



# Leapfrogging

## Technological Leapfrogging and the Formalisation of Africa's Informal Sector

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Last updated 13 May 2026 using IFs v7.84

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Africa has long been characterised by a large informal economy, which in many countries accounts for over 60% of employment and up to 40% of GDP. While this sector provides livelihoods for millions, it often operates outside formal financial and regulatory systems, limiting access to credit, savings, insurance and social protections.

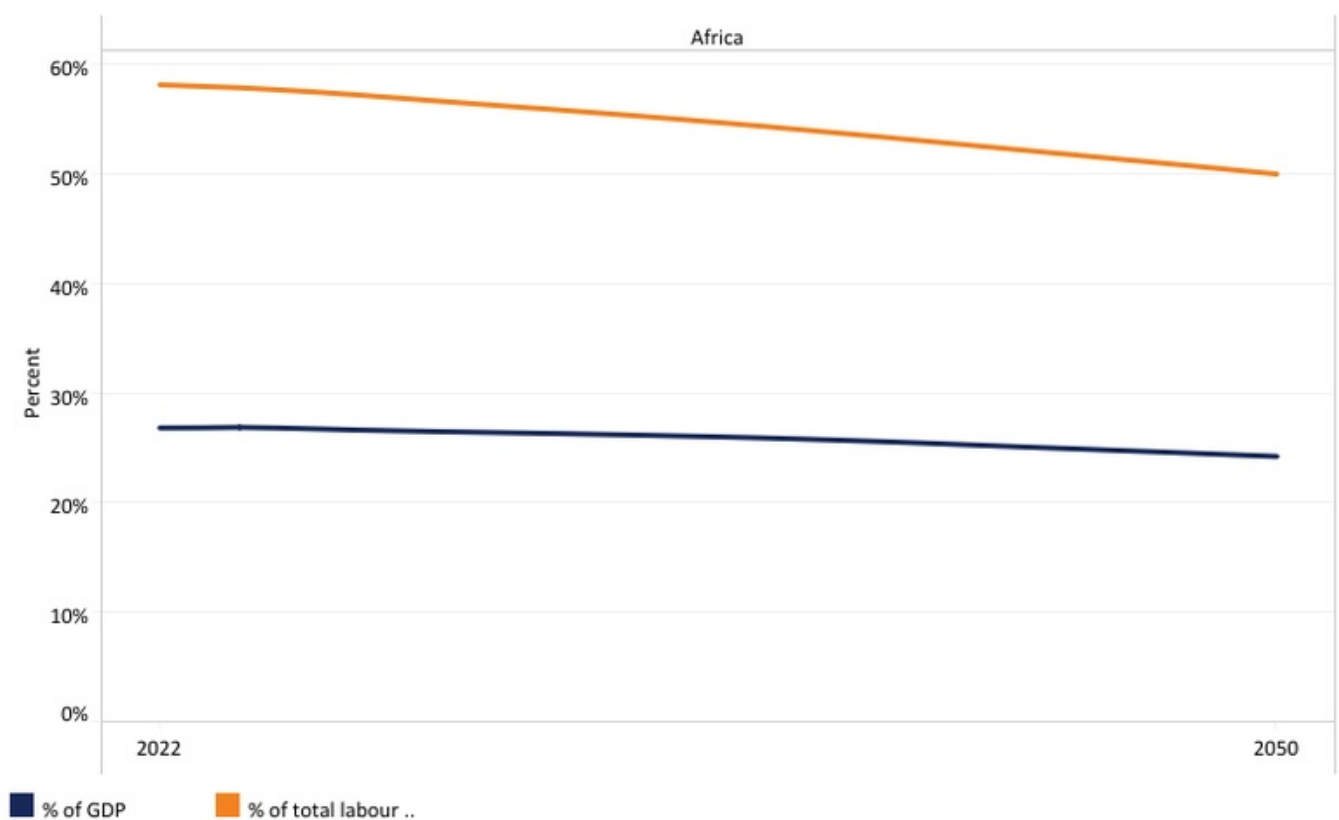
A large informal sector not only affects productivity and incomes but also limits governments' ability to generate domestic revenue. Because informal businesses and workers often operate outside official tax systems, they contribute little to VAT, corporate or income taxes. This constrains public budgets, reducing resources available for infrastructure, education, health and social protection programs.

