Firoz Lalji Institute for Africa

White Paper on Sustainable Industrialisation in Africa:

The Art of Upgrading Industrial Policymaking Itself

June 2023

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Summary

Sixty per cent of the world's extreme poor live in Africa. At the crux of why is that African industrialisation is yet to happen. This 'White Paper on Sustainable Industrialisation in Africa: The Art of Upgrading Industrial Policymaking Itself' argues that successful African industrialisation in the twenty-first century is unlikely to look like the successful East Asian experiences of the twentieth century.

There is no "the model" or "golden policy template" towards industrialisation, instead what matters is the approach and process, including "experimenting and learning" to craft appropriate interventions by a committed developmental state. This first requires an understanding of the "big five" industrialisation issues of today: policy consensus, green industrialisation, supply chain security and resiliency, shifting industrialisation paradigms, and widening policy space. But most importantly it requires that industrial policymaking in Africa is itself upgraded to be more adaptive, collaborative, and consultative, while bringing together government, anchor investors, and donors, into a grand bargain for social and environmentally sustainable industrialisation.

The Firoz Lalji Institute for Africa focuses on engagement with Africa through cutting-edge research, teaching, and public events, strengthening LSE's long-term commitment to placing Africa at the heart of understandings and debates on global issues.

Contents

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Introduction

Industrialisation has yet to substantively materialise across the African continent. This paper makes a case for industrial policy as the most viable strategy for delivering Africa's economic development. This will not look like the industrialisation of the past. It will require accounting for Africa's circumstances as a late developing continent and learning from the models of industrialisation applied across African countries and the world to craft contemporary industrial strategies with unique African characteristics. This includes a more expansive understanding of what "industrialisation" can be, beyond just manufacturing, and upgrading how industrial policymaking itself happens.

The paper explains why industrialisation remains *the* tried and tested tool for development (Section I), assesses African countries' experiences with it (Section II), charts the contours of "sustainable industrialization" (Section III), and what that can look like for Africa (Section IV).

I. Why industrialisation?

The first answer to the question "why industrialisation?" is historical precedence. Industrialisation is the most consistently proven pathway to high and sustainable standards of living, broader tax bases, and diversified exports. Historically, it has involved the movement of rural agricultural labour to the more economically productive urban manufacturing sector.

Starting with the United Kingdom, France, Germany, and a host of other European countries from the late 18th century, industrialisation has been an unrivalled tool for development. Other mid/early industrialisers were Japan and the United States, followed by recent industrialisers such as Singapore, South Korea, Thailand, and China. The latest group of emerging industrialisers includes Malaysia, Indonesia, Vietnam, India, Brazil, Chile, and Costa Rica.

These groups of countries utilised industrial policy to achieve their current levels of development. In most cases, industrial policy was *active* and *intentional*, rather than left in the invisible hands of supply and demand. Policies were tailored towards the specific characteristics of a country, implemented, and situated within the contemporary, emerging industrial and technological environment.

The second answer to "why industrialisation?" is its strong theoretical linkages to sustainable growth. Industrialisation is not a new magic bullet; it has long been understood as central to development. In 1967, Kaldor called industrialisation "the main engine of fast economic growth".[1] Increases in the share of manufacturing in GDP have been appreciated as a key feature of modern economic growth since Kuznets in 1966,[2] most famously through the movement of labour from rural agriculture to urban industry, as in Arthur Lewis' dual economy model.[3]

The theory goes as follows. Manufacturing, as an engine of growth, derives its strength from productivity growth and economies of scale. The manufacturing sector tends to exhibit rapid technological catch-up with the world's "technology frontier." It does this irrespective of the

[1] Kaldor, N. (1967), *Strategic Factors in Economic Development*, Ithaca, NY, Cornell University Press.
[2] Kuznets, S. (1966). *Modern Economic Growth: Rate, Structure and Spread*. Yale University Press. New Haven and London.
[3] Lewis, W. A. (1954), *Economic Development with Unlimited Supplies of Labour*, TheManchester School, vol. 22, no. 2, pp. 139-191

other policies, institutions, or geography of an economy.[4] The manufacturing sector acts as the "learning centre" of the economy, diffusing technological progress and spilling-over productivity growth into other sectors. Manufactured products also tend to be easily tradable, allowing access to international demand and generating foreign exchange, something particularly important for small, underdeveloped economies.

One of the most iconic features of industrialisation is its role in absorbing large amounts of labour from the countryside. Despite China being a predominantly agrarian economy in the 1970s, by 2012 the country had 176 million manufacturing jobs.[5] With an estimated 12 million African youth entering the workforce each year, industrialisation would be a vital source of employment for the continent. The type of employment created is also an important characteristic of industrialisation. Manufacturing tends to create secure formal salaried jobs. This will be vital for development in Africa where 9 out of 10 young African workers find themselves in the informal economy.[6]

The theoretical and empirical evidence on the one hand and the global experiences on the other shows that industrialisation can create an effective pathway to sustainable development. Yet this is nothing new. Various global, continental, regional and national initiatives have been designed to promote industrialisation in Africa. Goal 9 of the United Nations Sustainable Development Goals includes the promotion of "inclusive and sustainable industrialisation" while "industrialisation and value addition" persists as one of the priorities of the African Union's Agenda 2063 vision for the continent's development.

