

# Wealth without Agency

## The critical mineral race and the limits of strategic agency in the Global South: the case of the Democratic Republic of Congo

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Contemporary geoeconomics is largely defined by the competition between the US-led West and China, which manifests through these regions' attempts to defend and increase their centrality in global production and communication networks, notably in the digital realm.<sup>1</sup> In this context, Western powers face a structural limit to their technological dominance: their reliance on foreign critical minerals, the production and transformation of which is overwhelmingly dominated by China. Critical minerals – such as lithium, cobalt, nickel, and rare earth elements (REE) – are geographically dispersed around the world, with many of the known reserves located in Global South (GS) countries. These minerals are vital to advanced technologies needed for industrialized countries' twin digital and green transitions (semiconductors, electric vehicle batteries, or solar panels) and advanced military applications.<sup>2</sup> This criticality is further heightened by the absence of viable substitutes, the concentration of minerals in a few geographies, and the vulnerability of supply chains to external shocks like geopolitical tensions and environmental regulations.

China currently dominates the global critical mineral industry, creating a massive chokepoint for the West's pursuit of critical-mineral supply chain resilience. China is the largest global producer of at least 15 critical minerals and the global leader in mineral processing, refining over 90% of the world's rare earth output and most other critical minerals like cobalt.<sup>3</sup> In recent years, it has proven willing to weaponize this dominance over raw minerals supply chains, in particular during its 2010 maritime dispute with Japan and the more recent tariff tensions with the US.<sup>4</sup> Against this backdrop, Western industrialized powers have increasingly seen diversifying their critical-mineral supply toward GS countries as a way to improve their economic resilience and strategic autonomy vis-à-vis China. In parallel, this growing demand has often been viewed as an opportunity for the GS countries that hold vast resources of critical minerals to make economic gains and support their domestic development priorities (*see Table 1 in the Appendix*).<sup>5</sup> As such, tapping into the mineral wealth of the GS is often endorsed in policy debates as a win-win alternative, through which industrial powers get access to critical minerals and mitigate their vulnerability to Chinese coercion while the GS states gain strategic agency.<sup>6</sup> In this essay, strategic agency refers to the capacity of resource-endowed developing states to leverage their mineral wealth to negotiate favourable terms in their partnerships with foreign players and to exercise greater autonomy in navigating great-power politics.

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It is often thought that, by leveraging their mineral endowments, developing states of the GS can boost their structural power and gain greater room to negotiate or to ‘play the game,’ instead of becoming the playing field of great power competition.<sup>7</sup> However, the premise that possessing natural resources brings economic development and strategic agency to resource-endowed countries is worth probing. The classical framings of ‘paradox of plenty’ or the ‘resource curse’ describe the inability of resource-rich states to translate their endowments into meaningful economic development. The resource curse literature has long argued that weak institutions, rent-seeking by economic and political elites, corruption, and conflict increase the likelihood that a resource-rich country remains weakly developed.<sup>8</sup> More recent scholarly work has highlighted the limitations of this traditional framing, noting that external factors in particular geopolitics explain variation in resource-rich countries’ ability to evade the resource curse.<sup>9</sup>

Building on this expanded conceptual framing, this essay explores the limitations imposed by great powers’ geoeconomic competition on the ability of resource-rich countries to convert their mineral wealth into strategic agency. It demonstrates how domestic challenges, such as the scarcity of capital and the lack of infrastructure, as well as global geoeconomic competition interact to limit resource-rich GS countries’ ability to achieve greater strategic agency. It argues that industrialized countries have few incentives to support resource-rich countries’ refining and transformation capabilities because of the economic gains associated with localizing these capabilities on their own soil, pre-existing resource-backed loan obligations to China, and the substitutability of supply. Consequently, great power competition over access to critical minerals has not been associated with the meaningful industrial partnerships and investment needed for resource-rich countries to move up global value chains, greatly limiting their ability to achieve economic and strategic gains. The present essay illustrates this argument through the case of the Democratic Republic of Congo (DRC), home to the largest and highest-grade cobalt and copper in the world.<sup>10</sup>