Formalisation, therefore, has a dual benefit: it raises productivity while expanding the tax base. Digitisation and digital ID systems can help capture informal economic activity for taxation in a low-burden, efficient way. For example, mobile payment platforms and digital transaction records make it easier to monitor economic activity without imposing onerous compliance requirements on small-scale operators. Incremental formalisation strategies, such as PAYG models, can encourage participation without stifling entrepreneurial activity.

Chart 5 shows the informal sector's share of GDP and its proportion of the total labour force in Africa from 2020 to 2024, with a forecast to 2050. In 2024, the informal sector accounted for approximately 27% of GDP and 58% of the total labour force, with projections indicating a gradual decline to 24% of GDP and 50% of the labour force by 2050.

**Chart 5: Size of informal economy, 2020-2024 with forecast to 2050**

Measured as % of total labour force and % of GDP



Source: IFs 8.50 initialising from Elgin and Oztunali (2008), and Schneider and Enste (2012) data

Advances in internet access, mobile phones and digitisation do allow governments and businesses to reduce barriers

between the informal and formal sectors, making it easier for informal businesses to access services, credit and markets. Traditionally, the informal sector naturally shrinks as GDP per capita rises. Still, modern technology, combined with supportive policies and incentives, can streamline and accelerate this transition by lowering costs, improving access to digital IDs, financial services and formal registration processes.

The introduction of digital ID systems is the critical first step toward formalisation. According to the World Bank, roughly half of the world's [one billion](#) people without official identification live in Africa. Most African countries with stable governments now have active biometric ID programs, with South Africa and Nigeria among the most advanced, according to ID4Africa, an NGO promoting identity-for-all.

Digital IDs unlock access to banking, government benefits, education and other essential services. They enable precise identification of all parties to an interaction, low-cost communication and accurate, accountable, convenient payment processes. A McKinsey [study](#) across seven countries (Brazil, China, Ethiopia, India, Nigeria, the UK and the US) estimated that full digital ID coverage could unlock economic value equal to 3–13% of GDP by 2030, provided programs enable multiple high-value use cases and achieve widespread adoption.

A large informal sector also constrains African governments' ability to mobilise domestic revenue. By gradually formalising the informal economy, governments can expand the tax base in a low-burden and efficient way. Digital payment systems, biometric IDs and mobile-based transaction records allow authorities to monitor economic activity without imposing heavy compliance costs on small-scale operators. This simultaneously supports economic growth, raises incomes and strengthens fiscal capacity.

Modern technology presents an unprecedented opportunity to formalise Africa's informal sector incrementally. Digital ID systems, mobile payment solutions, PAYG models and carefully designed policies can collectively boost productivity and incomes, reduce poverty and inequality, expand access to financial and social services and strengthen domestic revenue mobilisation. By leveraging these tools, African governments can foster a more formal, inclusive and fiscally sustainable economy, unlocking long-term developmental gains for the continent.

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Jakkie Cilliers (2026) Africa Leapfrogging Futures. Published online at [futures.issafrica.org](https://futures.issafrica.org). Retrieved from <https://futures.issafrica.org/thematic/09-leapfrog/> [Online Resource] Updated 13 May 2026.



## About the authors

Dr Jakkie Cilliers is the founder and former executive director of the ISS. He currently serves as chair of the ISS Board of Trustees, head of the African Futures and Innovation (AFI) programme at the Institute's Pretoria office, and an extraordinary professor at the University of Pretoria. His 2017 best-seller [Fate of the Nation](#) addresses South Africa's future from political, economic and social perspectives. His three most recent books, [Africa First! Igniting a Growth Revolution](#) (March 2020), [The Future of Africa: Challenges and Opportunities](#) (April 2021), and [Africa Tomorrow: Pathways to Prosperity](#) (June 2022) offer rigorous analyses of the continent as a whole. From August to December 2025, Cilliers was a Richard von Weizsäcker Fellow at the Robert Bosch Academy in Berlin.

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