

Policy Insights

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Africa's Industrial Moment: Strategic Agency, China and the Green Transition

ROLI ASTHANA

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Executive summary

Africa faces a strategic choice in the green transition: remain primarily a supplier of critical minerals and an importer of finished clean energy technologies, or secure a meaningful role in manufacturing and assembling the industries that will shape future global growth. This policy insight argues that this outcome is not structurally predetermined. Africa possesses significant mineral resources, growing markets, available labour, industrial footholds and an increasingly integrated continental market. The central challenge is whether African governments can use these assets collectively and strategically to negotiate industrial capacity with external partners.

China's dominance of clean energy manufacturing creates both a constraint and an opportunity. It has an exceptionally deep ecosystem spanning solar, batteries, electric vehicles (EVs) and grid technologies, with particular dominance in mineral processing and battery cell manufacturing. Rather than attempting to compete directly with China across entire value chains, the policy insight proposes strategic complementarity. African countries should identify specific segments where they can develop competitive capabilities and negotiate with Chinese firms and other external investors to locate manufacturing, assembly, supplier development and associated capabilities within their economies.

Introduction

Africa is usually cast as peripheral to the green transition: a supplier of critical minerals, a site for infrastructure deployment, an arena for great power competition. That framing risks getting the politics backwards. Africa has agency in this transition, and the choices made now will decide whether the continent becomes a manufacturing actor in the green economy or is locked into the extractive role it has occupied in every previous commodity cycle.

The stakes are high. Clean energy technologies depend on a narrow set of critical minerals heavily concentrated on the continent,¹ and UNCTAD's 2023 assessment of Africa's supply chain potential is to the point: Africa holds roughly 48% of global cobalt reserves and 47.6% of manganese reserves, as well as significant reserves of several other critical minerals, yet remains structurally at risk of being 'locked into the provision of just raw materials'.² The EU's Critical Raw Materials Act gives that risk legal form, prioritising secure procurement of raw materials over building African manufacturing capacity, unless African governments renegotiate the terms.³ SAIIA's recent work traces the same dynamic on the China side, with a 2024 assessment of China–Africa energy and climate cooperation ahead of the

1 International Energy Agency, *The Role of Critical Minerals in Clean Energy Transitions* (IEA, 2021).

2 UN Trade and Development, *Economic Development in Africa Report 2023: The Potential of Africa to Capture Technology-Intensive Global Supply Chains* (UNCTAD, 2023).

3 European Commission, *Critical Raw Materials Act: Proposal for a Regulation* (European Commission, 2023).

Forum on China-Africa Cooperation (FOCAC) finding the relationship still weighted toward infrastructure and finance rather than shared industrial capability.⁴ An earlier foundational study of African agency in China relations argues that African governments hold more real bargaining power in these negotiations than is commonly assumed. It contends that the constraint is less structural than a failure to use that leverage in a coordinated way.⁵

This is, at root, a question of political economy: who sets the terms of exchange, who captures the rents and whose bargaining position improves as the technology shifts. Countries that secure manufacturing and assembly capacity in solar, batteries, electric mobility and grid equipment will shape global growth for decades. Countries that do not will simply have swapped one import dependency – fossil fuels – for another. UNCTAD's assessment finds that African economies already hold pockets of automotive and light manufacturing capacity, concentrated heavily in South Africa and Morocco;⁶ the task is to connect those footholds to the new energy value chains before the window closes.

China's dominance in renewable energy manufacturing is usually treated as the obstacle, but it is better understood as an opportunity. China has built the world's most complete ecosystem for solar, battery and EV production, underpinned by two decades of state-directed energy finance and industrial investment abroad and at home.⁷ That ecosystem (ie, its suppliers, production know-how and capital) can be negotiated with. The question is not whether Africa can industrialise in a China-dominated system, but whether African governments can negotiate a position within it on terms that build domestic capability. The binding constraint in such negotiations is rarely technical, but rather the absence of a clear objective or, crucially, a coordinated bargaining position.

