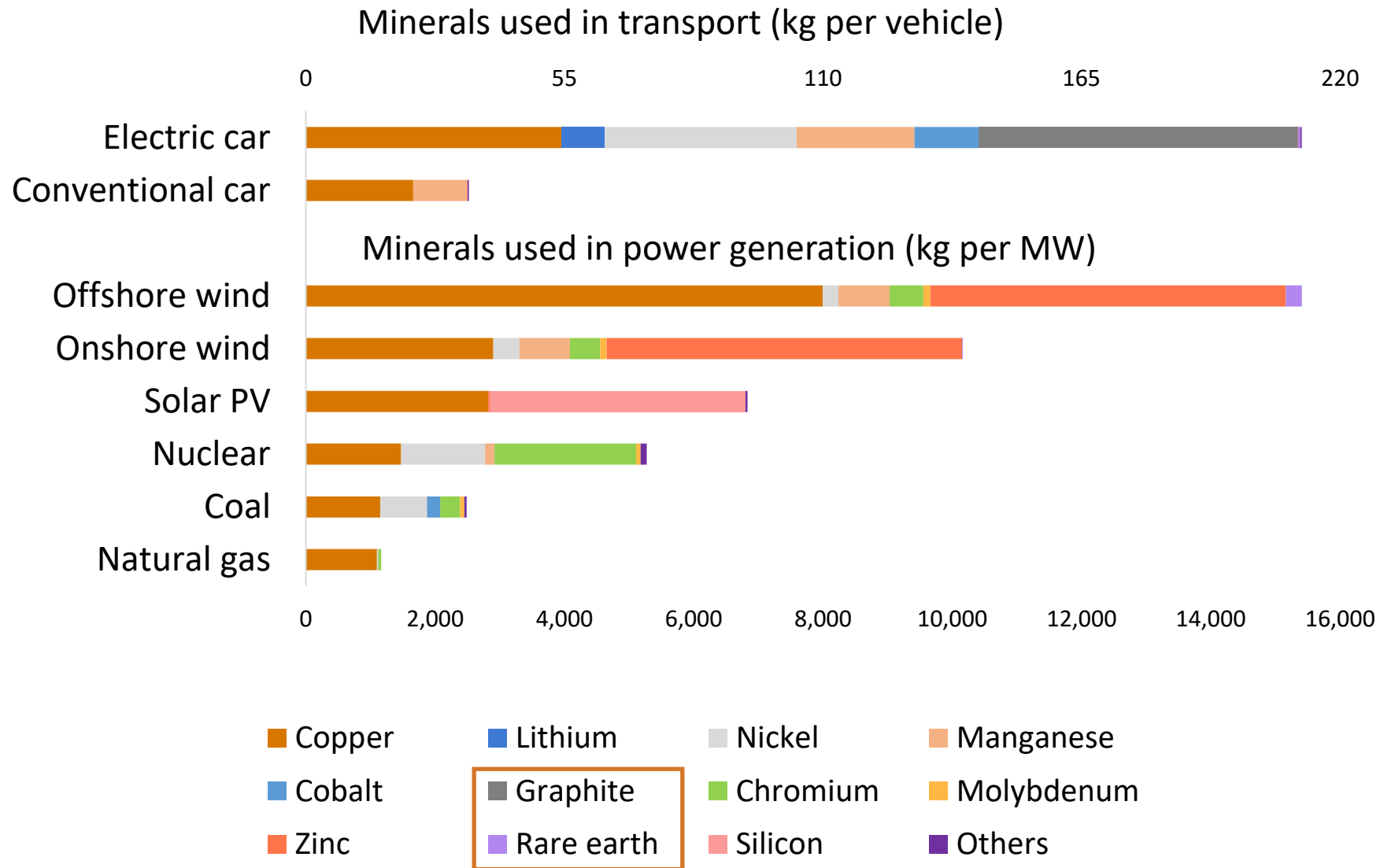




Geopolitical shocks and inflation: Critical raw materials

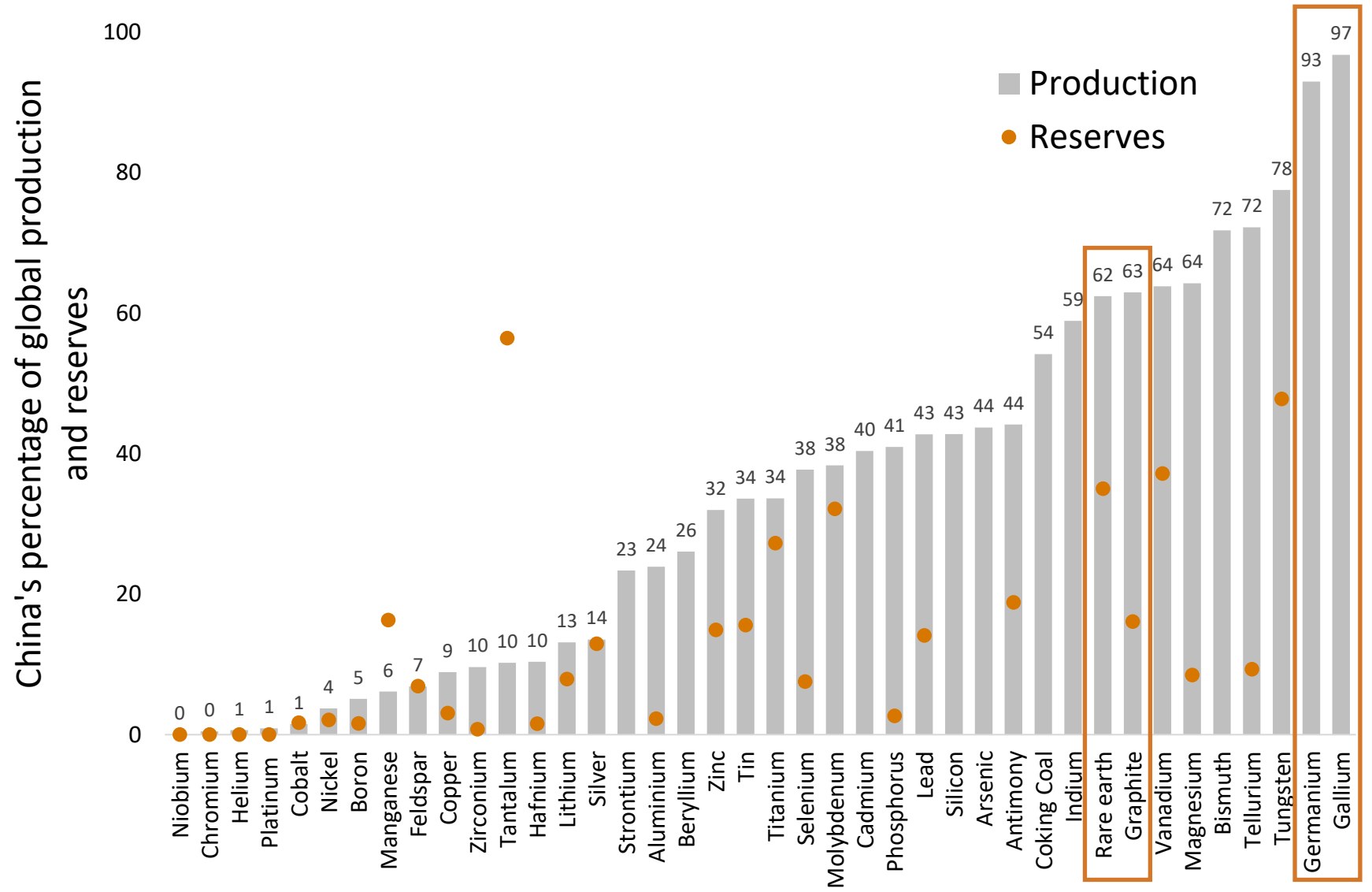
