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POLICY BRIEF

23-6 Why the proposed Brussels buyers club to procure critical minerals is a bad idea

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The European Commission has announced draft legislation that would establish a centralized purchasing mechanism for critical minerals ("critical raw materials," in European Union [EU] parlance), such as bauxite, cobalt, lithium, and nickel. These materials are critical inputs to green energy infrastructure, electric vehicles, and military technology. Their availability and cost will determine in large part how rapidly crucial climate change mitigation technologies can be adopted. The European Union is deeply dependent on imports of both raw and processed critical minerals and materials and thus highly exposed to global prices and price volatility.

The door appears to be open for the United States or other EU trading partners and like-minded countries to join, although the term *club* is also being applied to negotiations over trade deals—such as the limited US-Japan free trade agreement—designed to manage trade between major economies that are also critical mineral importers.[1] But many of the top producers of critical minerals are not developed economies. Countries like Bolivia, the Democratic Republic of the Congo, Guinea, and Indonesia are key exporters and/or have massive exportable mineral resources.[2]

Decarbonization is not the only impetus behind the proposed Brussels buyers club. Both the European Union and United States view China's dominance of critical mineral supply chains as a national security issue, because these minerals are key inputs to modern military technology. Access to strategic resources—the resources necessary to field modern militaries and the economies that sustain them—has always informed national security strategy; the issue has been given increased urgency by disruptions of energy supply chains stemming from Russia's

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1 Cecilia Malmström, Will the Scramble for Rare Earths Produce a Transatlantic Trade Accord? PIIE RealTime Economics blog, April 6, 2023.

2 Bolivia's lithium resources are the largest yet-untapped deposits in the world. Guinea, the Democratic Republic of the Congo, and Indonesia are among the world's top producers of bauxite, cobalt, and nickel.

invasion of Ukraine and weaponization of its oil and gas exports and reports that China is considering banning certain rare earth mineral and magnet exports in response to US and Dutch export controls on leading-edge semiconductors and fabrication equipment to China.[3]

The proposed buyers club could yield several benefits for the European Union, including preventing outbidding between EU-based purchasers, sending more accurate and transparent demand signals, and facilitating coordination with broader economic and security priorities. But for reasons ranging from intra-EU politics to challenges inherent to running cartels, such a buyers club may be politically and economically unworkable. And if successful, it would shift an important share of the economic benefits of green energy transitions from mostly developing and middle-income economies to the European Union, undermining putative commitments to just energy transitions at the global level.

Supply chains for critical minerals desperately need widening to meet projected global demand and tackle climate change mitigation. A purchasers club would not be a step in the right direction.

CARTELS IN THE GLOBAL ECONOMY

Cartels are groups of producers or buyers that coordinate their market behavior to exercise market power and shift prices in their favor. At the domestic/common market level, buyers cartels are generally illegal in the United States and European Union, although in the United States the distinction between cartel (illegal) and buying groups (legal) is based on market share of purchases rather than any fundamental conceptual difference (Carstensen 2010, Capobianco 2022).

Producer cartels exist to promote the collective political-economic interests of their members. The most famous producer cartel is the Organization of Petroleum Exporting Countries (OPEC). Its member-states coordinate oil production levels to achieve political-economic ends. Most of the time these ends are economic (maximizing and stabilizing oil prices and thus profits and member-state government revenues). But OPEC has also been motivated by political concerns. In 1973, its Arab members embargoed oil exports to countries that supported Israel during the Yom Kippur War, causing global prices to triple.

OPEC has also acted to tame rapid price increases for political ends. In 1991, it temporarily suspended production limits to allow members to pump extra crude to make up for the output lost during Iraq's invasion of Kuwait and to alleviate the effects of the resulting price spike on the United States, Saudi Arabia's main security partner, which had shouldered the lion's share of the burden of repelling the Iraqi invasion.

The aim of critical mineral–producing countries in forming an OPEC-like cartel for battery minerals like nickel and lithium is similar.[4] However, the end goal is not just to increase prices for raw materials but also to use the cartel's market power to catalyze investment in downstream processing and refining capacity in ore-

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3 Shunsuke Tabeta, "China Weighs Export Ban for Rare-Earth Magnet Tech," Nikkei Asia, April 6, 2023; Toby Sterling, Karen Freifeld, and Alexander Alper, "Dutch to Restrict Semiconductor Tech Exports to China, Joining US Effort," Reuters, March 8, 2023.

4 "Indonesia Pushing for OPEC-Style Nickel Cartel," *Asia Times*, January 26, 2023.

rich countries seeking to move up the value chain and avoid being relegated to "hewers of wood and drawers of water" status as primary commodity exporters in the era of renewable energy (Innes 1930). A critical minerals producers cartel would affect export prices but could also be viewed as part of a wider industrial policy push.