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The argument here is for strategic complementarity, ie, identifying the segments of energy value chains where African labour costs, market growth and regional integration create genuine competitive advantage, and negotiating with China to anchor

4 Xiang Chen, Alex Benkenstein and Cobus van Staden, *China-Africa Energy and Climate Cooperation: Prospects for FOCAC 2024*, Report (SAIIA, August 26, 2024).

5 Cobus van Staden, Chris Alden and Yu-Shan Wu, "In the Driver's Seat? African Agency and Chinese Power at FOCAC, the AU and the BRI" (Occasional Paper 286, SAIIA, September 2018).

6 UNCTAD, *Economic Development in Africa*.

7 Kevin P. Gallagher and Feng Zhang, "China's Global Energy Finance", research database and associated publications, Global Development Policy Center, Boston University (ongoing since 2022).

manufacturing and assembly capacity inside African industrial ecosystems rather than importing finished goods. This is the crux of the argument. This is not import substitution or an attempt to replay East Asia's late-industrialisation trajectory.⁸ It is a narrower, more achievable claim: that targeted industrial strategy, built on Africa's actual strengths, can secure a manufacturing stake in the transition before the terms are set by others.

The global energy and industrial landscape

Three forces are restructuring the global energy system: accelerating clean energy deployment; the return of industrial policy as the organising principle of economic strategy; and the geopolitical fragmentation of supply chains. This determines where factories get built, who controls the technology and how the value they create is distributed.

Industrial policy has returned with force, and China's experience shows how far a state may be willing to go to reshape it. One study describes Beijing's continuous adjustment of its industrial policy blueprint (eg, setting up pilot projects, reacting to setbacks, targeting 10 priority industries for global leadership) as an instrument of geo-economic competition, not a static subsidy programme.⁹ This is now the default mode of economic statecraft among the powers that matter to Africa's energy transition, which means the old assumption that trade liberalisation alone will let latecomers industrialise is no longer valid.

China is at the centre of that landscape. Its manufacturing ecosystem for solar PV, battery cells, EVs and grid technology has been built over two decades, financed in large part through state-directed lending.¹⁰ On battery supply chains specifically, BloombergNEF's Global Lithium-Ion Battery Supply Chain Ranking rates 30 countries on raw materials, manufacturing, performance on environmental, social and governance indicators, and downstream demand. It placed China first every year from the ranking's launch until 2022. In the February 2024 edition, Canada overtook China for the first time, on the strength of raw-material integration with the US automotive sector.¹¹ China nonetheless retains overwhelming dominance in the processing stages that matter most for a green transition strategy: it processed over 90% of the world's graphite and roughly two-thirds of global cobalt and lithium processing capacity as of 2022, and accounted for 58% of global processed battery mineral exports in 2023.¹² Its advantage over Africa is thus concentrated in mineral processing and cell manufacturing, and not an unchallenged dominance across every segment.

8 Alice Amsden, *Asia's Next Giant: South Korea and Late Industrialization* (Oxford University Press, 1989).

9 Max J. Zenglein and Anna Holzmänn, "Evolving Made in China 2025: China's Industrial Policy in the Quest for Global Tech Leadership", *MERICs Papers on China* 8 (July 2019).

10 Gallagher and Zhang, "China's Global Energy Finance".

11 BloombergNEF, *Global Lithium-Ion Battery Supply Chain Ranking*, 4th ed. (BloombergNEF, February 2024).

12 US Energy Information Administration, "China Dominates Global Trade of Battery Minerals", *Today in Energy*, May 21, 2025.

For Africa, this asymmetry is both an opportunity and a constraint: China's ecosystem is the only one currently capable of underwriting rapid industrialisation in emerging markets, but by the same token it also sets the terms on which that industrialisation happens.

Africa's structural position in this landscape has three features worth noting. It is mineral-rich and manufacturing-poor, a gap UNCTAD's 2023 supply chain assessment highlights.¹³ Its energy demand is rising fast, driven by urbanisation and the expansion of productive sectors. And its institutional architecture, eg, industrial parks, standards bodies and procurement systems, remains fragmented enough for African governments to struggle to negotiate industrial outcomes or coordinate regional value chains even where the political will exists.

