Energy Efficiency (CEREEAC)	• CEREEAC member countries have access to the learning platform of the Global Network of Regional Sustainable Energy Centres (GN-SEC), which provides support for regional qualifications and certification frameworks and access to networks of trainers. • CEREEAC was established in 2023, and it is the last of five regional centres[1] working on common energy solutions.	Technical; green	UNIDO, GN-SEC
Support Programme for the Management of Regional and National Infrastructures in Central Africa (PAGIRN)	• The programme aims to improve management, planning, implementation and advocacy skills specific to the transport, energy, information and ICT sectors • The Observatory of Abnormal Practices along the main Central African corridors, launched in 2021 in Cameroon, is part of the PAGIRN.	Technical; project management	CEMAC, EU
Stakeholder Workshop for Benchmarking of ICT in Central Africa (**Equatorial Guinea**)	The programme aims to: • Equip stakeholders with skills in regulatory strategies, stakeholder mapping, and sandboxing to foster innovation and evidence-based decision-making • Align national ICT strategies with the African Union's Digital Transformation Strategy, promoting a harmonised approach to policy and regulation • Enhance regional collaboration by bringing regulators, policymakers and stakeholders together under a shared vision for digital transformation and regional integration	Digital	ECCAS, ITU, Equatorial Guinea's Ministry of Transport, Telecommunications and Artificial Intelligence Systems
Training programme for the implementation of the National Infrastructure Master Plan (**Gabon**)	• From 2010 to 2020, the country's Agence Nationale des Grands Travaux d'Infrastructures (ANGTI) partnered with Bechtel to deliver a pipeline of priority infrastructure projects. • The programme welcomed 300 apprentices yearly, and ANGTI's ratio of local employees rose from 50% to 90% by the end of the partnership.	Technical; project management	Gabon Ministry of Infrastructure, Bechtel
Building Institutional Capacity for a Renewable Energy and Energy Efficiency Investment Programme (**São Tomé and Príncipe**)	The programme aims to: • Develop the country's sustainable energy ecosystem and infrastructure, and ensure long-term energy security • Strengthen institutional capacities of the Ministry of Infrastructure, Natural Resources and Environment (MOPIRNA) to become an executing entity of international climate finance in the energy sector • Support baseline reports and data management, regulations and standards, training, and business plan development	Technical; green	MOPIRNA, Ministry of Planning, Finance and Blue Economy, Green Climate Fund, UNIDO
Emergency Infrastructure and Connectivity Recovery Project (EICRP) (**Central African Republic**)	• The EICRP is charged with building or rehabilitating 900 kilometres of roads • It empowers communities through capacity-building initiatives, including training programmes for local talent in operating road construction machinery • Between 2021 and 2024, over 100 000 people gained transport access, and registered goods entering the improved areas increased from 20 000 to 30 000 metric tonnes.	Technical	World Bank, United Nations Multidimensional Integrated Stabilization Mission in the Central African Republic

Note: ICT = information and communications technology. UNIDO = United Nations Industrial Development Organization. CEMAC = Central African Economic and Monetary Community. EU = European Union. ECCAS = Economic Community of Central African States. ITU = International Telecommunications Union.

1. This includes the East African Centre for Renewable Energy and Energy Efficiency (EACREEE) in Uganda, the ECOWAS Centre for Renewable Energy and Energy Efficiency (ECREEE) in Cabo Verde, the Regional Centre for Renewable Energy and Energy Efficiency (RCREEE) in Egypt and the SADC Centre for Renewable Energy and Energy Efficiency (SACREEE) in Namibia.

Source: Ndiaye, Mbele and Sylla (2024[32]), "Building roads to build peace: Our experience in the Central African Republic"; GCF (2021[33]), *Readiness and Preparatory Support: Proposal Template: Building institutional capacity for a renewable energy and energy efficiency investment programme for Sao Tome and Principe*; CEREEAC (2025[34]), "Our work", cereeac.org (website); PAGIRN-PPTIC (2025[35]), pagirn-pptic.cm (home page); EU Delegation to Cameroon and Equatorial Guinea (2021[36]), *Atelier sous-régional de lancement de l'Observatoire régional des « pratiques anormales » sur les principaux corridors d'Afrique centrale faisant partie intégrante du Programme d'Appui à la Gouvernance des Infrastructures Nationales et Régionales;* Bechtel (2021[37]), *Gabon National Infrastructure Plan*

Notes

[1] CEMAC includes Cameroon, the Central African Republic, Chad, Equatorial Guinea, Gabon and the Republic of the Congo. ECCAS is made up of all Central African countries, as well as Angola and Rwanda. The EAC comprises Burundi and the DR Congo, as well as Kenya, Rwanda, Somalia, South Sudan, Tanzania and Uganda.

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5 Infrastructure and productive transformation in East Africa

This chapter addresses how infrastructure contributes to productive transformation in East Africa (Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Mauritius, Rwanda, Seychelles, Somalia, South Sudan, Sudan, Tanzania and Uganda). It begins by assessing the infrastructure investment need and current financing in the region and its countries. The chapter then analyses the degree to which regional and national infrastructure plans are co-ordinated and contribute to productive transformation. Finally, it examines the region's transport corridors, public-private partnership units and skills development programmes.

In brief

East Africa's infrastructure investment need is the largest of all African regions. To close the gap with their peer countries in other world regions, East African countries require an investment of USD 42 billion per year until 2040, equivalent to 8.6% of the region's gross domestic product (GDP) in 2024. Such an investment would increase East Africa's GDP growth by 6.0 percentage points.

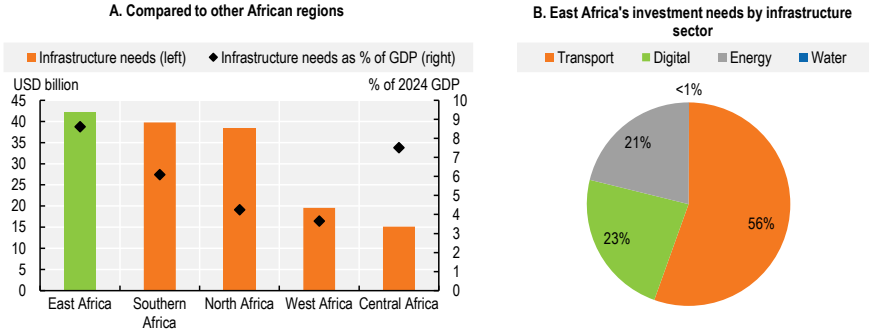
Currently, countries in the region have varying access to financing for infrastructure. Some East African governments spend far more on infrastructure than the African average (Comoros at 7% of GDP, Tanzania at 5% and Uganda at 4.2%). Yet, others allocate significantly more funds to debt servicing than to infrastructure (Madagascar 2.6 times more, Kenya 3.6 times more and Somalia 24.4 times more). Official development finance (ODF) and private participation in infrastructure (PPI) are larger in East Africa than in most other African regions. However, these funds are distributed unevenly across countries, with Kenya attracting 26% and 30% of the regional totals in ODF and PPI, respectively.

More strategic regional co-ordination of policies could vastly improve East Africa's infrastructure development:

- Most East African countries have pertinent national-level or sector-specific infrastructure plans, but regional co-ordination through the Regional Infrastructure Master Plan of the Intergovernmental Authority on Development (IGAD) is hampered by financing and capacity shortages.
- East Africa's development corridors have begun to achieve tangible regional integration outcomes. Greater harmonisation of complementary national policies (especially in trade) and adequate funding for maintenance could boost their effectiveness. Major funders, such as the African Development Bank (AfDB) and the European Union (EU), are vital partners for most corridors in the region.
- Major skills development programmes could more directly target regional priorities, covering transport in addition to energy and the digital sector.

East Africa regional profile

Figure 5.1. Annual infrastructure investment needed for East Africa to achieve the productive transformation levels of benchmark countries by 2040



Note: GDP = gross domestic product. Infrastructure investment needs refer to modelled estimates of the total expenditures required to build new infrastructure to match the infrastructure levels of peer countries that perform well in productive transformation while also maintaining existing infrastructure. See Annex 1.A for details.
Source: Data sources for the investment needs estimations are listed in Annex 1.A.

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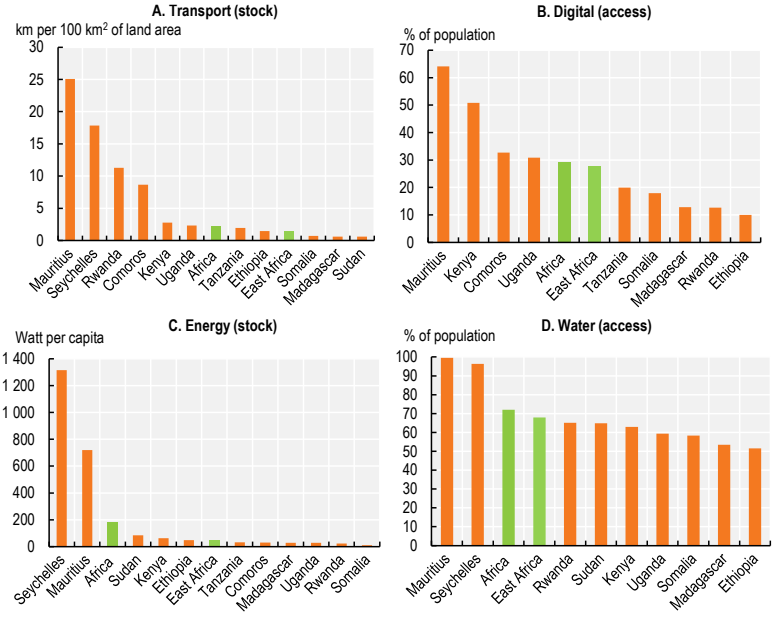
Figure 5.2. Average physical infrastructure stocks and access across selected East African countries compared to Africa



Note: Transport = kilometres (km) of paved roads and railways per 100 km² of non-desert land area. Digital = per cent of the population aged 15+ with Internet access. Energy = installed energy capacity as watt per capita. Water = per cent of the population with access to drinking water. For transport and energy stocks, the averages for East Africa and Africa are population-weighted. For transport and energy stocks, values for East Africa and Africa reflect aggregated totals relative to population or area, depending on the indicator. For digital and water access, the values for East Africa and Africa represent unweighted averages of country values. The selected countries are presented based on data availability.
Source: Transport and energy indicators' sources are reported in Annex 1.A. Water: Drinking water, sanitation and hygiene (WASH) estimates, from UNICEF (2024[1]), *Drinking water, sanitation and hygiene in households by country, 2000-2022* (database), https://data.unicef.org/topic/water-and-sanitation/drinking-water/; Digital: from Gallup (2020[2]), *Gallup World Poll 2020* (database), https://www.gallup.com/analytics/213617/gallup-analytics.aspx.

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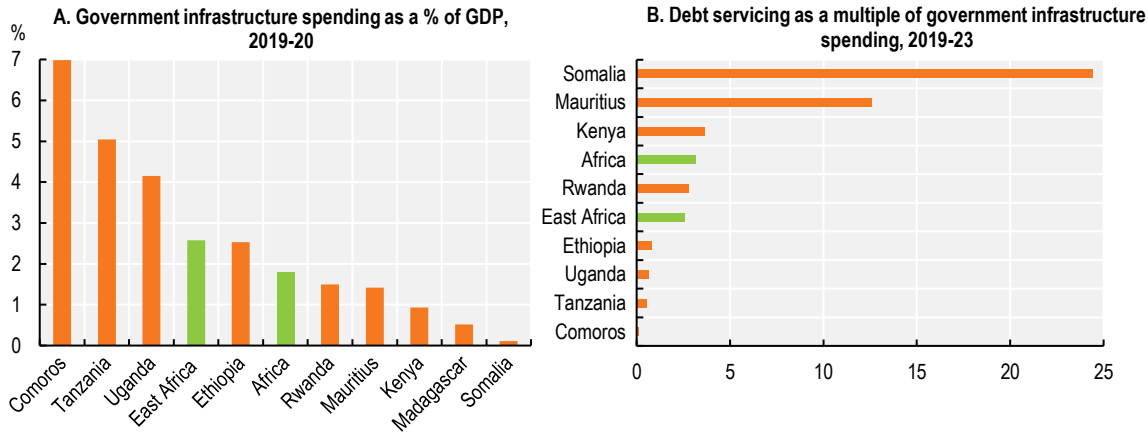
East Africa has a higher infrastructure investment need than any other African region

East African countries require significant investments in infrastructure to support productive transformation. With the exception of Mauritius and Seychelles, East African countries have a lower stock of energy infrastructure than the African average, and the region ranks slightly below the African average for transport, digital and water infrastructure. Mauritius (an upper middle-income country) and Seychelles (a high-income country) have the highest levels of physical stock and access for any type of infrastructure in the region, while least-developed East African countries such as Madagascar and Somalia rank lowest (Figure 5.2). To close the gap with their peer countries that have high levels of productive transformation in other world regions (Annex 1.A), East Africa's investment need amounts to around USD 42 billion per year until 2040, equivalent to 8.6% of the region's GDP in 2024 (Figure 5.1; Annex 1.A). This is the highest value of all African regions and 3 percentage points higher than the average value for Africa (5.6%). The large investment need is driven by the four largest economies, which together account for 92% of the region's total investment need (Ethiopia 32%, Tanzania 27%, Sudan 18% and Kenya 15%). Investing USD 42 billion per year until 2040 is estimated to increase the region's annual long-term GDP growth by 6.0 percentage points (see Chapter 1).

Some East African governments spend far more on infrastructure than the African average, while others are hamstrung by sovereign debt obligations. East Africa has the second highest government spending on infrastructure of the five African regions (1.9% of GDP), below Southern Africa (2.4%) but significantly above North Africa (1.2%) and Central Africa (1.1%). The relatively high-value results from individual countries' budgetary emphasis on infrastructure, including Comoros (7% of its GDP), Tanzania (5%) and Uganda (4.2%). Ethiopia's government, in line with its explicit emphasis on infrastructure-led development (Chipanda, 2025[3]), spent more on infrastructure (2.5% of GDP) than the African average (1.8%) in 2019-20; however, this value is far below the country's peak of 4.5% in 2013.[1] Madagascar, Kenya and Somalia spend 2.6, 3.6 and 24.4 times more, respectively, on debt servicing than on infrastructure (Figure 5.3).