Capturing a bigger share of the economic benefits and promoting downstream development were the rationales behind another 1970s-era producers cartel, the International Bauxite Association (IBA). The IBA was spearheaded by Jamaican prime minister Michael Manley as a means of increasing the prices paid to producing countries and promoting downstream development that would bring more and higher-wage employment opportunities to IBA members. As the history of the now defunct IBA demonstrates, the success of cartels depends on their ability to maintain market share and thus power—a challenge current critical mineral–producing countries will face in the coming decades as advances in electric vehicle battery design potentially reduce the future importance of minerals that are currently critical to green supply chains.[5]

A buyers cartel coordinates member behavior to increase market power and purchase on better (i.e., lower-price) terms, shifting benefits from producers to consumers. Successful and long-lived consumer cartels have less obvious international precedents than producer cartels. In the aftermath of the 1973 oil shock, the International Energy Agency (IEA) was formed to coordinate energy policy responses among members of the Organization for Economic Cooperation and Development (OECD) that were dependent on oil imports. The IEA's activities have since focused more on research and policy advising, but one of its principal roles is to coordinate emergency releases from its members' strategic petroleum reserves in response to supply shocks and price spikes. Such releases occurred during the 1991 Gulf War, in the aftermath of Hurricane Katrina in 2005, during the 2011 Libyan crisis, and twice in response to Russia's 2022 invasion of Ukraine (IEA 2023). Whatever their effects on prices in the short term, this type of emergency intervention is a far cry from coordination of purchases.

The planned EU club for critical minerals would be different. According to draft legislation, the European Commission would set up a central purchasing mechanism that would "aggregate the demand of interested union buyers and then negotiate on their behalf with sellers globally."[6] In this sense, it would be conceptually similar to the European Union's AggregateEU, a centralized purchasing mechanism for natural gas created as an emergency measure during the Ukraine war. AggregateEU is a war-time intervention necessitated by the highly segmented nature of the global market for liquefied natural gas (LNG) and Europe's dependence on Russia's exports. The proposed critical minerals club would not be an emergency measure but an attempt to manage demand and prices in markets that are thin, opaque, and significantly underdeveloped and undercapitalized relative to projected future demand.[7]

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5 Keith Bradsher, "Why China Could Dominate the Next Big Advance in Batteries," *New York Times*, April 18, 2023.

6 "EU to Set Up Central Buying Agency for Critical Minerals – Draft Law," Reuters, March 7, 2023.

7 Cullen S. Hendrix and Morgan Bazilian, "Markets for Critical Minerals Are Too Prone to Failure," *Barron's*, December 17, 2022.

Another potential model is Gavi, the public-private partnership that coordinates bulk vaccine purchases for distribution in the developing world. However, Gavi's mission and core partners—the World Health Organization, UNICEF, the World Bank, and the Bill & Melinda Gates Foundation—are philanthropic/development-oriented rather than motivated by political-economic or national security concerns.

WHY PURSUE AN EU BUYERS CLUB?

An EU buyers club would have several putative advantages. First, it would prevent EU members from bidding one another up on the purchasing side, reducing internal friction over the allocation of these resources and lowering prices (or at least transferring it from the marketplace to the political arena). This role is the most fundamental one buyers clubs play.

Second, such a facility would provide a more transparent and accurate demand signal for a large segment of the global market. Markets for these minerals are thin, opaque, and thus highly volatile—which is perhaps good for commodities traders but not for producers or consumers.[8] The direct effects for supply chains are negative, as are the broader effects for investors and access to capital necessary to widen global supply chains. Given long lead times for mine projects, the pace of technological change in the renewable energy sector, and the complex environmental, social, and governance (ESG) factors mining projects entail, reducing price volatility and giving more consistent demand signals would ostensibly lower at least one barrier to courting investors (Bontje and Duval 2022).

Third, a centralized purchasing body would ostensibly allow greater harmonization of critical mineral sourcing with broader EU economic and security goals. Russia's invasion of Ukraine has revitalized security cooperation within the European Union and the North Atlantic Treaty Organization (NATO). Both the United States and the European Union perceive China's current market shares for production and processing of critical minerals as national security concerns (US Department of Commerce 2022, European Parliament 2022). A buyers club would allow the European Union to use its market demand in more strategic ways, catalyzing investment in wider supply chains that would decrease China's dominant market shares.

