

DISCUSSION PAPER No. 365

Resource nationalism in the age of green industrialisation

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The critical raw materials essential for driving the global green transition are now at the forefront of geopolitical concerns. Governments in the US, China and the EU are emphasising domestic production of green technologies through industrial policies, leading to increased subsidies and trade fragmentation due to geopolitical rivalry. This race among superpowers is motivated by considerations of resilience and security. Meanwhile, many countries in the Global South that possess critical raw materials are engaging in resource nationalism, imposing export restrictions to promote value chain localisation. This strategy aims to assert sovereignty over resources amidst the ongoing wave of green development.

This paper looks at different narratives around resource nationalism. External viewpoints, 'from the outside looking in', often emphasise market efficiency and reasons for why resource nationalism might be inefficient. Conversely, internal perspectives, 'from the inside looking out', shed light on why it may be seen as a necessity to alter the historical model of providing raw materials with minimal value addition domestically.

In practice, however, countries often have to make a choice among different – economic, social, political – priorities, which makes it difficult to classify them into one or another category of narratives. Zooming in on the cases of Indonesia and Chile, the paper draws lessons for African countries as well as Europe.

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Acronyms

AfCFTA	African Continental Free Trade Area
CRM(s)	Critical Raw Material(s)
DRC	Democratic Republic of the Congo
EU	European Union
FTA	Free Trade Agreement
IRA	Inflation Reduction Act
OECD	Organisation for Economic Co-operation and Development
SQM	Chilean Chemical and Mining Society (<i>Sociedad Química y Minera de Chile</i>)
US	United States of America
USD	United States Dollar
WTO	World Trade Organization

1. Introduction

The raw materials requirements for the global green transition are enormous. At the same time, the supply chains of these critical raw materials (CRMs)¹ are increasingly the subject of geopolitical competition, amid concerns about access, security and stability of supplies. China's dominance of these supply chains has sparked fears of potential weaponisation,² prompting the United States of America (US) and the European Union (EU), among others, to prioritise domestic production of green technologies (e.g. solar panels, wind turbines, batteries, electric vehicles, among others) with the help of subsidies, tariffs and other protectionist measures, while also focusing on securing CRMs from third countries.

Most African governments subscribe to the need for industrialisation to create more and better jobs, diversify the economy, increase productivity and create more value-added. Several African countries are home to substantial reserves of CRMs. Although minerals have generally played a minimal role in promoting structural transformation in the past, CRMs are seen to offer opportunities to kickstart 'green industrialisation' in Africa, including through regional value chains, as envisaged under the African Continental Free Trade Area (AfCFTA). African governments are keen to enter green value chains like lithium-ion batteries by exerting greater control on their CRMs (Karkare and Medinilla 2023a). As countries deploy different strategies for green industrialisation, these are subject to a range of political economy factors (Medinilla and Byiers 2023). A key challenge then is to define the policies to support these ambitions in a politically informed way.

There is a surge in 'resource nationalism' in CRM-producing countries as they seek to maximise the benefits from their mineral wealth. It comes in the form of localisation measures, which CRM-rich governments tend to rely on in the absence of fiscal capacity to engage in a subsidy race, as observed in the US, China and the EU among a handful others. This is evident in the substantial increase in export restrictions on CRMs over the past decade (Kowalski and Legendre 2023). As much as 30% of global CRM exports by value were subject to restrictions in 2022 (Javorcik et al. 2023). In Africa, as of 2020, 42% of countries have bans on raw exports of minerals, often driven by aspirations for domestic economic development through resource-based industrialisation (Cust and Zeufack 2023). This approach is not new. In fact, there is a long history of resource nationalism in Africa, at least since the 1960s (Caramento et al. 2023). Recent interventions have several continuities with previous waves of resource nationalism, though these strategies are deployed amid different geopolitical challenges and national political contexts (Jacob and Pedersen 2018).

¹ CRMs are those minerals deemed critical to national security and economic development but are prone to supply chain disruptions (Mavhunga 2023). There is however a lack of consensus on which minerals are CRMs, with the US, the EU and China having their own lists (Venditti 2023).

² Import dependence of Organisation for Economic Co-operation and Development (OECD) countries on non-OECD suppliers is especially high for CRMs, concentrated in China accounting for 24% of the total followed by Russia (10%), Brazil (6%), South Africa (6%) and India (4%) (Kowalski and Legendre 2023).

Resource nationalism involves governments exercising control over natural resource industries through selective policies to achieve certain political and/or economic benefits (Caramento et al. 2023). Typically, it is aimed at (i) maximising public revenue from resource extraction, (ii) regulating and acquiring ownership of extractive industries, and (iii) promoting developmental spillovers from extractive industries including domestic processing to create backward and forward linkages. It can take different forms – for instance export taxes or bans, local content requirements for input-sourcing (linkages), acquiring ownership through nationalisation, contract renegotiations for greater revenues or retention of value-added in the country. At its core is the view that in order to benefit from the current wave of green technology development countries need to assert sovereignty over the country’s natural resources.

Yet it also opens up ideological debates. Some see it as ill-informed and unlikely to achieve the desired outcomes, statist, risking longer-term economic efficiency and well being,³ and favouring narrow interests (Hausmann et al. 2008; Evenett and Fritz 2023; Andreoni and Roberts 2022). In contrast, others view it as a means to achieve fairer terms of trade and investment, and a tool in a broader well-defined package of industrial policy (Sguazzin 2023; Nem Singh 2022; Braunschweig 2023). The vastly different views suggest that there is a need for a more nuanced understanding of the opportunities and risks to countries of adopting such a resource nationalism approach.

While explicitly resource nationalist policies have recently yielded positive results in countries like Chile and Indonesia, they have historically fallen short of expectations in many places in Africa. It is therefore necessary to analyse whether and how resource nationalism, given the above context, can contribute to the quest of sustainable development in Africa through CRMs. This paper applies a political economy lens to understand how formal policies, informal practices, and interests of key actors interact to shape outcomes.

2. Resource nationalism – from the outside looking in

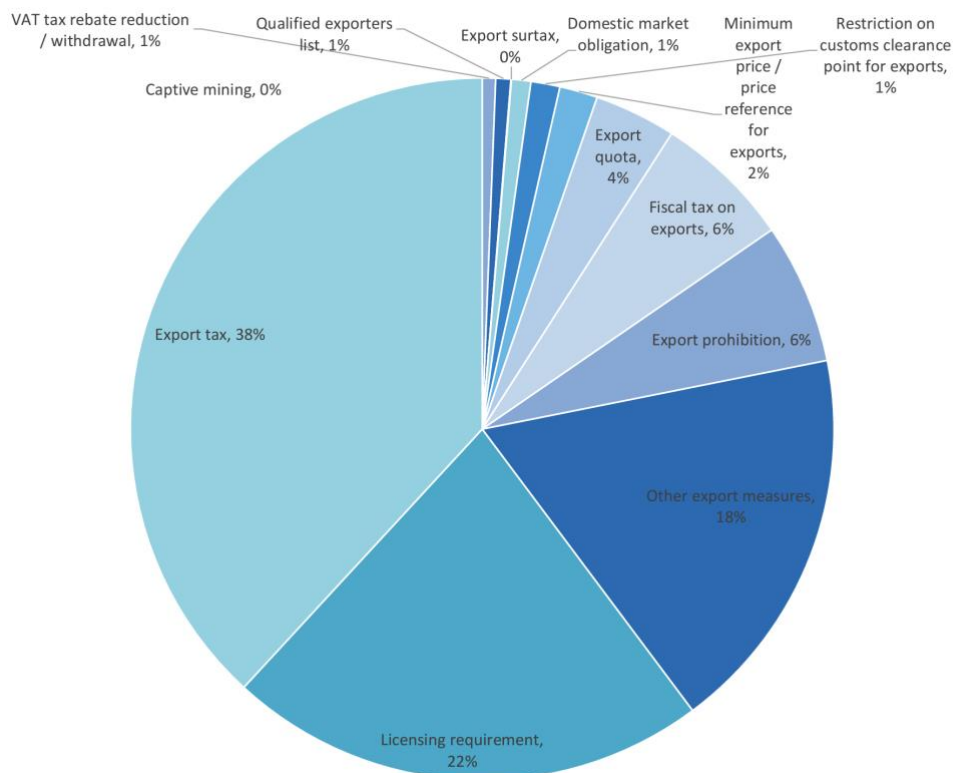
External observers often see resource nationalism in a negative light. It is seen as interfering in markets, with the likely consequence of raising the price of necessary inputs for (green) goods, while also creating inefficiencies and governance challenges.

The main export restrictions used in the past decade have been export taxes, followed by licensing requirements, other tax measures, export prohibitions and fiscal taxes, as shown in Figure 1 (Kowalski and Legendre 2023). The frequent use of export taxes is likely to circumvent the World Trade Organization (WTO) rules which prohibit quantitative restrictions but not export taxes. Countries adopt different measures to similar ends – while China has favoured export-related non-tariff measures and tax-based export incentives, others such as Vietnam have

³ “Business journalists, perhaps pandering to their readership, have tended to portray resource nationalism as a predatory and economically ruinous phenomenon, whereby greedy politicians seek to either extort taxes and royalties from, or place onerous demands on, foreign-owned extractive companies” (Caramento et al. 2023).

leaned towards export licensing requirements (Javorcik et al. 2023). Interestingly, African countries account for a relatively small share of the increase in CRM related export measures (Kowalski and Legendre 2023).

