

## When it comes to FDI motives, not all sectors are alike: Disaggregated evidence about the role of distance for FDI



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### Abstract

Much evidence on what drives foreign direct investment (FDI) is based on data that is aggregated to the country level. A new sector-level dataset allows us to investigate sector-specific determinants of FDI based on a gravity model for 184 countries over the period 2010 to 2020. We find that the relationship between FDI and distance (between source and host country) varies considerably across sectors. FDI policies should hence be sector-specific to effectively attract FDI and leverage its potential economic benefits.

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**Foreign direct investment (FDI) is an important type of cross-country capital flows.** It mostly reflects investment of multinational firms and is widely believed to have favorable effects on employment, economic growth, and other macroeconomic development outcomes. Many policy actors hence aim to attract FDI to their country through policies such as investment liberalization, tax incentives, or through specialized investment promotion agencies (IPAs).

**To be effective and efficient, FDI policies need to be informed by evidence about what drives FDI.** A large literature in international economics and business has analyzed FDI determinants and highlights the role of factor endowments, institutions, geography, and cultural factors (see [Schneider and Wacker, 2022](#)). Those determinants also interact with firms' motive to perform FDI. For example, if FDI is *market-seeking*, it is attracted by high income levels and associate purchasing power in the host economy. Conversely, if FDI is *efficiency-seeking*, high wages are a deterrent to FDI.

## FDI motives vary across sectors

**This suggests that determinants of FDI vary across sectors.** In some manufacturing sectors, for example, the potential for globally slicing up value chains is large and intermediate inputs like a wire, conductor, or microchip travel long distances before they reach the consumer in a final product like a cell phone or car. There is hence more scope for *efficiency-seeking* motives in those sectors. In other sectors, like some services, the potential for efficiency-led global unbundling is much smaller and FDI in those sectors tends to be more *market-seeking*.

## Distance is crucial to understand the nature of FDI

**Geographic distance plays a decisive role in understanding the nature of FDI.** For *efficiency-seeking* FDI, distance should be negatively correlated with FDI (holding everything else equal). Distance is associated with trade costs and hence limits possible efficiency gains from slicing up value chains. Conversely, *market-seeking* FDI should be positively associated with distance. The economic rationale for this positive association is that FDI competes with exporting as a market-entry mode. If an attractive foreign market is close, trade costs are low and exporting is more attractive. The further away the host country is, the more attractive FDI becomes as an entry mode. Hence the expected positive association of *market-seeking* FDI increases with distance.

**The role of distance is relatively poorly understood in the literature:** On the one hand, evidence clearly suggests a negative association between FDI and distance. On the other hand, this conflicts with the prevailing view that FDI is predominantly *market-seeking*. [One possible solution](#) to this puzzle is that even *market-seeking* FDI contains a relevant degree of intra-firm division of labor. For example, if there are a lot of transactions between headquarters and affiliates, those transactions costs may rise with distance, such that distance also deters *market-seeking* FDI.

## Our new study contributes a sector-level cross-country perspective

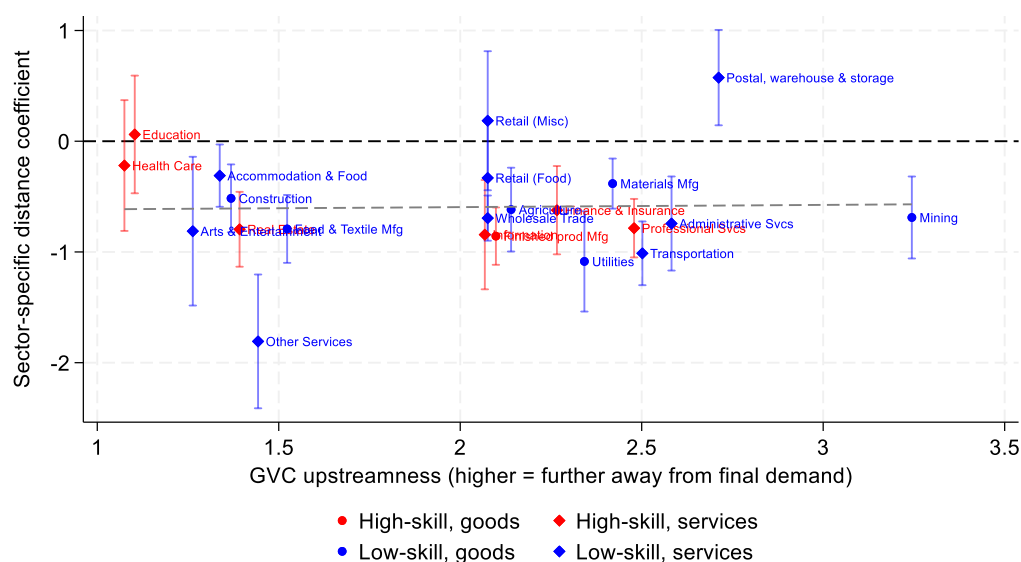
**No study so far has looked into sector-specific FDI determinants** across a comprehensive set of countries, despite the fact that firm-internal transaction costs and FDI motives should vary across sectors. This lack of evidence reflects the absence of comprehensive sector-specific FDI data – an issue that has been resolved through the recent [MREID data](#) (Ahmad et al., 2025). Prior to their contribution, most studies were based on aggregate bilateral FDI data or on firm-level data from a single country.