Figure 5.3. Government spending in infrastructure and debt servicing in East Africa



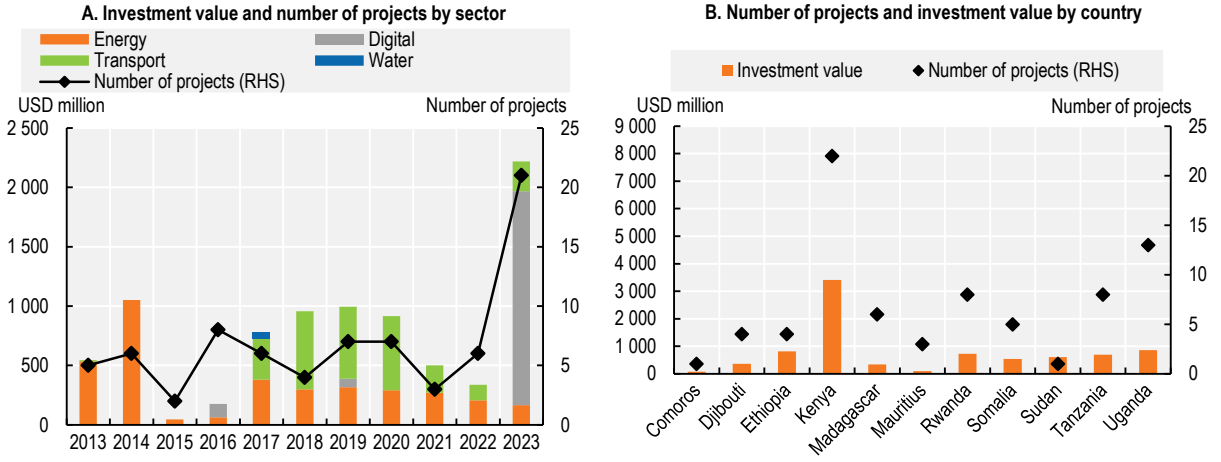
Note: GDP = gross domestic product. The indicator in Panel B is calculated based on an average of available data over the past five years for public infrastructure spending (2019-20) and debt servicing (2019-23). Median values are displayed for Africa and East Africa in Panel B to account for extreme cases. The selected countries are presented based on data availability.

Source: Authors' calculations based on ICA (2022[4]), *Infrastructure Financing Trends in Africa 2019-2020*, and World Bank (2024[5]), *International Debt Statistics* (database), https://www.worldbank.org/en/programs/debt-statistics/ids.

StatLink https://stat.link/7cpof3

Official development finance and private participation in infrastructure are larger in East Africa than in most African regions (largely driven by Kenya), while the share of official development assistance that considers gender equality objectives has remained stagnant since 2014. From 2019 to 2023, the region received USD 18.4 billion in official development finance allocated to infrastructure, compared to USD 4.9 billion in private participation in infrastructure. East Africa had 75 large infrastructure projects with private investors between 2010 and 2023, mainly in energy (46 projects), digital (14) and transport (13). An investment spree in digital infrastructure projects with private participation in 2023 has elevated East Africa to the region with the most projects and largest investment volume (USD 1.9 billion) in this sector (Figure 5.4). In contrast, official development finance (ODF) has put greater emphasis on transport and storage, as well as on water supply and sanitation (60% of total ODF) (Figure 5.5). With an average of USD 963 million per year in official development finance, Kenya accounts for 26% of the region's total. The investment value of private participation in infrastructure also centres on Kenya, attaining 30% of the regional total, while the number of projects is more evenly spread across East Africa's larger, market-oriented economies (22 projects out of 75 for Kenya, 13 for Uganda, 8 for Rwanda and 8 for Tanzania). The percentage of official development assistance that incorporates gender equality objectives rose significantly from 2010-13 (19%) to 2014-18 (32%) but has remained stagnant in 2019-23 (32%).[2]

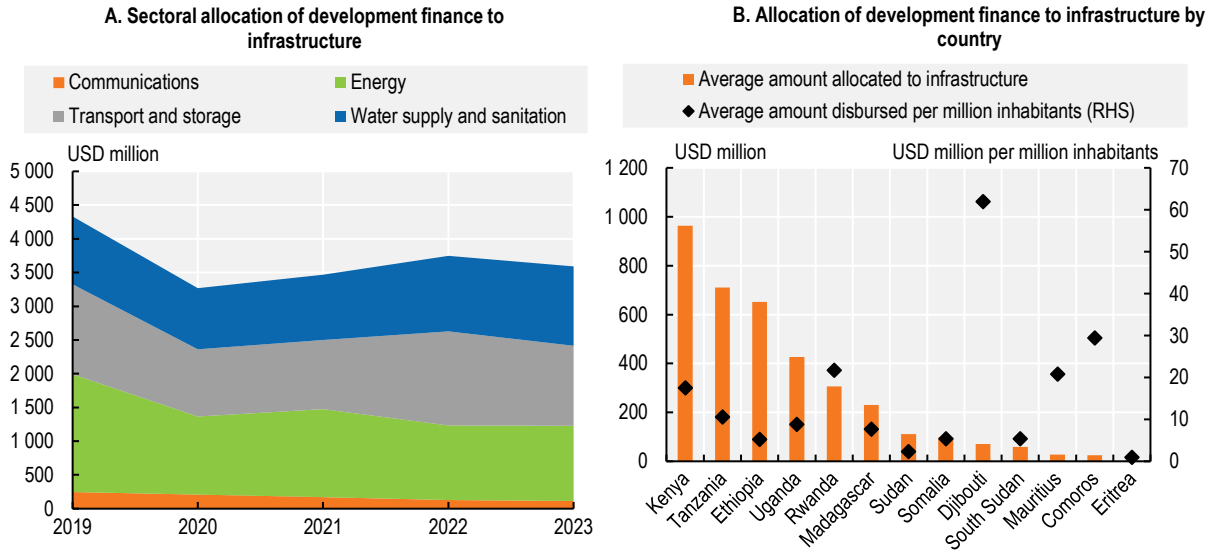
Figure 5.4. Infrastructure investments with private participation in East Africa, 2013-23



Note: RHS = right-hand side. The selected countries are presented based on data availability.
Source: World Bank (2024[6]), *Private Participation in Infrastructure* (database), https://ppi.worldbank.org/en/ppi.

StatLink https://stat.link/pcf4zv

Figure 5.5. Official development finance disbursements targeting infrastructure in East Africa, 2019-23



Note: RHS = right-hand scale. Official development finance disbursements include official development assistance (ODA) and other official financial flows that do not meet the conditions for eligibility as ODA (either because they are not primarily aimed at development, or because they have a grant element of less than 25%). No data available for Seychelles.
Source: OECD (2025[7]), *Creditor Reporting System* (database), https://www.oecd.org/en/data/datasets/development-finance-statistics-data-on-flows-to-developing-countries.html.

StatLink https://stat.link/mnqwu2

Regional co-ordination could make East Africa's infrastructure policies more effective

Most East African countries have pertinent infrastructure plans, while regional co-ordination is limited

East African countries typically have at least one infrastructure-related plan that explicitly targets objectives related to productive transformation. Seychelles, Somalia and South Sudan have adopted broad-based infrastructure plans. While Seychelles uses its plan to emphasise sectors that are strategic for a small island country (air transport and tourism), Somalia and South Sudan focus on broad-based access goals across all types of infrastructure. In contrast, Ethiopia, Kenya, Rwanda and Tanzania have chosen sector-specific plans to target specific challenges in their transport, digital and energy sectors. Uganda has incorporated infrastructure within its national development strategy. Certain national strategies explicitly link with cross-border and regional integration goals. This is the case for Kenya (for energy markets), Tanzania (for regional corridors or the regional standardisation of digital infrastructure) and South Sudan (for railway connections).

As their capacities vary, East African countries have different targets to support the development and implementation of their infrastructure-related plans. Some focus on increased private participation via public-private partnerships, while others seek to involve multilateral and development partners (i.e. Seychelles and South Sudan) (AfDB, 2013[8]; AfDB, 2015[9]). Several plans (e.g. those of Kenya and Rwanda) explicitly emphasise the importance of climate mitigation and gender-sensitive infrastructure development (MMEIPA, 2025[10]; MININFRA, 2021[11]) (Table 5.1; Chapter 1).

The IGAD Regional Infrastructure Master Plan (IRIMP) pursues regional co-ordination but is hampered by several challenges. By 2050, the IRIMP aims to create an integrated, region-wide transport, energy and digital infrastructure network. The plan specifically focuses on transitioning nine of East Africa's transport corridors into development corridors to more holistically target job creation, climate resilience and gender equality (see Chapter 2; Table 5.1). However, IRIMP has faced challenges such as the heterogeneity of IGAD member states' energy markets, difficulties in securing financing given some member states' high sovereign debt levels, and limited private sector investment due to political and macroeconomic uncertainty. The plan's effective implementation depends on IGAD's mandate to prioritise projects across the region; it could be supported through harmonised monitoring of and reporting on the performance of corridors (see Chapter 2).

Table 5.1. Selected infrastructure development plans and their objectives related to productive transformation in East Africa

Type of plan	Countries (implementing entity)	Plan	Objectives related to productive transformation
Regional	**Djibouti, Eritrea Ethiopia, Kenya, Somalia, South Sudan, Sudan, Uganda**	**IGAD Regional Infrastructure Master Plan** (2020-50)	• Develop a strategic regional framework for development in transport (including nine corridors), energy, digital and water infrastructure • Upgrade transport corridors into development corridors to attract foreign direct investment and to facilitate regional and global value chains and the movement of people • Increase climate resilience and the inclusion of women and youth • Harmonise policies and regulations related to integrated transport, communications, energy systems and resource management to operationalise the African Continental Free Trade Area
National – sectoral	**Ethiopia** (Ministry of Transport and Logistics)	**Transport Master Plan** (2022-52)	• Support key economic sectors (e.g. agriculture, tourism and mining) through reduced transport costs and better passenger and freight transport • Strengthen regional integration with IGAD countries and regional trade, in particular through development corridors and for regional value chains (e.g. raw materials, manufacturing) • Improve rural-urban linkages, reduce poverty and boost agricultural production
	Kenya (Ministry of Energy and Petroleum)	**National Energy Policy 2025-2034**	• Promote the power market and ensure energy security by strengthening regional integration and the modernisation of energy infrastructure • Diversify the energy mix through the development of renewable and non-renewable energy sources, reducing reliance on imports (e.g. coal) • Mitigate climate change and foster gender mainstreaming into the energy sector
	Rwanda (Ministry of Infrastructure)	**National Transport Policy and Strategy for Rwanda** (2021)	• Support economic activities and promote trade by reducing transport costs for rail, roads and inland waterways • Support major rail corridors (Northern and Central Corridors) for regional integration • Enhance transport infrastructure specifically in support of rural agriculture (e.g. ropeways along hillsides) • Increase gender mainstreaming in transport and mitigate climate change
	Tanzania (Ministry of Information, Communication and Information Technology and National ICT Technical and Steering Committees)	**National ICT Policy** (2023)	• Foster the Fourth Industrial Revolution and provide universal access to reliable, affordable digital infrastructure, including for rural areas • Create job and entrepreneurial opportunities via digital innovation, especially for youth • Strengthen integration to regional and global markets by aligning digital infrastructure and telecom services with international, regional and national requirements
National – infrastructure	**Seychelles** (High-Level Committee in national government, in collaboration with AfDB)	**Infrastructure Action Plan**	• Support the fisheries and tourism as the two pillars of Seychelles' economy • Enhance maritime and air transports to strengthen regional integration and trade (including the rehabilitation and refurbishment of Seychelles International Airport Terminal) • Increase energy capacity by modernising existing and building new energy infrastructure (including new power stations in Mahé and Praslin)

	Somalia (Inter-Ministerial Infrastructure Coordination Mechanism)	**National Infrastructure Strategy (SNIS) 2019-2063**	• Improve universal access to essential services such as energy, water and telecommunications, including irrigation for agricultural production • Support regional integration and trade with IGAD countries and countries from the Horn of Africa through transport corridors (railways, air, roads) • Promote job creation
	South Sudan (national government in collaboration with AfDB)	**Infrastructure Action Plan**	• Strengthen regional integration by enhancing road and rail networks (including the expansion of the railway linking South Sudan to Kenya and Uganda) • Ensure energy and water access, in particular for agriculture • Develop hydropower and petroleum resources and seek opportunities for exporting energy • Develop digital infrastructures and regional backbone network links
National – within the national development plan	**Uganda** (Office of the Prime Minister, National Planning Authority, and Ministry of Finance, Planning, and Economic Development)	**National Development Plan IV** (2025/26 - 2029/30) (includes development programmes for the transport, energy and digital sectors)	• Provide access to affordable and reliable digital infrastructure and increase national broadband coverage from 55% in 2023/24 to 70% by 2029-30, with a minimum speed of eight megabits per second • Ensure energy supply and diversification (solar, hydropower, nuclear) and support strategic sectors such as agriculture, mining and tourism • Develop an efficient multi-modal transport network to reduce transport costs and harness untapped opportunities (e.g. tourism with air transport)

Note: Eritrea's membership in IGAD is currently suspended. IGAD = Intergovernmental Authority on Development. ICT = information and communication technologies.
Source: IGAD Secretariat (2022[12]); governments of Ethiopia (2022[13]), Kenya (2025[10]), Rwanda (2021[11]), Seychelles (2015[9]), Somalia (2018[14]), South Sudan (2013[8]), Tanzania (2023[15]) and Uganda (2024[16]).

National public-private partnership units tend to have qualified personnel, and development partners lead the major skills programmes

Several East African countries have public-private partnership infrastructure units (PPP units) with relatively high employee capacity, according to the Benchmarking Infrastructure Development survey by the World Bank (2025[17]) **(see Chapter 2).** For instance, four out of six countries for which data are available (Djibouti, Ethiopia, Madagascar and Mauritius) require that staff both meet sufficient or detailed qualifications and establish training measures for personnel.

Major skills development programmes in East Africa emphasise specific skills in the energy and digital sectors. East Africa has a developed network of technical and vocational education and training (TVET) and skills providers engaged in infrastructure around emerging technical (green and digital) and transferable (managerial and entrepreneurial) skills. High-profile programmes that operate across several East African countries are typically driven by development partners, such as the World Bank and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) (Table 5.2). Although 29% of all global project preparation funds are active in Africa, few offer technical assistance beyond the conceptualisation phase (IGAD Secretariat, 2022[12]).

Table 5.2. Selected skills and capacity development programmes in infrastructure in East Africa

Programme	Main features	Partners	Types of skills promoted
East Africa Skills for Transformation and Regional Integration (EASTRIP) Project (Ethiopia, Kenya and Tanzania)	• Offers training for technicians in transport, energy, and information and communications technology (as well as manufacturing, tourism and agriculture) • Has developed some 370 accredited or industry-certified programmes since 2018 • Supports 16 Regional Flagship TVET Institutes, which feature industry advisory boards and monitor graduate employment data	TVET Centres of Excellence across the region and the World Bank	Technical; digital

Energy Regulation Centre of Excellence (ERCE) (regional, based in Tanzania)	• Seeks to build a pool of experts in the East African Community to develop integrated, competitive conventional and renewable energy markets	Regional institutions, research centres and development partners	Technical; soft; managerial
Build4Skills project (Kenya, Senegal and South Africa)	• Uses construction sites mainly financed by MDBs to provide work-based training to TVET students • Aims at integrating traineeships as a requirement in tendering documents for infrastructure projects of MDBs	GIZ-led, in co-operation with MDBs, and national ministries of education	Technical; green; soft (work-readiness training, leadership and self-confidence, occupational health and safety)
Solar Hands-on training and International Network of Exchange (SHINE) (Ghana, Nigeria and Uganda) (2023-26)	• Focuses on solar panel technology through three pillars: research (e.g. skill supply/demand); curricula development (e.g. action plans of each of the African TVET schools) and capacity building • Develops market-oriented skills through training, webinars and short stays in the three African host countries, thus gaining local knowledge	European-African consortium, including TVET and private actors, co-funded by the EU	Technical; green; digital; entrepreneurial
Miundo Misingi Hub (Kenya)	• Offers training in infrastructure project finance and public-private partnerships • Partners with the Institute for Sustainable Infrastructure for projects to obtain the Envision accreditation and sustainability rating	Private and public stakeholders	Technical; green

Note: TVET = technical and vocational education and training. MDB = multilateral development bank.
Source: Build4Skills (2022[18]), *EFTP et banques multilatérales de développement : Kenya, Mongolie, Pakistan, Sénégal, Afrique du Sud*; EASTRIP (2025[19]), "East Africa Skills for Transformation and Regional Integration Project"; ERCE (2025[20]), "Advancing energy regulation in Africa"; SHINE (2025[21]), "About the project"; Miundo Misingi (2025[22]), "About Miundo Misingi Hub".