Figure 1: Shares export restriction types in the overall increase in measures adopted 2009–2020



Source: Kowalski and Legendre 2023

Not only are export restrictions criticised for leading to higher international prices for CRMs, which would translate to a more expensive green transition, but in the past, stated policies and objectives have fallen well short of intended outcomes, often riddled by legal and administrative deficiencies and ineffective enforcement (Kowalski and Legendre 2023; Caramento 2020). Export restrictions by themselves do not raise the economic viability of domestic value addition, given other challenges such as information and power asymmetries, availability of inputs, scale, market access and business environment (Östensson 2019). Using local content requirements to achieve production capabilities that are too far away from existing industrial structures has tended to yield limited results (Scheifele et al. 2022).⁴ Moreover, while political leaders engage in populist messaging and positioning to widen their support base, political capture for patronage rather than for promoting industrialisation has also led to ‘linkage patronage’ in the past (Jacob and Peterson 2018; Hansen et al. 2016). This

⁴ There is generally no agreed definition of local content requirements. But broadly they contain specific requirements that can incentivise local manufacturing through greater participation of businesses and workers (Braunschweig 2024).

stems from the fact that political leaders themselves do not enjoy much legitimacy and often struggle to keep political and commercial interests separate, which is essential in good (industrial) policy making through a resource nationalist approach (Opalo 2023a).

International mining companies generally possess superior technology and financial capacity to domestic firms, giving them a comparative advantage to extract resources more efficiently. Governments are advised by international partners to focus on creating a conducive business environment rather than directly intervening in resource management. This is especially relevant in mitigating the 'resource curse' where natural resource extraction is associated with negative outcomes such as slow economic growth, authoritarianism, high levels of inequality, unproductive rent-seeking and corruption, armed conflict and environmental damage among others (NRGI 2015). In the more recent past, the discovery of resources, especially in Africa, is associated with fiscal mismanagement leading to debt distress before production even begins, also dubbed as the 'presource curse' (Mihalyi and Cust 2017).

Given these negative outcomes, some observers conclude that resource extraction is better left to the private and more professional actors. In this reading, efficient contracts between governments and private actors can ensure fair royalties, benefiting both parties.

The above narrative can be applied to Zimbabwe, which imposed a ban on raw lithium exports in December 2022 (Africanews 2022). The new rules in place include a 5% royalty on exported lithium, with half payable in cash and the other half in processed final products to bolster the country's cash reserves (Gbadamosi 2023). The new law allows for the export of this processed lithium to make battery-grade lithium outside Zimbabwe, though the government recently is exploring opportunities to produce lithium hydroxide domestically (Chingono 2024).

However, landlocked Zimbabwe faces logistical challenges and inadequate infrastructure and transport (Dempsey and Cotterill 2023). Greater value addition through the production of lithium hydroxide would require power, chemicals and a steady feedstock of raw lithium for processing as well as efficient transport systems to reach global markets. Additionally, there are practical challenges to enforcing the ban. On the one hand, smuggling has been persistent (NewHawks 2023; Matiashe 2024a), while on the other, stockpiles of lithium have locked cash flows and affected operations among businesses, with calls for a temporary moratorium on the ban (Matiashe 2023).

Moreover, there are concerns of corruption, and social and environmental harms in the absence of proper oversight (Mambondiyani 2024). In a country with rampant poverty, deep inequality and low access to electricity, social discontent stemming from these mining projects is likely to rise. Resolving these challenges will not only require more investments but also good institutions and governance.

3. Resource nationalism – from the inside looking out

From the inside looking out, however, policy-makers tend to have a very different understanding of the objectives and possible results of a resource nationalist agenda. Ideas and ideologies around how to add value to resource wealth tend to differ significantly from conventional economic models. Proponents of resource nationalism believe that significant benefits can be achieved in the medium to long term by putting in place export restrictions to divert minerals away from raw exports to the domestic market for processing and attracting investments to add value to these minerals domestically.

The history of resource extraction for raw material exports and broader geopolitical trends have created a sense that without active government intervention, countries will not be able to catalyse industrial growth. Thus, CRM-rich country governments see an opportunity, not only to reposition themselves in global value chains, with a strong role for the state, but also to correct perceived past policy failings which have led to a consolidation of value addition elsewhere, and a concentration of negative externalities from mining within their jurisdictions.

Figure 2 below shows how perceptions between foreign entities and (resource) nationalists differ. Whereas foreign investors tend to view market liberalisation as resulting in strong foreign as well as domestic benefits and protectionism weakening these benefits, the nationalists see the situation very differently. For them, liberalisation favours foreign investors and protectionism favours domestic actors, while they seek a middle ground of ‘transition’ prioritising downstream benefits and industrialisation by creating space for learning by doing (Patunru 2023). Research confirms such learning curves in renewable technologies (Malhotra and Schmidt 2020).

Figure 2: Logic of resource nationalism

Foreign entities' views				Nationalists' views			
		Domestic benefits				Domestic benefits	
		Strong	Weak			Strong	Weak
Foreign benefits	Strong	Liberalisation		Foreign benefits	Strong		Liberalisation
	Weak		Protectionism		Weak	Protectionism	Transition

Source: Adapted from Kim 2023

Looking at the broader geopolitical environment, resource nationalism by CRM producing countries is in line with a global trend towards greater trade restrictions across all sectors. Since 2023, around 3,000 trade-restricting measures have been introduced by governments around the world, covering *all* trade, which is three-times more than 2019 (Gopinath 2024a). While this

includes an uptick in policy interventions around CRMs, it is not more pronounced than in other materials and goods (Evenett and Fritz 2023).

Retaliatory trade measures are also on the rise. A (green) subsidy in one country is likely to be countered by a similar subsidy in another with a 70% probability (Gopinath 2024b). This is not only vis-a-vis China⁵ but also between allies.⁶ A common rationale is the prioritisation of security and resilience over economic efficiency and other market logic. While this move away from the orthodoxy of free-trade models seems to be happening irrespective of politics, the way it is manifested nevertheless differs. While those on the left of the political spectrum support initiatives such as the US Inflation Reduction Act (IRA), the EU's Critical Raw Material Act (CRMA) and Net-Zero Industry Act (NZIA) as autonomous measures outside the framework of global institutions to redraw trade and industrial partnerships (e.g. 'friendshoring' and 'reshoring'), those on the political right may even call for the dismantling of these global institutions such as the WTO as shown by the rise of conservative nationalism (The Economist 2024a).⁷

As the 'great power' rivalry heats up, the Global South, which includes African countries, do not wish to remain passive bystanders with their resources fuelling foreign industries as they did in the past.⁸ This sentiment stems from the sense that cold war tensions in the 20th century, which coincided with decolonisation in many countries, did not give them an opportunity to forge their own development path. Today, barring a handful of connector economies – mainly Mexico, Vietnam, Indonesia, Poland and Morocco – who have successfully positioned themselves to take advantage of the current geopolitical competition, most developing countries have in fact suffered losses in terms of trade and investment (Curran et al. 2023; Tran 2024).⁹ As increasing economic fragmentation, caused by rising trade barriers and protectionism, exacerbates global inequality, insecurity and polarisation and increases

⁵ The US has placed tariffs on at least USD 360 billion worth of Chinese products, while the latter has retaliated with tariffs on over USD 100 billion worth of US goods (China Briefing Team 2021). The EU recent anti-subsidy probe could also result in countervailing tariffs being levied on Chinese exports of electric vehicles to the bloc (Bermingham 2024).

⁶ The US introduced tariffs on EU exports of aluminium and steel, which were replaced by a quota system. While the EU initially responded with rebalancing tariffs, these have been suspended (EC 2023). Nevertheless, there are significant disagreements on how to resolve the dispute, with increased uncertainties (Allenbach-Amman 2023; Beattie 2023a; Scott et al. 2024).

⁷ Despite similarities in the US and EU approaches at first glance, there are also differences. While both have abandoned the *laissez-faire* approach, the US strategy prioritises some elements of *friendshoring* with *reshoring* as seen by the IRA, whereas the EU combines aspects of *reshoring* with *cooperative diversification* as shown by the Critical Raw Materials Act (which has soft targets for mining, processing and recycling in the EU) and the CRM partnerships (Bersalli 2023).

⁸ The term Global South, despite criticisms by mostly Western analysts, captures a common, if not the same, sentiment – of colonial experience, disadvantage in, and inequality of, the global system, and resentment with the hypocrisy and double standards of the West, among others (Olander 2024a; AC 2024).

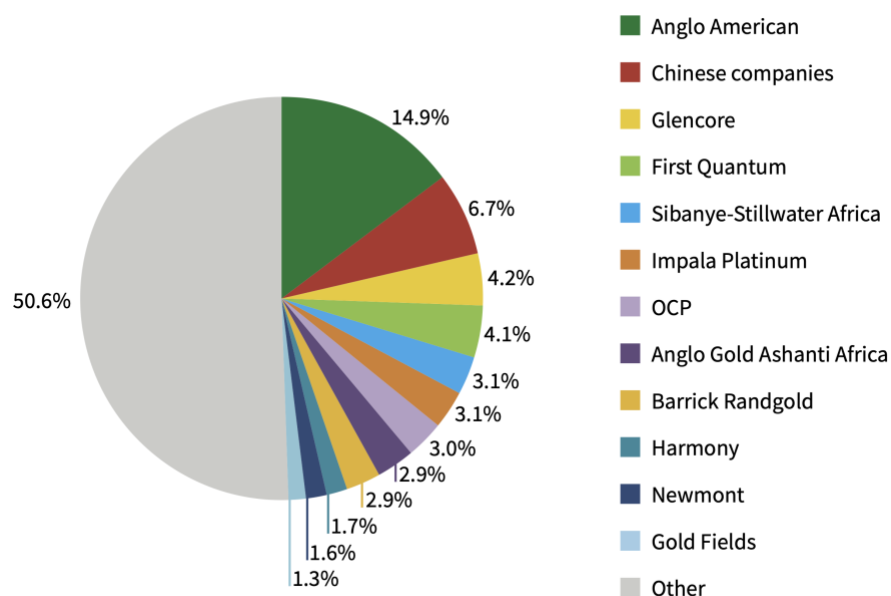
⁹ Global trade (in value) is expected to have shrunk by 5% in 2023 as trade-restrictions rose significantly (UNCTAD 2023).

uncertainty, Global South countries seek pragmatic international partnerships, safeguarding their own (socioeconomic) development or other (political) interests in a multipolar order (UNDP 2024; The Economist 2024b).

