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**Research Report**

## Got "critical minerals"? Hooray! But be careful!

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## Columbia FDI Perspectives

Perspectives on topical foreign direct investment issues

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### **Got “critical minerals”? Hooray! But be careful!**

by

Louis T. Wells\*

Although no one may have told you, you could have “critical minerals,” especially if you are a country with current mining activity. Those minerals may be disregarded by-products of existing mines or lie in stand-alone deposits or in abandoned tailings. Maximizing income from them raises important issues.

The US government [defines](#) a “critical mineral” as a non-fuel mineral or mineral material essential to the economic or national security of the country and which has a supply chain vulnerable to disruption. It names [fifty](#). The Japanese government considers [34](#) as critical. Other rich countries have similar lists.

Projections of a rapid transition to electric vehicles have led companies and governments of major automobile producing countries to compete to control supplies of minerals that will—or might—be used in batteries and electric motors. The transition to solar and wind power is expected to require critical minerals for turbines and storage. Some minerals are critical for defense and aerospace industries. But no one knows exactly how much of which minerals will be demanded [as technology evolves](#). In this environment, firms and their home country governments are driven by a deep fear of competitors’ (especially Chinese) control of whatever minerals those might be.

This competition has implications for mining countries:

- When home country governments see support for their private companies as a security issue, host countries with critical minerals may face threats. The US has warned a country of decreased aid if it failed to grant a US company access to minerals. The German federal and regional governments pressed Bolivia in support of a German company, rather than a Chinese competitor, to mine a lithium deposit. The task for host countries is to turn the pressure around: “if you want access to the mineral, you have to do things for us, or rights go to someone else.” Host countries’ foreign ministries should be involved in ways rare in previous

mining negotiations, increasing the difficulty of the always tough task of coordinating internal parties domestic in negotiations with foreign firms.

- There is a real risk of granting mining rights to firms—but seeing nothing happen. Competition leads firms to tie up deposits to ensure supplies if they eventually need them. But no one is certain how much, if any, of a particular mineral will be needed. The result can be potential revenue sources that remain undeveloped. In response, host country governments must include tight working provisions (“use it or lose it”) in contracts or in mining legislation: commercial production must begin by a certain date; production must remain above a certain level; and suspensions, limited in time. Otherwise, investors should lose their rights, and host countries can seek other investors.
- When a critical mineral is a by-product of the extraction of another mineral, mining agreements or relevant legislation may have to be modified to account for the new source of revenue. For example, royalties on minerals that may have gone into tailings may have to be adjusted to reflect their new value.
- When by-products become “critical” and newly valuable, companies currently holding mining rights may sell those rights to other firms that are eager for the byproduct. This happened in the Democratic Republic of the Congo, when Freeport-McMoRan, interested in copper, sold rights to two deposits to China Molybdenum, which wanted the associated cobalt. Similarly, ownership of a rutile deposit in Sierra Leone moved, over the years, from firms interested in rutile for paint pigment to firms interested primarily in the previously unwanted zircon and rare earth sands. In such transactions, buyers and sellers may try to escape tax on gains by selling to holding companies in tax havens, rather than subsidiaries in the countries where mining takes place. Host countries’ ability to collect tax on such transactions will depend on their legislation and contract terms. Host country governments should address this issue before disputes develop that could go to costly international arbitration.
- The renewed interest by end users in securing sources of materials means that some will increasingly seek control through long-term contracts or outright ownership of mines. When minerals are sold inside firms or under long-term contracts, tax authorities will have to determine meaningful prices, but reliable arms-length published prices do not exist for all critical minerals. Legislation or agreements will have to provide methods (such as Advance Pricing Agreements) for valuing output.

These issues are not completely new. The Chinese government has long viewed access to minerals as essential to its development, and therefore supported its firms abroad. The Japanese government behaved similarly in the 1970s. And the drive to keep deposits out of the hands of competitors was common in the old days of vertically-integrated oligopolies in industries such as aluminum. Disputes over capital gains tax have arisen as petroleum exploration companies have sold rights to producing companies. But now all these issues come together. Governments with critical minerals need to learn from past solutions (and failures) to revise mining and tax legislation, negotiate appropriate contracts and harness foreign offices’ skills if they are to maximize their benefits from the struggle by rich countries to control these minerals.

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