What these cases have in common is a political choice: governments treated market access as something to be negotiated in return for a benefit, not something simply to be accepted on offer

None of this is unprecedented. A study of South Korea's industrialisation shows how targeted state intervention, supplier development and hard-nosed negotiation turned a peripheral economy into a manufacturing powerhouse.¹⁴ Brazil's automotive sector, built on local content rules and industrial policy, demonstrates that domestic markets can anchor assembly capacity even in the face of dominant foreign suppliers.¹⁵ Vietnam's solar manufacturing boom is a more complex case than it first appears. Recent firm-level research finds that Chinese firms account for 25 of the 79 solar panel producers operating in Vietnam and roughly 75% of the country's solar exports.¹⁶ This is a reminder that 'export orientation' alone does not equal domestic capability unless the supporting ecosystem is transferred rather than merely hosted (a lesson countries like Pakistan could find useful). What these cases have in common is a political choice: governments treated market access as something to be negotiated in return for a benefit, not something simply to be accepted on offer.

¹³ UNCTAD, *Economic Development in Africa*.

¹⁴ Amsden, *Asia's Next Giant*.

¹⁵ Helen Shapiro, *Engines of Growth: The State and Transnational Auto Companies in Brazil* (Cambridge University Press, 1994).

¹⁶ Meng Yu Ngov et al., "[The Rise of Vietnam's Solar Panel Industry](#)," VoxDev, December 1, 2025.

China–Africa energy value chains:

Current realities

China's footprint in African energy is usually described as infrastructural, ie, power plants, transmission lines and grid upgrades financed and built by Chinese contractors. While that is accurate, the underlying story is industrial: Chinese firms shape the manufacturing and assembly ends of these value chains, while African governments consistently negotiate for the infrastructure rather than the industry or manufacturing capacity behind it.

China's energy-finance footprint on the continent is well documented,¹⁷ and Chinese firms have erected solar parks, hydropower stations and transmission corridors across dozens of countries. Almost none of this has translated into domestic manufacturing capability. Africa imports nearly all its solar modules, inverters, battery packs and electric mobility components, even where the minerals inside them were mined a few hundred kilometres away.¹⁸ This gap between resource endowment and manufacturing participation is the central structural problem this policy insight addresses.

The footholds that exist are shallow and heavily concentrated: UNCTAD's input–output analysis of 43 African countries finds current productive capacity in the automotive supply chain is overwhelmingly concentrated in South Africa and Morocco, with most other countries only marginally integrated.¹⁹ Without an integrated supplier ecosystem, no African producer can credibly anchor a sector requiring precision engineering or standards compliance. This is not a byproduct of lagging development but rather reflects a consistent negotiating pattern in which African governments prioritise short-term energy access over industrial capability.

Yet there are market segments where the asymmetry with China does not have to be decisive. Solar panel assembly is labour-intensive and logistically sensitive to shipping costs, which makes local assembly viable once domestic demand reaches scale. Battery pack assembly (as distinct from cell manufacturing) requires engineering capability but not the capital intensity of upstream cell production. EV assembly, particularly for two- and three-wheelers and buses, maps onto existing African automotive experience and urban mobility patterns.²⁰ Grid component manufacturing, such as transformers and switchgear, already exists in South Africa and could be extended regionally.

