



# Large Infrastructure

## Introduction

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Infrastructure is more than a collection of physical assets; it is the foundation upon which economies grow, societies progress and development becomes sustainable. Roads, energy systems, digital networks and water infrastructure shape how markets function, how people access opportunities and how productivity evolves. In Africa, where rapid demographic growth intersects with rising economic aspirations, infrastructure is indispensable to transforming economic growth into shared prosperity.

The centrality of infrastructure to development is deeply embedded in economic thought. From Adam Smith's *Wealth of Nations*, which identified public works as a core responsibility of the state, to modern macroeconomic and endogenous growth models, infrastructure is consistently treated as a critical intermediate input that raises productivity across all sectors.

A substantial body of empirical [research](#) over the past decades confirms that the availability, quality and reliability of infrastructure influence firm performance, market integration and long-term growth. More recently, academic [literature](#) has also emphasised infrastructure's role in reducing poverty and inequality by expanding access to basic services, enabling employment opportunities and enhancing human capital. An [emerging](#) consensus is that, under the right conditions, infrastructure development can play a major role in promoting growth and equity, and, through both channels, help reduce poverty.

Across Africa, however, a persistent infrastructure deficit remains a binding constraint on economic growth, structural transformation and the achievement of the Sustainable Development Goals (SDGs). Infrastructure [investment](#) has contributed significantly to the continent's improved economic performance in recent years, yet Africa, especially sub-Saharan Africa, lags behind every other developing region on critical infrastructure indicators. Electricity generation per capita is less than a third of South America's. Internet access is sparse, roads remain largely unpaved and water systems are often unreliable. These gaps translate into high logistics costs, unreliable energy supply, limited digital connectivity, and reduced productivity and competitiveness.

The economic consequences are substantial. Inadequate infrastructure is estimated to reduce Africa's GDP growth by around two percentage points annually and lower business productivity by up to [40%](#). Transport inefficiencies raise the cost of African goods, undermining trade and industrialisation, while poor water and sanitation systems alone are estimated to cost the continent nearly [5%](#) of GDP each year. Beyond macroeconomic losses, these deficits constrain access to health, education and decent livelihoods for citizens, reinforcing poverty and inequality.

Africa's infrastructure gap is not merely a story of constraints; it is also a story of unrealised potential. With the African Continental Free Trade Area (AfCFTA) poised to reshape regional trade and production structures, the returns to improved connectivity, reliable energy and efficient logistics are higher than ever. The African Development Bank estimates that the continent needs over [US\\$100](#) billion per year to close the infrastructure gap, a monumental ambition, but also an unprecedented opportunity. Infrastructure can serve as a powerful catalyst for structural transformation, enabling value-added production, regional value chains, urban productivity and the absorption of Africa's rapidly growing labour force.

Against this backdrop, this theme report provides a comprehensive overview of Africa's infrastructure deficit. It presents a positive scenario for exploring the contribution that improved infrastructure could make to catalyse economic growth and accelerate poverty reduction. By examining the multiplier effects of infrastructure investment and its interlinkages with productivity, trade and human development, the theme outlines a strategic vision for infrastructure-led development in Africa—how closing the infrastructure gap can shift the continent onto a higher, more inclusive growth trajectory.

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## About the authors

Dr Kouassi Yeboua previously worked as a Senior Researcher at AFI, where he led significant ISS studies on the long-term development prospects of the Democratic Republic of Congo, the Horn of Africa, Nigeria, Malawi, and Mozambique. His research focuses on development economics, macroeconomics, gender, and economic modeling. He holds a PhD in Economics.

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