However, as they seek a more active role to reposition themselves, the tools available to countries in the Global South are fundamentally different to those in the Global North. Policy interventions in the US, EU and China are centred on subsidies to achieve their industrial development goals, yet most other countries cannot compete with such incentives. Instead, many rely on localisation measures which may be seen as resource nationalism (Evenett and Martín 2024).

In Africa specifically, many leaders recognise the need to break away from the colonial-era 'pit-to-port' model, which leaves African nations with minimal returns from their own resources (AU 2021). Resource nationalism is a strategy to rectify this imbalance by securing fairer prices and fostering local value addition. In Africa, except for a brief period in the 1960s–70s when control of mining operations shifted to African states, the sector has been predominantly controlled by large multinational corporations (see Figure 2). This transition from African states to foreign mining giants can be attributed to several factors, including (i) criticism of African states for mismanagement while downplaying the external headwinds that affected the sector, (ii) structural adjustment programs promoting liberalisation and privatisation, and (iii) the stigmatisation of labour-intensive mining practices (RoAPE 2023).

Figure 3: Corporate control over total African mine production, 2018



Source: Andreoni and Roberts 2022

Transnational corporations often employ tactics like transfer mispricing, depriving governments of significant benefits from their resources. This leads to resentment, particularly during periods of high commodity prices. Moreover, greater value is generated further

downstream in the value chain where African countries are not involved. In sum, the current system is skewed against value addition and wealth creation in Africa (Opalo 2023b). Similar debates also took place in Latin America and Asia amid the commodity super cycle driven by Chinese demand for resources in the 2000s.

Resource nationalism, seen from the inside looking out, therefore, reflects a response to geopolitical shifts and historical legacies, aimed at asserting greater control over national, natural resources to capture more of the value that these provide for the green transition. Taxes and other export restrictions are introduced to achieve various objectives such as generating state revenues, addressing short term supply-demand mismatch, or promoting value addition (Braunschweig 2023). These measures are intended to provide countries with tools to exert some influence on the price they earn for the resources they own (Patunru 2023). Rather than exploiting exporters' market power or maximising export revenues, these restrictions seek to counterbalance the market power of CRM buyers, who are typically a small number of large and financialised players with an outsized influence on prices obtained by producers (Kowalski and Legendre 2023; Blas and Farchy 2021).

With this in mind, the preceding Zimbabwean case can be shown in a different light. The country, along with the DRC and Mali, is looking to become a major lithium producer, with the potential to satisfy a fifth of the global lithium demand (Beaubois-Jude 2022; VOA 2018). The government's policy interventions are also partly motivated by Zimbabwe's own experience in promoting manufacturing in the past (Muchineripi Gwande 2022).

Thanks to the ban, Chinese mining firms have invested over USD 1 billion in Zimbabwe's lithium projects, including projects by Zhejiang Huayou Cobalt, Chengxin Lithium Group, Sinomine Resource Group and Suzhou TA&A with processing facilities (Shen and Zhou 2023). As a result of these interventions, lithium exports rose significantly. While lithium ore exports increased from USD 1.8 million in 2018 to USD 70 million in 2022, since the ban and following (Chinese) investments they rose to USD 209 million in the first nine months of 2023 (ESI Africa 2023).

The country's infrastructure deficit is partly addressed by a multibillion dollar energy and mining deal with China (Ndlovu and Marawanyika 2023). Interestingly, most investments are privately financed rather than state-backed, and without insurance against political risks (Shen and Zhou 2023). This in turn indicates that these strategies are in fact "backed by the logic of capital markets rather than being a Chinese state strategy".

4. Resource nationalism in practice – balancing priorities

The above sections lay out the different narratives on resource nationalism whether from a market efficiency perspective (from the outside looking in) or from an activist state perspective (from the inside looking out). In practice, however, countries often have to navigate competing priorities with differing outcomes in the short and long-term, thus also creating political

challenges. This section highlights the different objectives for sustainable development that countries then have to seek to balance.

According to an economic historian “economic nationalism must navigate contradictory impulses – the temptation to restrict economic exchange with other countries in order to advance national independence and the desire to expand and leverage international links in the service of national economic growth” (Rodrik 2023).

Beyond balancing national ambitions and a reliance on international markets, countries engaged in resource nationalism cannot ignore market dynamics and economic efficiency. A typical demand by CRMs producing/exporting governments is to move along the value chain to processing and refining of minerals. At first glance, these seem like obvious low-hanging fruits. However, these operations are in fact highly capital-, technology- and energy-intensive. In a context where energy provision has been a structural challenge, it is unclear whether limited national resources would be most effectively spent in performing these operations. Value addition and profit margins in this segment of the value chain are limited (often in single digits percentages) compared to other stages of the value chain (Research Network Sustainable Global Supply Chains 2023).

Copper value chain development in the Democratic Republic of the Congo (DRC) illustrates another point. Although value addition through copper-based manufacturing in the DRC could result in USD 500 million worth of new copper-based products, USD 112 million in additional exports and 1,300–2,000 new jobs, according to some models, this greater value addition would only raise state revenues by USD 9 million given the small profit margins in this sector (WB 2023). This creates a tradeoff between promoting value addition, which often entails lowering taxes on copper ore sold domestically to processors, and maximising state revenues through taxes and royalties on exports of copper ore. In a context where mining accounts for 97.5% of the country’s national exports, 20% of its Gross Domestic Product (GDP), 24.7% of government revenues and 23.9% formal employment (Bersalli 2023), collective action to forego state revenues in the shorter term in the interest of greater processing activity in the longer term can be politically very difficult.

Weak legal frameworks and insufficient enforcement of existing regulations exacerbate social and environmental risks involved in mineral processing and refining. While governments may seek to exert greater control over mining operations for economic benefits, many other aspects also need to be carefully considered, including:

- ensuring social sustainability – safety of workers, upholding human rights, avoiding child labour, fair wages, protecting the rights of surrounding communities;
- mitigating the environmental footprint – avoiding deforestation, minimising pollution, ensuring safe disposal of effluents which may affect livelihoods of neighbouring communities; and
- governance – consultations with the local community and adequate compensation, avoiding rent-seeking and corruption.

Balancing these priorities is not always clear-cut. International firms, that usually dominate the mining scene, have largely failed to sufficiently mitigate the negative impacts of their operations and to adequately compensate for these externalities (Sanderson 2023; Patunru 2023).

Finally, geopolitics, as highlighted above, creates yet another set of considerations for countries as they seek to avoid entanglement in great power rivalry. Navigating US-China rivalry can be challenging for many of these countries, especially since Chinese dominance in CRM markets has made them an unavoidable partner for many African countries.

These competing priorities can also be observed in the case of Zimbabwe. The country has made progress on economic priorities by attracting greater investments in the sector and promoting value addition, but as highlighted above, there are social and environmental concerns, along with governance issues attached to these developments. Especially given that these investments are commercially-driven – as in the case of the Chinese who are by far the largest player in the country – there is a risk these impacts are not fully accounted for, and neither are these projects assessed by Chinese development finance institutions (Shen and Zhou 2023).

At the same time, Zimbabwe has limited access to foreign investments, severely hampered by US sanctions since 2001. This had left the country with few options but China. The Zimbabwe Investment Development Agency reportedly received 160 lithium investment applications from Chinese investors in the first half of 2023 compared to just five from the US (Gbadamosi 2023; Mberi 2023). There are limited signs of relations improving in the near future (Matiashe 2024b), despite the recent lifting of sanctions by the US (Dentons 2024). Thus, even without intending to choose sides in the great power rivalry, pre-existing conditions predispose Zimbabwe's mineral sector to Chinese investments.

The Indonesian (see Box 1) and Chilean (see box 2) cases highlight in greater detail how countries navigate these numerous priorities and objectives.

Box 1: Indonesia's nickel sector

Indonesia is among the top producers of several CRMs (nickel, bauxite, copper, and tin, among others) with ambitions to process them and enter green supply chains such as battery electric vehicles by capitalising on its nickel sector. In 2014, the government introduced an export ban on certain minerals including nickel, though there has been some back and forth in actual measures used (including a temporary lift in the ban, see below).

Indonesia's resource nationalist measures are rooted in popular sentiment (Arregui Coka and Rausch 2020). Even before the COVID-19 pandemic, the political discourse was quite explicitly in favour of retaining sovereignty over national resources, reflected in the desire to not rely on foreign imports, or

allow foreign investors to buy domestic firms. In general, most Indonesians believe that national companies should be better protected from international players.

To complement the export ban, a slew of policies was introduced to incentivise and enable domestic processing and attract investments. These include (i) changes to the mining law which enabled the government to channel nickel ore for domestic processing, (ii) divestments rules for foreign firms with clear targets and timelines, and (iii) consolidation of national assets through state holding firm that became one of the main players in the country’s resource-based industrialisation (Kim 2023). The government also attracted investments into battery electric vehicles through several policy measures including local content requirements (Kim 2023).

These measures were part of Indonesia’s longer term economic and industrial strategy. Not only did the government capitalise on the growing global demand for electric vehicles, but it anticipated the growing demand for nickel for battery production going forward (shifting from the stainless-steel sector which currently dominates nickel demand) (Kim 2023). With Indonesia accounting for half of the global production of nickel, the government was in a strong position to negotiate greater value addition with investors to get a growing slice in a growing pie.