East Africa's development corridors can widen their scope beyond transport and benefit from harmonised policies

Most of East Africa's corridors focus on transport, and their effectiveness hinges on better policy harmonisation and greater political stability. East African corridors target similar productive transformation objectives, such as regional integration, trade facilitation through the reduction of transport costs and economic diversification. Beyond such broad goals, individual corridors differ in their focus (e.g. urban growth, logistics efficiency, environmental sustainability or digital connectivity). In addition to sector-specific private sector participation, major funders, such as the AfDB and the EU, are vital partners for most corridors and other transnational infrastructure projects in the region. Lessons from corridor implementations include the importance of harmonised policy frameworks and institutional capacity (especially for trade policies), the consideration of ongoing maintenance, and (for the Mombasa-Kisangani and Madagascar-Indian Ocean corridors) the necessity of political stability[3] (Table 5.3). Despite these contextual challenges, several transport corridors have had tangible positive impacts, including reductions in travel time and logistics costs, improved income levels, and increased trade volumes.

> *Household incomes in the Central Corridor's project area have risen by 20%, and transport costs have dropped by 65% (AfDB, 2023[23]).*
>
> *Launched in early 2025, the Zambia-Tanzania-Kenya Power Interconnector Project offers a link between the Southern African Power Pool and the Eastern African Power Pool to improve the region's energy security and reduce Zambia's reliance on hydropower. As an EU Global Gateway flagship project, it covers both the development of infrastructure and institutional capacity building (Directorate-General for International Partnerships, 2025[24]).*

Table 5.3. Selected transport and development corridors in East Africa

Type of corridor	Envisioned impacts on productive transformation and regional integration	Lessons and impacts	Examples of corridors	Participating countries	Partners
Transport	• Enhance connectivity between countries (especially landlocked countries and ports) • Promote regional trade and economic integration; reduce transport costs and time • Encourage economic diversification • Focus on urban growth and development • Support environmental sustainability (e.g. green infrastructure)	• Importance of co-ordinated regional planning and policy harmonisation (e.g. trade) • Need for maintenance • Complementary capacity building for trade facilitation • Political stability as a necessary condition • Multimodal integration of transport • Need for harmonisation of transportation standards	Dar es Salaam-Nairobi-Addis Ababa-Berbera/Djibouti Corridor (road, rail, logistic hubs)	Djibouti, Ethiopia, Kenya, Somalia, Tanzania	National governments, AfDB, World Bank, Cities Alliance, EU, private infrastructure investors
			Mombasa-Kisangani Corridor (road, rail, trade facilitation)	DR Congo, Kenya, Rwanda, Uganda	National governments, AfDB, TradeMark East Africa, EU, AFD, logistics and transport companies
			Central Corridor (port, road, rail, inland container terminals)	Burundi, DR Congo, Rwanda, Tanzania, Uganda	National governments, AfDB, EU, TradeMark East Africa, JICA, GIZ, AUDA-NEPAD, private infrastructure investors
			Cairo-Khartoum-Juba-Kampala Corridor (road, rail, river transport)	Egypt, South Sudan, Sudan, Uganda	National governments, AfDB, EU, NEPAD-IPPF, AUDA-NEPAD, IGAD
			Northern Corridor (road, rail, trade facilitation)	Burundi, DR Congo, Kenya, Rwanda, Uganda	National governments AfDB, TradeMark East Africa, EU, UNEP, logistics and transport companies
Transport; development	• Strengthen connectivity and trade • Promote regional economic integration	• Political stability as a necessary condition • Importance of co-ordinated regional planning and policy harmonisation	Madagascar-Indian Ocean Corridor (ports and airports; energy and digital connectivity)	Comoros, France (Réunion), Madagascar, Mauritius, Seychelles	National governments, Indian Ocean Commission, AU, EU, private infrastructure investors

Note: DR Congo = Democratic Republic of the Congo. AfDB = African Development Bank. EU = European Union. AFD = Agence Française de Développement. JICA = Japan International Cooperation Agency. GIZ = Deutsche Gesellschaft für Internationale Zusammenarbeit. AUDA = African Union Development Agency. NEPAD = New Partnership for Africa's Development. IPPF = Infrastructure Project Preparation Facility. IGAD = Intergovernmental Authority on Development. UNEP = United Nations Environment Programme. AU = African Union.
Source: AUDA-NEPAD (2023[25]), "Connecting East Africa through the Green Infrastructure Corridors for Intra-African Trade Programme"; AfDB (2021[26]), *Unlocking Investments for Infrastructure Projects in Africa*; UNECE (2023[27]), "Trans African Corridors for transport and trade facilitation and their connection to the Transeuropean Transport Networks, Role of Rail, Corridor 11: Diagnostic Study".

Notes

[1] The strongly decreasing value for Ethiopia can mainly be explained by its public expenditure not keeping pace with GDP growth. For instance, total government spending decreased from 17.8% of GDP in 2013 to 14.5% in 2020 and to only 9.5% in 2024 (IMF, 2025[30]). The country's infrastructure spending in absolute terms only slightly increased (UNICEF, 2021[29]) while national GDP doubled from 2013-20.

[2] Authors' calculation based on OECD (2025[28]).

[3] Documentation for the Mombasa-Kisangani corridor suggests that the corridor has been hampered by frequent government reshuffles of some participating countries, inconsistent policies and outright conflict in the eastern parts of the Democratic Republic of the Congo. The Madagascar-Indian Ocean corridor has mostly been affected by frequent political transitions, contested elections and inconsistent legal frameworks.

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6 Infrastructure and productive transformation in North Africa

This chapter explains how infrastructure can promote productive transformation in the region of North Africa (Algeria, Egypt, Libya, Mauritania, Morocco and Tunisia). It presents the infrastructure investment needs and current financing in North Africa as a whole and in its individual countries. The chapter assesses the degree to which regional and national infrastructure plans in the energy and transport sectors contribute to productive transformation. In addition, it addresses the region's institutional capacity and skills development in infrastructure.

In brief

While North Africa often boasts the continent's best quality infrastructure, boosting infrastructure investment would catalyse its productive transformation. The region's infrastructure needs for productive transformation are estimated at USD 38 billion per year by 2040, or 4.2% of gross domestic product (GDP). Meeting this target could raise annual GDP growth by an additional 3.5 percentage points. The largest investment needs are in transport (55%), to reduce trade costs and improve connectivity, and energy (22%), to support energy security and the green transition.

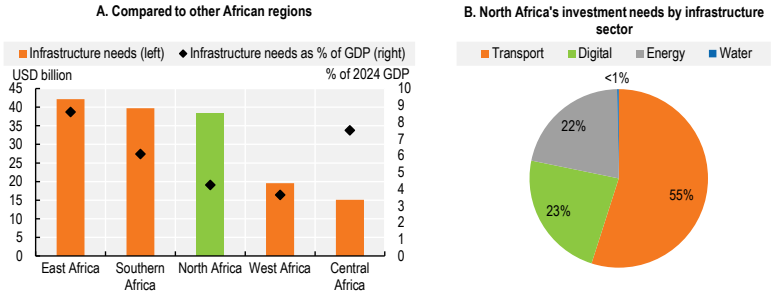
North Africa relies more on private investments to finance infrastructure than the continent's other regions, though financing sources differ between countries. In 2019-20, private sources made up 26% of total infrastructure investment in the region, the second highest share after West Africa (29%). Egypt and Morocco attract substantial private funding, accounting for over 91% of North Africa's private infrastructure investment between 2013 and 2023 (53% went to Egypt and 38% to Morocco), mainly in large-scale energy and transport projects. Yet, their government spending remains below the continental average, at 0.9% and 1.2% of their GDP, respectively. Tunisia spends 3% of its GDP on infrastructure; however, it draws relatively less private capital. Algeria's and Mauritania's government spending on infrastructure is 0.5% and 0.2% of their GDP, respectively. At 1.2% of its GDP, North Africa's government spending remains below the African average (1.8%) and less than that of Southern Africa (2.4%). In contrast, Mauritania receives the highest inflows of official development finance for infrastructure, reaching 1.6% of its GDP.

To support greater infrastructure investment, North African countries have launched ambitious national plans in the energy and transport sectors. Countries have also invested in the digital sector and smart city initiatives to upgrade urban infrastructure systems. Nonetheless, regional co-ordination remains weak, with no overarching North African master plans.

Delivering these plans requires strong institutional capacity. While public-private partnerships are supported by solid frameworks, skill shortages in energy and transport continue to constrain sustained transformation, despite growing efforts to develop skills.

North Africa regional profile

Figure 6.1. Annual infrastructure investment needed for North Africa to achieve the productive transformation levels of benchmark countries by 2040



Note: GDP= gross domestic product. Infrastructure investment needs for productive transformation refer to modelled estimates of the total expenditures required to build new infrastructure to match the infrastructure levels of peer countries that perform well in productive transformation, while also maintaining existing infrastructure. See Annex 1.A for details.
Source: Data sources for the investment needs estimations are listed in Annex 1.A.

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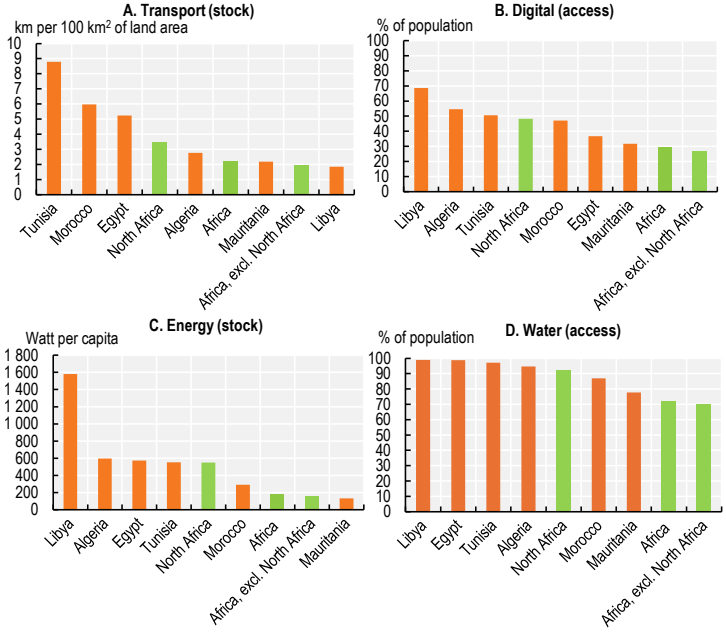
Figure 6.2. Average physical infrastructure stocks and access across North African countries compared to Africa



Note: Transport = kilometres (km) of paved roads and railways per 100 km² of non-desert land area. Digital = per cent of the population aged 15+ with Internet access. Energy = installed energy capacity as watt per capita. Water = per cent of the population with access to drinking water. For transport and energy stocks, the averages for North Africa and Africa are population-weighted. For transport and energy stocks, the values for North Africa and Africa reflect aggregated totals relative to population or area, depending on the indicator. For digital and water access, the values for North Africa and Africa represent unweighted averages of country values.
Source: Transport and energy indicators' sources are reported in Annex 1.A. Water: Drinking water, sanitation and hygiene (WASH) estimates, from UNICEF (2024[11]), *Drinking water, sanitation and hygiene in households by country, 2000-2022* (database), https://data.unicef.org/topic/water-and-sanitation/drinking-water/; Digital: from Gallup (2020[12]), *Gallup World Poll 2020* (database), https://www.gallup.com/analytics/213617/gallup-analytics.aspx.

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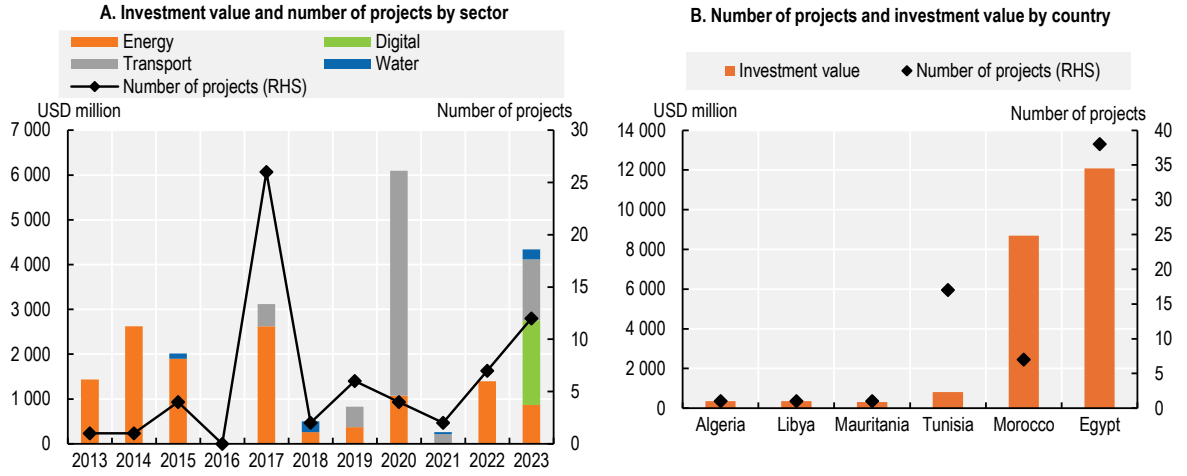
Increased investment in and government spending on North Africa's infrastructure can increase productive transformation

North African countries require significant investments in infrastructure to support productive transformation. While there are differences across the region, on average, North African countries have greater access to infrastructure and more physical stock than Africa as a whole (Figure 6.2). For instance, all North African countries except Mauritania rank among the top 10 in Africa for energy capacity per capita. Similarly, four also rank among the continent's top 15 in a qualitative score of railway quality: Morocco (first), Algeria (sixth), Egypt (seventh) and Tunisia (twelfth).[1] However, to close the gap with their peer countries that have high levels of productive transformation in other world regions (Annex 1.A), North Africa will need to invest around USD 38 billion per year by 2040. Such an investment level is equivalent to 4.2% of the region's GDP in 2024 (Figure 6.1). By comparison, this is below the African investment need for productive transformation of 5.6% of the continent's GDP. Investing USD 38 billion per year by 2040 is estimated to increase the region's annual GDP growth by 3.5 percentage points on average, propelling the region along a path to more sustainable growth.