**Beata Javorcik
EBRD & Oxford**

Green and digital technologies rely on many **critical raw materials**



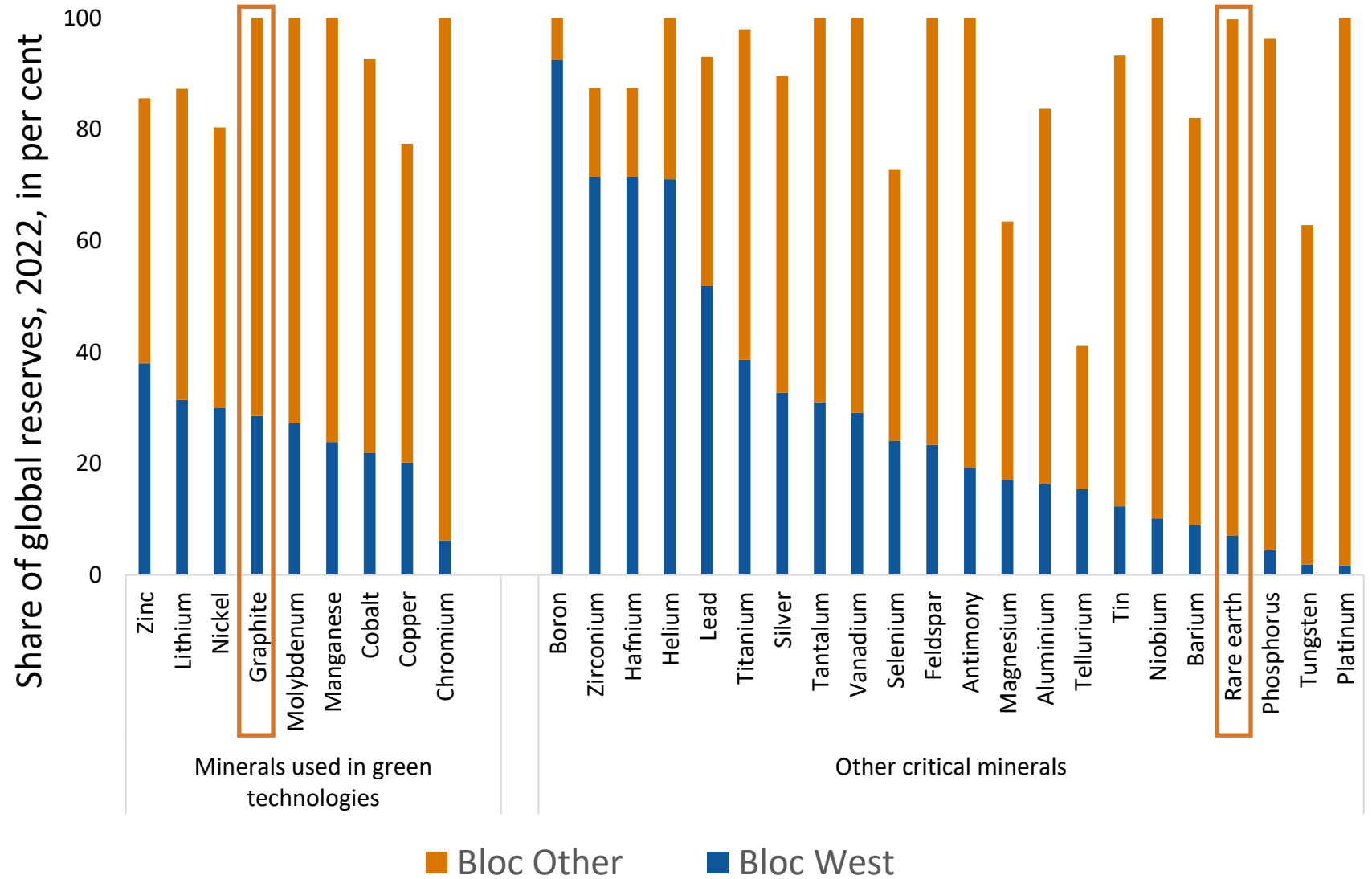
Source: IEA (2022).

Production
of critical raw materials is
concentrated
in a handful of
countries,
notably China