Another benefit of a buyers club would be the added leverage it would give the European Union with the United States, which included country content requirements in the US Inflation Reduction Act that adversely affect EU members. Presenting a united front on critical mineral supply chain issues would increase leverage vis-à-vis the United States in ongoing talks designed to better coordinate policy responses across the Atlantic.[9]

8 Ibid.

9 Chad P. Bown and Kristin Dziczek, *Why US Allies Are Upset Over Electric Vehicle Subsidies in the Inflation Reduction Act*, PIIE Trade Talks Podcast (transcript), December 2, 2022, Peterson Institute for International Economics.

WHAT ARE THE CHALLENGES?

Despite these potential benefits, a buyers club would be prone to free riding, set up distributive conflicts within the European Union, and have adverse effects for just transitions in developing and middle-income economies.

Free Riding

Cartel membership constrains member autonomy of action in pursuit of the collective goods associated with market power. This loss of sovereignty is palatable only if it is offset by efficiency gains or facilitates outcomes that would be significantly more difficult to achieve in the absence of such institutions.

For this reason, cartels are susceptible to free riding: If prospective members believe they will reap the benefits of a cartel's collusive practices without having to join, they will likely not join. Many oil exporters—including Brazil, Norway, and the Soviet Union/Russia—chose not to join OPEC because they could free ride on the organization's efforts without being constrained by its production targets or directly associated with its perceived political aims.

When a cartel's market share is sufficiently large, its members will still accept the sovereignty costs of sustaining lower prices even in the face of nonmembers reaping unconstrained benefits. Groups of this kind are what Mancur Olson refers to as "privileged groups" in his 1965 classic *The Logic of Collective Action*.

It is not clear that the EU buyers club would constitute such a group. If the European Union were to convince countries like the United States, Japan, and South Korea to join, the share of demand might be able to move markets in desired ways. But that is a big if. If the European Union were unable to do so, its members would be constrained by the actions of the purchasing facility in ways that would not obviously translate into better terms.

Intra-EU Politics

The European Union is trying to thread a narrow needle. On the one hand, the European Union wants to rapidly build out domestic supply chains from the mine to refining and processing. The law would establish benchmarks for domestic production by 2030 in which extraction would equal to at least 10 percent of annual EU consumption and processing at least 40 percent.[10] On the other hand, it wants to keep the costs of the resulting intermediate goods down. Using its putative market power to lower raw material input costs is one way of doing so, but it could be self-defeating and inflict collateral damage on the European Union's own mining sector.

Attempting to set a de facto below-market price through coordinated purchasing is a curious way to incentivize investment in a sector, especially in light of the aforementioned problems and challenges (Bontje and Duval 2022). Even if successful, the European Union would remain a marginal player in the mining of most critical minerals relative to global production, and achieving the target market shares would take years if not decades to materialize. But its ability

10 European Commission, "Critical Raw Materials: Ensuring Secure and Sustainable Supply Chains for EU's Green and Digital Future," press release, March 16, 2023.

to attenuate global prices through market power would affect the perceived long-term profitability of critical mineral investments domestically unless tax-based incentives or subsidies were applied indefinitely.

Creating a buyers club would also have political ramifications. The European Union is not a pure consumer of critical minerals. Among the European Union's largest suppliers of certain critical raw materials are Germany (gallium); Finland (germanium); France (hafnium, indium); and Spain (strontium), and many other EU members produce nontrivial levels of these and other critical raw materials. To the extent that an EU buyers club lowered and stabilized global prices, it would entail relative losses for these mineral producers, unless otherwise compensated by intra-EU mechanisms.

Mining represents a small share of total employment in the European Union, accounting for just 0.3 percent of employment in the nonfinancial business sector.[11] However, mining employment is highly geographically concentrated and tied to fixed assets (mineral resources) in ways that amplify the mining sector's power as a political interest group, especially in political systems with majoritarian electoral rules (Brunnschweiler and Bulte 2008).[12] The EU critical raw materials list already reflects political pressures from domestic lobbying groups: The inclusion/continuation of coking coal on the list came after lobbying from Poland, the European Union's top coking coal producer.[13] A buyers club sets up a potential conflict between the European Union's more mineral-dependent economies (Finland, Poland, and Sweden, among others) and countries that produce electric vehicles and renewable energy technologies (such as France, Germany, and Spain). These potential conflicts could be attenuated if the European Union's mineral-dependent economies are successful in courting investment in downstream activities like processing and final assembly (Eddy, Pfeiffer, and van de Staajj 2019). But in contests between existing, entrenched interests and potential future constituencies, the former tends to win.

