

Road to prosperity? New research project examines roads in Africa

Would your company like to contribute to this exciting new initiative for advancing Africa's development goals?

Over the past 15 years or so, African states' development agendas have changed dramatically, as governments across the continent have adopted ever more ambitious National Development Plans.

These plans, which are usually framed in terms of some 'Vision' of the country's future – as in: Vision 2020 (Rwanda), Vision 2030 (Kenya), Vision 2040 (Uganda), etc. – aim for rapid economic take-off, and structural transformation, through infrastructure-led growth (also known as: 'infrastructure-based development').

In this model, major new investments are made into national transport and energy infrastructures, with a view to accelerating the industrialisation of agriculture, the growth of manufacturing, and expansion of the technology sector. The aim is that these sectors will in turn boost the Sustainable Development Goals (SDGs), by generating improvements in food security, widen access to quality healthcare and education, and generally reduce inequality.

In pursuit of these Visions, in recent years African governments have poured billions of dollars into new infrastructure projects. These investments have been funded by vast amounts of new development finance, especially from China, but also from other "new" donors, including Russia, India, the Gulf States, South Korea and Turkey, and from international financial institutions such as the World Bank and the African Development Bank.

In many African countries, infrastructure investments have been also significantly boosted by mining revenues.

These monies have been used to finance all kinds of new infrastructure projects, from ports, railways and airports, to dams, rural electrification projects and urban sanitation schemes. However, in country after country across the continent, the vast majority of the new investment has gone into just one thing: roads.

In consequence, Africa is now experiencing a veritable explosion of new road building projects, and road upgrades schemes. Across the continent, over the

past decade, an average of 7,500km of new roads have been built per year. Over the same period, one country, Lesotho, has grown its national network by an extraordinary 24% per annum. There are currently a massive \$286 billion of new road schemes under construction, and investment is growing all the time. Nigeria alone plans to spend \$1.1 trillion on its national transport infrastructure by 2050.

To date, much of the new roads investment has gone into major highway schemes, one result of which is that plans for trans-continental road corridors – which for decades, have been little more than pipedreams – are now becoming a reality. Examples include the Trans-Sahara Highway and the Cairo to Cape Town Highway. Yet so too, the past decade has seen a vast expansion of investment in all kinds of provincial and local feeder roads, and in all manner of urban bypasses, expressways, ring-roads, flyovers, and laneways. Across Africa, recent years have also seen a boom in the construction of private roads.

It feels as though everywhere one looks, new roads are being built – or will soon be built.

Yet why such an emphasis on roads? Certainly, following several decades of austerity-driven structural-adjustment programmes, the continent's road network was of insufficient size, and quality, to support Africa's expanding economies. In short, African roads were in chronic need of new investment. Moreover, roads are always and everywhere a good economic prospect, as they inevitably facilitate improved mobility of raw materials, goods and labour. Yet so too, in many African countries road-building programmes have proven to be politically expedient, in enabling governments to project an image of "progress" among their voting public.

However, beyond these straightforward economic and political benefits, surprisingly little is known about the wider impacts all of these new roads are having, especially for the people who live alongside them.

In particular, more research is needed to understand the (apparently) wide range of ways in which new roads may disrupt livelihoods – in both positive and negative

ways – for different demographics, and especially for women. New models are needed to understand how roads may facilitate improved health outcomes yet may also act as vectors of disease (for example, our existing models frequently failed to predict how COVID-19 moved along African highways).

New research is also urgently needed to understand new roads' environmental impacts, and to develop more effective strategies for the future "greening" of African roads. Central here will be pathways for achieving the broad scale adoption of EVs. So too, it will involve the adoption of more sustainable building materials, the increased use of smart technologies, and the adoption of new modes of mobility for road users (including ones that don't use cars at all).

In 2023, the authors of this article – who are academics based at the University of Western Australia, Murdoch University, Curtin University and Edith Cowan University – together with partner researchers and institutions in Africa, are launching a major new research project to answer all these questions. The project, called Roads to the Future, is comparing new road-building projects in countries across Africa, and around the Indian Ocean Rim, to understand precisely how new roads do contribute to development goals, and could more effectively contribute to them in the future.

The Roads to the Future project is being substantially funded by the Australian Research Council. However, additional partners are being sought to fund further components of the research. The project team will be hosting a panel discussion on the project at this year's Africa Down Under conference.

For more information, please contact Professor Richard Vokes, at UWA: richard.vokes@uwa.edu.au

*Richard Vokes, Rochelle Spencer,
Yirga Woldeyes, Barbara Nattabi,
Kwadwo Adusei-Asante*