North Africa relies more on private investments to finance infrastructure than most other African regions. In 2019-20 in North Africa, private sources accounted for 26% of total infrastructure investment (public and private). This represents the second-highest share among the regions after West Africa (29%). In the same period, North African governments spent on average 1.2% of their GDP on infrastructure, below Southern Africa (2.4% of its GDP) and the African average (1.8% of its GDP).

North Africa attracts the continent's highest volume of private investments in infrastructure. In 2013-23, North Africa secured the largest share of private participation in infrastructure (PPI) investments in volume on the continent: 27%, or a total of USD 22.6 billion. Most of this investment (83%) was directed towards large-scale private infrastructure projects in the energy and transport sectors. Egypt and Morocco were the main recipients, receiving 53% and 38% of North Africa's PPI investment value, respectively, and hosting 45 of the region's 65 projects (Figure 6.3).

Figure 6.3. Infrastructure investments with private participation in North Africa, 2013-23



Note: RHS = right-hand side.
Source: World Bank (2024[3]), *Private Participation in Infrastructure* (database), https://ppi.worldbank.org/en/ppi.

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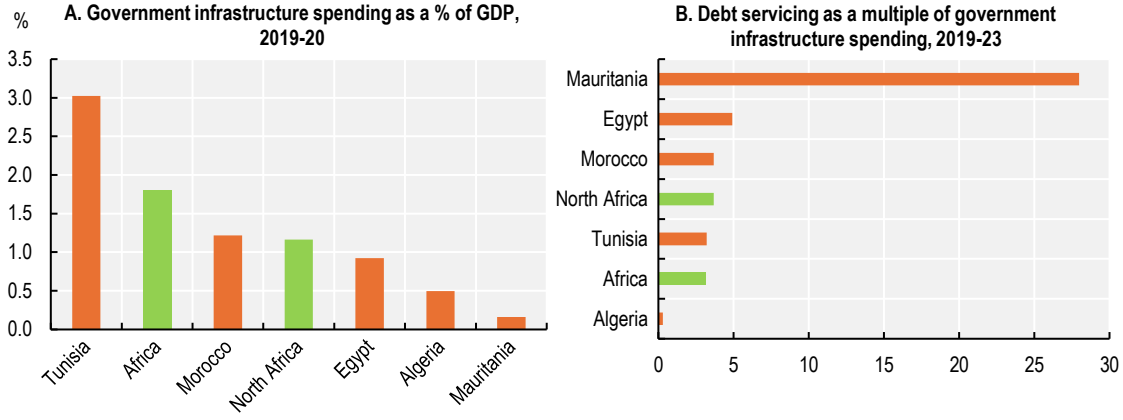
Government spending on infrastructure and debt servicing varies widely across North African countries. In 2019-20, Tunisia's government spent the equivalent of 3.0% of its GDP on infrastructure

– 3 times more than Morocco (1.2%) and Egypt (0.9%); Mauritania's government spending was 15 times lower (0.2%). Large differences across North African countries exist in terms of debt service-to-infrastructure spending ratios: in 2019-20, Mauritania spent over USD 363 million – or 28 times more – on its sovereign debt than on infrastructure, the second highest ratio on the continent. In contrast, Algeria had the second-lowest ratio of debt service-to-infrastructure spending in Africa (0.30 times) (Figure 6.4).

Figure 6.4. Government spending in infrastructure and debt servicing in North Africa



Note: GDP = gross domestic product. The indicator in Panel B is calculated based on an average of available data over the past five years for public infrastructure spending (2019-20) and debt servicing (2019-23). Median values are displayed for Africa and North Africa in Panel B to account for extreme cases. No data are available for Libya.

Source: Authors' calculations based on ICA (2022[4]), *Infrastructure Financing Trends in Africa 2019-2020*, and World Bank (2024[5]) *International Debt Statistics* (database), https://www.worldbank.org/en/programs/debt-statistics/ids.

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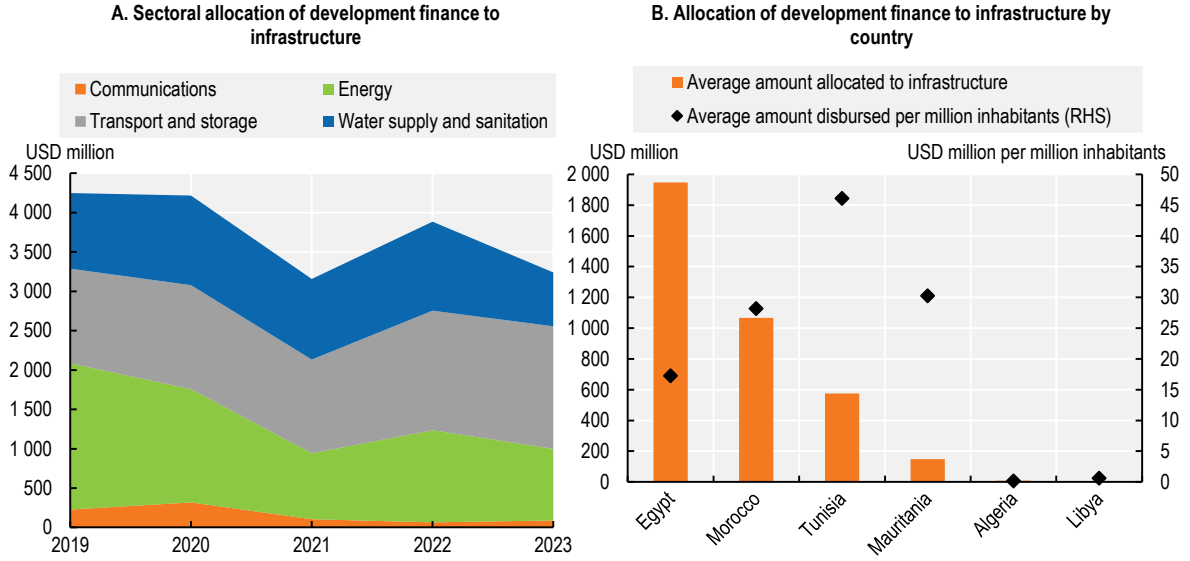
Official development finance (ODF) in North Africa contributes to a smaller share of infrastructure financing compared to other African regions. From 2019 to 2023, North Africa received USD 18.7 billion in ODF allocated to infrastructure, or 0.7% of its GDP. It is the smallest amount of ODF allocated to infrastructure relative to the GDP of all African regions. At an average of USD 1.9 billion per year, Egypt received more than half of the region's total ODF. Mauritania received the equivalent of 1.6% of its GDP in ODF for infrastructure, roughly eight times as much as national government spending. In contrast to PPI investments, ODF for infrastructure puts greater emphasis on transport (36% of total ODF), which could indicate that ODF fulfils specific needs not met by private investment (Figure 6.5).

Figure 6.5. Official development finance disbursements targeting infrastructure in North Africa, 2019-23



Note: RHS = right-hand scale. Official development finance disbursements include official development assistance (ODA) and other official financial flows that do not meet the conditions for eligibility as ODA (either because they are not primarily aimed at development, or because they have a grant element of less than 25%).
Source: OECD (2025[6]), *Creditor Reporting System* (database), https://www.oecd.org/en/data/datasets/development-finance-statistics-data-on-flows-to-developing-countries.html.

StatLink https://stat.link/bmohx4

Infrastructure policies and skills development in the energy and transport sectors can better align with North Africa's productive transformation priorities

North African countries have developed ambitious energy and transport infrastructure plans, but stronger regional co-ordination is needed to support deeper trade integration

North African countries' infrastructure plans primarily focus on the energy and transport sectors, and some cities are concentrating on the digital sectors. At the national level, governments have developed ambitious strategies to modernise infrastructure for renewable energy and transport and improve connectivity to support productive transformation. At the local level, some North African municipalities are investing in digital infrastructure to develop smart cities (Box 6.1).

Box 6.1. Digital infrastructure enables the development of smart cities across North African countries

Smart cities use digital technologies to boost citizen well-being and deliver more efficient, sustainable and inclusive urban services and environments as part of a collaborative, multistakeholder process (OECD, 2020[7]). In North Africa, governments are increasingly adopting strategies to develop smart cities to modernise urban infrastructure systems and improve the quality of life for their growing urban populations. Algeria, Egypt, Morocco and Tunisia have each followed distinct approaches.

- Algeria is developing smart cities to support entrepreneurship. Launched in 2017 and inaugurated during the Smart Cities Global Technology and Investment Summit in June 2018, the Algiers Smart City project aims to create a technological hub and boost the local start-up ecosystem. Key initiatives include the Experimental Lab and the Technology Innovation Hub, which test smart solutions before large-scale deployment and mobilise local talent (Oxford Business Group, 2018[8]).
- Egypt stands out for its large-scale investments in new urban developments, anchored in a national strategy launched in 2024, the first of its kind in Africa. The programme includes the construction of entirely new smart cities, such as the New Administrative Capital and New Alamein, and targets the elimination of unsafe and informal residential settlements. These efforts are supported by partnerships with UN-Habitat, technology firms and multilateral donors (Development Aid, 2023[9]; UN-Habitat, 2019[10]).
- Morocco has focused on modernising existing urban centres, particularly Casablanca. Through initiatives like E-Madina and active involvement in the IEEE Smart Cities Initiative, the country has strengthened local governance and fostered collaboration between municipalities, academia and private actors. Casablanca's smart city model integrates transport optimisation, municipal management and citizen engagement (EGE Rabat, 2022[11]; Betis et al., 2018[12]).
- Tunisia has given priority to a decentralised approach, launching smart city pilots in secondary cities like Bizerte and Kairouan. It has also invested in skills development, establishing North Africa's first Smart Industry Readiness Index Training and Certification Centre in 2024 to build professional skills in digital manufacturing and infrastructure planning (Tunisian Smart Cities, 2025[13]; INCIT, 2024[14]).

For infrastructure, regional co-operation is less prevalent than bilateral partnerships, with cross-border co-operation centring on transport corridors. While regional co-operation is advancing through selected initiatives – in partnership with the European Union – progress is limited by the absence of a North African authority dedicated to regional infrastructure master plans. Regional co-operation with non-European Union countries is scarce. Rather, North African countries typically engage in bilateral partnerships. For example, all the region's countries participate in China's Belt and Road Initiative. Cross-border co-operation efforts are concentrated around transport development corridors that aim to reduce trade costs and enhance regional integration.

Energy infrastructure plans in North Africa aim to diversify energy sources, reduce reliance on fossil fuels, expand access and create jobs. Across the region, national strategies promote energy efficiency, grid expansion and the development of domestic renewable industries with high job-creation potential. Exporting countries like Algeria and Libya aim to reduce their dependency on oil and gas revenues by investing in solar and wind power; importing countries such as Egypt, Morocco and Tunisia seek to improve energy security by lowering fossil fuel imports. Interconnection projects – linking national grids across North Africa with the Arab region and Europe – are also central to North African countries'

plans. At the regional level, co-operation with the European Union is advancing through initiatives such as the Mediterranean Solar Plan and the Southern Hydrogen Corridor, which aim to position North Africa as a key supplier of clean energy and green hydrogen to Europe (Table 6.1).

Table 6.1. Selected national and regional energy infrastructure development plans and their objectives related to productive transformation in North Africa

Type of plan	Countries (implementing entity)	Plan	Objectives related to productive transformation
National	**Algeria** (Ministry of Energy and Mining)	Renewable Energy and Energy Efficiency Development Plan 2015-2030	• Diversify energy sources and reduce dependence on oil and gas exports • Target 40% renewable electricity by 2030, with 10 000 megawatts for export • Promote the solar photovoltaic industry and job creation
	Egypt (Supreme Energy Council; Ministry of Electricity and Renewable Energy)	Integrated Sustainable Energy Strategy (ISES) 2035	• Increase the renewable share of energy to 42% by 2035 • Strengthen regional grid links (e.g. Arab region, Europe) • Promote job creation • Reduce energy costs and import dependence
	Libya (Ihya Libya Movement, supported by the United Nations, the League of Arab States and international partners)	Ihya (Reviving) Libya Vision 2030	• Expand oil and gas exports while identifying renewable sources and other strategic sectors (e.g. logistics, tourism) for future development
	Mauritania (Ministry of Energy and Petroleum; Ministry of Economy and Finance; Mauritanian electricity company [SOMELEC])	National Energy Compact	• Promote clean, affordable energy through improved production, transmission and off-grid access • Support regional integration via interconnection with West Africa
	Morocco (Moroccan Agency for Sustainable Energy [Masen], National Commission of Hydrogen)	National Energy and Energy Efficiency Plan; National Hydrogen Strategy	**Energy efficiency** • Generate 8% of total installed power capacity from renewable sources by 2012 (achieved); 42% by 2020 (achieved); 52% by 2030 (on-going) • Reduce energy costs and import dependence, and expand access to renewable sources in rural areas **Green hydrogen** • Increase green ammonia production and export in the short term (2020-30) • Scale up synthetic fuels and electricity storage by 2040 • Expand global hydrogen trade and domestic use in manufacturing, heating and transport by 2050
	Tunisia (Ministry of Energy, Mines and Energy Transition; GIZ; Germany's Federal Ministry for the Environment, Nature, Conservation and Nuclear Safety [BMUB])	Tunisia Solar Plan 2030	• Enhance energy security, and reduce fossil fuel use • Support wind and solar development, aiming for USD 16 billion in energy savings and approximately 12 000 new jobs
Regional	Union for the Mediterranean (UfM) members, including **Algeria**, **Egypt**, **Libya**, **Morocco**, **Tunisia** and the EU	Mediterranean Solar Plan (MSP)	• Aim for an aggregate export capacity to Europe of approximately 22 000 megawatts by 2030 • Supply the local market with most of the electricity produced, while exporting a part to the EU

	Algeria; Tunisia; Austria; Italy; Germany	Joint Declaration of Political Intent on the Development of the Southern Hydrogen Corridor (January 2025)	• Establish a hydrogen pipeline corridor from North Africa to Central Europe via a major infrastructure project • Promote investment in green hydrogen production and transport, and contribute to job creation, technology transfer and long-term economic diversification

Note: EU = European Union. GIZ = German Development Agency.
Source: Government of Mauritania (2024[15]), *National Energy Pact for the Islamic Republic of Mauritania (Pacte National de l'Energie pour la République Islamique de Mauritanie)*; Government of Libya (2023[16]), "Ihya Libya 2030 Vision: Economic Development: Growing and Diversifying the Economy"; IEA (2018[17]), *Tunisia Solar Plan (PST) 2010-2016*; IRENA (2021[18]), *Renewable Readiness Assessment: The Republic of Tunisia*; GIZ (2017[19]), *Support the Implementation of the Tunisian Solar Plan (APST)*; UNDP (2018[20]), *NAMA Support for the Tunisian Solar Plan*; World Bank (2024[21]), *The Disruptive Energy Transition and Opportunities for Job Creation in the Middle East and North Africa: Case Study – Tunisia*; Grantham Research Institute on Climate Change and the Environment (2015[22]), *The 2015 Global Climate Legislation Study: A Review of Climate Change Legislation in 99 Countries: Algeria*; meetMED (2020[23]), *Country Report on Energy Efficiency and Renewable Energy Investment Climate: Algeria*; IRENA (2018[24]), *Renewable Energy Outlook: Egypt*; Ministry of Energy, Mines, Water and Environment (Morocco) (2013[25]), *Morocco's New National Energy Strategy*; Ministry of Energy, Mining and Environment (Morocco) (2021[26]), *Feuille de route de l'hydrogène vert : vecteur d'une transition énergétique innovante.*

Transport infrastructure plans in North Africa focus on expanding networks, improving connectivity and supporting industrial development. Morocco and Tunisia aim to become regional transport hubs by significantly expanding their transport network to boost trade and job creation. At the regional level, co-operation with the European Union under the Union for the Mediterranean framework supports integration through initiatives such as the Regional Transport Action Plan. The lack of a dedicated regional authority limits co-ordination, and most cross-border efforts remain focused on transport corridors. North Africa would benefit from a comprehensive regional transport infrastructure plan for regional integration (Santi, 2012[27]).