**We leverage this new sector-level dataset in a gravity model for FDI** that relates bilateral FDI stocks to the economic sizes of countries, the distance between them, and other factors influencing cross-border investment decisions, such as trade costs, colonial and cultural ties, institutional distance, exchange-rate regimes, and financial development. [Our analysis](#) covers 25 NAICS 2-digit sectors for 184 countries over the period 2010 to 2020 and provides the following main results:

## Key findings

- **Distance reduces FDI and this result is highly robust.** Across every specification we test – aggregate data, pooled sector data, alternative fixed-effect structures, distance deciles instead of a continuous variable, and controls for geopolitical alignment – bilateral distance is overall negatively and significantly associated with FDI. This robust finding surprises since economic theory would predict a positive distance effect for *market-seeking* (horizontal) FDI, which is believed to dominate global FDI activity. This is sometimes referred to as the “Neary paradox” (Neary, 2009): if most FDI is *market-seeking*, aggregate FDI should rise with distance, not fall.
- **The distance elasticity of FDI differs enormously across sectors, in one case even changing sign** (see Figure 1). When we estimate the gravity model separately for each of the 23 sectors, the estimated distance coefficients range from strongly negative (e.g. business services, utilities, transportation) to positive (warehouse and storage). Warehousing and storage is the only sector where the positive distance elasticity remains robust across several specifications, consistent with firms setting up decentralised warehouses precisely because their target market is far from the production site.

Figure 1. Relationship between FDI and distance across sectors



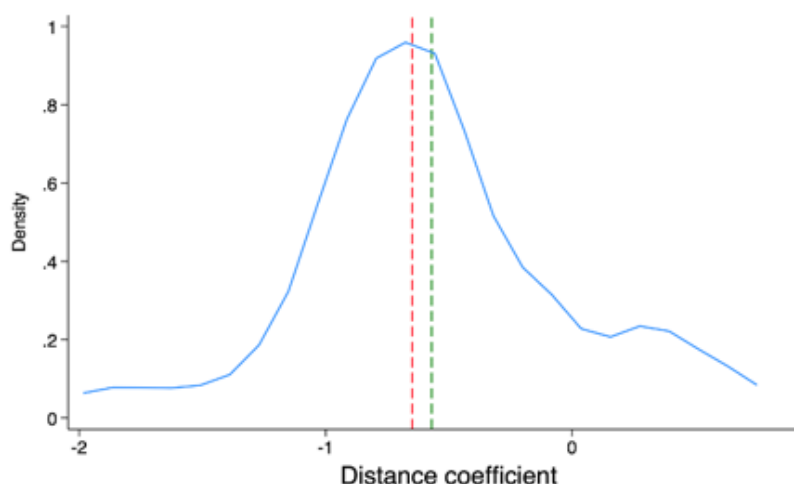
95% confidence intervals based on clustered SEs (country pair). See section 5 for details.

Source: The authors based on Rebmann and Wacker (2026).

- **No dominant FDI motive (horizontal vs. vertical) clearly emerges from the data, even at sector level.** Neither the aggregate/pooled models nor the sector-specific regressions deliver a clean, unambiguous classification into *market-seeking* or *efficiency-seeking* FDI, as predicted by the theoretical “gravity for FDI” framework (Kleinert and Toubal, 2010). This likely reflects that real-world FDI often follows “complex” hybrid strategies that do not map neatly onto the horizontal-vertical dichotomy, as well as data limitations (e.g. 2-digit sector data cannot detect intra-industry vertical FDI).
- **No simple, systematic economic explanation accounts for the sector heterogeneity in the distance elasticity.** We tested whether the sector-specific distance elasticities can be explained by: (i) whether a sector produces goods or services; (ii) skill intensity; (iii) a sector's position in global value chains (upstreamness); and (iv) sector-specific trade costs. None of these factors explains more than about 3% of the cross-sector variation individually, and only around 5% jointly (see also Figure 1). A formal statistical test does, however, confirm that the variation across individual sectors is systematic rather than random noise. It is just not yet explained by existing theory.