II. Africa's industrialisation

What the data shows

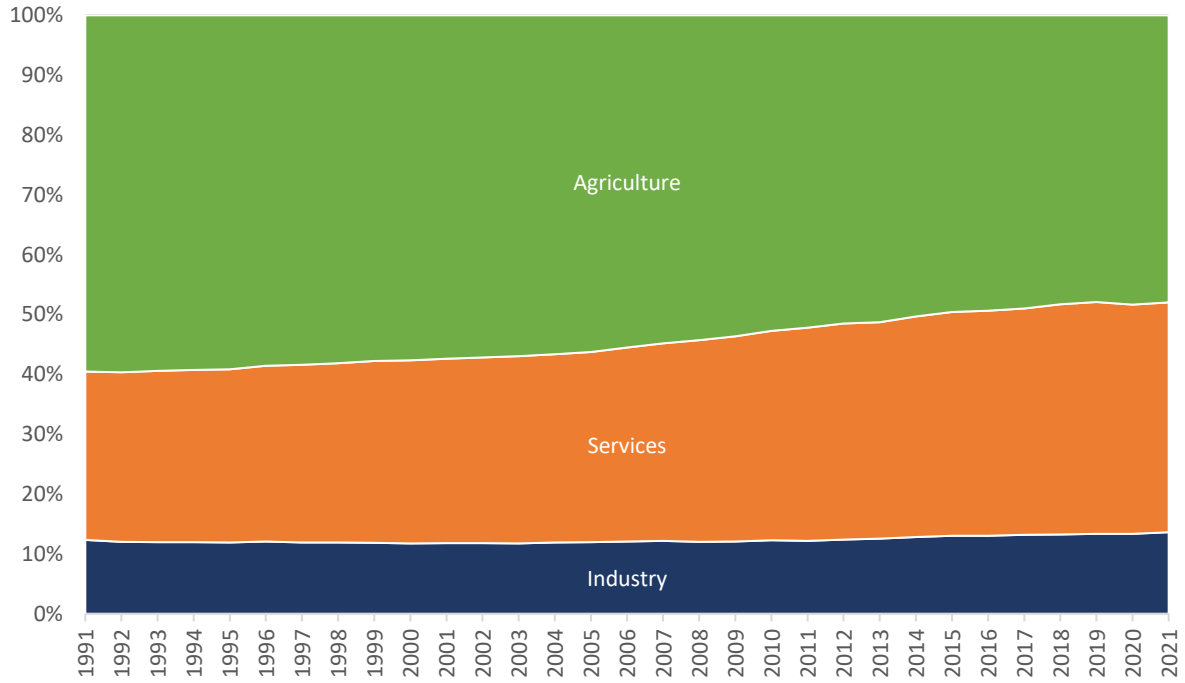
Up to now, Africa's efforts in industrialisation have generally been considered unsuccessful.[7] That might seem so in aggregate, but as this section shows the reality is more nuanced and complex. We can see this in the two measures usually used to express industrialisation: the share of manufacturing employment and manufacturing value added to total GDP.

Africa's employment share in the industrial sector has stagnated since the 1990s, falling from 12.3% in 1991 to 11.8% in 2004 (Figure 1). This prompted fears of a so-called "premature de-industrialisation."[8] Yet this trend has recently been reversed and the share of the African workforce in industry has gradually and consistently risen to reach 13.6% in 2021. The elephant in the room has been the rapid growth in services employment, yet much of this remains insecure, untradeable, and is concentrated in the informal sector.[9]

[4] Rodrik, D. (2013). Unconditional convergence in manufacturing. *The Quarterly Journal of Economics*, 128 (1), 165-204.
[5] ILO. (2021). Employment by Sector: modelled estimates
[6] *Ibid*
[7] See Mbate (2016), Chang (2013), Lopes (2015, 2019) and Lopes and te Velde (2021) among others on the evaluation of Africa's industrialisation efforts.
[8] Rodrik, D. (2016). Premature deindustrialization. *Journal of Economic Growth*, 21, 1-33.
[9] Kiaga, Annamarie and Leung, Vicky. (2020). The Transition from the Informal to the Formal Economy in Africa, ILO Global Employment Policy Review, Background Paper No. 4

Figure 1. Very little industrialisation at the continental level

Employment share in Africa, by sector, 1991 to 2021



Source: calculations based on ILO Modelled Estimates and Projections, Nov. 2022 revision