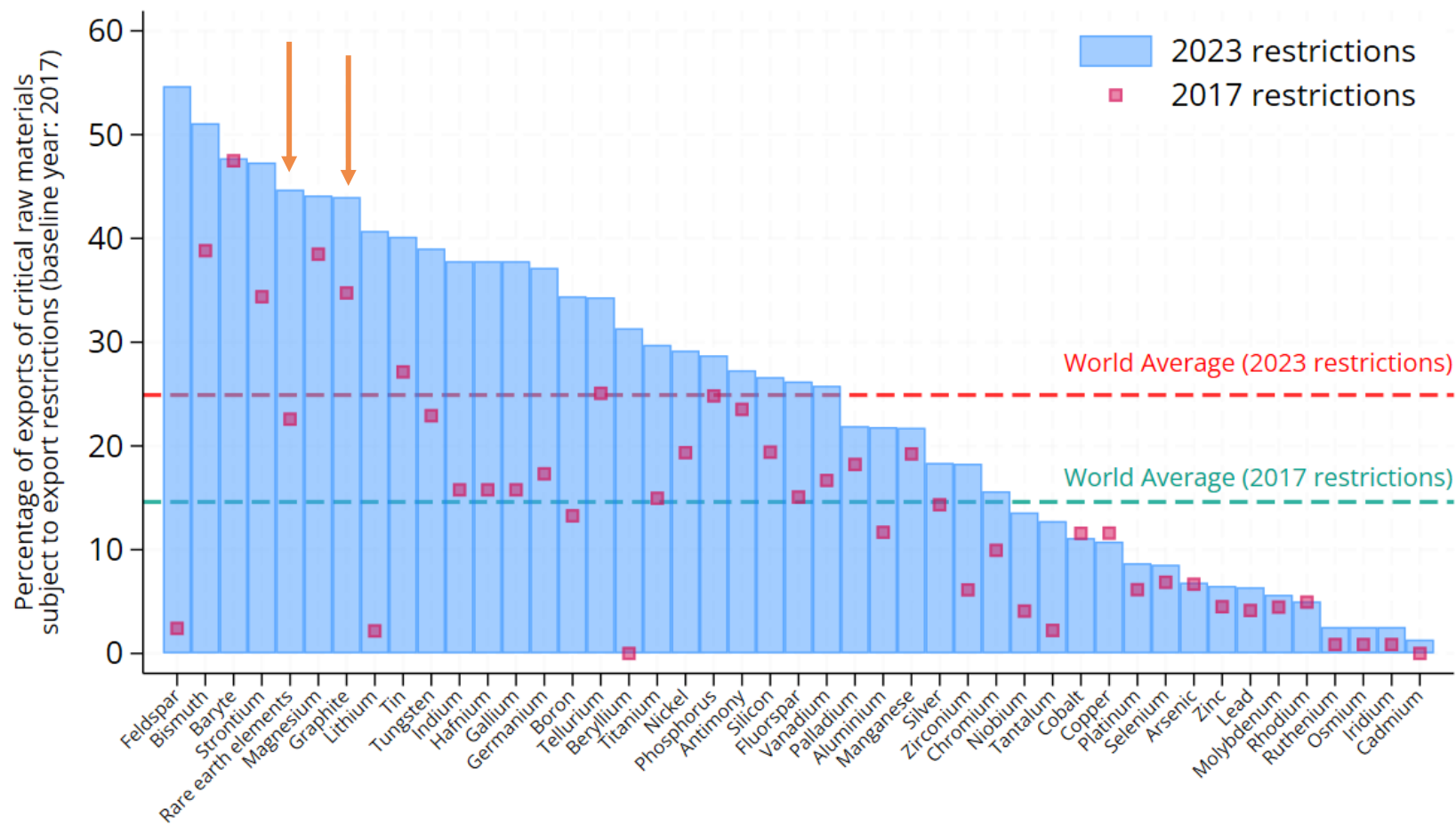
Source: Reichl and Schatz (2023), USGS (2023), Ministry of Natural Resources, PRC (2022) and authors' calculations. Reserves data are not available for tantalum, strontium, beryllium, cadmium, silicon, arsenic, coking coal, indium, bismuth, germanium, gallium, elsewhere they may be based on old surveys. Platinum refers to platinum group metals.

Mounting **geopolitical tensions** raise concerns about the **security of supply** of critical raw materials



