Geoeconomic fragmentation and foreign direct investment

JaeBin Ahn, Benjamin Carton, Ashique Habib, Davide Malacrino, Andrea Presbitero, and Dirk Muir

Strictly confidential – please DO NOT SHARE

Supply-chain disruptions and rising geopolitical tensions have brought the risks and potential benefits and costs of geoeconomic fragmentation (GEF) to the center of the policy debate. This chapter studies how GEF can reshape the geography of foreign direct investment (FDI) and, in turn, how FDI fragmentation can affect the global economy. The recent slowdown of FDI has been characterized by divergent patterns across host countries, with flows increasingly concentrated among geopolitically aligned countries, particularly in strategic sectors. Looking forward, several EMDEs are highly vulnerable to FDI relocation, given their reliance on FDI from countries which often are geopolitically distant. In the long-run, FDI fragmentation due to the emergence of geopolitical blocs can generate large output losses. These may be especially severe for EMDEs facing heightened restrictions from AEs, which are the major sources of FDI. Multilateral efforts to preserve global integration are the best way to reduce the large and widespread economic costs from FDI fragmentation. When multilateral agreements are not feasible, consultations and processes to mitigate the spillover effects of unilateral policies are required. In a more fragmented world, some countries could reduce their vulnerability by promoting private sector development, while others could take advantage of the diversion of investment flows to attract new FDI, by undertaking structural reforms and improving infrastructure.

Rising geopolitical tensions, and the uneven distribution of past gains from globalization, have contributed to increasing skepticism toward multilateralism and to the growing appeal of inward-looking policies (Colantone and Staning 2018; Rodrik 2018; Autor and others 2020; Pastor and Veronesi 2021). Brexit, the trade tensions between U.S. and China, and Russia's invasion of Ukraine are posing a challenge to international relations and could lead to policy-driven reversal of global economic integration, a process referred to as geoeconomic fragmentation (GEF). This process encompasses different channels, including trade, capital, and migration flows. This paper focuses on one specific channel—the fragmentation of FDI, which are cross border investments through which foreign investors establish a stable and long-lasting influence over domestic enterprises.

A slowdown in globalization—often referred to as "slowbalization"—is not new and, for most countries, dates to the aftermath of the global financial crisis (GFC) (Antras 2021; Baldwin 2022). A fall in FDI has been particularly visible, with global FDI declining from 3.3 percent of GDP in the 2000s to 1.3 percent over the last 5 years. While a range of factors could have contributed to this protracted phase of slowbalization, the fragmentation of capital flows along geopolitical fault lines and the potential emergence of regional blocs are novel elements which could have large negative spillovers to the global economy.

Firms and policy makers are increasingly looking at friend-shoring and reshoring as strategies to move production processes to trusted countries with aligned political preferences, to make supply chains more resilient and less vulnerable to geopolitical tensions. A text-mining analysis of earning call reports from a large sample of multinational corporations (MNCs) shows a sharp spike in firms' interest in reshoring and friend-shoring, occurring at the same time that the average geopolitical distance across country pairs started increasing. Recently, the U.S. Treasury Secretary argued that, rather than being highly reliant on countries with which the U.S. has geopolitical tensions, firms

should move towards the friend-shoring of supply chains to a large number of trusted countries. In Europe, the French government has been urging the EU to accelerate production targets, weaken state aid rules, and develop a "Made in Europe" strategy to counter domestic production subsidies provided by the recent U.S. Inflation Reduction Act (IRA). In China, too, government directives aim to replace imported technology with local alternatives to reduce its dependence on geopolitical rivals. The rising interest in friend-shoring is a significant reversal of the division of production pursued through offshoring, driven predominantly by international cost differences in labor and input costs (Feenstra 1998; Antras and Yaple 2014).

The importance of friend-shoring goes beyond just announcements. Recent large-scale policies implemented by major countries to strengthen domestic strategic manufacturing sectors suggest that a shift in cross-border capital flows is about to take place. Most notable is a series of recent bills in the U.S.—such as CHIPS and Science Act and the IRA—and in Europe—such as the European Chips Act—that shook up the fundamentals of MNCs' production and sourcing strategies, prompting efforts to reconfigure their supply chain networks.