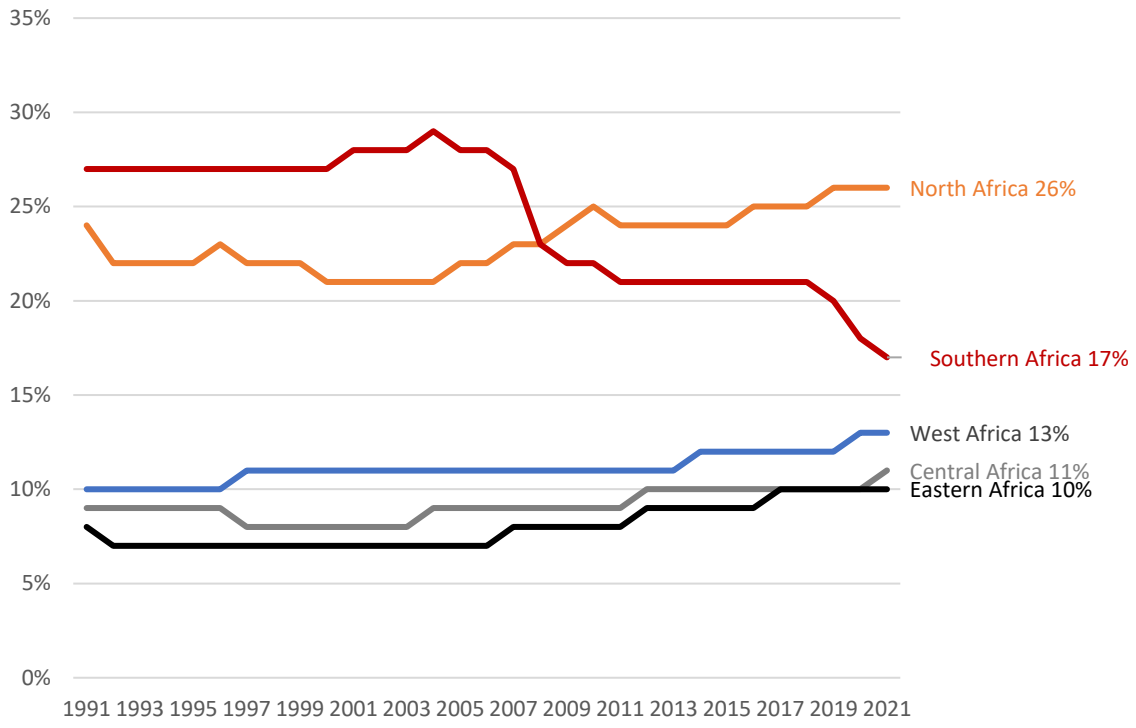
Three very different stories can be seen since 2008 when drilling down to experiences at the sub-regional level. In West Africa, Central Africa and Eastern Africa, the share of manufacturing in total employment has recently grown, albeit from a low base. Countries like Ethiopia and Mauritius have had successes in apparel and textiles, Kenya has performed well in agro-processing, and Nigeria in electronics.[10] In North Africa manufacturing employment has grown from a high base and reached levels typically associated with industrial take-off. But in Southern Africa, historically the most industrialised part of the continent, the share of total employment in manufacturing has collapsed. It is Southern Africa that has been weighing down the continent-wide experience recently. This instance relates to domestic challenges in which "electricity has become the dominant constraint facing manufacturing firms more than any other obstacle after 2008".[11]

[10] Lopes, C. and te Veld, D. (2021). Structural Transformation, Economic Development, and Industrialisation in Africa Post-Covid-19, Institute for New Economic Thinking, Africa Paper Series no. 1

[11] Fortunato, A. 2022. Getting Back on the Curve: South Africa's Manufacturing Challenge. Center for International Development at Harvard University (CID) Working Paper No. 139. https://growthlab.cid.harvard.edu/sites/projects.iq.harvard.edu/files/growthlab/files/2022-11-cid-fellows-wp-139-south-africa-manufacturing.pdf

Figure 2. Three stories: Declining industrial employment shares in Southern Africa, growth from a high base in North Africa, and growth from a low base elsewhere

Manufacturing employment share in Africa (% of total employment), by region, 1991 to 2021



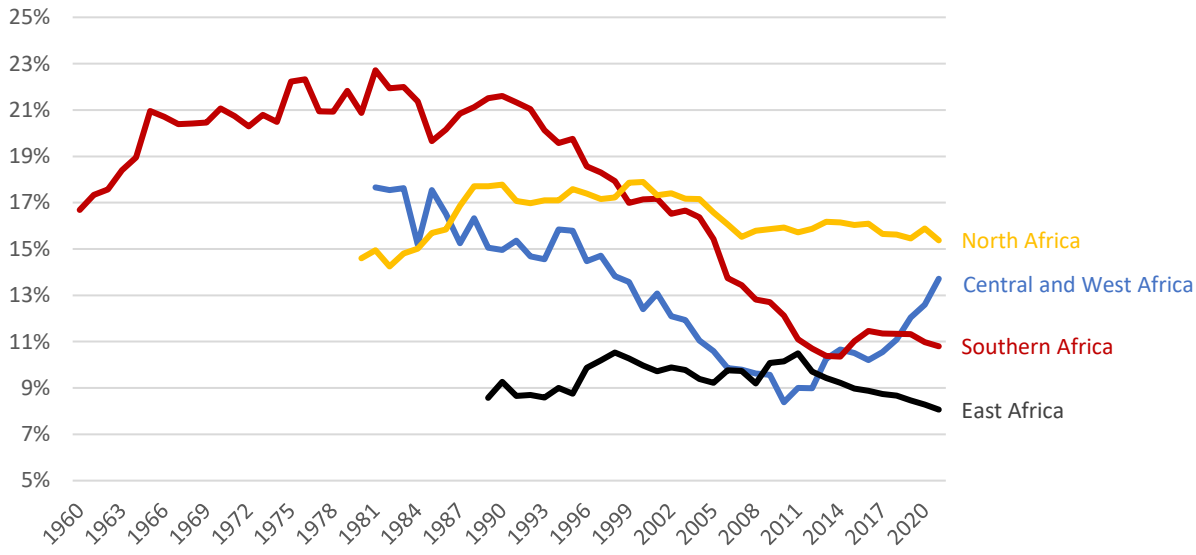
Source: calculations based on ILO Modelled Estimates and Projections, Nov. 2022 revision