> *Morocco aims to extend its Tanger-Casablanca high-speed railway to Marrakech, expanding the intermodal connection between strategic cities and the largest container port in Africa (Head of Government, Kingdom of Morocco, 2025[28]).*
>
> *Launched in 2024, the Tunisia Economic Corridors Project aims to improve connectivity and logistics between urban and rural areas by prioritising last-mile roads. The project seeks to make lagging regions more attractive for private investment and help local businesses access larger markets (World Bank, 2025[29]).*

Table 6.2. Selected national and regional transport infrastructure development plans and their objectives related to productive transformation in North Africa

Type of plan	Countries (implementing entity)	Plan	Objectives related to productive transformation
National	**Morocco** (Moroccan National Railway Office, Ministry of Equipment, Transport, Logistics, and Water)	Plan Rail 2040	• Develop a domestic rail industry to boost industrialisation and reduce import dependence • Position Morocco as a regional exporter of rail components • Expand the rail network from 23 to 43 cities, covering 87% of the population • Link 12 ports and 15 international airports • Strengthen North-South connectivity and support AfCFTA goals • Create approximately 300 000 jobs and promote workforce upskilling (e.g. transport, engineering, manufacturing)
	Tunisia (Ministry of Public Works and Housing, through the Directorate General of Bridges and Roads)	Transport Master Plan 2040	• Establish an integrated, multimodal transport system (road, rail, ports, airports) • Lower costs, and improve logistics efficiency • Strengthen connectivity and regional integration, with investments targeting underserved regions and cross-border corridors (e.g. Sfax-Kasserine, border link to Algeria and Libya)
Regional	Union for the Mediterranean (UfM) members, including **Algeria**, **Egypt**, **Libya**, **Morocco**, **Tunisia** and the European Union	Regional Transport Action Plan (RTAP) for the Mediterranean Region 2021-2027	• Recognise the multiplier effect of infrastructure connectivity on regional integration and sustainable development • Ensure that women participate in the planning and implementation of strategies and policies, as well as in the management and operation of transport networks

Note: AfCFTA = African Continental Free Trade Area.
Source: AfDB (2024[30]), *Rapport d'évaluation : Projet de Modernisation des Infrastructures Routières, Phase III (PMIR III) : Tunisie;* ONCF (2018[31]), "Plan Stratégique METLE"; Atalayar (2025[32]), "La grande vitesse : un levier économique stratégique pour le Maroc".

Transport co-operation among North African countries has led to establishing development corridors. These transport and logistics linkages focus on facilitating the movement of people and goods. The Tunisian segment of the Trans-Maghreb Multimodal Corridor has reduced travel time from 3.5 to 1.45 hours and greatly improved transport access. Conversely, the Trans-Saharan Road Corridor (TSR) – linking Algeria, Chad, Mali, Niger, Nigeria and Tunisia – has experienced mixed results, with challenges such as weak logistical performance, non-tariff barriers and road safety leading to underutilisation of the corridor's secondary branches (Table 6.3). The six TSR member countries have shown commitment regarding its gradual evolution into an economic development corridor, with resources allocated to key areas including institutional governance, capacity building and environmental sustainability (UNCTAD, 2022[33]).

Table 6.3. Selected transport corridors among North African countries

Corridor (main sub-sectors)	Countries covered	Partners	Envisioned impacts on productive transformation and regional integration	Usage and impacts
Trans-Saharan Road (TSR) (Corridor road)	**Algeria,** Chad, Mali, Niger, Nigeria, **Tunisia**	Algeria; Chad; Niger; Nigeria; AUDA-NEPAD; AfDB; IsDB; BADEA; BDEAC; KFAED; SFD; OPEC Fund for International Development	• Trade enhancement: reduced transportation costs and transit times • Economic diversification • Digital inclusion: the fostering of innovation and access to information • Regional integration: stronger economic ties among member countries, and alignment with AfCFTA goals	2019 usage patterns, which varied significantly across national segments: • **High usage:** in Algeria (38 000 heavy trucks per day), Nigeria (42 000 heavy trucks per day) and Tunisia (19 000 heavy trucks per day) • **Low usage:** Niger-North Africa route with only about 10 heavy trucks per day

Trans-Maghreb Multimodal Corridor (road, rail)	Algeria, Egypt, Libya, Mauritania, Morocco and Tunisia	National governments; AUDA-NEPAD; AfDB; UfM; ECA; AMU; World Bank; EU; IsDB	• Simplification of border crossings, and improved efficiency for trade and mobility
			• Reduction in transport costs and journey time
			• Stronger energy value chains
			• Boosted competitiveness of underdeveloped/remote areas
			• Enhanced interoperability between transport networks
			• Greater economic integration and a potential increase in intra-regional trade
				Trans-Tunisia Corridor (part of the Trans-Maghreb Highway):
				• **Positive impact:** 8% average annual growth in daily road transport of goods (2015-20)
				Algeria-Tunisia Corridor (part of the Trans-Maghreb Highway):
				• **Positive impacts:**
				  • Reduced vehicle maintenance costs along rehabilitated segments from USD 0.11 to USD 0.07 per kilometre
				  • Improved transport access for 700 000 people
				  • Reduced travel time on rehabilitated sections from 3.5 to 1.45 hours
				• **Low impact:** Countries still trading less than 10% with other corridor countries

Note: AfCFTA = African Continental Free Trade Area. AfDB = African Development Bank. AMU = Arab Maghreb Union. AUDA-NEPAD = African Union Development Agency-New Partnership for Africa's Development. BADEA = Arab Bank for Economic Development in Africa. BDEAC = Development Bank of Central African States. ECA = United Nations Economic Commission for Africa. EU = European Union. IsDB = Islamic Development Bank. KFAED =The Kuwait Fund for Arab Economic Development. OPEC = Organization of the Petroleum Exporting Countries. SFD = Saudi Fund for Development. UfM = Union for the Mediterranean.

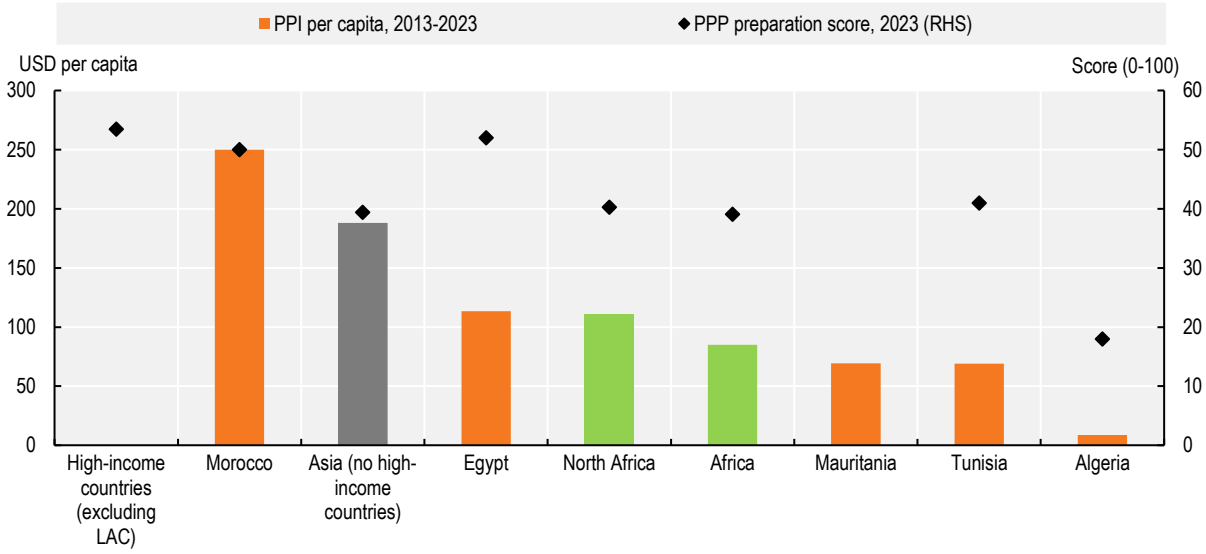
Source: Thorn et al. (2022[34]), "African Development Corridors Database: A new tool to assess the impacts of infrastructure investments"; JICA (2022[35]), *Data Collection Survey on Corridor Development in Africa: Final Report*; AfDB (2023[36]), *Cross-Border Road Corridors: Expanding Market Access in Africa and Nurturing Continental Integration*; UNCTAD (2022[33]), *The Trans-Saharan Road Corridor – Towards an Economic Corridor: Commercializing and Managing the Trans-Saharan Road*; CETMO (2018[37]), *The Trans-Maghreb Multimodal Corridor: The Backbone of the Maghreb Transport System*.

Public-private partnerships are supported by solid institutional frameworks, yet skills gaps in transport and energy hinder full infrastructure development

North African countries are relatively well-equipped with mechanisms to implement and monitor public-private partnerships (PPPs). North Africa has longstanding regulatory frameworks facilitating PPPs: the earliest PPP institutional efforts on the continent emerged in Algeria and Egypt in 2006. According to the Benchmarking Infrastructure Development (BID) survey by the World Bank (2025[38]), in 2023, Egypt and Morocco had similar scores in the PPP preparation phase as high-income countries, which could potentially explain their high capacity to mobilise private investment (Figure 6.6). Some North African countries explicitly highlight PPPs in their sectoral infrastructure plans to encourage investments

(e.g. Tunisia's solar plan) and commit to reinforcing the legal basis of PPPs (e.g. Mauritania's Pact for Energy).

Figure 6.6. Private participation in infrastructure investments and public-private partnership preparation scores across North African countries and selected world regions



Note: PPI = Private participation in infrastructure. PPP = Private-public partnership. RHS = right-hand scale. LAC = Latin America and the Caribbean. For each country and region, PPI per capita is calculated as the total PPI investment between 2013 and 2023 divided by the 2019 population. PPI project data do not include high-income countries.
Source: World Bank (2024[3]), *Private Participation in Infrastructure* (database), https://ppi.worldbank.org/en/ppi, and World Bank (2025[38]), *Benchmarking Infrastructure Development (BID)* (database), https://bpp.worldbank.org/en/global.

StatLink https://stat.link/geurja

Skills development in the energy and transport sectors is increasing among North African countries. Four out of six North African countries offer training in these sectors via technical and vocational education and training programmes, tertiary education (e.g. Pan-African University Institute of Water and Energy Sciences based in Algeria) and internship programmes (e.g. Masen Talents Campus based in Morocco) (Table 6.4).

Yet, the demand outpaces the skill supply. According to the Big Data for Labour Market Intelligence project, electricity and construction are among the five sectors with the highest demand for green skills in Egypt, Morocco and Tunisia (ACQF, 2024[39]). A survey by the African Union Commission and the OECD of North African experts in the energy sector reveals that job demand in renewable energy depends on the segment of the value chain. In upstream segments, unmet demand prevails for technical skills in design, engineering and innovation; whereas in downstream segments, skills demand is unmet in operations, maintenance and recycling skills. A number of factors cause the mismatch between skills' demand and supply, including the narrow scope of skills development strategies and the lack of funding for relevant training (AUC/OECD, 2024[40]).

Table 6.4. Selected skills and capacity development programmes in infrastructure in North Africa

Programme	Partners	Objective	Types of skills promoted
Pan-African University Institute of Water and Energy Sciences (including Climate Change) (Algeria)	African Union	• Offer four master's programmes in water and energy with tracks in engineering and policymaking	Technical; green
TVET for photovoltaic installers (Tunisia)	Tunisia; GIZ; private sector	• Support the implementation of the Tunisian Solar Plan • Provide a dual apprenticeship on solar photovoltaic installations via 12 training centres	Technical; green
Institut de Formation Ferroviaire (Morocco)	Morocco's ONCF; France's SNCF	• Offer railway training on skills needed for conventional and high-speed rail operations and maintenance, logistics, and freight transport	Technical; project management; maintenance; commercial; client service
École des Métiers des Travaux Publics (Algeria)	Ministry of Public Works and Basic Infrastructure (Algeria)	• Develop the qualifications and skills of personnel involved in the construction, maintenance, control and monitoring of the quality of infrastructure and public works	Technical
Masen Talents Campus (Morocco)	Masen (tasked with piloting the country's renewable energies)	• Support scientific excellence in renewable energies through workshops, internships and research programmes	Technical; green
Regional Centre for Renewable Energy and Energy Efficiency (RCREEE)	17 member countries, including Algeria, Egypt, Libya, Mauritania, Morocco and Tunisia; independent fiscal institutions; private sector (relevant in renewable energy certification)	• Offering capacity-building programmes at the request of member countries in renewable energy and energy efficiency practices	Technical; green

Note: GIZ = German Development Agency. ONCF = Office National des Chemins de Fer (Morocco). SNCF = Société Nationale des Chemins de Fer (France). TVET = technical and vocational education and training.
Source: GIZ (GIZ, 2019[41]), "Solar energy in Tunisia: Vocational training for experts"; IFF (2025[42]), "Maintenance de l'infrastructure et travaux"; EMTP (2025[43]), "Ecole des Métiers des Travaux publics", emtp.dz (website); THAMM Plus/OIM (2023[44]), *Termes de références : cartographie des besoins en compétences dans le secteur du Bâtiment et Travaux Publics en Italie et en Tunisie et analyse de l'offre de formation*; Masen (2019[45]), *Masen Talents Campus*; RCREEE (2022[46]), "RCREEE concluded a cooperation agreement for training services in MENA and GCC regions".

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[1] Authors' calculations based on World Economic Forum (2019[47]).

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7 Infrastructure and productive transformation in West Africa

This chapter outlines how infrastructure can contribute to productive transformation in West Africa (Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo). First, it identifies infrastructure investment needs and financing sources, at the regional and country levels. Second, it examines how regional and national infrastructure plans and corridors support productive transformation. Third, it highlights relevant examples of infrastructure-related and sector-specific capacity building and skills development programmes.

In brief

West Africa's infrastructure investment needs are the second lowest of all African regions. To reach physical stocks of infrastructure comparable to peer countries showing high levels of productive transformation in other developing world regions, West African countries will need to invest approximately USD 20 billion per year by 2040, mainly in transport, followed by the digital sector. This investment could increase West Africa's gross domestic product (GDP) growth by 5.4 percentage points.

