

A digital industrialisation policy?

Ashly Hope, Volunteer

...with 'digital transformation, the distinction between industrial and innovation policy effectively disappears as innovation reshapes the industrial landscape.'

– Dan Ciuriak¹

We have seen two key examples of digital industrial policy emerge in recent decades. Firstly, that of the United States (US). Although not necessarily billed as such, the key tenets of US digital industrial development are public investment in R&D, education and skills development and a supportive environment for tech (and other) companies. Secondly the 'China model'. The Chinese approach has, by preventing the entry of companies such as google, Facebook, YouTube and Amazon, enabled the development of a tech and e-commerce industry that now competes with US tech giants. Requiring internet content providers to be resident and licensed in China, to be subjected to content control and to store any servers or technical equipment in the country has also stymied the participation of foreign content providers in China.

While the China strategy may seem to be an appealing pathway, it is unlikely to duplicate well in Africa. Firstly, the African market, while large enough is not a single country and has nowhere near the kind of homogeneity of China. Nor does it have the political coordination. China's state-controlled economy also has vastly more resources at its disposal to support its policies. This is not the case for budget-constrained African economies. It is also a different time. When China began implementing these strict policies, digital services, internet use and the penetration of the digital into the entire economy and social structure were not close to where they are today. Chinese tech giants were able to grow behind the walls of Chinese protectionism, simultaneously with the growth of the digital economy outside of China. For Africa, there is already much catching up to do and by closing African economies to digital development from outside, we risk falling even further behind.

However, more importantly, attempting to protect a nascent (and non-existent, in many African countries) tech sector would be at the expense of all other businesses as well as consumers.² The tools for this protectionism are the prevention of the free flow of data, information and ideas. This would mean that the rest of the economy would also be restricted from accessing the important inputs and facilities to grow. This would affect both online businesses and offline businesses, which are increasingly relying digital goods and services to operate.

An effective digital industrialisation policy will not result in assembly plants for electronic devices or local data storage. Rather it will create the conditions for developing and



implementing new big ideas in Africa, capturing the value of these ideas and spreading African technology and services to the world.

This could include policies such as creating incentives (including tax) for private investment in tech and digital start-ups; public investment in innovative digital businesses; promoting and incentivising R&D (such as through tax, and public-private collaboration); improving STEAM (science, technology, engineering, arts and math) education at all levels; creating robust and enforceable intellectual property and competition laws; public investment in digital infrastructure, including high-speed internet; and encouraging innovation clusters.

This is the path that India appears to be pursuing in its recently announced [industrial policy](#). However, at the same time, India is seeking to emulate the success of the China model, with its draft [e-commerce policy](#) and [FDI guidelines](#) emphasising local business registration, local data storage and prohibiting vertically integrated foreign-funded e-commerce.

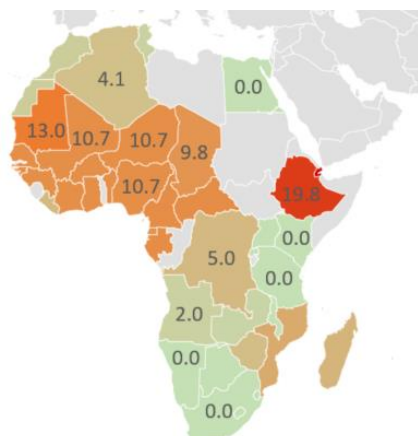
Another potential East Asia led industrialisation path could be producing technology intensive goods. Yet only around \$370 of the \$999 price of an iPhone X is attributable to the manufacture in total – including the screen, battery, processors... and only around 3-6% of that manufacturing cost is attributable to assembly in China. Indeed, the major value is in the design, software and marketing that is famously sourced in California.³

This suggests that we should look to ‘Silicon Cape’ (Cape Town), and ‘Silicon Savannah’ (Nairobi) and tech hubs across the continent to drive digital development in Africa, not to factories assembling tech heavy goods with poor working conditions and low value-addition. This is another reason why following a US-style digital industrialisation policy is preferable to following the Chinese approach.

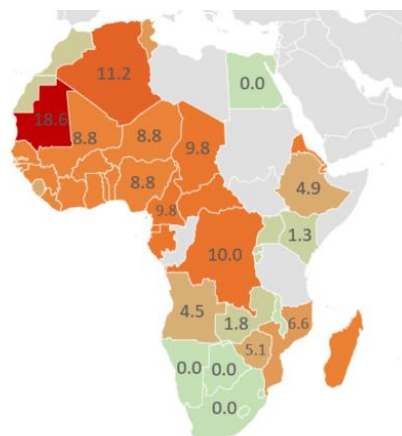
From a goods trade perspective, the import tariff is a key tool that can be used to promote digital industrialisation. Not by stopping or increasing the price of goods, but by encouraging the imports needed to develop a digital economy. Reduced tariffs on digital input goods not made locally – computing components, 3D printing technology, semi-conductors, batteries – can all assist in creating the conditions for e-commerce and digital innovation to flourish.

Reducing tariffs on IT goods and inputs is an important part of creating a joined-up strategy to build the digital economy. This has been recognised at the multilateral level – with the Information Technology Agreement (ITA) created in 1996 at the WTO. The ITA provides for countries to reduce or eliminate tariffs on IT goods. However, to date only 3 African countries are participants to the ITA (Morocco, Egypt and Mauritius). Tariffs remain on some important IT inputs, for example:

Machines for manufacturing semi-conductors (HS8486)



Apparatus & parts for the transmission or reception of voice, images or other data (HS8517)



Source: ITC trademap

The Chinese approach is also inextricably linked to China's goal "to make the entire Chinese digital environment, commercial and public, 'secure and controllable'".⁴ While there are legitimate public policy reasons for some control of data and the internet, the heavily censored, party-controlled Chinese internet should not be a model for African countries to aspire to.

It is impossible to avoid the digital nature of today's economy, and it is important to understand that industrialisation does not look the same as it did in the past. African nations have important choices to make when it comes to encouraging development. Industrial policy, as a route to development, must include some consideration of digital industrial policy. A China-style approach will not contribute to regional integration, and nor does it seem feasible. African countries should take an approach that prioritises innovation over protection.

¹ https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3223072

² For a summary of the costs of data localisation in the South African context, see Ferracane, M. 2018. South Africa and Data Flows: How to Fully Exploit the Potential of The Digital Economy, GEG Africa. <http://www.gegafrica.org/item/651-south-africa-and-data-flows-how-to-fully-exploit-the-potential-of-the-digital-economy>

³ IHS Markit

⁴ <http://ecipe.org/app/uploads/2017/06/China-Tech-Protectionism.pdf>