Africa has not pursued these systematically. Industrial parks remain under-utilised as land allocation rather than ecosystem-building instruments. A comparative study of African special economic zones (SEZs) finds that most lack the institutional depth to attract and

17 Gallagher and Zhang, "China's Global Energy Finance".

18 IEA, *Critical Minerals in Clean Energy Transitions*.

19 UNCTAD, *Economic Development in Africa*.

20 UNCTAD, *Economic Development in Africa*.

retain manufacturing investment.²¹ Supplier development, the mechanism that made South Africa's automotive sector competitive, remains the exception rather than the rule elsewhere. Even in South Africa itself, local content in domestically assembled vehicles is below 40%, against a government target of 60% by 2035 under the South African Automotive Masterplan.²² Standards harmonisation on the continent is coordinated through the African Organisation for Standardisation, whose mandate covers exactly this kind of technical alignment, but which, by its own account, is still working through a multi-decade harmonisation process across 43 member states.²³

Blended finance instruments are increasing: the African Development Bank's (AfDB) Africa Green Banks Initiative, developed with the Climate Investment Funds, is designed to de-risk exactly this kind of manufacturing investment.²⁴ Gulf capital has entered at scale, with Masdar committing \$10 billion in clean energy finance to the continent through 2030.²⁵ The World Bank and AfDB's Mission 300 aims to provide reliable, affordable and sustainable energy to 300 million people across Africa by 2030.²⁶ But most African governments still lack the institutional capacity to structure financing arrangements that make full use of either channel. Power Africa, the US bilateral channel that once did some of this coordinating work, was also effectively dismantled in 2025 following the demise of USAID, removing one of the few institutional actors focused on procurement-side reform in African energy markets.²⁷ Africa's power pools offer a foundation for cross-border trade and grid integration, as set out in the African Continental Power Systems Masterplan. Coordinated by AUDA-NEPAD, this is a blueprint for linking the continent's five regional power pools (Southern, West, East, Central and North African) into a single electricity market.²⁸ However, without harmonised standards and shared supplier networks, they cannot yet anchor manufacturing. In addition, the African Single Electricity Market aims to facilitate electricity sector development through an integrated continental electricity market based on the 2019 AfCFTA Agreement.

The result is a structural gap. Africa participates in China–Africa energy value chains as a consumer of infrastructure and supplier of minerals, but rarely as a manufacturer. This position is the result of policy choices and negotiating approaches, which means it can (and should) be re-examined.

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- 21 Thomas Farole, *Special Economic Zones in Africa: Comparing Performance and Learning from Global Experience* (World Bank, 2011).
 - 22 Justin Barnes, Lorenza Monaco and Anthony Black, "Localisation and Supply Chain Development in the SA Auto Industry" (Industrial Development Think Tank Policy Briefing Paper 6, University of Johannesburg Centre for Competition, Regulation and Economic Development, April 2018); Guy Bowden, "Made in South Africa? An Assessment of Local Content within the Automotive Value Chain" (Master thesis, University of Cape Town, 2022).
 - 23 African Organisation for Standardisation, institutional mandate documentation, including *Principles and Procedures for the Harmonisation of African Standards and Other Deliverables* (2024).
 - 24 African Development Bank, "African Green Banks Initiative", accessed October 19, 2026, <https://www.afdb.org/en/topics-and-sectors/initiatives-and-partnerships/african-green-banks-initiative> (developed with the Climate Investment Funds).
 - 25 PR Newswire, "COP28 Presidency Announces US\$4.5 Billion UAE Finance Initiative to Unlock Africa's Clean Energy Potential", Press Release, September 5, 2023.
 - 26 World Bank Group, "Mission 300", accessed October 5, 2026, <https://www.worldbank.org/ext/en/energizingafrica>.
 - 27 Kim Harrisberg, "USAID Cuts Hurt Debated Energy Plans in Africa", *Reuters/Context News*, April 24, 2025, on the 2025 termination of most Power Africa programmes.
 - 28 AUDA-NEPAD, *The African Continental Power Systems Masterplan (CMP): Synthesis Report* (AUDA-NEPAD, 2023).

Strategic agency: Moving beyond extractive roles

Africa's participation in these value chains has long followed an extractive logic: minerals leave the continent, value is added elsewhere and finished technology returns as an import. Now, there is an opportunity to break that cycle, as the green transition is redrawing the map of global manufacturing at the same moment Africa's markets and labour force are growing most rapidly.