- **Using aggregate FDI data does not, by itself, create a strong aggregation bias, but it does hide something important.** Previous studies had to rely on country-level, instead of sector-level, FDI data for gravity estimation. As Figure 2 suggests, such aggregate country-level estimates are nearly identical to pooled sector-level estimates (with parameters forced to be identical across sectors) and fall close to the average of sector-specific distance elasticities. Still, estimating gravity models with aggregate data masks another important problem: it forces every sector into a single common distance effect, even though sectors behave very differently in reality. This can lead to considerable prediction errors and misguided policy if FDI into certain economies are specialized in particular sectors. The below Box provides an example.

**Figure 2. Distribution of distance coefficient across sectors**



Source: Rebmann and Wacker (2026). The red dashed line indicates the coefficient of aggregate estimation; the green line indicates the coefficient from a pooled estimate.

## Policy implications

- **Policies to attract FDI should take a sector-specific perspective.** Many FDI policies are rather broad-based and involve creation of a favorable business environment or general tax benefits for multinationals. Our results suggest that well-designed policies that target the right sectors may be more effective and efficient in attracting FDI. Obviously, that requires a good understanding of sector-specific FDI potential and how those sectors support a country's economic development strategy.
- **Distance and geography should feature explicitly in assessments of FDI potential.** IPAs and policymakers who evaluate potential source countries or plan outreach campaigns based on aggregate gravity relationships risk drawing the wrong conclusions for the sectors that matter most to their economy. A country that is a plausible, geographically distant source of warehousing, logistics, or export-platform investment, for instance, should not be dismissed on the basis of an aggregate "distance deters FDI" rule of thumb – see the Box for an example.
- **Sector-specific investment promotion requires sector-specific evidence, not one-size-fits-all gravity assumptions.** Because we cannot identify a simple set of sector characteristics (goods vs. services, skill intensity, value-chain position, trade costs) that reliably predicts a sector's distance sensitivity, policy actors should be cautious about extrapolating from theory or from other countries' experiences. Instead, sector-level empirical analysis should inform which source countries and which sectors are the most promising targets for investment promotion.

- **Different FDI motives call for different policy levers.** Where *efficiency-seeking* FDI is likely to dominate, such as in globally fragmented manufacturing, policies that reduce barriers to intra-firm trade (e.g. lowering tariffs and non-tariff barriers in intermediate inputs, streamlining customs) are likely to be most effective. Where *market-seeking* FDI dominates, such as in many non-tradable services, policies that lower fixed entry costs (e.g. simplifying licensing, investment screening, and administrative procedures) are likely to matter more.
- **Findings should feed into a genuinely sectoral approach to investment climate assessments.** Institutions such as the World Bank have long emphasized sectoral approaches to investment climate assessment, but this has remained relatively disconnected from the gravity literature typically used to study FDI determinants at an aggregate level. Bridging this gap, as our paper attempts to do, can help make evidence-based FDI policymaking more precise, which is particularly relevant for developing countries where attracting FDI is often a core pillar of their development strategy.

### Box 1. Why aggregation can mislead – Bangladesh, Israel, and Malaysian warehousing

To illustrate why aggregate evidence can give rise to misleading predictions and policy, consider the example of Bangladesh's FDI in Malaysia. Based on a standard gravity estimation with aggregate data, increasing the bilateral distance by switching the source country from Bangladesh to Israel suggests a *reduction* of FDI in Malaysian by roughly 46%. However, FDI stocks from both Bangladesh and Israel into Malaysia is highly concentrated in a single sector: warehousing and storage, accounting for 100% and 87% of FDI stocks, respectively. A gravity model estimated specifically for this sector shows that the same increase in distance would actually *increase* FDI stocks by around 87%. The aggregate and sector-specific predictions do not just differ in magnitude, they point in opposite directions. Relying on aggregate gravity models to guide sector-relevant investment promotion decisions can therefore be highly misleading.

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