Despite short-term financial loss due to the export ban, Indonesia secured other long-term benefits from its 2014 ban, unlike a previous ban in 2009 which suffered from lack of enforcement (Research Network Sustainable Global Supply Chains 2023). Once production recovered by 2017 from the initial shock of the ban in 2014, most nickel was redirected for domestic processing rather than being exported, resulting in increased exports of both stainless steel and other nickel products (see Figure 3 and 4).

Figure 4: Nickel ore production & consumption

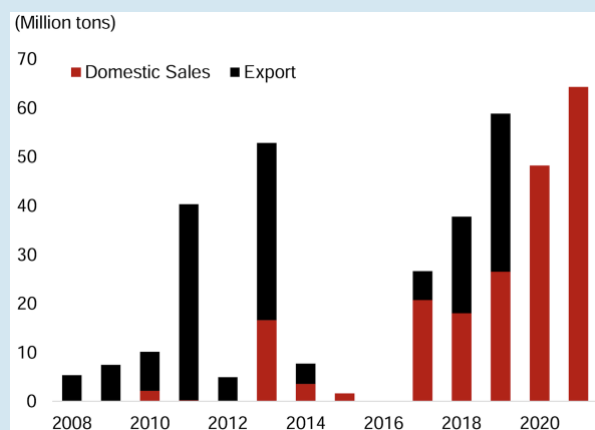
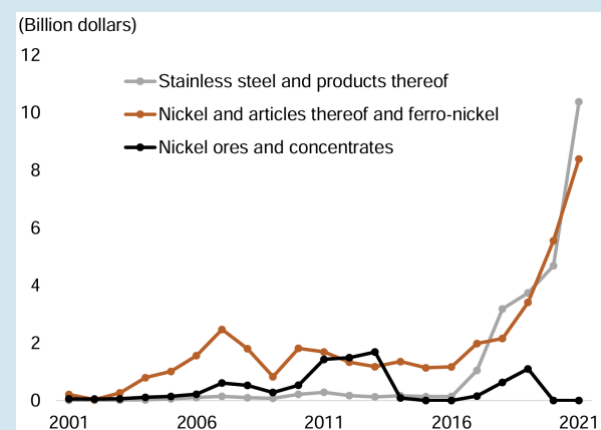


Figure 5: Exports of nickel-related products



Source: Kim 2023

This was enabled by a surge in foreign direct investments, mainly from China. The number of nickel smelters increased from two before the ban to 43 in 2023, with 28 under construction and further 24 planned (Research Network Sustainable Global Supply Chains 2023). There is also a movement up the

value chain from class 2 ferro-nickel products to intermediate nickel sulphide and hydroxide, and to class 1 products containing nickel sulphate, used in battery production, through advanced chemical processing. Similarly, there is South Korean Foreign Direct Investment (FDI) into the electric vehicle space with significant local content requirements (Kim 2023).

However, the country has also had to balance between different policy objectives. The 2014 ban was partially lifted in 2017-2020 to provide financial support to the state-owned nickel company which suffered heavy financial losses due to the export ban. The ban since then was strictly enforced, complemented by Chinese investments to produce nickel products for the Chinese market where firms faced a shortage of nickel (Sanderson 2023).

There are important social and environmental sustainability challenges. For instance, job safety remains a concern (Olander 2024b). A recent report also highlights cases of land grabbing, unfair negotiations and lack of compensation, along with a loss of traditional livelihoods and violation of cultural rights due to the heavy environmental footprint of nickel refining, especially water and air pollution (CRI 2024). Moreover, the use of coal-fired power for refining entails a negative climate impact along with deforestation in mining-concessions areas. Storage of industrial waste is especially precarious because Indonesia is prone to tropical rain, tsunamis and earthquakes which could further exacerbate these risks (Lott 2024a).

Geopolitically, the benefits of Indonesia's resource nationalism remain to be maximised despite having good relations with both the US and China (Chivvis et al. 2023). While the government seeks a limited free trade agreement with the US to take advantage of the IRA, there is opposition to this in the US due to concerns over Chinese investments in the country's nickel sector (Hidayat 2023). Political leaders in Indonesia have expressed frustrations over slow Western response to balance/counter Chinese influence (Curran et al. 2023).

Box 2: Chile's lithium sector

Chile is the largest producer of lithium, behind Australia. Lithium was declared a strategic mineral back in 1979 due to security concerns related to its use in hydrogen bombs (Research Network Sustainable Global Supply Chains 2023). Nevertheless, extraction licences are granted to private firms on publicly owned land (Ibid.). These include only two major producers - Chilean Chemical and Mining Society (SQM) and US-based Albemarle (Ibid.). Realising the strategic significance of its lithium reserves, the National Commission on Lithium recommended a dedicated National Lithium Strategy in 2014.

This strategy was unveiled in 2023, when under President Gabriel Boric, Chile unveiled its plans to add value to its lithium resources through significant state participation to boost economic gains and limit environmental risks of increased extraction (Bersalli 2023). Exploration and exploitation contracts are awarded to state-owned enterprises namely the National Mining Company and the State Copper Company (Ibid.). The Chilean Lithium Institute aims to foster innovation and knowledge-sharing (Ibid.).

Current contracts with lithium mining firms include the provision to acquire a maximum of 25% of annual production at preferential prices to develop value-adding projects in the country. There are already initial results with two Chinese companies having been granted the right to obtain lithium

carbonate from SQM as they invest in downstream activities including a cathode factory as well as battery chemical plant for electric vehicles (Research Network Sustainable Global Supply Chains 2023).

Nevertheless, tensions around social and environmental sustainability remain. Lithium reserves are mainly found in the salt flats of the Atacama Desert which consists of ancestral lands of indigenous communities (Lott 2024b). Increased stress on water resources in an already dry region creates further tensions. Private firms, mainly carrying out the lithium extraction, have clashed with government and local communities (Bersalli 2023).

5. What makes resource nationalist policies work?

The above discussion puts resource nationalist policies for CRMs in a different light, highlighting that under some conditions these can in fact support accelerated industrialisation, even if the risks are significant. Below are seven lessons that can be drawn for other developing countries, including in Africa, as they explore their options to better leverage resource wealth:

5.1. Market power and access

Indonesia's experience in the nickel sector highlights the importance of market power in terms of resource endowments. Control over half of the global nickel supply grants Indonesia significant market power, enabling it to influence (international) firms' behaviour through changes in government policies.

Market access is another critical factor. In this regard, Indonesia's case highlights risks. Limited access to markets like the US, as explained in box 1, could constrain further growth as there is increasing uncertainty for (other) investors to ramp up nickel processing in Indonesia.

Implications for African countries

Indonesia's remarkable success in the nickel value chain has attracted widespread attention, yet there is a question in terms of the extent to which this can be generalised and applied to other value chains. In the absence of similar market power as in Indonesia's nickel sector, the effectiveness of resource nationalist policies to facilitate local value addition is likely to be limited. The Indonesian government's own attempt to replicate its nickel model to other commodities such as bauxite faced challenges as Chinese buyers switched to Guinea and Australia so that Indonesia's share of China's bauxite supply collapsed from 60% to 15% (The Economist 2023). While African resources are significant relative to the size of their domestic economies, on a global scale these resources often do not compare to Indonesia's position in the nickel sector, except in a few cases such as DRC's cobalt or South Africa's several other CRM deposits (Karkare and Medinilla 2023b).

Market access is a relevant consideration for many African countries too. Apart from Morocco, no African country has a Free Trade Agreement (FTA) with the US. Ensuring market access - whether through FTA or state-to-business agreements or third-party deals - will remain an important factor for success given that the demand for processed materials within Africa is likely to remain limited in the short to medium term (Karkare and Medinilla 2023a).

5.2. Confrontational or constructive approach?

Chile and Indonesia present contrasting approaches as they both seek to better position themselves in global value chains.

As Chile sought to balance the ambitions for greater local value addition and the need for foreign investments and expertise, the country successfully negotiated to reserve a part of its lithium for domestic use at more favourable prices (see box above) as reflected in the revised/enhanced association agreement with the EU, despite the latter's initial opposition to it (Beattie 2023b). The agreement underscores Chile's commitment to draw economic benefits with high standards of environmental and labour protection while also maintaining a conducive environment for foreign investments (Dammert and Torreblanca 2023; Research Network Sustainable Global Supply Chains 2023). By adopting a more positive agenda, Chile struck a compromise with the trade partner (in this case the EU). This more constructive approach combined elements of resource nationalism from both the market efficiency as well as activist state narratives (see sections 2 and 3 above).

On the other hand, Indonesia has adopted a more confrontational approach. By completely banning the exports of raw nickel, the country's approach can be seen as falling more squarely in the activist state narrative (section 3 above). The EU filed a lawsuit against the country at the WTO over allegedly discriminatory policies favouring domestic interests. In Indonesia and other countries of the Global South, this move is seen as yet another instance of the West 'kicking away the ladder' (Max and Nafkote 2024). At the same time, while the WTO ruled in favour of the EU, in practice, this is not likely to amount to much change. The ruling has been challenged by Indonesia and the case now remains at the appellate body, with the verdict likely to take a significant period, during which time crucial investments will have gone ahead in the country.¹⁰ As such, there is no going back for the Indonesian nickel sector.

¹⁰ The functioning of the appellate body was severely hampered during the Trump administration, with limited improvements by the Biden administration (Ones and Tooze 2024). Currently it has 27 other cases that remain to be resolved. As a result, disputes are in a limbo or "appealed into the void" (Dombrovskis 2024).

Implications for African countries

While CRM-producing countries show increased interest in adding value to their minerals domestically, their ability to do so will depend on the approach they adopt. A more constructive approach as that of Chile is relatively less likely to result in significant frictions. This is because countries can better align their objectives and approaches with their key trade partners, and/or the international trading system. While Indonesia's more confrontational approach did not make it ineffective, the conditions in which its nickel sector developed was also unique (see box 1 above), and so may not be applicable in many other contexts. Simply put, it is unclear whether such an approach would work in other countries in the absence of other conditions such as market power (see above) among other things (see below).