Africa's strength here is not only mineral abundance but also market growth, labour availability, regional integration and the political momentum already built up around industrialisation. The African Continental Free Trade Area's (AfCFTA) rules of origin can be calibrated to reward local value addition and shape investment decisions to focus on assembly and supplier development rather than pure import substitution.²⁹ Used well, they are as much a bargaining chip with external manufacturers as a trade liberalisation tool.

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Negotiating leverage, not just comparative advantage, is what determines outcomes here. Morocco's automotive sector shows that a government with a credible investment promotion offer and a clear industrial target can anchor manufacturing even in the shadow of a dominant global supplier. Automotive exports rose from 2% to 16% of Morocco's total exports between 2010 and 2016, on the back of a national industrial acceleration strategy launched in 2014, and its Tanger Med free-zone complex was ranked Africa's top free zone by fDi Intelligence in 2020.³⁰ Morocco did this by making a specific, narrow ask that included a targeted segment, clear terms and local content commitment, and following through on the institutional side of the bargain. IRENA's own country study of Morocco's renewable energy sector found the same pattern in its Noor-Ouarzazate solar complex, where the government's auction design required 30–35% local content and local labour, using procurement rules as an industrial policy lever rather than a pure

29 AfCFTA Secretariat, *Rules of Origin Manual*, vol. 1.0 (AfCFTA Secretariat, July 2022).

30 "Morocco, an Example in Terms of Special Economic Zones – Oxford Business Group", *North Africa Post*, November 27, 2023, reporting on OBG, *How Special Economic Zones Are Shaping Africa's Industrial Landscape, Focus Report* (November 2023).

cost-minimisation exercise.³¹ This is an example of strategic complementarity in action: a carefully negotiated claim on a segment Africa can credibly hold.

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However, local content requirements and supplier development mandates create rents, and rents attract rent-seeking. Import-dependent trading interests, and sometimes the officials who administer import procurement, have every incentive to resist rules that shrink the margin on finished goods imports. Any serious industrial strategy must anticipate this. That means sunset clauses on protection, performance requirements tied to measurable local content thresholds rather than symbolic quotas, and institutions with enough independence from short-term procurement politics to enforce them.

Most African SEZs lack the supplier networks and standards infrastructure to anchor manufacturing because they were conceived as land allocation exercises rather than ecosystem-building institutions.³² Fixing that is less about capital than about mandate: an industrial park with a supplier development unit and standards-testing capacity does a different job than one that simply leases plots.

Industrial strategy for the green transition

Manufacturing in this sector will not emerge from market forces alone; every country that has built a competitive position in it did so through deliberate state action. Africa's industrial strategy should be built on the following lines, as an integrated programme rather than a checklist.

- **Ecosystem building:** This is the first step because manufacturing does not happen in isolation from supplier networks, standards bodies, testing facilities and logistics. Vietnam's solar sector illustrates the relevant promises and limits: the country has built genuine export capacity, with module manufacturing capacity running at roughly three times domestic demand,³³ but the underlying supplier base is still substantially Chinese-owned rather than domestically embedded.³⁴ Africa's advantage is that it

31 International Renewable Energy Agency, "Morocco Country Analysis", in *Renewable Energy Transition in Africa: Country Studies* (IRENA, March 2021).

32 Farole, *Special Economic Zones in Africa*.

33 World Bank, *Vietnam: Achieving 12 GW of Solar PV Deployment by 2030 – An Action Plan* (World Bank, 2020).

34 Ngov et al., "Rise of Vietnam's Solar Panel Industry".

does not need to build every layer at once. Starting with solar panel assembly, battery pack integration, electric bus assembly and grid components lets ecosystem depth accumulate and develop around a manageable number of segments, provided the ecosystem transfer is negotiated explicitly rather than implicitly assumed to follow from hosting factories.