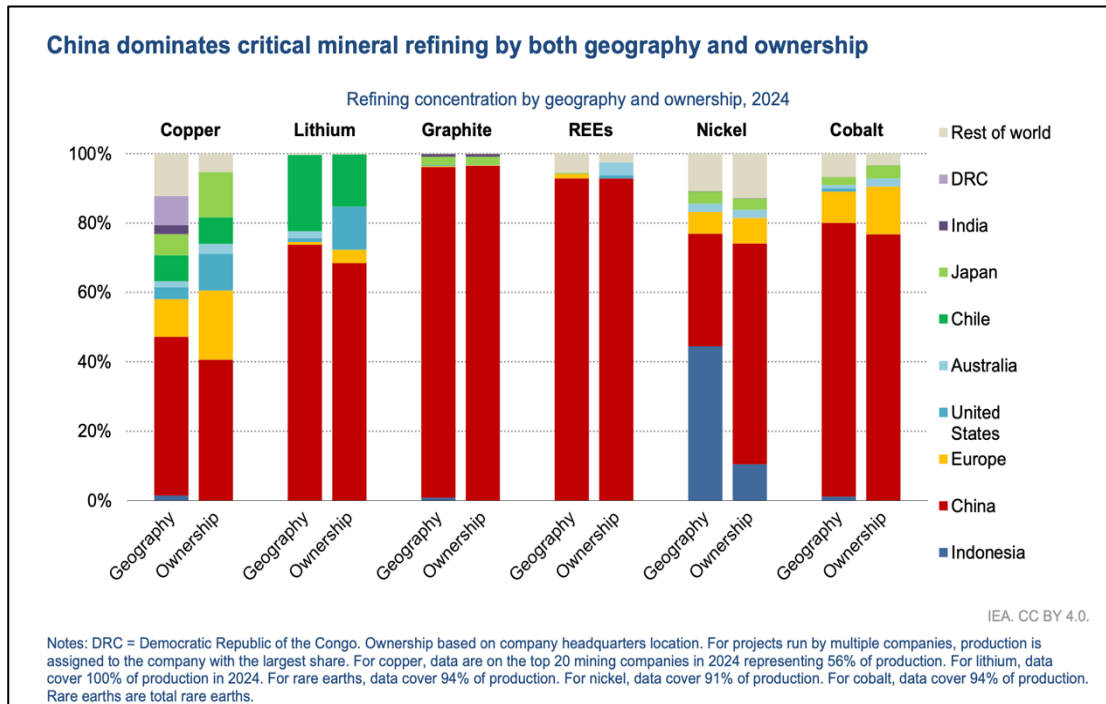
### **Domestic structural deficits**

The exploration, mining, and processing of critical minerals require advanced technology, long lead times, and substantial capital investment. Once a potential mine is discovered, its exploration and production can last up to an average of 16 to 18 years.<sup>11</sup> Most of this time covers the initial stages, including the feasibility studies and the acquisition of mining permits. Subsequently, the construction of mineral processing infrastructure can take up to five additional years.<sup>12</sup> Consequently, a commercial mine could operate for years without making any profit, a risk for profit-driven investors.<sup>13</sup>

A key reason why China dominates the global mineral industry is that it can circumvent these fundamental challenges. China’s mineral boom started as early as the 1990s, long before critical minerals became a geoeconomic chokepoint.<sup>14</sup> Beyond this early start, China’s subsidy-backed state-owned enterprise (SOE) model has allowed it to sustain high-capital investments in both mining and processing.<sup>15</sup> As Beijing’s ‘Go Global’ mandate provided the political will, and its current account surplus financially enabled it, Chinese SOEs aggressively expanded their global footprint in the mining sector.<sup>16</sup> This expansion utilised two strategic lending models: the resource-backed loan model (RBL), whereby debt is serviced through direct resource exports like minerals and oil, and the resource-for-infrastructure (RFI) model, which barter domestic infrastructure projects for a long-term supply of

resources to China. As a result, China today is both deeply embedded in a global network of mines and has more domestic processing facilities than its own mines can feed. This prompts China to import unprocessed minerals from elsewhere (*see Figure 1*).<sup>17</sup> These features have enabled Beijing to invest in mines beyond China by tolerating the inherent risks in the mining industry while outperforming its risk-averse Western rivals.<sup>18</sup>

**Figure 1:** China's dominance in critical mineral refining capacities



Source: *Global Critical Mineral Outlook 2025*.