Given the centrality of market considerations, country strategies, even if coming from a resource nationalist approach, need to take into account lead firm decisions (Nem Singh 2023), while also anticipating reactions for international partners where the demand for CRMs is likely to be concentrated.

5.3. Policy coherence and consistency

Indonesia's and Chile's policies show coherence in the respective government's strategy to add value to their minerals through complementary policies (see box 1 and 2). In Indonesia, not only did the previous government have a clear vision on how it intends to develop the nickel sector, but there are signs that these policies will continue despite the recent change in government (The Economist 2024c).¹¹

In contrast, there have been several policy U-turns in Africa through several different mining regulations, shifting from state monopolies (1960s-70s), to complete deregulation (1980s-90s) in order to attract international mining firms, to calls for greater control more recently. This is seen in the case of the DRC, where the government replaced the 2002 mining code in 2018 as the former was seen as too favourable to private foreign investors. The government classified cobalt, coltan and germanium as strategic minerals, subject to a 50% super-profit tax and 10% royalty. This coincided with a period of high mineral prices, and total revenue generated from the mining industry jumped to USD 2.9 billion compared to an annual average of USD 1.3 billion in 2010-2017 (Géraud Neema 2024; Radley 2023). However, this intervention does not provide a clear strategy for the resource sector apart from maximising revenues from natural resources. While the government has introduced export bans on several occasions over the past decade, value addition has been challenging given severe power shortages (Manley et al. 2022).

¹¹ Indeed, voters' support for the new President is "not because they have turned against democracy but because he promises to continue "Jokonomics": the drive for investment in infrastructure and green metals such as nickel, for which Chinese support is vital" (The Economist 2024c).

Nevertheless, given the country's significant market power, these sporadic measures have helped increase domestic value addition to some extent.¹²

In addition, African governments often struggle to achieve intended benefits due to a lack of sufficient knowledge base around mining and economic governance, and industrial policy more broadly (Nem Singh 2023). Historical experiences of pillaging by foreign firms and governments, coupled with failed state-led developmental efforts, have created a bias favouring "defensive public ownership of property rights to natural resources" in order to curb unproductive rent-seeking without sufficient attention to generating productive wealth in Africa's resources sector (Opalo 2024a). Additionally, large information asymmetries given the nature of operations of, predominantly international, mining firms has created a yawning gap in capabilities between governments on the one hand and large transnational mining firms on the other.

Implications for African countries

A general lack of national policy or strategy on strategic minerals, that explains a country's priorities and sets the agenda during negotiations and engagements with international partners, affects African countries' ability to leverage their natural resources in practice (Géraud Neema 2024). In the absence of such policies and strategic dialogue with partners, the objectives and goals of the latter may be prioritised. Moreover, given the nature of the sector, which is shrouded in secrecy and lack of transparency, achieving long term developmental objectives may even be deprioritised in favour of short-term interests. For instance, negotiations around mining contracts often take place between foreign firms, mostly interested in getting easy licences and maximising profits, and politicians, mainly interested in the next political cycle and lacking sufficient knowledge of the sector, to the detriment of domestic private players (Opalo 2024a).

While revenue maximisation (as seen in the case of the DRC) is important, resource-based development will also require a roadmap on how value can be added to Africa's minerals domestically/regionally. This in turn requires acquiring knowledge of the sector and of suitable approaches through industrial policy.

Closing the capability gap between international firms and African governments will require more than institutions and good governance as is often advised (Opalo 2024a). Though institutional development, which supports evolution and strengthening i.e. learning over time, is helpful (Rodrik and Stiglitz 2024), there is also a need for improving the market efficiency of African mining and related operations, and reducing information asymmetries (Opalo 2023d).

¹² In 2020, the DRC 68% of the world's cobalt, of which 94% was processed into cobalt hydroxide (Manley et al. 2022). Firms commonly process cobalt concentrate into cobalt hydroxide before exporting to reduce the weight for transport.

5.4. Collective action or competing mandates?

As highlighted in section 4, countries often find themselves juggling various objectives, with formal mandates placing an emphasis on different things. For instance, producing “**economic – benefits** – from – **resource – extraction**”, which is a commonly observed objective of CRM-producing countries, typically involves at least four different government mandates:

1. The Ministry of Economy and Industry is likely to prioritise beneficiation and value-addition of minerals as a means of fostering **economic** development.
2. The Ministry of Mines may be primarily concerned with the revenue generation and other financial benefits from **mining** operations.
3. The Ministry of Environment plays a crucial role in overseeing the management and conservation of natural **resources** and promoting environmental sustainability.
4. Lastly, the mining regulator, typically a separate entity, focuses on enforcing compliance with national rules and regulations related to resource **extraction**.

This shows the government is far from monolithic. In addition, considerations of social sustainability, governance, and equitable distribution of benefits among various stakeholders, including the public, private sector, and local communities reflect additional concerns and interests. These factors further complicate the decision-making process and make collective action more challenging to achieve.

In the case of Indonesia, the temporary lifting of the nickel export ban in 2017–2020, as mentioned in box 1, shows that political ambitions (value-addition through resource nationalism) may still confront competing policy objectives (financial sustainability). Moreover, as the government continues to favour weak legal frameworks in the interest of speed in industrial processing (Lott 2024a), environmental damage due to nickel mining and refining has become apparent. While it is necessary to minimise the trade-off between economic interests and social and environmental sustainability, an ethical and sustainable model for CRM extraction and processing/refining remains elusive, with significant challenges even in developed nations such as the US (The Economist 2024d).

In Africa, given the rhetoric around the AfCFTA, there is an additional consideration of balancing regional/continental commitments with national action (Cust and Zeufak 2023). A recent analysis shows the difficulties in bringing about regional coordination for battery production using African CRMs, where there is a tension between cooperation and competition (O’lang and Scurfield 2023). Outcomes depend on dynamics not just within countries but also between countries (Byiers et al. 2021). Lack of coordination will result in suboptimal outcomes. Whereas in some countries this is manifested through retaliatory subsidies (see above), in Africa this could be through national priorities that compete rather than complement each other thus undermining the benefits of regional integration (Odijie 2018). This in turn points to the relevance of regional lead firms that can overcome such coordination challenges (Odijie 2023).

Implications for African countries

Industrial policy can be an effective tool in bringing together disparate sets of socio-economic objectives that a country pursues (Said 2022). This is also why industrial policy is different to a trade policy, or monetary or fiscal policy, or even a manufacturing policy. It can ensure coherence among these different policies while also ensuring collective action through strong leadership.

While a key function of industrial policy is to ensure strategic coordination among a wide range of stakeholders, which in turn means balancing different interests. This may include revising the level of ambition (do countries/regions want to localise the entire production process or only part of it?) as well as approach (inclusive-yet-indecisive consultations or strategic-yet-backdoor negotiations?). In short industrial policy has elements of embeddedness (working with the private sector), coordination (among stakeholders), monitoring (progress of policies), conditionality (of support to firms), and institutional development (engaging in learning) (Rodrik and Stiglitz 2024).

5.5. Politics and informal interests

Formal policies help in laying the legal and regulatory framework to maximise the benefits from a country's resources. But decisions are also influenced by informal interests, incentives and politics. Indonesia's experience illustrates that politics and resource nationalism have a reciprocal influence (Patunru 2023).

The emergence of resource nationalism is influenced by underlying configurations of power (Hickey et al. 2020). These change over time within the same country as in the case of the DRC (see above), with noticeable differences between countries. While Ghana's competitive clientelist settlement generated 'soft', oscillating set of resource nationalist policies, Uganda's dominant settlement resulted in 'hard', more robust resource nationalism. In addition, demands from mining communities, civil society including women's organisations, domestic business interests and mineworkers on their governments, in a context of competitive politics, has increased pressure to respond in order to ensure buy-in from potential voters, whether in terms of equitable distribution of benefits, sustainability or gender balance by fighting marginalisation (Caramento et al. 2023).

Geopolitical considerations also influence policy decisions. The (existential) risks of war or invasion in East Asian countries like South Korea and Taiwan played a major role in galvanising different actors to act towards a specific goal (Kim 2024; Nem Singh 2023).

Implications for African countries

While today existential risks such as those observed in South Korea or Taiwan are less likely, few countries do sense the urgency to restructure their current production systems to drive economic transformation.

The (varying) configuration of power across countries also means that there is a need for context-specific strategies to develop CRMs. Rather than justifying the status quo where many African countries are unable to develop their strategic minerals – whether because of corruption or incompetence – such contextualisation should aim to set ambitions that are realistic given the starting point and existing capabilities of countries (see below).

5.6. Winners and losers

Competing objectives or priorities and mandates point to another important lesson – just as in any policy intervention, there will be winners and losers in resource nationalism.

In Indonesia's nickel sector, the dominance of Chinese actors led to oligopsonistic behaviour raising concerns over environmental practices and technology transfer (Research Network Sustainable Global Supply Chains 2023). Indonesian firms, no longer able to sell their unrefined nickel to the international market, lowered their environmental and safety practices as Chinese smelters exerted price pressure.¹³ It is also unclear whether there is true technology transfer to Indonesian firms (Ones and Tooze 2024).

Another aspect is that of China's dominance in green energy, and CRM supply chains. This stems from China's robust manufacturing capacity – enabling it to absorb these materials from Africa and exporting green goods in return – as well as the strong presence of Chinese contracting firms who work across sectors (62% in Africa) (Van Staden 2024). Additionally, strong ties of these firms with policy banks and insurance providers have ensured financing.