- **Industrial clustering:** This is the second step, as firms benefit more from shared infrastructure and labour pools than from isolated incentives. Morocco's automotive clusters demonstrate this: the government's National Pact for Industrial Emergence and subsequent Industrial Acceleration Plan built genuine agglomeration around its Tanger and Kenitra free zones, not merely a collection of tax breaks.³⁵ African industrial parks need to become cluster builders that offer supplier development services and standards infrastructure, not just serviced land.³⁶
- **Supplier development:** This pillar, which is most often neglected, creates durable capability – assembly alone teaches a workforce to bolt together imported components, while supplier upgrading builds the engineering capacity that lets a firm eventually design its own. South Africa's own experience is the clearest African cautionary tale here. Despite decades of a dedicated automotive industrial policy, the industry consistently falls short of its local content targets, a gap that industry analysts attribute to a policy design that rewards vehicle assembly over deep localisation.³⁷ The immediately feasible components – eg, solar panel frames and junction boxes, wiring harnesses, bus bodies and transformer casings – do not require capital-intensive upstream processes and are within reach of African manufacturers.
- **Standards harmonisation:** This determines market access and reduces the duplicated testing costs that keep African markets fragmented. The African Organisation for Standardisation's mandate covers this work across its 43 member states, coordinating with the continent's regional economic communities.³⁸ However, it needs to move in step with AfCFTA's rules of origin³⁹ and integrate with regional testing infrastructure, rather than running as a parallel technical exercise.
- **Financing and procurement reform:** This binding constraint is most likely to stall all of the above. The AfDB's Africa Green Banks Initiative and comparable blended finance mechanisms can de-risk manufacturing investment.⁴⁰ Gulf sovereign capital, particularly through Masdar's \$10 billion Africa commitment, has begun to fill some of the gap.⁴¹ However, governments still need the institutional capacity to structure the

35 Oxford Business Group, *How Special Economic Zones Are Shaping Africa's Industrial Landscape* (Oxford Business Group, November 2023).

36 Farole, *Special Economic Zones in Africa*.

37 Renai Moothilal, "How Policy Fix Can Revive SA's Stalled Automotive Localisation", *Business Day*, July 6, 2026; Barnes, Monaco and Black, "Localisation and Supply Chain Development".

38 African Organisation for Standardisation, institutional documentation.

39 AfCFTA Secretariat, *Rules of Origin Manual*.

40 AfDB, "African Green Banks Initiative".

41 PR Newswire, "Africa Green Investment Initiative".

deals, and solar procurement needs to reward domestic assembly and local content rather than defaulting to lowest landed-cost imports.

- **Regional coordination:** This turns fragmented national markets into the scale that manufacturing needs. AfCFTA's rules of origin⁴² and the AUDA-NEPAD Continental Power Systems Masterplan linking Africa's five power pools⁴³ both point in this direction, but only if industrial policy, standards and supplier networks are coordinated across borders.
- **Strategic negotiation with external partners (covered in the next section):** This pillar determines whether the other six translate into manufacturing capacity or remain a wish list. Morocco anchored manufacturing despite dominant external suppliers because its government negotiated for it, rather than hoping investment would follow infrastructure finance.⁴⁴

Case studies: Emerging African industrial pathways

Ethiopia's electric bus assembly programme grew out of a broader automotive-industrialisation push built around labour cost and a growing urban market. It remains small, but it shows that African cities can anchor electric mobility assembly without upstream battery cell manufacturing. The constraint is not demand but the absence of standards, infrastructure and financing instruments to deepen the ecosystem around the assembly line.

Kenya's path runs through its distributed solar home systems market – one of the largest in Africa – and an unusually strong entrepreneurial ecosystem, neither of which has yet translated into manufacturing. Fragmented procurement and inconsistent standards have kept panel assembly and inverter integration shallow, which makes Kenya's underperformance here look more like a policy failure than a structural one.