Figure 3 shows changes in the share of GDP that is made up from manufacturing value added (MVA) which is another measure used to assess industrialisation, and one for which a longer comparable time series is often available. The share of manufacturing fell in most African regions from the mid-1980s. That was a period of deregulation, privatisation, trade, and financial market liberalisation in African countries driven by market-led development strategies known as "Structural Adjustment Programmes," which were promoted by the Washington Consensus institutions, such as the International Monetary Fund (IMF) and World Bank. This also coincided with a broader global fall in the share of manufacturing value added in many countries elsewhere in the world.

The MVA of Central and West Africa has since experienced a U-turn, increasing rapidly from a nadir in 2010. Southern Africa's share of manufacturing in GDP has fallen most dramatically from rates above the world average to lower than Central and West Africa by 2020 in a change of fortune that drags down the overall African picture.

Figure 3. Changing shares of economic value added

Manufacturing value added (% of GDP), selected regions and countries



Source: calculations based on World Development Indicators (2023)

Notes: regional averages are calculated on the bases only of countries for which consistent data is available, with small country-specific gaps smoothed out.

The experience behind the data

The varied industrialisation performance of African countries suggests that the type of industrial policy matters. The policies that have spanned the last six decades require critical evaluation for the future of Africa's industrialisation to be brighter.

Industrial policy refers to strategic efforts by governments to shape the economy by promoting specific industries, firms, or economic activities. Historically, it has involved promoting export-oriented manufacturing. Industrial policy instruments are generally "vertical," targeting selected sectors for help with the expectation of pulling up other sectors as a consequence of growth. However, "horizontal" policies or business climate policies may also form part of an industrialisation strategy by focusing on the general economic environment that allows other sectors to flourish.[12]

Africa's apparent struggles to industrialise have generated many explanations. Some pin the blame on the Structural Adjustment Programmes of the 1980s which encouraged African countries to let go of the levers of industrial policy and allow liberalised markets to leverage their comparative advantages. Unfortunately, in Africa that has driven capital-intensive mining and fuel extraction which failed to produce jobs, rather than creating labour-intensive manufacturing. Without active supporting policies, resources tended to be extracted and exported with limited value added, which holds back the domestic economy.

[12] See McMillan, Page, J, D. Booth and D. W te Velde (2017) for more on typology of industrial policy SET-approach-paper-WEB_FINAL_MARCH.pdf (odi.org)

Some argue that it is more difficult for African countries, or any country, to industrialise now. The case is frequently made that the time for East Asian-style industrialisation has passed.[13] The argument goes that African countries now face greater competition in manufacturing in both international and domestic markets than other countries did when they industrialised.[14] The world economy, more generally, may have begun to suffer from Baumol's cost disease. Decades of faster productivity growth in manufacturing, including through digitalisation and automation, have simply reduced the amount of labour needed for manufacturing relative to services, which continue to be much more labour-intensive.[15]

Some policymakers now consider that rather than "looking East" to a manufacturing-centric export-oriented model heavily reliant on public investment in infrastructure, and cheap labour, Africa should instead look West to Latin America for an agriculture-centric model, with a focus on smallholder farmers and regional markets.[16] Others argue for adding value to Africa's exports of unprocessed raw resources, including oil, gas, metals and timber, perhaps following the Indonesian model with nickel, in which local content requirements were used to encourage domestic processing of the ore.[17] With services increasingly tradeable through digital means, and exhibiting the kind of productivity growth usually reserved for manufacturing, others have wondered if a services model, such as that employed in the Philippines or India,[18] might replace the traditional role of manufacturing in development.[19]

An "export-orientation" has been a core feature of past models of industrialisation, with smaller countries keen to tap larger export markets to realise economies of scale and expose themselves to the latest international technologies. Yet regional models of industrialisation, based on African regional integration and trade policies like the African Continental Free Trade Area (AfCFTA), are increasingly cited as unique opportunities to take advantage of the size and dynamism of the collective African marketplace.

Increasingly a case has been made for an expanded understanding of what is meant by "industrialisation,"[20] and to look beyond a fixation on manufacturing towards sectors and industries that share similarly attractive characteristics including scalability, tradability, labour-intensiveness, and scope for rapid productivity growth. That might include activities such as regional value-added supply chains, agro-industry, and horticulture, adding value to minerals, tourism and service exports using information and telecommunication technologies. The main point is that "successful African economies of the twenty-first century are unlikely to look like the successful East Asian economy of the twentieth."[21]

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[13] Stiglitz, J., (2018) From Manufacturing Led Export Growth to a 21st Century Inclusive Growth Strategy: Explaining the Demise of a Successful Growth Model and What To Do About It. https://www.wider.unu.edu/sites/default/files/Events/PDF/Papers/Draft-paper-Juseph-Stiglitz-Sept2018.pdf

[14] Rodrik, Dani. 'Premature deindustrialization.' *Journal of Economic Growth* 21 (2016): 1-33.