Implications for African countries

CRM mining and processing is a contentious issue precisely because these social and environmental standards are often difficult to attain. Governments, including in Africa, often tend to prioritise economic interests. Whereas social and environmental dilemmas are increasingly getting attention in policy circles, it is the surrounding communities that largely bear the brunt of negative externalities

¹³ Tsingshan, a Chinese group that refines nickel in Indonesia, paid USD 38/tonne for local nickel compared to USD 65 that Chinese producers paid for nickel from the Philippines (Sanderson 2023).

directly impacting the firm's as well as government's social licence to operate (Pickles 2023).¹⁴ Artisanal mining, an important activity in Africa, also face unsafe conditions and other risks as miners, including many women, are stigmatised due to 'informality', yet efforts to address these issues are hindered by exclusion,¹⁵ regulatory misconceptions,¹⁶ and lack of recourse to remedy or justice (Finn 2023; Dempsey 2023; IPIS 2024; Stempel 2024).¹⁷ Moreover, the lack of respect to social and environmental standards can especially negatively impact women (CER 2021). Balancing these different sustainability objectives, interests and justice issues calls for strategic coordination among different actors, well beyond politicians and firms to achieve a delicate balance and ensure equitable benefits (Andreoni and Chang 2019) as mentioned above.

With regards to the role of China, the combination of above mentioned factors gives Chinese actors an edge over others in that they can provide integrated solutions (e.g. combining mineral extraction with processing and/or infrastructure and/or energy) to many developing country partners that are quickly implemented. This is an attractive offer in an environment where political actors want to show visible results to a demanding electorate within tight political cycles (Opalo 2023c).

An important lesson for African countries, as they seek to enter hi-tech value chains such as battery, is that these supply chains are unlikely to remain only local or regional,¹⁸ requiring African firms to compete in the international market, while also upholding social and environmental standards with a view to ensure long term sustainability. As mentioned above, the success of such (industrial) policies hinges on alignment with lead firm strategies (Nem Singh 2023).

5.7. Create linkages in line with current capabilities and beyond resources for economic development

The official development strategy for many African mineral-rich countries seems to focus on mineral value addition as a key driver of industrialisation (Kitaw 2023). Despite the resurgence of resource nationalism, historical precedents cast doubts about the likelihood of successful resource-led development. Though the nature of manufacturing-led growth is changing – due

¹⁴ Cobalt mining in the DRC is marred by workplace hazards including worker safety and exploitation by trading companies; public health risks with congenital disabilities, fatal diseases and high radiation levels; ecological damage due to large-scale deforestation and soil and water contamination along with air pollution; and climate impact given fossil-fuel powered activity in the sector.

¹⁵ While about 10% of the global cobalt production comes from artisanal mining, mainly in the DRC, "[t]he USD 7.7tn club of miners, car manufacturers and electronics makers – including Glencore, Volkswagen, Microsoft and Apple – who belong to the Responsible Minerals Initiative continue to rigidly exclude artisanally mined cobalt from what they consider "responsible" sources" (Dempsey 2023).

¹⁶ The popular perception of minerals causing conflict has been rebuked through rigorous research (IPIS 2024).

¹⁷ Recently a federal appeals court refused to hold five major tech firms liable to their alleged support to child labour since the companies did not have more than a buyer-seller relationship with their suppliers or the means to stop child labour (Stempel 2024).

¹⁸ The battery value chain consists of 15 to 20 unrelated industries to work in a coordinated way to supply the world with much needed batteries to power the green transition (Lott 2024a).

to rising servicification, increasing capital-intensity among other things – the evidence of its role in economic development remains solid (Hauge and Chang 2019; Smith 2024; Rodrik and Stiglitz 2024). However, it is less evident this role can be fulfilled by the mining sector. Historically, countries have developed by raising the economic complexity of their production, by expanding into related sectors in the product space to develop broader capabilities and know-how than its natural resource sector which drove economic growth and development (Hausmann 2019).

The Australian case offers insights. A country rich in mineral resources, Australia did not grow rich by simply selling these minerals, but by developing manufacturing capabilities that would help add value to these minerals by producing chemicals, materials and machinery (i.e. backward linkages) to produce nickel alloy and other metallic oxides (i.e. forward linkages) (Hausmann et al. 2021). Nevertheless, overall economic complexity in the mining industry remains limited compared to other sectors, and consequently the complexity of production in Western Australia, where mining activity dominates, is also relatively low (Hausmann et al. 2013; Hausmann et al. 2021).

Implications for African countries

The fact that there aren't many African mining giants affects the prospects of the mining sector. Contrary to popular belief, the mining sector is a small part of the African economy and African resources are not as big as is often portrayed, even though they may be significant relative to the size of many African economies (Opalo 2023b; Simons 2012). The dominance of foreign players who hold unequal negotiating power and “strike obscenely lucrative bargains”, as well as other political economy factors have not allowed for the emergence of “developmentalist natural resource barons” in Africa (Opalo 2023b).

The mining industry tends to operate as an enclave economy with specialised inputs, limiting the opportunities for job-creation (Opalo 2024a). About 45% of the annual gross revenues generated by the extractive industry flows into the, mainly foreign, supplier industry, with domestic suppliers facing high entry barriers. Expansion of the resources sector is associated with a deepening of its enclave nature due to a weakening in manufacturing (in line with the ‘Dutch disease’ phenomenon) and other adverse economic conditions (Pitman and Toroskainen 2020; Calzada Olvera and Foster-McGregor 2018).

Even in Latin American countries where resource nationalism swept in the late 2000s under the so-called ‘second pink tide’, progress was limited. Countries embraced resource nationalism in a critique of the ‘Washington Consensus’ to capture greater windfall profits (Chang 2017). However, despite this ideological approach to economic policy, progress in structural transformation through capital reinvestments was limited (Nem Singh 2023).

6. Conclusion

The diversity of approaches to resource nationalism highlights that there is no single path to achieving economic transformation (Nem Singh 2023). These approaches are shaped by political economy factors where the governance of mineral rights and rents is central. Effective management in countries dependent on commodities often involves a combination of three strategies: economic diversification by investing windfalls in other sectors, de-enclaving the commodity sector through backward linkages, and adding value to commodities before export along with other downstream activities like logistics and business services (Opalo 2023d).

An important implication for international partners, including the EU, is that, politically, resource nationalism cannot be simplistically reduced to a dichotomy of democratic and authoritarian way of governance. In most developing countries, where there is no discernible left and right divide in politics, economic or resource nationalism serves as a means to differentiate from rival groups and signal their political credentials. As industrial policy is making a comeback – especially in countries in the Global North – as a means to ensure economic resilience, strategic autonomy and security, this discourse is not completely unrelated to that used by resource nationalists to ensure greater benefits from the international system that depends on minerals these countries produce (Juhász et al. 2023; De Ville 2023). Moreover, supporting resource nationalism in CRM producing countries could align with the geopolitical priority of partners to diversify supply chains away from China (McGeady and Baskaran 2023). As value is added in CRM producing countries, it can reduce the risk of restrictions and other disruptions associated with excessive dependence on China. Especially in a context where decisions of international partners are based on (geopolitical) considerations beyond economic efficiency and market logic, ‘first best solutions’ also do not necessarily apply given narrower elite interests in African countries (Dercon 2023).

On the other hand, African policymakers must consider strategic considerations and risks associated with resource nationalism, drawing lessons from their own past experience as well as that from other regions. Maximising the benefits from CRMs would require designing policies that take sufficient account of implementation realities in Africa, rather than an emulation of interventions elsewhere (Opalo 2024b). This requires closer cooperation between the government and business to ensure embeddedness (in local context), coordination (between different objectives and mandates), learning (by doing with market discipline), institution building (through experience) (Rodrik 2024). Development in Africa depends on long term processes of state-building, economic take-off and accountable and responsible government which are a best-fit to the local contexts rather than (empty) commitments to best-practices which are anyway mutated during implementation (Opalo 2023a). This in turn requires an open embrace of elites and distributive politics, conflicting interests, ideology and electoral concerns. Finally, geopolitically, while African countries may not enjoy the negotiation capacity that Indonesia had, they may be best placed to position themselves as the Western-policymakers first choice in their diversification strategy.

The emerging geopolitical landscape as well as renewed development ambitions require a rethink of pathways to economic transformation and a questioning of pre-existing biases.

References

- AC. 2024. *China in the Global South: Development and influence in a shifting global order*. AC, Global China Hub and Keough School of Global Affairs Event, 22–23 February 2024. YouTube video, AC channel. Washington, DC: Atlantic Council.
- Africanews. 2022. *Zimbabwe bans all lithium exports*. Lyon.
- Andreoni, A. and Chang, H.J. 2019. The political economy of industrial policy: Structural interdependencies, policy alignment and conflict management. *Structural Change and Economic Dynamics*, 48: 136–150. Amsterdam: Elsevier. <https://doi.org/10.1016/j.strueco.2018.10.007>
- Andreoni, A. and Roberts, S. 2022. *Geopolitics of Critical Minerals in Renewable Energy Supply Chains*. Energy Access and Transitions Programme series. Cape Town: The African Climate Foundation.
- Arregui Coka, D. and Rausch, T. 2020. *Gains, Pains and Divides – Attitudes on Globalization on the Eve of the Corona Crisis*. 2020 GED Globalization Survey. Gütersloh: Bertelsmann Stiftung.
- AU. 2021. *Statement by the Secretary-General of the AfCFTA Secretariat, H.E. Wamkele Mene, at the AfCFTA Start of Trading Ceremony Webinar*. Speeches. Addis Ababa: African union.
- Allenbach–Ammann, J. 2023. *EU Commission postpones reintroduction of steel tariffs until after US election*. News. Brussels: Euractiv.
- Beattie, A. 2023a. A cynical transatlantic deal on steel. EU trade. *Financial Times*. London.
- Beattie, A. 2023b. *EU seeks to tone down the imperial style in search for critical minerals*. Opinions, Trade Secrets. *Financial Times*. London.
- Beaubois–Jude, A. 2022. *DRC, Mali, Zimbabwe: The race to become a top lithium producer*. New Gold. Paris: The Africa Report.
- Bermingham, F. 2024. EU moves to slap retroactive tariffs on electric vehicles from China. China, Diplomacy. *South China Morning Post*. Hong Kong.
- Bersalli, G. 2023. *Critical Raw Materials for the EU Energy Transition: Geopolitics and Sustainability in the Global South*. Unpublished.
- Blas, J. and Farchy, J. 2021. *The World for sale*. Oxford: Oxford University Press.
- Braunschweig, O. 2023. *Balancing Export Pricing Commitments in FTAs: Towards Affordable, Secure, and Clean Energy*. Trade, Blog. Zurich: Council for Economic Policies.
- Braunschweig, O. 2024. *Striking a Balance on Local Content Requirements in Trade Agreements: The Case of the Energy Sector*. Trade, Blog. Zurich: Council for Economic Policies.
- Byiers, B., Apiko, P. and Karkare, P. 2021. *The AfCFTA and industrialisation: From policy to practice*. ECDPM Discussion paper 314. Maastricht: ECDPM.