By contrast, the DRC, which sits on an estimated 24 trillion USD worth of mineral reserves, has been unable to tap into this potential. Interestingly, this valuation is only approximate, as only 20% of the country's landmass has been geologically mapped to date. This suggests that vast mines have been unexplored.<sup>19</sup> Severe political and economic limitations, including the lack of capital, infrastructure, energy, and institutional capacity, have collectively prevented the DRC from developing a profitable domestic mining industry.

The DRC lacks the capital to finance its mineral industry due to systemic domestic fiscal failures. A weak tax system generates revenue amounting to about 12.5% of the GDP, which is insufficient to accumulate the reserves necessary for highly capital-intensive mining projects.<sup>20</sup> Its rampant poverty, with 70% of the population living below the national poverty line, further undermines sufficient inland revenue collection.<sup>21</sup> DRC's overall economic deficiencies also mean it has a low borrowing capacity and poor credit ratings, with high-risk profiles that have resulted in international lending restrictions. For instance, S&P Global classifies the DRC at B-, a high-risk Non-Investment Grade rating, while the IMF categorises DRC's debt carrying capacity as 'weak.'<sup>22</sup> In addition, the DRC government imposed a domestic law in 2023 that legally restricted public institutions from borrowing externally without approval.<sup>23</sup> This severely affects the country's ability to borrow foreign capital to invest in domestic mining projects. Even though DRC has its state-owned mining enterprise Gécamines, this

glaring lack of capital forces it to be a minority partner in joint ventures with foreign companies, rather than an independent producer with a majority profit share.

Similarly, the DRC lacks the functional and interconnected road and railway network needed to transport mined ore to ports. This dramatically increases the transport costs involved, which, in turn, reduces the profitability of exporting minerals. Although infrastructure development projects such as the Lobito Corridor are partially operational, they remain several years away from completion, with the Corridor itself not expected to be complete before 2029.<sup>24</sup> Energy remains another significant structural bottleneck. Globally, mining amounts to approximately 15% of electricity consumption. As the world's third-largest population without access to electricity, with only 20% of its population forecasted to have access by 2030, DRC cannot offer the stable and affordable electricity supply that industrial mining demands.<sup>25</sup> Not only does this deficit undermine cost-efficient production, but it also limits the DRC's ability to develop a high-value-added processing capacity.

While the lack of capital compels the DRC to rely on foreign investments, its infrastructure and energy deficits further erode its bargaining power, enabling foreign investors to secure highly asymmetrical arrangements such as resource-for-infrastructure (RFI) deals. This dynamic was evident in the Sicomines agreement. In 2008, a consortium of Chinese SOEs led by the China Railway Engineering Corporation (CREC) and financed by the Export-Import Bank of China (CEXIM) invested 3 billion USD in copper and cobalt mine development and another 3 billion USD in related infrastructure in the DRC.<sup>26</sup> In this partnership, Chinese companies hold a 68% stake and DRC's mining SOE Gécamines holds 32%, while the profits earned from the mining project are legally obligated to be paid to CEXIM to settle the loans that financed the infrastructure projects. Overall, Chinese entities now have equity in 15 out of 19 cobalt mines in the DRC, while Chinese facilities refine 60-90% of global cobalt, most of which traces its origins back to the DRC.<sup>27</sup> The DRC's capacity deficits also affect commercial acquisitions, as evident during China Molybdenum's (CMOC) acquisition of Tenke Fungurume mine from the US miner Freeport-McMoRan in 2016. Though Gécamines fiercely opposed the transfer of a strategic asset to a Chinese entity and had the legal right of first refusal to block the Chinese acquisition of the mine, its severe capital deficit prevented Gécamines from outbidding CMOC, underscoring how the DRC's capital deficit exposes its mineral wealth to foreign control.<sup>28</sup>

Similarly, while Western actors like the US have signed agreements pledging to invest in the Congolese mineral industry, they appear mostly driven by their intentions to defend their supply chain security and bypass Chinese dominance, rather than by a will to develop the DRC's processing capacities. For example, the US-DRC Strategic Partnership Agreement signed in December 2025 includes a designated list of strategic assets called the Strategic Asset Reserve (SAR), offering US companies preferential first-look rights over the projects included in the SAR.<sup>29</sup> The agreement is also characterised as a minerals-for-security arrangement, whereby the US secures stable access to critical minerals like cobalt, copper, and germanium in exchange for security cooperation with the DRC to combat rebel fighting in East DRC.<sup>30</sup> Such an agreement reveals that the American engagement with the DRC's mineral wealth is designed to secure its mineral access, rather than to develop Congolese industrial capacities, thereby reinforcing the structural asymmetries that constrain the DRC's strategic agency.