[15] Baumol, William J. (1967), 'Macroeconomics of unbalanced growth: the anatomy of urban crisis'. *The American Economic Review*, Vol. 57, No. 3 (Jun.), pp. 415-426.

[16] Ndii, David. (2023). Africa's Infrastructure-Led Growth Experiment Is Faltering. It Is Time to Focus on Agriculture, https://carnegieendowment.org/2023/04/21/africa-s-infrastructure-led-growth-experiment-is-faltering.-it-is-time-to-focus-on-agriculture-pub-89564

[17] Huber, Isabelle. (2021). Indonesia's Nickel Industrial Strategy, Center for Strategic and International Studies (CSIS) Commentary. https://www.csis.org/analysis/indonesias-nickel-industrial-strategy

[18] Barry Eichengreen & Poonam Gupta, 2013. 'The two waves of service-sector growth,' *Oxford Economic Papers*, Oxford University Press, vol. 65(1), pages 96-123, January

[19] World Bank. 2021. At your service? The promise of services-led development.

[20] Newfarmer, R. S., J. Page and F. Tarp (2018) *Industries without smokestacks: Industrialisation in Africa Reconsidered*. Oxford Univeristy Press; and Arkebe Oqubay. (2015) *Made in Africa: Industrial Policy in Ethiopia*, Oxford Universtity Press

[21] Ibid

Recent arguments have also stressed the need to tailor Africa's industrialisation for the changing priorities, opportunities and challenges of our times such as green industrialisation, digitisation, and regional integration.[22]

This paper argues that there is not a single "the model" that will work in all circumstances. What matters more is the approach and process, including "experimenting and learning" to craft appropriate interventions by a committed developmental state. In different African countries that might involve a blend of agriculture, manufacturing, or services-based industrialisation, and adding value to raw materials. In some instances, it may involve building on national and regional markets, as well as international markets further afield.

III. The "big five" of a contemporary route to industrialisation in Africa

Rather than prescribe a "golden policy template" of actions, the priority presented in this paper is for industrial policymaking itself to be upgraded. To get there, one must first understand what we are calling "the big five" issues that underpin contemporary industrial policymaking. While some reflect internal issues that African countries have direct influence over, others concern external issues that must be accounted for in contemporary industrial policies.

1. Policy consensus concerns the political economy of industrial policy and how it is governed. It can entail building a collective strategic vision for industrialisation, striking careful bargains with elites, and aligning economic incentives to ensure that the industrial policy – whatever it is – has a deep and subsisting commitment to it at the highest levels of government, but also beyond the executive and through the business community to other constituencies and individuals within societies.

A challenge to the current model of development in African countries has been distributional struggles and the emergence of stark inequalities. Mining and resource sectors have created islands of wealth, but few jobs. This has left increasing numbers of Africans to resort to the informal sector and particularly informal and insecure services sector work. Lots of workers are being left behind, undermining the political-economic buy-in to the prevailing model of development.

2. Green industrialisation is now necessary because of climate change. It requires a new path to industrialisation that is mindful of environmental concerns and decouples economic growth from negative environmental externalities such as carbon emissions.[23]

Africa's historic contribution to CO2 emissions is negligible but is likely to rise as the continent develops. The challenge is to ensure the emergence of a competitive industrial sector while transitioning to cleaner energy and production methods. This should involve developing Africa's underutilised renewable energy sources, reducing process emissions in production,

[22] Carlos, L., and te Veldes (2021) Structural Transformation, Economic Development and Industrialisation in Africa Post-COVID-19. Institute for new Economic Thinking: Africa Paper Series #1. January
[23] Triki, C. and Said, J. (2021). Maximising the Green Path to Industrialisation in Africa, Tony Blair Institute for Global Change. https://www.institute.global/insights/climate-and-energy/maximising-green-path-industrialisation-africa

and increasing resource efficiency. However, it will also involve abandoning Africa's abundant fossil fuel resources and an expensive transition to a new energy infrastructure. This is a more difficult trade-off for African countries, still struggling with extensive extreme poverty, than for more advanced and secure economies elsewhere in the world.

Green industrialisation may also create opportunities as the world transitions to new technologies and patterns of consumption. For Africa, this could include leapfrogging into new and cleaner technologies, encouraging "green mineral" value chains, harnessing green hydrogen, and developing the continent's sizeable but underutilised renewable energy resources. Achieving these goals requires delicate balancing to achieve environmental goals without compromising the just development aspirations of African countries.

3. Supply chain security and resiliency are changing investment patterns and, correspondingly, how and where industrialisation can take place in an increasingly fragmented post-Covid-19 world.

Geopolitical tensions and corresponding security-influenced industrial policies in major economies are leading to a recalculation of supply chain risks and investment decisions. Key examples include US-China decoupling since the initial US tariffs on imports from China in 2018, bans on the sharing of certain technologies between rivals, calls for EU development assistance to become more "transactional… [dependent on] common values",[24] and policies to entice the reshoring of "strategic" sectors such as semiconductors. Covid-19 shifted perspectives on supply chain risks with businesses reconsidering the resiliency of their supplies while governments navigated "vaccine diplomacy".