South Africa is the continent's most advanced industrial base, with established automotive clusters and supplier networks. However, UNCTAD's supply chain analysis confirms that productive capacity remains overwhelmingly concentrated in South Africa and Morocco relative to the rest of the continent⁴⁵ and the local content shortfall documented above shows that it has not fully converted assembly capacity into supplier depth.⁴⁶ Its grid component manufacturing (transformers, switchgear, cables) is a genuine foothold that could extend into renewable energy value chains. But energy

42 AfCFTA Secretariat, *Rules of Origin Manual*.

43 AUDA-NEPAD, *African Continental Power Systems*.

44 Oxford Business Group, *How Special Economic Zones Are Shaping*.

45 UNCTAD, *Economic Development in Africa Report 2023*.

46 Barnes, Monaco and Black, "Localisation and Supply Chain Development".

insecurity, policy inconsistency and thin regional integration mean the country could lose ground even as continental demand accelerates.

Morocco offers the most complete case of the model this policy insight argues for. Its automotive clusters became globally competitive through export orientation and coordinated industrial policy, taking automotive exports from 2% to 16% of the country's total exports in six years.⁴⁷ Its emerging solar manufacturing sector builds directly on that foundation, with local content requirements already embedded in flagship projects like Noor-Ouarzazate.⁴⁸ This demonstrates the importance of sequencing: build supplier capability in one sector, then extend it into an adjacent one on the strength of the existing ecosystem, using procurement rules to drive local content rather than leaving it to the market.

This demonstrates the importance of sequencing: build supplier capability in one sector, then extend it into an adjacent one

Outside Africa, Vietnam's solar sector and Brazil's electric mobility strategy make the same point, if in different directions. Vietnam shows the upside and the limits of hosting rather than owning an ecosystem: real export capacity, but a supplier base still substantially anchored in Chinese foreign direct investment (FDI).⁴⁹ Brazil shows a more deliberate attempt to force domestic capability: its 2024 Green Mobility and Innovation Program (MOVER) ties tax incentives to domestic production of low-emission vehicles and batteries. Recent modelling suggests an ambitious electrification pathway could roughly double the industrial jobs created compared with a business-as-usual scenario.⁵⁰ Africa's existing footholds are partial for the same reason these comparators are still working through their own limitations. Depth, standards and regional coordination are unfinished business everywhere, not just in Africa.

A framework for China–Africa industrial cooperation

China's dominance in these value chains is a structural fact, not a variable Africa can negotiate away. The relevant question is the terms of engagement, with a coherent framework resting on a few principles rather than an exhaustive checklist.

⁴⁷ Oxford Business Group, *How Special Economic Zones Are Shaping*.

⁴⁸ IRENA, *Renewable Energy Transition in Africa*.

⁴⁹ Ngov et al., "Rise of Vietnam's Solar Panel Industry".

⁵⁰ International Council on Clean Transportation, *The Transition to Electric Vehicles in Brazil's Automotive Industry and Its Effects on Jobs and Income* (ICCT, June 2025).

First, value chain segmentation means identifying where domestic capability can be built without competing head-on with China's upstream dominance in mineral processing and cell manufacturing.⁵¹ Ecosystem transfer, not just technology transfer, is the aim: African governments routinely negotiate for technology transfer clauses, but what builds capability is the supplier network, testing infrastructure and logistics integration around it. Vietnam's experience is a cautionary example: hosting Chinese FDI firms that account for three-quarters of the country's solar exports has not, on the evidence available, produced a comparably deep domestic supplier base.⁵² This is a key distinction that African negotiators should push on explicitly rather than accept 'technology transfer' language that leaves the underlying question unaddressed.

African governments routinely negotiate for technology transfer clauses, but what builds capability is the supplier network, testing infrastructure and logistics integration around it

Second, co-investment and risk-sharing are important, as no African government can capitalise this on their own. The AfDB's blended finance mechanisms and Gulf sovereign capital, particularly Masdar's Africa commitments, show that co-investment structures are scaling.⁵³ Chinese policy banks, sovereign funds and industrial park developers can co-invest on the same basis, but only where African governments arrive with a credible industrial strategy. Brazil's MOVER programme shows that tying incentives explicitly to domestic production, rather than to investment volume alone, translates co-investment into capability rather than just capacity.⁵⁴

Third, standards alignment, supplier network development and regional integration (discussed earlier in this policy insight in the context of domestic policy) can also be applied to negotiations with China. This is not a separate strategy but the domestic strategy finding expression in negotiations with a specific partner. What China contributes that changes the calculation is the depth of its own supplier base and processing capacity,⁵⁵ along with a standards ecosystem tightly integrated into global manufacturing, which African producers will need to align with regardless of whom they eventually sell to.