## The processing chokepoint

Beyond the DRC's structural deficits in the extraction stage, the more fundamental chokepoint lies in mid- and downstream processing, a domain in which the agency of GS countries is most severely curtailed. The mined ore does not hold significant commercial value, unlike processed and refined minerals or end products such as permanent magnets. Although most GS states possess critical minerals, since they occur in unrefined forms, the mined ore must be processed to make their extraction commercially viable. However, due to the absence of mineral processing capacities, the extracting states must export most of their ores to be refined in China, which dominates global mineral refining.

China has built a massive processing industry and has come to dominate critical mineral refining, as measured by both geography and ownership.<sup>31</sup> Despite being a major producer, China's domestic mining output is insufficient to feed its processing facilities. Consequently, it must import vast quantities of unprocessed minerals from the rest of the world to sustain its massive mineral refining industry.<sup>32</sup> With the majority of mineral processing occurring domestically, China has seamlessly integrated the mineral value chain. This enables it to direct processed minerals toward high-value-added manufacturing, such as permanent magnets and EV batteries. This structural advantage is reflected, for instance, in China's control of a staggering 94% of global permanent magnet manufacturing.

By contrast, the mineral industry in the DRC is confined to midstream processing. Since the value addition of mineral value chains in the DRC is minimal, most profits are typically made after the minerals leave the country. For example, cobalt is exported as cobalt hydroxide, an intermediate product with a purity of 20% to 40%. Cobalt is rarely mined alone and instead produced as a by-product of copper and nickel mining, making cobalt extraction an advanced and complex process. Since the cobalt hydroxide that DRC exports is yet to undergo advanced chemical refining, it is sold at a discounted price, often around 50%-60% of the metal price.<sup>33</sup> Refiners in China further purify the cobalt hydroxide into a sulphate form, claiming the remaining margin as the mineral reaches its full market price. Subsequently, China integrates refined cobalt into battery cathodes, such as those used in EVs, which have an even higher market value. Although the DRC is attempting to improve its mineral processing and battery manufacturing capabilities, it cannot match China's already established and advanced expertise.

Recognizing the disparity in value addition, the DRC has actively taken steps to capture a greater share of the profits generated in cobalt value chains. In February 2025, it imposed an export ban on cobalt, bringing the global cobalt market from a surplus to a deficit and forcing the refineries to pay the price of fully refined cobalt for semi-refined hydroxide, effectively eliminating their profit margins.<sup>34</sup> Later replaced with a quota system by October, the ban caused cobalt imports in China to dwindle, forcing refiners to draw from their internal stocks to meet the demand and giving significant leverage to the DRC in renegotiating the terms of its agreements with Chinese companies. The new quota system caps DRC's 2026 and 2027 annual cobalt exports at 96,000 tonnes, approximately half of its exports in 2024, keeping the market tight, the prices stable, and DRC's profit gap narrow.<sup>35</sup> However, the imposition of export quotas also carries adverse long-term risks, such as a potential decline in the demand for Congolese cobalt. For instance, export restrictions have already redirected the attention of

mining and processing companies toward alternative markets, notably Indonesia, the world's second-largest producer, where cobalt production has rapidly accelerated.