This paper studies how GEF could affect the global economy through a shift in the geographical footprint of FDI. While a growing literature investigates the costs of GEF through the lens of trade and technological decoupling[1], existing work has not yet looked directly at FDI fragmentation. But this is likely to be a relevant channel though which the emergence of geopolitical blocs could have global spillovers. In fact, FDI accounts for a substantial share of domestic capital stock globally—about 12 percent on average—and is generally associated with knowledge transfer to domestic firms and economic growth, especially in EMDEs (Alfaro and others 2004; Javorcik 2004; Kose and others 2009). A relocation of FDI closer to source countries could have direct negative effects on current host economies through lower capital and technological deepening, as firms expressing interest in reshoring and friend-shoring tend to be on average larger, more profitable and more knowledge-intensive.

Against this backdrop, the paper starts by looking for early signs of FDI fragmentation, using detailed bilateral investment-level data on greenfield FDI from 2003 to the end of 2022. Two questions are investigated: i) is there any evidence of reallocation of FDI across countries indicating that flows are becoming more fragmented; and ii) do geopolitical factors contribute to explaining bilateral FDI flows, so that countries deepen their integration with friends and reduce their reliance on foes? The paper develops a multidimensional index of countries' vulnerability to FDI relocation combining information on: i) the geopolitical distance between source and host countries, ii) the share of strategic-sector investment in total FDI inflows, and iii) the degree of market power enjoyed by the host country.

Next, the paper turns to quantifying the potential costs of FDI fragmentation and their distribution across countries. To understand the channels through which a potential unwinding of FDI could affect host countries, we empirically examine FDI spillovers taking both macro- and micro-level approaches. An extensive literature on the economic effects of FDI on host countries does not

[1] See, among others, Cerdeiro and others 2021; Eppinger and others 2021; Felbermayr and others 2022; Goes and Bekkers 2022; Javorcik and others 2022. A related literature looks at the effects of Brexit and the 2018–2019 U.S.–China trade war; see Caliendo and Parro (2021) and Fajgelbaum and Khandelwal (2022) for an extensive review.

deliver consistent results when simply looking at aggregate flows (Benetrix and others 2022). We extend this literature by conducting a country-level analysis of the relationship between GDP growth and FDI separately for horizontal and vertical investment, as the latter is more likely to be affected by GEF. A subsequent firm-level analysis combines investment-level FDI data with a large sample of cross-country firm-level surveys to identify the potential spillovers to firm labor productivity within and across sectors along the value chain.

Finally, the paper calibrates a multi-region DSGE model to illustrate the possible long-term economic implications of FDI fragmentation. Scenario analysis is used to explore the distribution of costs and benefits across economies, including from spillovers through external demand and the reallocation of production capacity. Fragmentation is modeled as a permanent rise in investment barriers between opposing geopolitical blocs centered on the two largest economies (China and the U.S.), and with economies pursuing a non-aligned path potentially facing heightened uncertainty.

The main conclusions from the chapter are as follows:

- The recent slowdown of FDI has been characterized by divergent patterns across host countries, particularly when considering investment in strategic sectors, like semiconductors. FDI flows are increasingly concentrated among countries which are geopolitically aligned. The role of geopolitical alignment in driving the geographical footprint of FDI is particularly relevant for EMDEs and has increased since 2018, with the resurgence of trade tensions between the U.S. and China.

- The multi-dimensional index of vulnerability to FDI relocation suggests that, on average, EMDEs are more vulnerable than AEs. This is mostly because of EMDE's reliance on FDI from countries which are relatively far in terms of geopolitical alignment. Several large emerging markets, across different regions, show high vulnerabilities, indicating that the fragmentation scenario is not a risk only for a few select countries.

- A further contraction in FDI and a shift in its geographical distribution would likely have large negative effects on host countries, through lower capital accumulation and technological deepening. The analysis finds that vertical FDI, more likely to be targeted by policies aimed at friend-shoring investment in strategic sectors, is strongly associated with economic growth, not least because of its knowledge-intensive nature. The entry of MNCs also directly benefits domestic firms. In AEs, the increased competition from foreign firms pushes domestic firms to become more productive. In EMDEs domestic suppliers benefit from technology transfers and increased local demand for inputs from foreign firms in downstream sectors.

- Model-based scenarios illustrate that FDI fragmentation—modeled as a permanent rise in cross-bloc barriers to the import of investment inputs—could reduce global output in the long run. These losses are unevenly distributed, with EMDEs with reduced access to AEs particularly affected, both through lower capital formation and reduced productivity gains. While the diversion of investment inputs could allow some economies to gain, such benefits could be significantly offset by spillovers from lower external demand. Alternative scenarios are used to highlight that non-aligned regions could have some negotiating power vis-à-vis the geopolitical blocs. However, uncertainty regarding their alignment could restrict their ability to attract investment.