Commitments to Just Transitions

In shifting prices in favor of consumers, the buyers club would reduce the share of climate mitigation benefits accruing to critical mineral–producing countries, many of which are developing and middle-income economies. Global energy transitions are occurring in an era in which investors and voters are more focused on ESG issues than ever before. Since the term *just transitions* was included as part of the 2015 Paris Accords after a major push by organized labor, the idea has been a major component of climate mitigation–related ESG discourse.

In advanced economies, the just transitions discourse has focused mostly on softening the blow of decarbonization for fossil fuel–dependent regions and sectors of the economy. The European Union has already adopted a variety of mechanisms designed to foster just transitions within its borders. They include the Just Transition Fund, a dedicated stream of funding under the InvestEU

11 European Statistical Office (Eurostat). 2023. Businesses in the Mining and Quarrying Sector.

12 France (lower house), Italy, Poland, and Spain (upper house) fall into this category.

13 Aleksandra Krzysztoszek, "Coking Coal Remains on EU Critical Raw Materials List after Polish Pressure," Euractiv, March 20, 2023.

mechanism, and a public sector loan program operated by the European Investment Bank. More widely, the concept of just transitions focuses on ensuring that the costs and benefits of climate action are equitably shared.

The international dimensions of the proposed buyers club are challenging from a moral perspective. Having gotten rich burning the fossil fuels that are responsible for the majority of historical greenhouse gas emissions, a set of the world's wealthy countries now wants to collude to prevent mostly developing and middle-income economies from benefitting from the green energy boom through higher prices for their commodity exports.

The world's energy transitions provide a once-in-a-generation opportunity for these critical mineral–rich economies to build strong foundations for the inclusive growth that has eluded many of them. These economies, especially less developed ones, already face a host of challenges related to building infrastructure, securing investment, promoting good governance, and navigating an increasingly complicated geopolitical environment (Hendrix 2022). A buyers club would create an additional hurdle: Instead of being able to leverage competition between advanced economies and China to secure the most beneficial terms, mineral exporters would find themselves facing a united European (and potentially American) front on the purchasing side.

Such an arrangement would be less exploitative than was accessing the developing world's oil via arrangements between the Seven Sisters oil companies and local, pro-Western (and often highly repressive) governments (Hendrix and Noland 2014). But it would still be an explicitly anti-competitive arrangement that would further challenge Western rhetoric about market mechanisms being the best mechanisms for equilibrating global supply and demand—and provide additional justification for more resource nationalist approaches in mineral-exporting countries.

A buyers club would also send a message to developing and middle-income economies about the European Union's commitment to fostering just transitions: "Just transitions are for industrial workers in developed countries, not for you." This message would be a bad one to send, especially given the need for cooperation from developing and middle-income economies to reduce emissions.

PATHS FORWARD

The European Union is right to be concerned about critical mineral supply chains, which are not adequate to fuel needed energy transitions and create strategic vulnerabilities. In the event of a war, many of these considerations would be set aside. Indeed, the war in Ukraine has been the clear impetus for the LNG buyers club that serves as the template for the proposed critical minerals club. But the European Union is not at war with China or most of the other major exporters of critical minerals. Its imports of critical minerals like aluminum and ferrovanadium from Russia can and are being sourced elsewhere. War-time measures are therefore not currently called for.

If one of the main constraints on expanding critical mineral supply chains is concern about future demand and the weaponization of exports, a broader set of countries and country groups, including the European Union, the United States, and Japan, could consider phased bulk purchases for stockpiling purposes over several years along the lines of IEA member-states' strategic petroleum reserves

(SPRs). This would send a powerful demand signal and provide member-states latitude in timing purchases to take advantage of favorable prices. If the constraints relate more to energy infrastructure and thus limits on downstream capacity in ore-producing countries (Hendrix 2022), then there is an expanded role for the World Bank, regional development banks, and bilateral aid to help fill gaps. The European Union's Global Gateway initiative seeks to catalyze €300 billion in investments to develop, among other things, green energy infrastructure as a counterweight to China's Belt and Road Initiative. The Indo-Pacific Economic Framework for Prosperity (IPEF) has among its goals "coordinating on diversification efforts" with partners in the Asia-Pacific, though commitments in terms of investment and market access have not been forthcoming. Governance-related challenges are also fundamental, though many countries are able to sustain mineral-led development despite (or perhaps because of) weak rule of law.

Other elements of the draft EU legislation are welcome. They include centralizing and shortening permitting processes for new mining and processing and creating strategic partnerships with countries outside the European Union and China to develop as-yet-untapped resources.

These provisions would remove or reduce barriers to building more mining and processing capacity at home and abroad. A cartel-based approach to addressing critical mineral supplies would not.

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