In a similar initiative to capture a larger share of profits, DRC and Zambia signed a memorandum of understanding (MoU) in 2022 to build a special economic zone focusing on downstream processing and manufacturing battery precursors locally. However, acute deficits in electricity and infrastructure have stalled the progress of implementation. The DRC's high-risk profile, characterized by institutional weaknesses and armed conflicts involving M23 rebels, has put the project's feasibility into further question. This highlights how domestic structural deficits continue to affect the country's ambitions for domestic value-added processing. The DRC has signed similar partnerships with Western actors aimed at developing its mineral industry, especially domestic value addition. For example, the 2023 EU-DRC partnership on sustainable raw materials covers five areas of cooperation that include value chain integration, funding for infrastructure, and sustainable production. But the agreement only mentions research and development and knowledge sharing on mineral refining and processing, without further elaboration on what it entails.<sup>36</sup>

Although many such partnerships are being established, their effectiveness, especially in developing domestic processing capacities, faces an immediate structural barrier on the ground, as China retains a majority stake in most of the operational mines in DRC. Through RFI deals, China is contractually allowed to secure the bulk of DRC's mineral output for its own downstream processing for the foreseeable future. For example, the Sicominex agreement funds infrastructure projects in DRC until 2040, and since the DRC pays for these projects entirely via mineral extraction, Sicominex is contractually required to mine and export minerals to China until the loan is fully settled. Further, even under the new quota system, the payback to Sicominex takes precedence when allocating quotas, as it is legally designated as a sovereign, state-backed priority. This means DRC cannot reallocate mineral exports elsewhere without causing a default on its Sicominex infrastructure loan of approximately 7 billion USD.<sup>37</sup> This creates a stalemate where, despite DRC's imposition of export quotas and the West's investments to build DRC's processing capacities, a majority share of DRC's mineral exports remains legally reserved for Chinese processing. This shows how contractual obligations linked to foreign powers' desire to secure their supply of raw minerals – in this case China – continue to overshadow DRC's pursuit of resource sovereignty and strategic agency.

### **Level of criticality and the risk of substitution**

Although the umbrella term 'critical minerals' is widely used in geoeconomic contexts, there is no universally agreed-upon list of critical minerals. Rather, different states and regional blocs maintain distinct lists tailored to their strategic priorities. The US Geological Survey (USGS) of 2025, for instance, identifies 60 minerals as critical, whereas the EU's Critical Raw Materials Act of 2024 identifies only 17. But not all minerals on these lists are equally "critical". For example, lithium, copper, and cobalt are currently in higher demand due to their geographic exclusivity and indispensability to green energy and EV technology, with the World Bank predicting the global demand for these minerals to grow by 500% by 2050.<sup>38</sup>

A mineral's criticality fluctuates over time, depending on the geographic dispersion of mines, technological innovation, and the overall global demand and price.<sup>39</sup> Consequently, when geographic exclusivity leads to limited supply and price hikes, it incentivises downstream manufacturers to seek substitutes. This dynamic is starkly evident in the EV battery domain. When the DRC imposed an export ban on cobalt, later followed by a restricted export quota system, it drove the demand for cobalt-free EV battery alternatives such as LFP (Lithium-iron-phosphate) over typical NMC (manganese-nickel-cobalt) batteries. Given their cost-efficiency, longer lifespan, and safety, the demand for LFP batteries is on the rise. LFP batteries are currently used in 80.9% of the Chinese EV battery market, while market analyses forecast that their global market share will rise from 48% in 2024 to 65% by 2029.<sup>40</sup> The rapidly increasing demand for LFP batteries illustrates the limits of resource leverage and how the mineral market adapts to prioritise commercial efficiency and supply security, often bypassing a state's ambition for strategic agency or the geoeconomic frictions that created the bottleneck.<sup>41</sup>

## Conclusion

The global shift towards technological advancement and decarbonization has triggered an unprecedented surge in demand for critical minerals, theoretically positioning resource-rich countries of the Global South in an advantageous bargaining position. Against optimistic accounts, this essay has argued that domestic structural deficits and external geoeconomic constraints reinforce each other in curtailing mineral-rich countries' ability to achieve greater agency in the international system. Despite the increase in demand driven by geoeconomic competition, mineral-rich Global South countries lack the necessary capital and infrastructure to develop viable domestic processing capabilities. Simultaneously, industrialized powers have weak incentives to support mineral-rich countries moving up global value chains by improving their domestic downstream processing capabilities. Resource-rich Global South countries' lack of infrastructure, weak governance, and entanglement in resource-backed Chinese loans do not make sustained foreign investments in domestic transformation capabilities by Western industrialized powers a viable option, either economically or strategically. In particular, the risk of seeing Western-funded production capabilities feed Chinese markets deters any efforts to provide substantial capital. Consequently, most foreign mining investments in the GS fall short of establishing advanced capabilities, focusing instead on mineral extraction, midstream processing, and export infrastructure. This demonstrates how geoeconomic competition between industrialized powers risks entrenching mineral-rich countries' resource curse.