-
- Calzada Olvera, B. and Foster-McGregor, N. 2018. *What is the potential of natural resource based industrialisation in Latin America? An Input-Output analysis of the extractive sectors*. MERIT Working Papers 2018-015. Tokyo and Maastricht: United Nations University and Maastricht Economic and Social Research Institute on Innovation and Technology.
- Caramento, A. 2020. Cultivating backward linkages to Zambia's copper mines: Debating the design of, and obstacles to, local content. *The Extractive Industries and Society*, 7(2): 310-320. Amsterdam: Elsevier
- Caramento, A., Saunders, R.G., and Larmer, M. 2023. *The Return of Resource Nationalism to Southern Africa – Introduction*. *Journal of Southern African Studies*, 49(3): 339–357. Oxford: Taylor & Francis Online. <https://doi.org/10.1080/03057070.2023.2272547>
- CER. 2021. *How mining erodes the rights of women*. Cape Town: Centre for Environmental Rights.
- Chang, H.J. 2017. *Edible Economics: A Hungry Economist Explains the World*. New York, NY: Hachette Book Group.
- China Briefing Team. 2021. *US-China Relations in the Biden Era: A Timeline*. Last updated on 8 April, 2024. Shenzhen: Dezan Shira & Associates.
- Chingono, N. 2024. *Zimbabwe wants lithium miners to plan new capacity despite price dive*. Commodities. London: Reuters.
- Chivvis, C.S., Noor, E. and Geaghan-Breiner, B. 2023. *Indonesia in the Emerging World Order*. Article. Washington, DC: Carnegie Endowment for International Peace.
- CRI. 2024. *Nickel Unearthed – The Human and Climate Costs of Indonesia's Nickel Industry*. CRI Indonesia Report. Berkeley: Climate Rights International.
- Curran, E., Donnan, S., Cousin, M., Uyen, N.D.T., Nguyen, Q., Martewicz, M., Averbuch, M., Murray, B., Lee, A., Sihombing, G. and Jiao, C. 2023. *These Five Countries Are Key Economic 'Connectors' in a Fragmenting World*. Businessweek, Bloomberg New Economy. New York, NY: Bloomberg.
- Cust, J. and Zeufack, A. (eds.). 2023. *Africa's Resource Future*. Africa development Forum. Paris and Washington, DC: Agence Française de Développement and World Bank.
- Dammert, L. and Torreblanca, J.I. 2023. *Critical material: The EU's and Chile's new relationship in the multipolar world*. ECFR Commentary. European Power. Berlin: European Council on Foreign Relations.
- De Ville, F. 2023. *The Return of Industrial Policy in the European Union*. Ghent: Ghent University.
- Dempsey, H. 2023. Artisanal mining: the struggle to clean up a murky industry. The Big read, Rare earths. *Financial Times*. London.
- Dempsey, H. and Cotterill, J. 2023. How China is winning the race for Africa's lithium. The Big read, Natural resources. *Financial Times*. London.
- Dentons. 2024. *US terminates Zimbabwe sanctions program, transitions certain designations to GLOMAG*.
- Dercon, S. 2023. *The Political Economy of Economic Policy Advice*. Oxford: Centre for the Study of African Economies, Blavatnik School of Government and Department of Economics, University of Oxford.
- Dombrovskis, V. 2024. Reform the WTO to make it fit for the 21st century. Opinion, World Trade Organization. *Financial Times*. London.

-
- EC. 2023. *EU prolongs tariff suspension for US products related to the steel and aluminium dispute*. EC Press release. 19 December 2023. Brussels: European Commission.
- ESI Africa. 2023. *Zimbabwe: Lithium exports soar as Chinese projects take off*. Cape Town.
- Evenett, S.J. and Fritz, J. 2023. *The Scramble for Critical Raw Materials: Time to Take Stock? The 31st Global Trade Alert Report*. London: Centre for Economic Policy Research.
- Evenett, S.J. and Martín, F. 2024. *Why the return of the industrial policy matters for business*. *IMD Strategy*. Lausanne: International Institute for Management Development.
- Finn, B.M. 2023. The structure of informality: The Zambian copperbelt and the informal/formal dialectic. *Dialogues in Human Geography*, 0(0). Thousand Oaks, CA: Sage Journals, Sage Publishing. <https://doi.org/10.1177/20438206231168883>
- Gbadamosi, N. 2023. *Zimbabwe's 'White Gold'*. Africa Brief. Washington, DC: Foreign Policy.
- Géraud Neema, C. 2024. *Navigating Critical Mineral Supply Chains: the EU's Partnerships with the DRC and Zambia*. Geopolitics & Geoeconomics. Berlin: Africa Policy Research Institute.
- Gopinath, G. 2024a. *How Policymakers Should Handle a Fragmenting World*. FP Argument. Washington, DC: Foreign Policy.
- Gopinath, G. 2024b. *On the Global Economy*. FP Live conversations. Washington, DC: Foreign Policy.
- Hansen, M. W., Buur, L., Mette Kjær, A. and Therkildsen, O. 2016. The Economics and Politics of Local Content in African Extractives: Lessons from Tanzania, Uganda and Mozambique. *Forum for Development Studies*, 43(2): 201–228. Oxford: Taylor & Francis Online. <https://doi.org/10.1080/08039410.2015.1089319>
- Hauge, J. and Chang, H.J. 2019. The role of manufacturing versus services in economic development. In *Transforming industrial policy for the digital age*, Chapter 1, pp. 12–36. Cheltenham: Edward Elgar Publishing.
- Hausmann, R. 2019. *What is the Product Space?* YouTube video, CID channel. Cambridge, MA: Center for International Development at Harvard University.
- Hausmann, R., Hidalgo, C.A., Bustos, S., Coscia, M., Simoes, A. and Yildirim, M.A. 2013. *The Atlas of Economic Complexity. Mapping paths to prosperity*. Cambridge, MA: Massachusetts Institute of Technology and Center for International Development, Harvard University.
- Hausmann, R., Klinger, B. and Lawrence, R. 2008. *Examining Beneficiation*. CID Working Paper 162. Faculty Research Working Papers Series. Cambridge, MA: Harvard Kennedy School – John F. Kennedy School of Government.
- Hausmann, R., Protzer, E., Tapia, J. and Grisanti, A. 2021. *Economic Complexity Report for Western Australia*. CID Faculty Working Paper 394. Working Papers. Cambridge, MA: Center for International Development at Harvard University.
- Hickey, S., Abdulai, A.-G., Izama, A. and Mohan, G. 2020. Responding to the commodity boom with varieties of resource nationalism: a political economy explanation for the different routes taken by Africa's new oil producers. *The Extractive Industries and Society*, 7(4):46–1256. Amsterdam: Elsevier. <https://doi.org/10.1016/j.exis.2020.06.021>
- Hidayat, F. 2023. Bleak Prospects for an Indonesia–US FTA on Critical Minerals. Pacific Money | Economy | Southeast Asia. *The Diplomat*. Washington, DC.

-
- IPIS. 2024. *Mining and conflict in the eastern DRC*. Mapping. Antwerp: International Peace Information Service.
- Jacob, T. and Pedersen, R.H. 2018. New resource nationalism? Continuity and change in Tanzania's extractive industries. *The Extractive Industries and Society*, 5(2): 287-292. Amsterdam: Elsevier. <https://doi.org/10.1016/j.exis.2018.02.001>
- Javorcik, B., Kitzmüller, L., Mathew, S., Schweiger, H. and Wang, X. 2023. *The green transition and geopolitical tensions*. VoxEU/Columns. London: Centre for Economic Policy Research.
- Juhász, R., Lane, N., Oehlsen, E. and Pérez, V.C. 2023. *Trends in Global Industrial Policy*. Vienna: UNIDO Industrial Analytics Platform.
- Karkare, P. and Medinilla, A. 2023a. *Green industrialisation: Leveraging critical raw materials for an African battery value chain*. ECDPM Discussion paper 359. Maastricht: ECDPM.
- Karkare, P. and Medinilla, A. 2023b. *An African battery value chain to kickstart green industrialisation*. ECDPM Guide. Maastricht: ECDPM.
- Kim, K. 2023. *Linking economic nationalism with global value chain: Indonesia's nickel sector industrial policies*. ANU Indonesia Project. Canberra: Australian National University.
- Kim, O. 2024. *Anatomy of a Coup: Weak States and the Chain of Command*. Global Developments Blog.
- Kitaw, M. 2023. *Making the Most of Africa's Strategic Green Minerals*. The World's Opinion Page. PS Commentary. New York, NY: Project Syndicate.
- Kowalski, P. and Legendre, C. 2023. *Raw materials critical for the green transition*. OECD Trade Policy Papers; 269. OECD iLibrary. Paris: Organisation for Economic Co-operation and Development.
- Lott, M. 2024a. *The High Stakes for Battery Ingredients*. The Big Switch Podcast series, Season 4(3). New York, NY: Columbia University, Center on Global Energy Policy.
- Lott, M. 2024b. *The Mining Conundrum for Critical Minerals*. The Big Switch Podcast series, Season 4(2). New York, NY: Columbia University, Center on Global Energy Policy.
- Malhotra, A. and Schmidt, T.S. 2020. Accelerating Low-Carbon Innovation. *Joule* 4: 2259-2267. Amsterdam: Elsevier.
- Mambondiyani, A. 2024. Zimbabwe looks to China to secure place in EV battery supply chain. *Climate. African Arguments*.
- Manley, D., Heller P.R.P. and Davis, W. 2022. *No Time to Waste: Governing Cobalt Amid the Energy Transition*. Berkley, CA and New York, NY: Center for Law, Energy & The Environment (Berkley University) and Natural Resource Governance Institute.
- Matiashe, F.S. 2023. *Zimbabwe: Is the raw lithium export ban backfiring? Compromise? The Africa Report*. Paris.
- Matiashe, F.S. 2024a. *Zimbabwe: Raw lithium ban fails to curb smuggling*. Explore and Exploit. Paris: The Africa Report.
- Matiashe, F.S. 2024b. *US-Zimbabwe relations take another turn for the worse*. Explore and Exploit. *The Africa Report*. Paris.
- Max and Nafkote. 2024. *Economics for the 99% - with Professor Ha-Joon Chang*. Spotify Podcast episode. *Series Equals: Reimagining our Economy*.