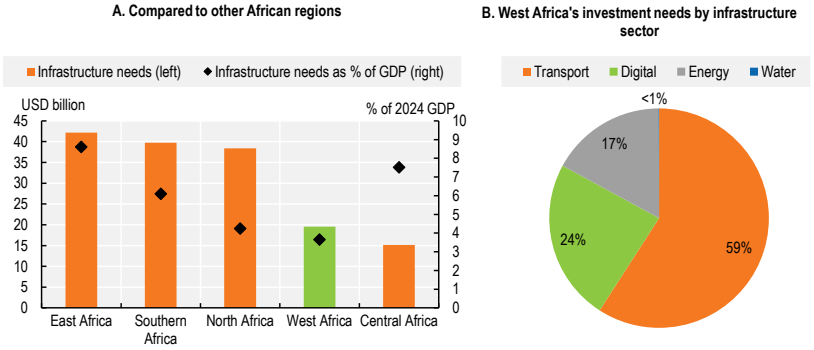
The region's public infrastructure expenditure stands at 1.6% of GDP, slightly below the continental average (1.8%). Major sources of infrastructure financing vary from country to country. Côte d'Ivoire and Togo have the highest levels of public infrastructure spending, Nigeria the highest level of infrastructure investments with private participation and Senegal the highest of official development finance directed to infrastructure. Some West African countries are encumbered by debt servicing costs. While Guinea, Mali, Niger and Togo spend more on infrastructure than on debt servicing, Guinea-Bissau allocates 51 times more public finances to debt servicing than to infrastructure – the second-highest rate on the continent.

Infrastructure priorities are closely linked to West Africa's agricultural transformation, as infrastructure can improve food security and avoid dependence on food imports. All-season roads and better energy access could yield more reliable transport services and more efficient processing facilities. Four policy recommendations emerge:

- Development corridors in West Africa can unlock social and environmental benefits that extend beyond economic gains, but their effects could be better understood through better data.
- Regional institutions charged with leading sectoral master plans and supporting project preparation require more capacity for improved infrastructure project implementation.
- Infrastructure plans could include objectives targeting female participation in the region's productive sectors (transport, energy and digital), beyond the agricultural sector.
- Capacity building and skills development for public-private partnership units and other regional institutions can improve project preparation and implementation.

West Africa regional profile

Figure 7.1. Annual infrastructure investment needed for West Africa to achieve the productive transformation levels of benchmark countries by 2040



Note: GDP = gross domestic product. Infrastructure investment needs refer to modelled estimates of the total expenditures required to build new infrastructure to match the infrastructure levels of peer countries that perform well in productive transformation, while also maintaining existing infrastructure. See Annex 1.A for details.
Source: Data sources for the investment needs estimations are listed in Annex 1.A.

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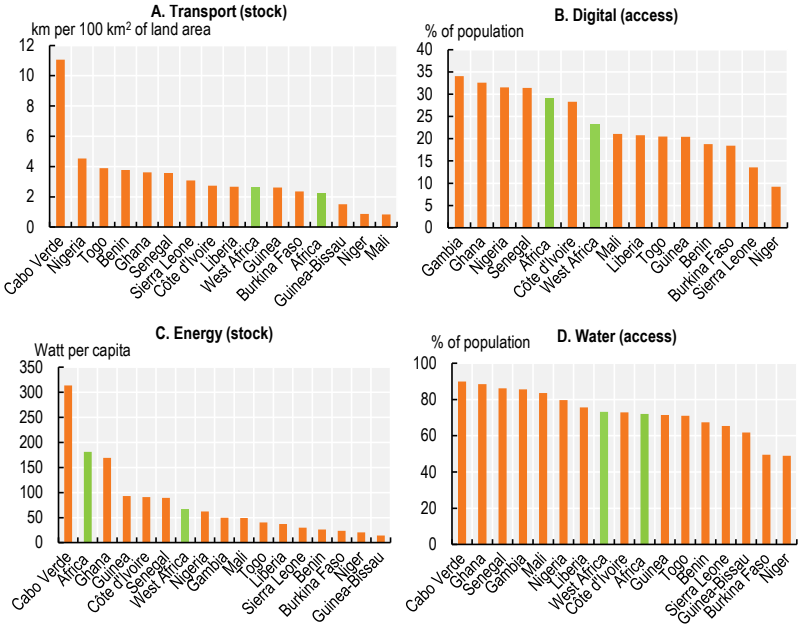
Figure 7.2. Average physical infrastructure stocks and access across West African countries compared to Africa



Note: Transport = kilometres (km) of paved roads and railways per 100 km2 of non-desert land area. Digital = per cent of the population aged 15+ with Internet access. Energy = installed energy capacity as watt per capita. Water = per cent of the population with access to drinking water. For transport and energy stocks, the averages for West Africa and Africa are population-weighted. For transport and energy stocks, the values for West Africa and Africa reflect aggregated totals relative to population or area, depending on the indicator. For digital and water access, the values for West Africa and Africa represent unweighted averages of country values. Data on digital access covers 13 of the 15 West African countries.
Source: Transport and energy indicators' sources are reported in Annex 1.A. Water: Drinking water, sanitation and hygiene (WASH) estimates, from UNICEF (2024[1]), *Drinking water, sanitation and hygiene in households by country, 2000-2022* (database), https://data.unicef.org/topic/water-and-sanitation/drinking-water/. Digital: from Gallup (2020[2]), *Gallup World Poll 2020* (database), https://www.gallup.com/analytics/213617/gallup-analytics.aspx.

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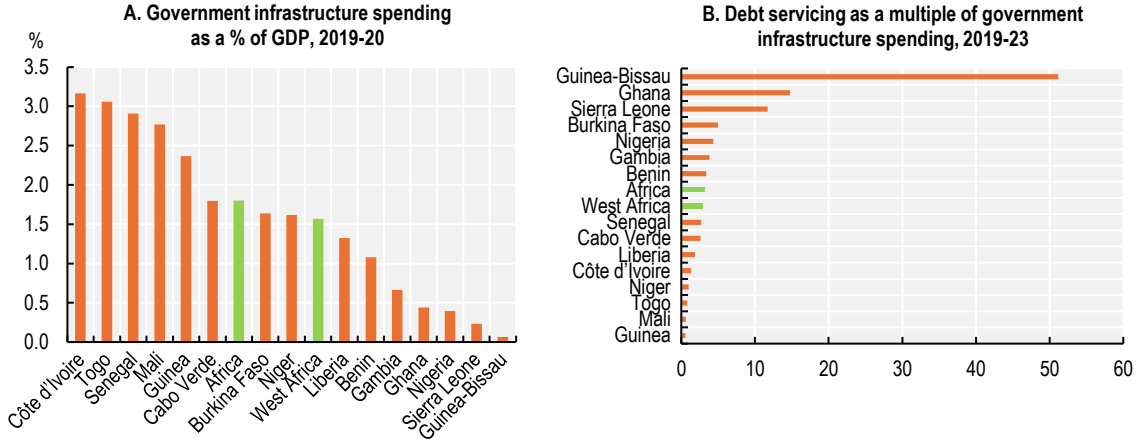
West Africa's infrastructure needs for productive transformation are the second lowest on the continent, with transport requiring over half of these investments

West African countries require significant infrastructure investments, notably in transport and digital infrastructure, to support productive transformation. To close the gap with peer countries with high levels of productive transformation in other developing regions of the world (Annex 1.A), West Africa will need to invest approximately USD 20 billion per year by 2040, or 3.6% of the region's GDP in 2024, far below the continental equivalent of 5.6% (Figure 7.1). This investment is projected to increase West Africa's annual GDP growth by 5.4 percentage points on average. West African countries have slightly higher levels of transport infrastructure stock (2.6 kilometres [km] per km^2) and access to water infrastructure (for 73.1% of the population) than the continental average (2.2 km per km^2 and 71.9%, respectively) but a lower energy stock and less access to digital infrastructure (Figure 7.2). Cabo Verde is the region's country best endowed with transport and energy stocks, resulting both from its status as a small island country and from high government spending on transport (e.g. 13% of GDP in 2011) (World Bank, 2011[3]). Burkina Faso, Niger and Sierra Leone have the lowest levels of water and digital access in the region, and Guinea-Bissau, Mali and Niger have the lowest levels of transport and energy infrastructures stocks.

Public infrastructure spending in some West African countries is constrained by their debt obligations. In 2019-20, the region's share of government expenditure for infrastructure (1.6% of its GDP, or USD 6.5 billion) was similar to the African average (1.8% of GDP, or USD 33.2 billion). Between 2019 and 2020, average debt servicing amounted to 3.7% of GDP, or USD 19.6 billion per year, behind Southern Africa (7.9%) and North Africa (4.7%). Côte d'Ivoire and Togo each allocated the highest shares of public expenditure as a percentage of GDP to infrastructure (3%), whereas Guinea-Bissau allocated only 0.1% (Figure 7.3, Panel A). Guinea, Mali, Niger and Togo spent slightly more on infrastructure than on debt servicing, while Guinea-Bissau allocated 51 times more public finances to debt servicing than to infrastructure (Figure 7.3, Panel B). This contrast also makes Guinea-Bissau the country with the second-highest ratio of debt servicing to public infrastructure spending in Africa (only behind Mozambique).

Figure 7.3. Government spending in infrastructure and debt servicing in West Africa



Note: GDP= Gross Domestic Product. The indicator in Panel B is calculated based on an average of available data over the past five years for public infrastructure spending (2019-20) and debt servicing (2019-23). Median values are displayed for Africa and West Africa in Panel B to account for extreme cases.

Source: Authors' calculations based on ICA (2022[4]), *Infrastructure Financing Trends in Africa 2019-2020* and World Bank (2024[5]), *International Debt Statistics* (database), https://www.worldbank.org/en/programs/debt-statistics/ids.

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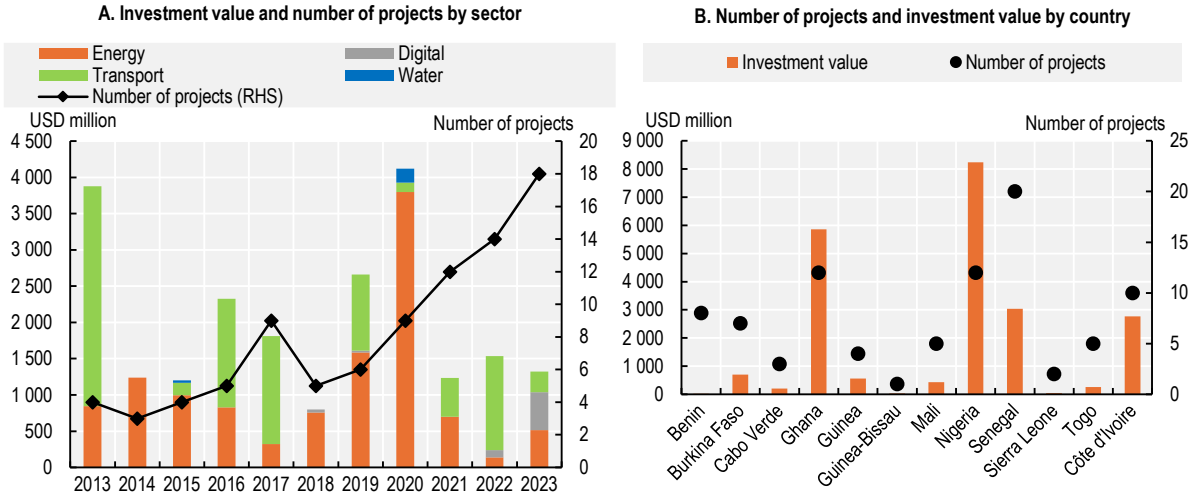
Energy and transport infrastructure receive the highest private participation in infrastructure (PPI) and official development finance (ODF) in West Africa, while cross-country differences in main financing sources persist. From 2019 and 2023, the total value of PPI (USD 22.1 billion) and ODF (USD 20.2 billion) flows for infrastructure captured by the region remained stable. Just 4 out of the 15 West African countries together accounted for 90% of total PPI to West Africa: Nigeria received the most (37%), followed by Ghana (26%), Senegal (14%) and Côte d'Ivoire (13%). PPI investment amounts varied from 2013 to 2023 but consistently focused on energy and transport. Indeed, West Africa attracted more PPI in transport infrastructure than any other African region (Figure 7.4). This could have been partly driven by the launch of the construction of nine corridor-related projects in the region between 2013 and 2020 alone. In the same period, as a share of GDP, West Africa obtained more ODF for infrastructure (0.6% of annual GDP) than any other region. Senegal attracted the largest amount of ODF directed to infrastructure of all West African countries, equivalent to 17% of total ODF in the region (Figure 7.5). Both PPI (in 2013-23) and ODF (in 2019-23) were heavily concentrated in energy (53% and 47%, respectively), followed by transport (43% and 25%, respectively), and water supply and sanitation. Between 2019 and 2023, only 23% of official development assistance provided by members of the OECD Development Assistance Committee to West Africa for infrastructure considered gender objectives, the lowest on the continent after North Africa (10%).

Figure 7.4. Infrastructure investments with private participation in West Africa, 2013-23



Note: RHS = right-hand side. Data on the number of projects and investments value in Panel B covers 12 of the 15 West African countries.
Source: World Bank (2024[6]), *Private Participation in Infrastructure* (database), https://ppi.worldbank.org/en/ppi.

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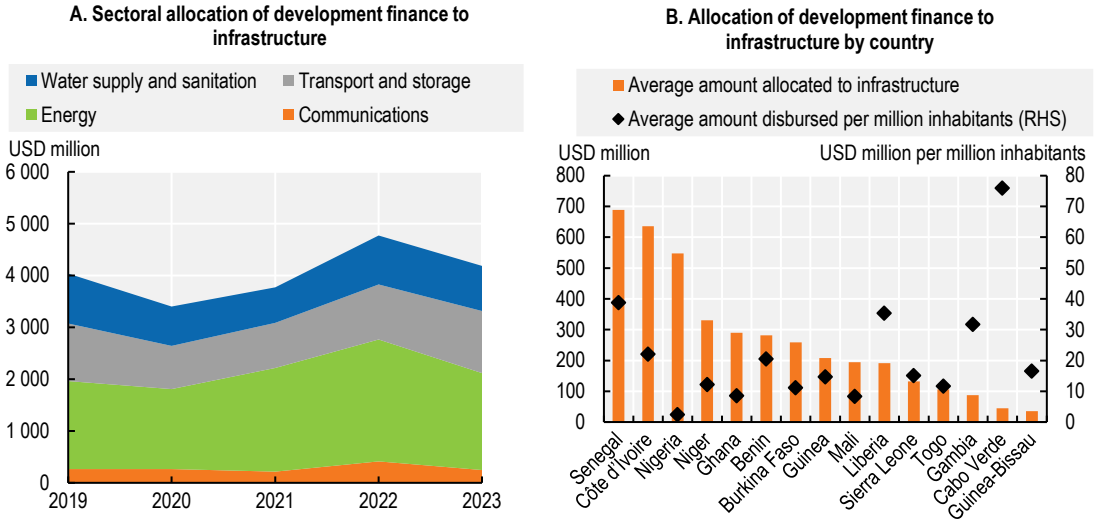
Figure 7.5. Official development finance disbursements targeting infrastructure in West Africa, 2019-23



Note: RHS = right-hand scale. Official development finance disbursements include official development assistance (ODA) and other official financial flows that do not meet the conditions for eligibility as ODA (either because they are not primarily aimed at development, or because they have a grant element of less than 25%).
Source: OECD (2025[7]), *Creditor Reporting System* (database), https://www.oecd.org/en/data/datasets/development-finance-statistics-data-on-flows-to-developing-countries.html.