## Appendix

**Table 1:** Notable mines in the Global South states and their strategic importance

Country	Key critical minerals	Notable mines / projects	Strategic importance
<b>Africa</b>			
<b>DRC</b>	Cobalt, Copper	Tenke Fungurume, Kisanfu, Kamoto, Mutanda	Produces over 70% of global cobalt, World's 2nd largest copper producer.
<b>Zambia</b>	Cobalt, Copper	Kansanshi, Sentinel, Konkola	Historically Africa's top copper producer. Currently shares African Copper Belt with the DRC
<b>Zimbabwe</b>	Lithium, Platinum	Bikita, Arcadia, Sandawana	Largest lithium reserves in Africa
<b>Angola</b>	Copper, rare earth	Longonjo (REE), Tetelo (Copper)	Longonjo is one of the world's only ready-to-drill neodymium-praseodymium (NdPr) projects.
<b>Namibia</b>	Uranium, Lithium	Rossing (Uranium), Karibib (Lithium)	Third largest uranium producer globally.
<b>Guinea</b>	Bauxite (Aluminium)	Sangaredi, Boffa	Holds world's largest bauxite reserves
<b>Morocco</b>	Phosphate, Cobalt	Khouribga (Phosphate), Bou-Azzer (Cobalt)	Produces 75% of global phosphate. Bou-Azzer is one of the world's only primary cobalt mines.
<b>South Africa</b>	Manganese, Platinum, Chromium	Kalahari Manganese Field, Mogalakwena (Nickel/PGMs)	World's largest manganese producer. Produces 70% of global platinum.
<b>South America</b>			
<b>Chile</b>	Lithium, Copper	Salar de Atacama (Lithium), Escondida (Copper)	Forms the Lithium Triangle with Argentina and Bolivia. World's largest copper producer.
<b>Argentina</b>	Lithium	Salar del Hombre Muerto, Cauchari-Olaroz	Part of the Lithium Triangle. Rapidly expanding lithium capacity.
<b>Brazil</b>	Niobium, Rare Earths, Iron Ore	Araxa (Niobium), Serra Verde (REE)	Holds near-monopoly on niobium (90%). Emerging rare earth player.
<b>Peru</b>	copper, zinc, silver, arsenic	Las Bambas, Antamina, Cerro Verde	World's third largest copper producer, largest arsenic producer. Heavily reliant on mineral exports for GDP, similar to the DRC.
<b>Bolivia</b>	Lithium	Salar de Uyuni, Coipasa	Part of the Lithium Triangle. Holds substantial lithium reserves globally but contributes marginally to global production due to technical and political hurdles.
<b>Asia</b>			
<b>Philippines</b>	Nickel, copper	Rio Tuba, Taganito	A top global nickel ore supplier.
<b>Vietnam</b>	Rare Earths	Dong Pao (proposed expansion)	Holds the world's second-largest REE reserves after China.
<b>Indonesia</b>	Nickel	Grange, Weda Bay, Morowali	World's largest nickel producer (59% of global production).
<b>Kazakhstan</b>	Uranium	Stepnogorsk (Processing), Zhana Kazakhstan (REE)	World's top uranium producer; emerging as a key non-Chinese rare earth alternative in Central Asia.
<b>Malaysia</b>	Rare Earths	Lynas LAMP (Pahang)	Operates the largest heavy rare earth separation facility outside China. A vital processing node for Western supply chains.
<b>Myanmar</b>	Rare Earths, Tin	Kachin State Mines	Third largest REE producer globally. A massive global supplier of heavy rare earths to China. Mineral industry affected by ongoing conflict.

<b>India</b>	Rare Earths, Lithium, Beryllium	IREL Beach Sand (Odisha/Kerala)	Holds the world's third largest rare earth reserves. Launched the National Critical Mineral Mission in 2025 to move into magnet manufacturing.
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Source: Created by the author using data retrieved from USGS 2025, Global Critical Mineral Outlook 2025, and Visual Capitalist 2025.

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