A text-mining analysis of call reports from a large sample of multinational corporations found a sharp spike in firms' interest in "reshoring" and "friend-shoring" since Covid-19 and the war in Ukraine.[25] IMF simulations suggest that real income losses due to geoeconomic fragmentation could be more than twice as large for the median emerging market economy in Africa than for the median advanced economy.[26] Rather than getting trampled under foreign elephants, African economies must consider how their industrial policies can traverse and circumvent such risks. There may be opportunities too, like North African gas exports to Europe replacing Russian supplies, or intra-African trade in grains and fertilisers.

4. Shifting industrialisation paradigms must be accounted for by so-called 'late developers' in their industrialisation policies. The three biggest emerging changes to the current industrial paradigm are the rise of digital production methods, the growth of platform production models, and continuing changes to the geographic distribution of production (Table 1).

Digital technologies are transforming industry, changing where value is created and how it is captured. This includes using computing to automate what would previously have been routine tasks undertaken by workers, the increasing role of computer-aided services in production, and e-commerce or platform work.

[24] Chadwick, V. 2022. Exclusive: Internal report shows EU fears losing Africa over Ukraine, https://www.devex.com/news/exclusive-internal-report-shows-eu-fears-losing-africa-over-ukraine-103694
[25] IMF. 2023. Geoeconomic fragmentation and foreign direct investment, World Economic Outlook April 2023
[26] *Ibid*

Digitalisation is increasing the skills and technology intensity of manufacturing, which is undermining its traditional developmental role in absorbing large amounts of labour from the countryside. Digitalisation also creates opportunities that could be seized, including new possibilities for late developers like African countries to leapfrog into new ways of producing, including the increased role of digital services in manufacturers, many of which can be outsourced.

Two other factors that define industrial paradigms over time include the organisational model of production currently characterised by network production and platform production, and the geographic scope of industrialisation currently dominated by value chains at regional as well as global levels (Table 1). These developments come with opportunities and challenges that African countries must factor into the design and implementation of industrial policy. For instance, regional or global value chain systems entail specialising in specific tasks but require efficient transport, ICT, and energy infrastructure as the price of entry.

Table 1: Industrial paradigms from 1860 to present

Industrial paradigms	**1861 – 1913**	**1896 – 1945**	**1955 – 1992**	**1991 – 2005**	**2008 – present**
Technological paradigm	Steam power & rail	Steel & electricity	Autos & oil	Computers & ICTs	Digital and green
Organisational model of production	Managerial firms & local suppliers	Corporation & mass production	MNC & mass production	Network production	Platform production
Geographic scope	National	National, Multinational	Multinational	Global Value Chains	

Source: adapted from UNIDO (2020)[27]

5. Widening policy space concerns the expansion of the acceptability of industrial policy measures. Until recently prevailing norms of acceptability, backed up by bilateral, regional and multilateral agreements, had constrained the "space" available for adventurous industrial policy instruments. Frameworks, such as the World Trade Organization and international investment agreements, restricted certain instruments, such as local content requirements, subsidies, import licenses and tariffs. Such rules had a "chilling" effect on policymakers even beyond their direct enforcement.[28]

The growing use of industrial policies by major economies, or "modern supply-side economics" in the words of US Treasury Secretary Janet Yellen, has put industrial policy back on the menu. The EU with its Green Deal Industrial Plan and the US with its Inflation Reduction Act have demonstrated a step-shift in norms around industrial policy acceptability. Some

[27] UNIDO [United Nations Industrial Development Organization] 2020). *Industrialization as the driver of sustained prosperity*. Vienna, Austira

[28] Tienhaara, K. (2011). 'Regulatory chill and the threat of arbitration: a view from political science". *Evolution in Investment Treaty Law and Arbitration*, Chester Brown, Kate Miles, eds., Cambridge University Press.

more powerful developing countries, such as Brazil and India are following suit.[29] While this may open the door to more adventurous industrial policies in some developing countries, this also raises the real risk of the multilateral rules-based system devolving into more of a "might is right" system to the detriment of smaller economies.[30]

IV. Tenets of sustainable industrial policy in Africa

Industrial policy can be a powerful tool for Africa's development but without the certainty of any specific model to follow, it requires the art of upgrading industrial policymaking itself to be more agile in the face of a changing world, more robust to challenges and distractions, and more impactful to meaningfully transform African economies. The following five tenets articulate the foundations of more sustainable, active, and intentional industrial policy in Africa.

A. Adaptive industrial policymaking

Adaptive industrial policymaking employs an "experiment and learn" approach. It appreciates that industrialisation must occur in a new, unsettled era of challenges and opportunities (including "greening" industrialisation, the re-prioritisation of supply chain security, and shifting industrialisation paradigms). A proactive test-and-learn methodology to policy making is more realistic than striving for immediate policy perfection. Doing so allows governments to get less caught up in perfecting industrial policy design, and to focus more on implementation (in general appreciated to be a greater challenge in many African countries) and to "build capacity by delivering results."[31]

It can also involve policy "sandboxes" which are dedicated zones in which different policy levers and laws are tested before they are rolled out across the rest of a country. The best example of this is the Special Economic Zones (SEZs) and industrial parks popularised in the successful promotion of manufacturing in countries like China, and increasingly in African countries (Box 1). Unfortunately, outside of these examples, such experiment and learn policymaking in African countries has often been limited and unimaginative, instead relying blindly on reforms already identified by the World Bank or other donors.[32]