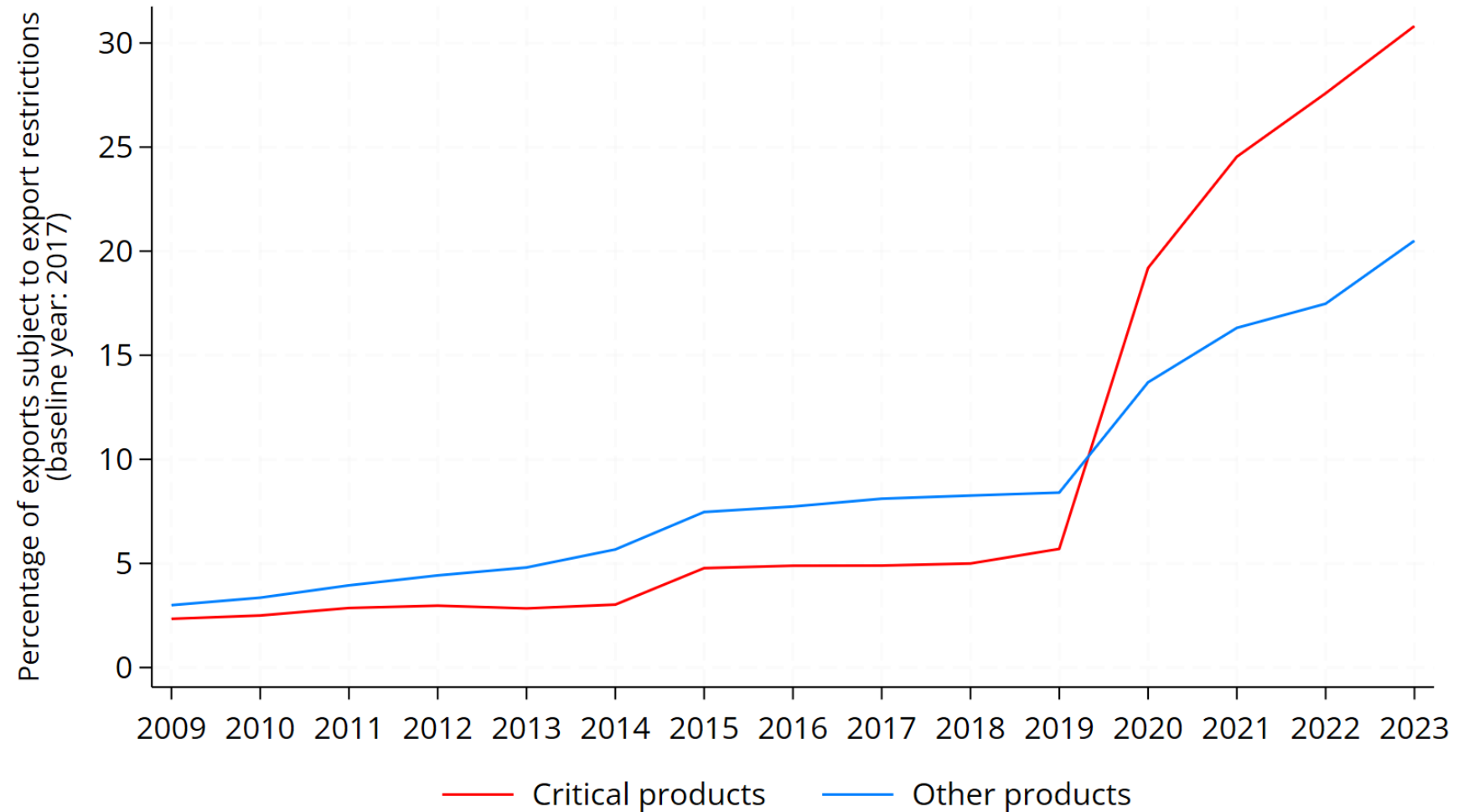
Source: S&P, Voeten (2013) and authors' calculations. Based on mine location. Bloc West consists of countries that are more closely aligned with western economies, based on votes at the UN General Assembly, 2014-21. Location of some reserves is undefined in the dataset.

Export restrictions on critical raw materials have increased substantially



Source: Global Trade Alert (as of 24 June 2024), UN Comtrade, US draft list of critical supply chains and authors' calculations. US Executive Order 14017 of 14 February 2021, with products defined on the basis of 8 or 10-digit HS codes and assigned to the critical minerals and materials for energy and ICT sectors.

Geopolitical tensions may lead to further export restriction



Source: Global Trade Alert (as of 24 June 2024), UN Comtrade, US draft list of critical supply chains and authors' calculations, US Executive Order 14017 of 14 February 2021, with products defined on the basis of 8 or 10-digit HS codes and assigned to the critical minerals and materials for energy and ICT sectors.

Note: Critical products are a broader category than critical raw materials

What is certain

Export restrictions can be introduced quickly
Developing a new mine takes more than a decade

What are the known unknowns

How will **geopolitical tensions** affect the **supply of critical raw materials**?

Will the **speed of green transition**, and hence the **demand for critical raw materials**, change?

How fast can **innovation** find ways of **substituting away from some critical raw materials**?

What it implies for inflation

Trade in **critical raw materials as a source of inflationary shocks**

Transition Report 2023-24

Transitions big and small