StatLink https://stat.link/u65wtk

With sufficient data, emerging alternative financial instruments could be replicated across West Africa. The Distributed Renewable Energy (DRE) Nigeria Fund seeks to catalyse local currency funding for solar energy systems, including from pension funds and insurance companies. Further, in nine West African countries, the Infrastructure Climate Resilient Fund seeks to integrate climate resilience across the project lifecycle (from design to operations) through climatic risk data (Table 7.1). As these mechanisms are relatively nascent, tracking their impact will be key to helping replicate them in other countries in the region.

Table 7.1. Selected African-led innovative financing instruments to mobilise investments for infrastructure in West Africa

Instrument	Country (launch year)	Instrument's main purpose	Implementing partners	Expected impact
Infrastructure Climate Resilient Fund (ICRF)	19 African countries total, 9 in West Africa (2022)	Building climate resilience in the design, construction and operations of infrastructure (75% of the portfolio) and in greenfield and existing infrastructure projects (25% of the portfolio)	Africa Finance Corporation (AFC), Green Climate Fund (GCF)	Increased climate resilience of target countries, reaching over 50 million direct and 144 million indirect beneficiaries
Distributed Renewable Energy (DRE) Nigeria Fund	Nigeria (2025)	Catalysing local currency funding from pension funds, insurance companies and other local institutional investors	Nigeria Sovereign Investment Authority (NSIA), Sustainable Energy for All (SEforALL), International Solar Alliance (ISA), Africa50	Reliable and cost-effective power access

Note: The ICRF includes Benin, Côte d'Ivoire, Gambia, Ghana, Guinea, Mali, Nigeria, Sierra Leone and Togo.
Source: GCF (2023[8]), *Funding Proposal 205: Infrastructure Climate Resilience Fund (ICRF)*; Africa50 (2025[9]), "NSIA, SEforALL, ISA, and Africa50 unveil US$500 million DRE Nigeria Fund".

With better capacity and co-ordination, West Africa's infrastructure development can strengthen agricultural value chains and increase economic and social impacts

Improvements in transport and energy infrastructure are crucial to transform the agricultural sector

West Africa's foremost infrastructure plan prioritises transport and renewable energy, in support of the region's agricultural sector. The Regional Infrastructure Masterplan (RIMP) 2020-45 of the Economic Community of West African States (ECOWAS) focuses on the four sectors of the Programme for Infrastructure Development in Africa (PIDA) – transport, energy, digital and water[1] – of the 12 current ECOWAS countries.[2] The Plan's vision for productive transformation calls for investment, trade and interconnectivity to improve regional integration and productivity. The Plan prioritises transport and renewable energy (with a total of 114 energy projects, including 4 in hydrocarbons). Several projects address regional railway reconstruction and network extensions, access to electricity and efficient energy infrastructure (ECOWAS, 2021[10]). By highlighting the nexus of the four infrastructure sectors and agriculture, the RIMP calls for a regionally integrated approach.

At the national level, development strategies and infrastructure plans seek to strengthen agricultural value chains. There is an untapped opportunity to focus on downstream agricultural activities in West Africa, where the bulk of exports are at an early stage of processing and have minimal value added (AUC/OECD, 2022[11]). In 2019, total added value from outside the continent embedded in national exports was on average 0.37% of GDP for West African countries, well above the 0.03% of GDP of added value from neighbouring countries (AUC/OECD, 2024[12]). West African countries capture their national infrastructure priorities in development strategies and/or infrastructure-dedicated plans (the latter is the case of Cabo Verde, Ghana and Nigeria), broadly converging towards the RIMP's aims of regional and economic integration and trade. National plans identify concrete linkages in infrastructure needs and strategic value chain development, namely between agriculture and energy (e.g. Gambia and Togo); agriculture and transport (e.g. Côte d'Ivoire and Togo), and agriculture and water (Nigeria). In addition to countries with established infrastructure plans (Table 7.2), in 2025, Cabo Verde announced its first infrastructure plan and Liberia launched its inclusive development plan with infrastructure as a pillar (Africa Press, 2025[13]; UN, 2025[14]; Government of Liberia, 2025[15]).

Insufficient infrastructure, namely for transport and energy, constrains the development of West Africa's agroindustry. The food economy contributes 35% of West Africa's GDP (AUC/OECD, 2022[11]; FAOSTAT, 2020[16]), but inadequate transport infrastructure and unstable energy supplies hinder the efficiency of the food systems (SWAC/OECD, 2021[17]). Indeed, the region imports processed foods, despite its rich natural endowments. For instance, Sierra Leone – where 75% of the arable land is uncultivated – imports 80% of its ready-for-consumption food. Further, deep-rooted societal norms, including financial and land ownership barriers can negatively impact women, whose participation in the food economy remains prevalent in off-farm activities (the food economy overall employs 37% of women compared to 11% of men) (Allen, Heinrigs and Heo, 2018[18]). Several infrastructure policy documents highlight female inclusion but confine women to roles in agriculture and micro-entrepreneurship, leaving their participation in other value chains such as digital and transport, mostly overlooked (Table 7.2).

> *In March 2025, the West African Power Pool – an ECOWAS agency – launched the West Africa Women in Energy Forum in partnership with the World Bank and the German Corporation for International Cooperation, marking a commitment to the integration of women in a sector largely dominated by men (ECOWAPP, 2025[19]).*

Table 7.2. Productive transformation objectives in selected national-level infrastructure plans in West Africa

Country	Policy document		Productive transformation objectives			
	National development strategy	Infrastructure plan	Contributing to regional integration and trade	Boosting strategic value chains	Modernising sector-specific infrastructure	Increasing female participation in strategic sectors
Burkina Faso	✓		✓	Agriculture; energy	Agriculture; energy; digital; industrial parks; SEZ; transport	✓ (Entrepreneurship)
Côte d'Ivoire	✓		✓	Agriculture; energy; digital; mining; transport	Agro-processing; energy; digital; transport	
Gambia	✓		✓	Agriculture; energy; digital	Agro-processing; energy; digital; transport	✓ (Agriculture)
Ghana	✓	✓	✓	Agriculture; energy; transport	Agro-processing; transport; water	
Guinea-Bissau	✓			Agriculture; energy; digital; transport	Transport; water	✓ (Agriculture)
Nigeria	✓	✓	✓	Agriculture; energy; mining; digital; transport	Agro-processing; energy; digital; transport; water	✓ (Agriculture)
Senegal	✓		✓	Agriculture; energy; digital; mining; transport	Agro-processing; energy; digital; SEZ; transport; water	✓ (Entrepreneurship)
Sierra Leone	✓		✓	Agriculture; digital	Agro-processing; energy; digital; transport	✓ (Agriculture; mining; tourism)
Togo	✓		✓	Agriculture; digital; mining	Agro-processing; energy; digital; transport; water	

Note: The table reflects the latest plans available online. SEZ = special economic zones. Emphasis on productive transformation was assessed through keyword searches, including for regional value chains, the African Continental Free Trade Area, economic diversification, strategic sectors, industrialisation, women's participation and skills.
Source: Government of Burkina Faso (2021[20]), *National Economic and Social Development Plan 2021-2025*; MPD (2021[21]), *Côte d'Ivoire's National Development Plan 2021-2025*; MoFEA (2023[22]), *Recovery Focused-National Development Plan (RF-NDP) 2023-2027 (YIRIWAA)*; NDPC (2019[23]), *Ghana Infrastructure Plan (GIP) 2018-2047: Highlights*; NDPC (2024[24]), *Vision 2057: Long-Term National Development Perspective Framework*; MEPIR (2020[25]), *Guinea-Bissau's National Development Plan;* MFBNP (2020[26]), *Reviewed National Integrated Infrastructure Master Plan (2020-2043);* MFBNP (2021[27]), *Nigeria's National Development Plan (NDP) 2021-2025*; MEFP (2018[28]), *Emerging Senegal Plan PAP: Priority Action Plan 2019-2023;* MoPED (2024[29]), *Sierra Leone's Medium-Term National Development Plan 2024 – 2030: A Transformative Acceleration Agenda for Food Security, Human Capital Development and Job Creation*; Government of Togo (2020[30]), *Togo 2025 Government Roadmap*; ECOWAS (2021[10]), *ECOWAS Regional Infrastructure Master Plan: Revised Draft Final Report.*

With better monitoring, development corridors in West Africa can expand their scope and attain broader economic and social impacts

Corridors across West Africa can put greater emphasis on development, including through greater trade. West Africa has a relatively sizeable number of corridors (25), which together stretch along 11 000 km (Thorn and Juffe Bignoli, 2022[31]). Most of the corridors specifically support trade and logistics, while neglecting broad-based economic, spatial, and social planning goals, and therefore do not qualify as development corridors (see Chapter 2). One exception is the West Africa Growth Ring Master Plan (WAGRIC), supported by the Japan International Cooperation Agency, which stresses the inclusion of social, environmental and security aspects for balanced economic development between the coastal and

inland areas of Burkina Faso, Côte d'Ivoire, Ghana and Togo (Table 7.3). Intra-regional West African exports (9% of total exports in 2022) and to the rest of the continent (12%) are low compared to those to the European Union (25%). In response, the WAGRIC focuses on better integrating strategic value chains of agricultural production (such as rice) along four major corridors (Abidjan-Ouagadougou, Tema-Ouagadougou, Lomé-Ouagadougou and Abidjan-Lagos) to increase trade and value chain integration within the WAGRIC sub-region by 2040 (JICA, 2025[32]).

Upgrading transport corridors can have overall positive economic outcomes, but social and environmental-related data are lacking. Upgrading transport corridors (for instance, increasing the number of driving lanes and improving road quality) can lead to overall positive outcomes when it is part of other interconnected policies. A study on five West African corridor upgrades revealed that economic benefits double and diffuse more widely when upgrades are combined with measures to reduce border delays (Lebrand, 2021[33]). It also indicated that income gains in real wages in coastal countries were twice as high as those in landlocked countries. It has been shown that the absolute economic benefits are greatest for corridors connecting large economies, while smaller and more fragile countries gain the most relative to their GDP when they are connected to larger markets. However, the environmental and social outcomes of corridors remain largely undocumented, making it difficult to ascertain and manage associated risks.

> *The CORRICONI project, financed by the European Union, seeks to reduce the Cotonou-Niamey Corridor's environmental footprint by infrastructure sustainability and maintenance. The project is scheduled to run from 2025 to 2030.*

Table 7.3. Selected corridors in West Africa

Corridor	Countries covered	Key partners	Envisioned impact on productive transformation	Outcomes
West Africa Growth Ring Corridors (WAGRIC)	Burkina Faso, Côte d'Ivoire, Ghana, Togo	National governments, UEMOA, JICA, ECOWAS, private investors	• Enhanced connectivity between coastal and landlocked countries • Balanced economic development across regions • Increased investment in key sectors (e.g. agriculture, mining and manufacturing)	***Consumption (E):*** • Fourfold increase in rice consumption, from USD 4 to 15 billion (2015-40)
Abidjan-Lagos Corridor[1]	Benin, Côte d'Ivoire, Ghana, Nigeria, Togo	National governments, AfDB, ECOWAS, private investors, EU	• Improved connectivity between cities • Strengthened regional economic integration • Digitalised corridor	***Trade:*** • Increase in trade volume by 15% on completion of the Togo-Benin expressway • Decrease in the average crossing time at the Benin-Togo border from 7 to 3 hours (2015-20) • Rise in trade volume at the Benin-Togo Hillacondji border post by 20% (2010-14) • Decrease in travel time along the upgraded segment from 75 to 36 hours
Abidjan-Ouagadougou Corridor	Burkina Faso, Côte d'Ivoire	ECOWAS, UEMOA, EU, Germany, Netherlands, United States, World Bank, private investors	• Facilitated trade	***Trade (E):*** • Reduction in 40-ft container cost from USD 3 500 to USD 3 150 • Decrease in transit time from 96 to 60 hours ***Social:*** • Training completed (2023): 20 master trainers, 776 driving instructors, 3 500 transporters, 1 500 managers • Corridor users at approximately 200 000 people annually (as of November 2023) ***Environmental:*** • Vehicle dismantling centre and eligibility pipeline for truck renewal (aimed at reducing carbon dioxide emissions)

Cotonou-Niamey Corridor	Benin, Niger	National governments, UEMOA, EU, United States (Millenium Challenge Corporation), OFID, IDB	• Facilitated trade	***Trade:*** • Approximately 3.55 million tonnes of cargo handled in Niger, indicating substantial freight activity (2016) ***Trade (E):*** • Trade efficiency to be boosted by the CORRICONI project through better integration of agricultural value chains and improved customs operations and corridor governance ***Social (E):*** • Training programmes and sector reforms for freight transporters • Over 1.6 million people expected to benefit from better transport services ***Environmental (E):*** • Reduction in the corridor's environmental footprint (CORRICONI)
Praia-Dakar-Abidjan Corridor	Cabo Verde, Côte d'Ivoire, Gambia, Guinea, Guinea-Bissau, Liberia, Senegal, Sierra Leone	National governments, AUDA-NEPAD, ECOWAS, AfDB, ECOWAS Bank for Investment and Development, EU	• Increased intra-regional and inter-regional trade (with Central Africa) • Enhanced access to international markets	***Trade:*** • Growth in Côte d'Ivoire-Guinea trade from 103 to 139 million tonnes (2013-19) • Expansion of Côte d'Ivoire-Liberia trade from 445 to 560 million tonnes (2017-22) ***Competitiveness:*** • Country progress on the Global Competitiveness Index for Infrastructure, e.g. Gambia (from 3.8 to 4.8) and Senegal (from 2.7 to 3.7)

Note: Unless followed by "(E)" for "expected", all outcomes have been recorded. UEMOA = West African Economic and Monetary Union. JICA = Japan International Cooperation Agency. ECOWAS = Economic Community of West African States. AfDB = African Development Bank. EU = European Union. OFID = OPEC Fund for International Development. IDB = Islamic Development Bank. AUDA-NEPAD = African Union Development Agency – New Partnership for Africa's Development.

1. Denotes one of the four WAGRIC corridors.

Source: European Union, (2023[34]), *EU-Africa: Global Gateway Investment Package - Strategic Corridors*; JICA (2025[35]), *West Africa Growth Ring Corridor Development Master Plan*; AfDB (2023[36]), *Cross-border road corridors: Expanding Market Access in Africa and Nurturing Continental Integration*; APA News (2025[37]), "La Cédéao valide le tracé de l'autoroute Praia-Dakar-Abidjan"; PIDA (2025[38]), "Praia-Dakar-Abidjan Multimodal Transport Corridor"; World Bank (2021[39]), *TFWA Program Small-Scale Cross-Border Trade Survey, Cotonou-Niamey Corridor Report*; CPCS (2024[40]), *Corridor Cotonou-Niamey : CPCS optimise le transport routier au Bénin*; Prici (n.d.[41]), "Le PAMOSET"; Agence Ecofin (2023[42]), "Corridor ferroviaire Abidjan-Ouagadougou : le transport de passagers reprendra le 17 novembre 2023"; Koffi (2023[43]), "Côte d'Ivoire/Corridor Abidjan-Ouaga : un atelier-bilan présente les acquis du Pamoset"; Open.Enabel (2025[44]), "Mesures d'accompagnement du commerce et des transports sur le corridor Cotonou–Niamey »; Africa World Radio (2023[45]), "Corridor Cotonou-Niamey : tout se met en place pour la mise en œuvre du MCA Régional"; MCC (2025[46]), "Benin Regional Transport Compact"; Kobina vanDyck and Domfeh (2017[47]), "Gateway port selection based on inland transport cost and performance metrics In West Africa", World Bank (2023[48]), *Global Competitivity Index (CGI) (database),* https://databank.worldbank.org/metadataglossary/africa-development-indicators.