For adaptive industrial policymaking to be effective it is important to foster a policy learning ecosystem that accepts experimentation and learning. Policymakers must not just 'test' their ideas, but closely monitor and evaluate their effects. They must, like any high-growth investment manager, be permitted to take risks and learn from mistakes. China's success in industrialisation was equally due to flexible and adaptive policymaking as to any particular

[29] Shadlen, K. and Azmeh, S. 2023. Rethinking developmental policy space in a fragmented trade regime, https://blogs.lse.ac.uk/internationaldevelopment/2023/05/24/rethinking-developmental-policy-space-in-a-fragmented-trade-regime/
[30] *Ibid*
[31] Andrews, M., Pritchett, L., Smji, S., & Woolcock, M. (2015). Building capability by delivering results: Putting problem-driven iterative adaptation (PDIA) principles into practice. OECD.
[32] Ansu, W., Booth, D., Kelsall, T., and te Velde, D. (2016). African Transformation Forum 2016: Public and Private Sector Collaboration for Economic Transformation.

sectoral focus.[33] An approach famously articulated by Deng Xiaoping as "crossing the river by feeling the stones".

Box 1. SEZs and Industrial Parks in Africa

ARISE Integrated Industrial Platforms (ARISE IIP) grew from successes focusing on transforming timber to furniture in Gabon's Special Economic Zone before expanding to cotton with Togo's Plateforme industrielle d'Adétikope and agro-processing with Benin's Glo-Djigbé Industrial Zone. Its model of developing and running integrated industrial parks is now being extended to six other African countries (Côte d'Ivoire, Chad, Nigeria, Rwanda, Republic of the Congo, and the Democratic Republic of the Congo). A prerequisite for the ARISE model is strong government vision and commitment which is leveraged to secure constructive policy and regulatory environments, for instance through a tailored SEZ Act. Close collaboration with international investors ensures demand for the parks and access to investor resources, including networks, know how, and reputational capital, while the "integrated" part of the parks involves providing logistics, infrastructure, and access to finance. Where there is alignment, development partners are also collaborated with, for instance, to support skills training.

Ethiopia's industrial parks are among Africa's most famous. Established in 2007, with a bold government vision and partnerships with foreign private investors, the government drew inspiration from experiences in other countries before experimenting and learning from initial efforts leading to a revamped industrial park policy in 2015 that focused more on addressing socio-environmental sustainability, establishing backwards and forward industrial linkages, and transferring technology and know-how.

In 2019/20 Ethiopia's industrial parks accounted for 40% of all manufacturing exports in the country.[34] Conflict in the northern part of Ethiopia, and resultant expulsion from the US AGOA trade preferences programme, have unfortunately likely undermined some of the recent successes of the policy.

B. Capacitated industrial policymaking

More advanced policymaking, which is adaptive and substantive, does however demand greater capacities for policymaking in government to design, monitor and analyse policies. The capacities for this are not always available in resource and personnel-stretched African governments. Ministries responsible for industrial development (typically ministries of "trade and industry") are often relegated to the second tier in the policy power hierarchies of many African countries and in many instances have limited political capital or substantive economic influence.

At its heart, capacitated industrial policymaking argues that development is best driven when effective government institutions are at the steering wheel. Ministries responsible for industrial policy must have the resources to lead the research, design, and implementation of their own policies, rather than absolute reliance on external assistance and expertise. The

[33] Ang, Y. (2016). How China Escaped the Poverty Trap. Cornell University Press.
[34] World Bank. (2022). On the Path to Industrialization: A Review of Industrial Parks in Ethiopia

effectiveness of those institutions will improve if they are given the chance to grow, with sufficient resources, political capital, and scope to test ideas and learn from successes and failures.

C. Consultative industrial policymaking

In the past, economic policymaking was often seen through the prism of the state vs markets. Some models call for free market-led development, others for the strong hand of developmental states. Whichever model was chosen, the problem has been that it can take 5-20 years for policy to catch up with practice. If policy reacts too slowly, damage may already be done, or adverse economic situations become entrenched, and opportunities lost. But premature and misdirected policy can also frustrate or constrain growth. To strike a balance, governments must engage in consultative policymaking. This involves plugging policymaking into industrial ecosystems to foster collaboration between policymakers and businesses. Doing so can help identify local solutions to particular local challenges, identify cases of misaligned policy, and speed up the pace at which policy can catch up with practice.

This is especially important for policies that are not easily reversible, which would be unsuited to the abovementioned “test and learn” approach and instead require more careful deliberation with stakeholders. Consultative mechanisms must solicit the views of enterprises of different sizes and local businesses as well as international investors.

It is not just businesses that governments must consult with in industrial policymaking. They must also engage with workers and civil society organisations to ensure that policies have broad buy-in to an overarching vision. Sustainable development, not just growth, must be the target and that is more likely to happen when environmental, labour, social, local and gender issues are understood and addressed.

In binding this all together, consultative policymaking must of course also be conscious of accounting for the inherent biases and ulterior motives of stakeholders. That requires strong and committed leadership, which is willing to confront vested interests while looking to establish trust with partners. Consultative policymaking does increase the complexity of the policy formulation process. That in turn can slow down, frustrate, and inhibit policy implementation. Care should be taken so that policy consultation and inquiry do not descend into paralysis by analysis. That, in turn, requires well-capacitated and skilful industrial policymaking institutions.