51 EIA, "China Dominates Global Trade".

52 Ngov et al., "Rise of Vietnam's Solar Panel Industry".

53 AfDB, "African Green Banks Initiative"; PR Newswire, "Africa Green Investment Initiative".

54 ICCT, *The Transition to Electric Vehicles*.

55 EIA, "China Dominates Global Trade".

Finally, industrial diplomacy is the principle most often missing in practice. China's own industrial policy is itself in continuous motion. MERICS's account of how Made in China 2025 has been adjusted, de-emphasised in official rhetoric and pursued anyway through regional pilot programmes is instructive.⁵⁶ African governments that do not track and respond to that shift will find themselves negotiating against an out-of-date understanding of this key partner. This requires standing expertise, not a one-off negotiating team assembled for a single deal.

Industrial diplomacy is the principle most often missing in practice

Conclusion

Africa can become a manufacturing actor in the industries that will define the coming decades of global growth. That is a strategic choice, not a foregone structural outcome, and it depends on whether African governments treat industrialisation as a central economic objective rather than a byproduct of infrastructure finance.

Africa can become a manufacturing actor in the industries that will define the coming decades of global growth

China's manufacturing ecosystem is unmatched in scale and depth at the processing and cell manufacturing stages,⁵⁷ but Morocco and Brazil have shown that scale asymmetry does not foreclose domestic industrial agency; it just constrains the terms on which that agency has to be exercised.⁵⁸ Strategic complementarity is the discipline that follows from that constraint: target the segments (solar panel assembly, battery pack integration, electric bus assembly, grid components) where African capability can be built without a head-on contest with China's upstream dominance, and build the institutions that make holding those segments durable.

⁵⁶ Zenglein and Holzmann, "Evolving Made in China 2025".

⁵⁷ EIA, "China Dominates Global Trade".

⁵⁸ Oxford Business Group, *How Special Economic Zones Are Shaping*; ICCT, *The Transition to Electric Vehicles*.

That (mostly unfinished) institutional work consists of supplier development programmes, standards harmonisation, industrial parks with an ecosystem mandate, blended finance instruments matched to institutional capacity, and regional coordination that survives changes of government. The evidence on African SEZs,⁵⁹ South Africa's own decades-long struggle to meet its local content targets⁶⁰ and the still-unfinished work of continental standards harmonisation and power pool integration⁶¹ show how much still needs to be done. None of it is insurmountable, but all of it requires African governments to treat China, and increasingly, Gulf capital, as manufacturing and investment partners to negotiate terms with, not just sources of finance to accept terms from. The green transition will not keep this opportunity open indefinitely. The window for Africa to enter as a manufacturer rather than a supplier is closing as fast as the transition is accelerating.

59 Farole, *Special Economic Zones in Africa*.

60 Moothilal, "How Policy Fix Can Revive".

61 African Organisation for Standardisation, institutional documentation; AUDA-NEPAD, *African Continental Power Systems Masterplan*.

Author

Dr. Roli Asthana

is a development economist, former diplomat and senior advisor with over three decades of experience in economic diplomacy, global governance and international cooperation across Asia, Africa and the Middle East. She is the CEO of Purvasa Strategy, Risk and Impact and served as a SAIIA Bradlow Fellow in 2026.

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Lithium battery production line (Getty Images)

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Jan Smuts House, East Campus, University of the Witwatersrand
PO Box 31596, Braamfontein 2017, Johannesburg, South Africa
Tel +27 (0)11 339-2021 • Fax +27 (0)11 339-2154
www.saiia.org.za • info@saiia.org.za