Strengthened institutional capacity and skills development could improve project preparation and implementation

Though at different levels, public-private partnership (PPP) units in West Africa tend to have insufficient institutional capacity and undertrained staff. Several national infrastructure plans highlight the importance of PPPs as an alternative means of financing infrastructure to reduce borrowing pressures (Burkina Faso and Ghana), facilitate market access for young entrepreneurs (Gambia) and attract investment to accelerate the provision of infrastructure in rural areas (Nigeria). According to the World Bank's *Benchmarking Infrastructure Development (BID)* database,[3] West African countries on average prepare six of the nine most often conducted assessments prior to engaging in a PPP, signifying room for improvement (BID, 2023[49]). In most of the countries covered (8 out of 11), new recruits lack the specific skills requirements, and none of the countries have established mechanisms for personnel training after hiring. Procedural clauses to assess performance objectives are missing from some PPP frameworks in

West African countries with lower human development levels (Guinea and Sierra Leone). Missing legal arrangements to verify the proper implementation of PPP contracts can have an impact on PPP execution.

The region faces institutional and skill deficiencies, exacerbated by limited funds. One of the main bottlenecks to implementing the ECOWAS RIMP is an unclear division of responsibilities among stakeholders, which delays development and decision-making processes. Another is the shortage of skills; this can be at least partially overcome through programmes focusing on project preparation, capacity building and regulatory frameworks. For instance, soft projects related to infrastructure in West Africa's energy and transport sectors reveal accrued capacity building needs, and those in transport and digital infrastructure would benefit from increased institutional development (ECOWAS, 2021[10]). However, funds for skills development are disproportionally low, estimated at USD 3 billion, compared to those for capital investments (USD 122 billion).

> *Agencies at the national level with sectoral expertise, such as Ghana's Centre of Excellence on Regional Transport and the Centre for Sub-Saharan Transportation Leadership, integrate managerial and leadership skills into their curricula. The region also benefits from international partners' active engagement, particularly in the transport and energy sectors, notably through technical and vocational education and training institutions and regional mobility projects that also target digital and entrepreneurial skills (e.g. CERFER and SHINE) (ACE, n.d.[50]).*

In West Africa, skills development and capacity building are more closely aligned with energy infrastructure than with the other infrastructure sectors. Existing and envisioned entities – such as the Center for Renewable Energy and Energy Efficiency and the ECOWAS Electricity Institute – are mandated by regional plans to respond to evolving skill demands in energy infrastructure (Table 7.4). The energy sector has also benefited from the leading role of the West African Power Pool (WAPP) for project identification. In turn, the absence of a similar entity in other infrastructure sectors has reportedly led to promising regional projects stalling at the planning stage (ECOWAS, 2021[10]). More generally, insufficient capacity within the institutions leading the implementation of sectoral master plans has been an additional barrier for infrastructure sectors other than energy, for instance, limiting infrastructure project preparation. West Africa's renewable energy market has made a first step to tackle the issue of low-quality imports and flawed installations by uncertified personnel.

> *The International Solar Alliance and United Nations Industrial Development Organization, supported by the Government of France, will pilot the International Network of Solar Technology and Application Resource Centres (STAR C) in 11 West African countries to improve quality and certification frameworks for photovoltaic and solar thermal products and services (GN-SEC, 2023[51]). Since its establishment in 2024 at the École Polytechnique de Thiès, Senegal's Solar Academy under STAR C has trained over 50 participants, of whom nearly half are women (STAR C, 2025[52]).*

Table 7.4. Selected skills and capacity development programmes in infrastructure in West Africa

Programme	Main features	Types of skills promoted
ECOWAS Sustainable Energy Skills Certification Programme **(Cabo Verde)**	• **Objective:** It trains aspiring designers, installers, inspectors and other stakeholders of sustainable energy • **Impact:** To date, 1 000 off-grid technicians have gained certification, which is awarded by the ECOWAS Certification Body for Sustainable Energy Skills (ECBSES) following a three-year programme. • **Partners:** It is hosted by the Center for Renewable Energy and Energy Efficiency (ECREEE), a specialised Agency of the ECOWAS Commission, the ECBSES, the International Renewable Energy Agency (IRENA) and GIZ.	Technical, green, digital
Regional Training Center for Road Maintenance - CERFER **(Togo)**	• **Objective:** It enhances capacities and develops vocational training programmes in civil and mechanical engineering tailored to the needs of the private sector • **Programmes:** The CERFER was founded in 1970 as a TVET provider by the Conseil de l'Entente (Benin, Burkina Faso, Côte d'Ivoire, Niger and Togo).	Technical

	• **Impact:** To date, over 4 000 students have gained technician certificates (Bac+2), higher technician certificates, and professional bachelor's degrees (Bac+3). • **Partners:** IIEP-UNESCO Dakar, AfDB	
Centre for Sub-Saharan Transportation Leadership (CSSTL) and Centre of Excellence on Regional Transport, hosted at Nkrumah University of Science and Technology **(Ghana)**	• **Objective:** It develops the managerial capacity of young African transportation professionals to deliver Africa's transportation infrastructure • **Programmes:** It blends technical with leadership and management modules via the Transport Sector Leadership Development Programme (TSLDP) • **Partners:** UK Aid, Mott MacDonald, University of Cape Town, University of Birmingham	Technical, managerial, leadership
Solar Hands-on training and International Network of Exchange –SHINE (**Ghana, Nigeria** and Uganda) (2023-26)	• **Objective:** It focuses on solar panel technology through three pillars: research (e.g. skill supply/demand), curricula development (e.g. action plans of each of the African TVET schools) and capacity-building • **Programmes:** It develops market-oriented skills through training, webinars and short stays in the three African host countries, thus gaining local knowledge • **Partners:** European-African consortium, including TVET and private actors, co-funded by the EU	Technical, green, digital, entrepreneurial

Note: GIZ = German Corporation for International Cooperation. TVET = technical and vocational education and training. AfDB = African Development Bank. EU = European Union. IIEP-UNESCO = UNESCO International Institute for Educational Planning.
Source: ECREEE (2025[53]), "ECOWAS Certification Body for Sustainable Energy Skills (ECBSES)"; IIEP-UNESCO (2025[54]), "Inside the transformation of CERFER, a regional vocational training programme in Togo"; ReCAP et al. (2020[55]), *Establishment of Centre for Sub-Saharan Transport Leadership: Centre for Sub-Saharan Transport Leadership Status Report*; SHINE (2025[56]), "What is SHINE?".

Notes

[1] The ECOWAS RIMP 2020-45 estimates investment needs in the transport, energy, digital and water sectors at USD 122 billion.

[2] At the time the RIMP was approved, ECOWAS had 15 member countries. Currently, ECOWAS membership includes 12 countries: Benin, Cabo Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Nigeria, Senegal, Sierra Leone and Togo.

[3] The Benchmarking Infrastructure Development (BID) 2023 covers 11 of the 15 countries in West Africa. The survey identifies nine choices under assessments conducted: cost-benefit analysis, fiscal affordability, risk identification, comparative procurement assessment, procurement strategy, financial viability/bankability, market sounding, environmental impact and social impact (World Bank, 2025[57]).

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Annex A. Statistical annex

Data used in this edition of *Africa's Development Dynamics* have been compiled and presented in tables available for free download online (https://www.oecd.org/en/publications/africa-s-development-dynamics-2025_c2b40285-en/support-materials.html) along with some additional social and economic indicators that add context to the report's analysis.

All indicators that were chosen for the annex provide national data figures for all or nearly all African countries, as well as most countries in the rest of the world. These choices were made in order to allow for both comparisons between African countries and comparisons with groups of similar countries outside of Africa that could serve as benchmarks. These data give context to the analyses presented in the report and allow readers to investigate the underlying data in more depth.

Data were obtained from various sources, including harmonised data sets of annual national data from reputable international institutions, as well as some indicators that were calculated by researchers working on the publication. Figures will get updated as new data become available so that readers can always track the latest versions of key indicators. Therefore, some differences between figures in the statistical annex and figures reported in the publication may reflect changes to the data tables made after the publication of the written report.

Data tables available for free download online

	Click on title to download table
Table 1	Indicators of growth, employment and inequality
Table 2	Annual real GDP growth rate, 1990-2030
Table 3	Annual population growth rate, 1990-2030
Table 4	Annual real GDP growth per capita, 1990-2030
Table 5	Demographic estimates
Table 6	Basic education indicators
Table 7	Labour force characteristics
Table 8	Sectoral breakdown of the economy
Table 9	Growth decomposition by expenditure
Table 10	Investment returns and debt risk
Table 11	External financial inflows
Table 12	Investment and capital stock
Table 13	Public finances
Table 14	National wealth
Table 15	Ecological sustainability
Table 16	Environmental causes of premature deaths
Table 17	GHG Emissions by sector
Table 18	Electricity and sustainable energy
Table 19	Digitalisation
Table 20	Infrastructure stock
Table 21	Infrastructure financing
Table 22	Sustainable public investments and adjusted net savings
Table 23	Indicators of inequality and poverty
Table 24	Gender indicators

More extensive data, including time series for all variables back to 2000, are also available online

The figures presented in these statistical tables, with the exception of Tables 2-4, represent the most recent years for which data are available. However, a complete dataset containing all these indicators for the years 2000-present in one compressed flat csv file can be downloaded from this link: https://github.com/AfDD-DDAf/AfDD-DDAf-2025/raw/refs/heads/main/AfDD_2025_Stats_by_year.zip. Otherwise, the same indicators can be found online through the OECD's online statistical portal at https://data-explorer.oecd.org/ and clicking on "Development", followed by "Africa's Development Dynamics" on the menu.

The data in the statistical annex are also available for key country groupings

The statistical annex reports statistics for nearly all world countries, and also aggregations of indicators over country groups developed for benchmarking and analysis. The table indicating the countries that belong to each group is among the files available in the annex. The country groups featured in the analysis are the following:

- **The five regions of the African Union** (Central Africa, East Africa, North Africa, Southern Africa, and West Africa, as defined by the Abuja Treaty)
- **Africa and benchmark country groupings** (Africa, Asian countries excluding high-income countries, Latin America and Caribbean countries, and the World)
- **Resource-rich countries**

  Countries that obtain a significant fraction of their GDP from underground natural-resource extraction are referred to as "resource-rich". These resource endowments can have major implications for economic, political, and social development. In this report, countries are identified as resource-rich based on whether, over the previous decade, the estimated contribution of the extraction of hydrocarbons, coal and minerals to economic output exceeds 10% of GDP in at least five years.

- **Income level**

  The World Bank divides the countries of the world into four categories based on GNI per capita, using their Atlas Method:[1] low-income countries, lower middle-income countries, upper middle-income countries, and high-income countries.

- **Geographic access**

  The report provides a breakdown between countries that are landlocked, countries that have a portion of coastline, and island nations. Gaining access to world trade can be complicated by a country's access to the ocean or lack thereof, while island nations have been shown to have different development patterns than other coastal nations. In addition to this three-way breakdown of countries, this report provides data on countries deemed "Landlocked Developing Countries (LLDC)" and "Small Island Developing States (SIDS)" by the UN Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS).[2]

- **Least developed countries[3]**

  The UN-OHRLLS classifies some countries as "Least Developed Countries (LDC)". This categorisation of countries was officially established in 1971, by the UN General Assembly, and represents countries that face low levels of socio-economic development. Countries are designated as LDC countries based on income criteria, the health and education of their populations, and their economic vulnerability.

- **Fragile states[4]**

  The OECD studies fragility as a multi-dimensional concept of risks that could pose a critical challenge to the ability of countries to achieve their development aspirations, in particular the goals outlined by the UN's 2030 Agenda for Sustainable Development. Based on the results of this research, presented in the OECD States of Fragility report, countries are categorised as being "fragile" or "extremely fragile".

- **Regional Economic Communities and other intergovernmental organisations**

  Partnerships of countries formed for the purposes of regional integration or co-operation that have economic or political significance and that are particularly relevant to an analysis of African economic performance are included here. This includes the eight Regional Economic Communities (REC) recognised by the African Union, as well as other regional and international organisations, such as the Association of Southeast Asian Nations (ASEAN), Mercado Común del Sur (MERCOSUR), the European Union (EU) and the OECD that serve as benchmarks. Aggregate figures for PALOP (Países Africanos de Língua Oficial Portuguesa, the Portuguese-speaking African countries) were included in response to a request from members of this country grouping.

Notes

[1] Please see http://datahelpdesk.worldbank.org/knowledgebase/articles/378832-what-is-theworld-bank-atlas-method.

[2] Please see www.un.org/ohrlls/.

[3] Please see www.un.org/ohrlls/content/least-developed-countries.

[4] Please see www.oecd.org/en/publications/states-of-fragility-2025_81982370-en.html.

Africa's Development Dynamics 2025

INFRASTRUCTURE, GROWTH AND TRANSFORMATION

Africa's Development Dynamics uses lessons from Central, East, North, Southern and West Africa to develop policy recommendations and share good practices across the continent. Drawing on the most recent statistics, its analysis aims to assist African leaders in reaching the targets of the African Union's Agenda 2063 at all levels: continental, regional, national and local.

This edition explores how African stakeholders can accelerate infrastructure development to achieve productive transformation and the Agenda 2063. The report's original, data-driven analysis helps policymakers identify cost-effective ways to mobilise investments in infrastructure in the face of growing sovereign debt burdens, high cost of capital and declining development finance. Two continental chapters assess the infrastructure investment needs and current financing conditions and identify policy solutions to facilitate infrastructure development and improve sustainability outcomes. Five regional chapters assess the state of infrastructure, financing flows, infrastructure policies, development corridors, infrastructure project support and skills development in Africa's regions.

Africa's Development Dynamics feeds into a policy debate between the African Union's governments, citizens, entrepreneurs and researchers. It proposes a new collaboration between countries and regions, focusing on mutual learning and the preservation of common goods. This report results from a partnership between the African Union Commission and the OECD Development Centre.

Consult this publication on line at *https://au.int/en/documents/20240625/africas-development-dynamics-2025* and *https://doi.org/10.1787/c2b40285-en*

This work is published on the African Union Commission's website and the OECD website.
Visit ***www.au.int*** and ***www.oecd.org*** for more information.

Co-funded by the European Union

PRINT ISBN 978-92-64-45219-0
PDF ISBN 978-92-64-89282-8

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