D. Partnering for industrial policymaking

Partners can be used to amplify industrial policies. This can involve integrating and onboarding international investors to leverage key assets to understand how industrial paradigms are shifting and where opportunities could be created. Examples include taking advantage of the growing demand for sustainable cotton and circular textile production methods in West Africa, or the demand for critical green minerals in the Democratic Republic of the Congo. It can involve network capital, to access complementary investors, and reputational capital to interest and crowd them into industrial investment opportunities.

Investments from Africa's partner countries do not serve its industrial interests. Currently, 47% of EU, 45% of UK and 31% of US Foreign Direct Investment (FDI) to Africa is in mining.[35] The largest destination of China's FDI in Africa is energy.[36] Partners can help by shifting this focus into sectors that can create value-added, jobs, and contribute to sustainable industrialisation.

Partnering in policymaking does however require skill and astuteness. Partner's interests do not always align. Investors may prioritise cheap access to extractable resources over building local value chains while donors can bloat or divert policies with their own well-intentioned priorities. Well capacitated policymaking is needed to ensure that partnering in policymaking is done well so that partners can be harnessed equitably, rather than either side being taken advantage of.

E. Transboundary industrial policymaking

Many of the modern challenges of industrialisation are transboundary. Fighting climate change requires sharing clean technologies and corresponding investments. Global governance frameworks are increasingly needed in the digital era for areas like taxation, labour rights, and data access. Some of the opportunities for African industrialisation are also transboundary, including the potential to create scale economies and tap into rapid market growth through African regional integration.

The influence of individual African countries and their technical capacities in transboundary issues can be limited. There is no continental vision, and few African countries have well-articulated strategies, on how to engage constructively with China on economic priorities, despite the country now being Africa's single largest trading partner. At the WTO, and in bilateral negotiations, African countries are almost always on the back foot, watering down commitments rather than offering constructive and positive proposals. Participation by African countries in WTO disputes and norm-setting is paltry.[37] An admirable exception was South Africa's (jointly with India) proposed WTO waiver for Covid-19 vaccine technology sharing.

To use the language of the African Union's Agenda 2063, Africa must "speak with one voice and act collectively to promote our common interests and positions in the international arena". By pooling their resources and influence, African countries can better ensure that their interests are heard and accounted for in global issues. The AfCFTA can be a powerful resource not just for integrating African economies, but for establishing commonalities on tricky issues being negotiated in multilateral fora. Regional projects and programmes, like trade corridors, power pools, and regional trade facilitation programmes like Trademark Africa, can bring countries together to tackle regional coordination challenges.

Partner countries can help, too. The trade regimes of Africa's partner countries are critically important for its trade – and by extension industrialisation, yet they fail to serve Africa's needs. A new trade deal is needed for Africa that first prioritises space for African regional integration.[38] The US's African Growth and Opportunities Act (known as AGOA) sets a

[35] MacLeod J. & Luke D. 2023. Trade and investment flows and a perspective for analysing trade policy in Africa. In: Luke, D (ed.), How Africa Trades. London: LSE Press. DOI: https://doi.org/10.31389/lsepress.hat.a
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[36] Ibid
[37] Van der Ven, C and Luke, D. 2023. "Africa in the World Trade Organization". in Ed. Luke, D. How Africa Trades, LSE Press
[38] Luke, D. and MacLeod, J. 2023. *A New Trade Deal for Africa, Please!* https://library.fes.de/pdf-files/international/20258.pdf

precedent for this, showing that partner countries around the world can come together to create waivers in WTO rules for trade arrangements to help support Africa, as a late developer and the region increasingly home to the last vestiges of extreme poverty.

V. Conclusions

There is no reason African countries cannot industrialise, diversify their economies, raise tax revenues, and realise high and sustainable living standards. As a late developing continent, the circumstances in which African countries will industrialise are however very different to previous historical examples. Industrialisation today is unlikely to be a phenomenon narrowly confined to export-oriented manufacturing for foreign markets, but instead involves sectors with potential for scalability, tradability, labour-intensiveness, and productivity growth, whether in services, agriculture or adding value to raw materials and resources. We can think of this as 'sustainable industrialisation.'

Industrialisation policies must increasingly account for the ways that industrialisation is changing, including the rise of digitalisation, changes to organisational models of production, and the geographic distribution of production. It must be greener than the industrialisation that occurred before while navigating growing geopolitical divides, the re-emergence of concerns around supply chain security, and the disintegration of constraints to adventurous policymaking space. There is also now a greater appreciation of the role of political-economic buy-in to industrial policy.

There exists no "golden template" of sustainable industrial policy that can be prescribed. The routes to industrialisation will be different from the past but also differ across African countries depending on their available resources, geographic disposition, labour wages and existing economies. To be effective, industrial policymaking itself must change. It must be far more sophisticated. Key tenets involve efforts to make it more adaptive and consultative, while better integrating investment partners and engaging with regional and international allies to address transboundary issues, like access to clean technologies. Industrial policymakers must also fight for the resources they need so that ministries of trade and industry have the capacity to effectively design, implement, and learn from their policies.

For African industrialisation to be successful it is unlikely to follow the East Asian model or a Latin American model, but be contemporary and sustainable, and with uniquely African characteristics. That will not be easy, but the prize of alleviating poverty makes it worth it.


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