-
- Mberi, R. 2023. *As Zimbabwe elections near, China is the dragon in the room*. Soft Power. New York, NY: Coda Story.
- McGeady, C. and Baskaran, G. 2023. *Resource Nationalism is not the United States' biggest minerals problem*. Washington, DC: Center for Strategic and International Studies.
- Medinilla, A. and Byiers, B. 2023. *The political economy of green industrialisation in Africa*. ECDPM Discussion paper 363. Maastricht: ECDPM.
- Mihalyi, D. and Cust, J. 2017. *What is the Resource Curse?* NRG Blog. New York, NY: Natural Resource Governance Institute.
- Muchineripi Gwande, V. 2022. *Manufacturing in Colonial Zimbabwe, 1890-1979*. Martelsham: Boydell & Brewer.
- Ndlovu, R. and Marawanyika, G. 2023. *China to Invest \$2.8 Billion in Zimbabwe in Lithium*. Energy. Green. New York, NY: Bloomberg.
- Nem Singh, J.T. 2022. *Geographies in Transition*. Phenomenal World.
- Nem Singh, J.T. 2023. *Industrial Experiments*. Phenomenal World.
- NewsHawks. 2023. *Massive lithium ore smuggling via Zim-Mozambique porous borders*. News. Harare.
- NRGI. 2015. *Primer: The Resource Course*. NRG Briefing. New York, NY: Natural Resource Governance Institute.
- Odiije, M.E. 2018. The need for industrial policy coordination in the African Continental Free Trade Area. *African Affairs*, 118(470): 182-193. Oxford: Oxford University Press. <https://doi.org/10.1093/afraf/ady054>
- Odiije, M.E. 2023. *Sectoral Strategy*. Phenomenal World.
- O'lang, S. and Scurfield, T. 2023. *The DRC-Zambia Battery Plant: Key Considerations for Governments in 2024*. NRG Briefing. New York, NY: Natural Resource Governance Institute.
- Olander, E. 2024a. *What Exactly is the "Global South"?* Jorge Heine. The China in Africa Podcast. 23 February 2024. China Global South Project.
- Olander, E. 2024b. *China and the Indonesia Nickel Trade: Measuring the True Labor and Environmental Cost*. Krista Shennum. The China in Africa Podcast. 27 February 2024. China Global South Project.
- Ones, C. and Tooze, A. 2024. *Indonesia's Presidential Election*. FP Live podcast, Ones &Tooze series. Washington, DC: Foreign Policy.
- Opalo, K. 2023a. *There is an urgent need to unlock labor productivity in African economies*. An Africanist Perspective Blog.
- Opalo, K. 2023b. *Natural resources and economic (under)development in Africa*. An Africanist Perspective Blog.
- Opalo, K. 2023c. *On America's structural inability to effectively compete with China in Africa*. An Africanist Perspective Blog.
- Opalo, K. 2023d. *Managing the coming lithium boom (and bust) in select African states*. An Africanist Perspective Blog.
- Opalo, K. 2024a. *What next for Equatorial Guinea after oil?* An Africanist Perspective Blog.

-
- Opalo, K. 2024b. *Policymaking for economic transformation in African states: what ought to be done*. An Africanist Perspective Blog.
- Östensson, O. 2019. Promoting downstream processing: resource nationalism or industrial policy? *Mineral Economics*, 32: 205–212. Berlin: Springer Link. <https://doi.org/10.1007/s13563-019-00170-x>
- Patunru, A. 2023. *Linking economic nationalism with global value chain: Indonesia's nickel sector industrial policies*. Global Seminar Series. YouTube video, ANU Indonesia Project channel. Canberra: Australian National University.
- Pickles, S. 2023. *Value Addition in the Context of Mineral Processing*. Study, e-paper. Berlin: Heinrich-Böll-Stiftung.
- Pitman, R. and Toroskainen, K. 2020. *Beneath the Surface: The Case for Oversight of Extractive Industry Suppliers*. New York, NY: Natural Resource Governance Institute.
- Radley, B. 2023. Green imperialism, sovereignty, and the quest for national development in the Congo. *Review of African Political Economy*, 50(177–178): 322–339. Oxford: Taylor & Francis Online. <https://doi.org/10.1080/03056244.2023.2277616>
- Research Network Sustainable Global Supply Chains. 2023. *Sustainable global supply chains in times of geopolitical crises. Annual Report 2023*. Berlin: Stiftung Wissenschaft und Politik.
- RoAPE. 2023. The three-stage process through which African resource sovereignty was ceded to foreign mining corporations. *Review of African Political Economy*. Berlin: ScienceOpen.
- Rodrik, D. 2023. *Doing Economic Nationalism the Right Way*. New York, NY: Project Syndicate.
- Rodrik, D. 2024. *A New Growth Strategy for Developing Nations*. Cambridge, MA: Harvard Kennedy School, Mossavar-Rahmani Center for Business and Government.
- Rodrik, D. and Stiglitz, J.E. 2024. *A new Growth Strategy for Developing Nations*. Cambridge, MA: Harvard University.
- Said, J. 2022. The key to AfCFTA success is industrial policy, not trade policy. Analysis, Business. *Pan African Review*. Kigali.
- Sanderson, H. 2023. *Volt Rush - The Winners and Losers in the Race to Go Green*. London: Oneworld Publications.
- Scheifele, F., Bräuning, M. and Probst, B. 2022. The impact of local content requirements on the development of export competitiveness in solar and wind technologies. *Renewable and Sustainable Energy Reviews*, 168(112831). Amsterdam: Elsevier.
- Scott, M., Gijs, C. and Zimmermann, A. 2024. How to 'Trump proof' the transatlantic relationship? News, Technology. *Politico*. Brussels.
- Sguazzin, A. 2023. *Next Africa: Resource Nationalism or a Fair Share?* Newsletter. New York, NY: Bloomberg.
- Shen, W. and Zhou, Z. 2023. *Chinese investments amid the energy crises and mineral treasures in Zimbabwe*. Policy Brief Series on China and Africa's Energy Transition. Policy Brief 01. Beijing and Cape Town: International Institute of Green Finance and African Climate Foundation.
- Simons, B. 2012. Africa's Fabulous Mineral Wealth that isn't ALL there. Politics. *African Arguments*.
- Smith, N. 2024. *Do poor countries need a new development strategy?* Noahpinion Blog.

-
- Stempel, J. 2024. *US court sides with Apple, Tesla, other tech companies over child labor in Africa*. Legal. London: Reuters.
- The Economist. 2023. *Indonesia embraces resource nationalism*. Asia | Full metal jacket. London.
- The Economist. 2024a. *The growing peril of national conservatism*. Leaders | The right. London.
- The Economist. 2024b. *Africa is juggling rival powers like no other continent*. International | Surviving in a multipolar world. London.
- The Economist. 2024c. *Prabowo Subianto will be Indonesia's next president*. Asia | General, elected. London.
- The Economist. 2024d. *A millennial is building America's first nickel-cobalt refinery*. United States | Cobalt blues. London.
- Tran, H. 2024. *How Can the Global South Navigate Geopolitical Rivalry and Geoeconomic Fragmentation?* PCNS Policy brief. Salé: Policy Center for the New South.
- UNCTAD. 2023. *Global trade expected to shrink by nearly 5% in 2023 amid geopolitical strains and shifting trade patterns*. Geneva: United Nations Conference on Trade and Development.
- UNDP. 2024. *Breaking the gridlock: Reimagining cooperation in a polarized world*. Human Development Report 2023–24. New York, NY: United Nations Development Programme.
- Van Staden, C. 2024. *Climate Collaboration in Multipolar Times. The European Union and China as Energy Transition Partners to African Countries*. Megatrends Working Paper 09. Megatrends Afrika. doi:10.18449/2024MTA-WP09
- Venditti, B. 2023. *The Critical Minerals to China, EU, and U.S. National Security*. Mining. Vancouver: The Visual capitalist.
- VOA. 2018. *Zimbabwe Has Potential to Meet 20% of Global Lithium Demand*. Washington, DC: VOA Zimbabwe.
- WB. 2023. *Democratic Republic of the Congo - Country Economic Memorandum (CEM)*. Washington, DC: World Bank.

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