

Disentangling Foreign Direct Investments

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I describe multinational corporations' (MNCs') motivations for engaging in foreign direct investment (FDI) rather than other forms of internationalisation. I demonstrate the issues presented by FDI studies relying on high levels of aggregated FDI measures when it comes to understanding the underlying determinants of an investment, some of which are caused by aggregation, and others which are driven by data. I then present some of the gains from disaggregation in existing studies of both FDI and global supply chains and point to the benefits of pursuing and promoting such an approach for policy makers.

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Foreign direct investment (FDI), the form of international production characterized by the ownership and control of productive assets in a host market by foreign entities, is often cited as evidence of economic globalization, or the extent to which a particular country's economy is interconnected with that of the rest of the globe. However, when it comes to assessing the effects of FDI at a national or subnational level, these highly aggregated figures are of limited utility.

While the definition of FDI is intuitively straightforward, its application is far more complex. The application of foreign-owner control varies across the world, particularly in developing economies. Consequently, particularly when dealing with aggregated country-level FDI data, cross-national evaluations may effectively be comparing apples to oranges. Furthermore, the motivations behind individual direct investments can vary significantly, leading to a wide range of potential effects within the host country. Reliance on aggregated flows masks FDI's diverse impacts by obscuring these effects, hindering effective policy responses.

I begin by presenting a framework depicting the varying motivations for multinational corporations (MNCs) to engage in FDI and the different ways the resulting investments fit into their supply chains. While the diversity of motivations and roles presents a challenge on its own to understandings based on highly aggregated FDI data, I proceed to discuss additional problems with aggregation. Varying motivations, effects, and problems with data aggregation point to the comparative benefits from investment-level analysis when it comes to creating research-informed policy.

Investment Motivations and Types of FDI

In simple theoretical expositions, FDI is typically represented in two ideal-type forms, based on the intent of the investment and the way it fits into the MNC's production network. Horizontal FDI is market-seeking in nature, essentially replicating the production line from the MNC's home country in the host market to produce identical (or nearly identical) products across both markets. This is contrasted with vertical FDI, where the investment is focused on accessing raw materials or producing an intermediate input to the final product, fragmenting the MNC's supply chain across both home and host economies. The underlying motivations for each type of FDI differ significantly, lending themselves to tractable analytical approaches. However, in practice, production-focused FDI typically contains both elements of horizontal and vertical characteristics, leading to veri-zontal FDI.

Tax haven FDI makes up a third form of FDI. It differs significantly from production-focused FDI in that its sole purpose for existence is to allow a MNC to take advantage of the host country's favourable tax policies by incorporating a subsidiary or affiliate and running business operations through that arm of the corporation. With no distinct impact on the host economy's non-financial sector, the determinants and effects of tax haven FDI differ substantially from those of production-focused investments.

Market Imperfections and Market Access

FDI provides one way for MNCs to access foreign markets. Firms have a large menu of options for internationalization, the costs and benefits of which are determined by a range of foreign market characteristics. While importing and exporting are less costly ways for firms to internationalise,¹ FDI provides one way for MNCs to access markets insulated by high tariff or non-tariff barriers, although it is driven by a wider variety of motivations.² When compared with other options, FDI is characterised by relatively high entry costs and lower continuing costs. Consequently, the decision to engage in FDI must be driven by circumstances that proscribe other, less pricy, alternatives.

John Dunning's organizing approach, known as the Ownership-Location-Internalization (OLI) framework, is perhaps the most widespread approach to explaining the necessary conditions making FDI an attractive internationalisation strategy in spite of its high entry costs.³ The OLI framework consists of three components, as described in Table 1. One of these – locational advantage – refers to market features, while the others, ownership and internalisation, identify characteristics of the firm. Where these factors all coincide, FDI presents advantages over other foreign-market access strategies.

Table 1 – Components of Dunning's OLI Framework

Principle Component	Description
Ownership Advantage	This describes products or an aspect (such as a patent, trade secret, trademark, reputation, etc.) of the production process controlled by the MNC that other firms do not possess.
Location Advantage	The foreign market must have some characteristic that makes it attractive, while precluding exports as a viable alternative to FDI. These features may be inherent to the market, such as cheap factor prices or a large domestic market, or could be based on trade costs.
Internalisation Advantage	There needs to be an advantage to internal foreign production; otherwise, licensing production to a foreign partner or exporting domestically produced products are more attractive alternatives.

Ownership advantages typically arise from knowledge-based (intangible) assets, or knowledge capital. Knowledge capital possesses different attributes from physical capital (including specific assets), making FDI a more likely outcome: knowledge capital can be easily transferred geographically, and it can easily be shared across multiple locations without reducing facility-specific productivity. Consequently, firms that rely heavily on knowledge-capital assets are well positioned to directly invest both domestically and internationally, allowing the firm to achieve economies of scale in a global market.

¹ Helpman et al. 2004 . Bernard et al. 2007 provide an excellent overview of the economic aspects of this. Plouffe 2015 discusses the political-economy implications.

² Blonigen 2005.

³ Dunning 1977, 1981.

Locational advantages depict market-based incentives for MNCs to enter foreign markets. Without these, firms would focus their internal production in domestic markets at the expense of expansion abroad. Locational advantages vary widely in the ways in which they incentivise foreign expansion. They may involve access to natural resource deposits – one of the key drivers for FDI flows prior to the latter half of the 20th century. Locational advantages may also result from access to cheap factors of production or a large market of consumers. Barriers to trade, such as those incurred through transportation or regulatory costs, can also increase the attractiveness of FDI relative to trade.

Locational advantages are not necessarily constricted to the potential host market, which may offer access to other economies as an export platform. This is particularly common where free trade areas (FTAs) link several markets, with rules of origin (ROO) limiting the benefits of the FTA to those goods at least partially produced within the bloc. FDI in this case provides an MNC with a way to reduce trade or production costs through vertical integration of production within the FTA, while additionally offering horizontal expansion. This can lead to FDI increases to bloc members offering competitive or regulatory advantages.

Internalisation advantages dictate whether production-related activities occur within the boundaries of the firm or outside these boundaries, arising from either intangible or specific assets, or a combination of the two.⁴ The value of intangible assets is often tied to the MNC itself, and thus eroded if licensed to a third party. In the case of specific assets, licensing or outsourcing production to an unrelated producer may provide a solution to access a foreign market, but the highly specialized nature of these assets can lead to the hold-up problem under incomplete contracting, creating an incentive for the MNC to maintain production internally.

Table 2 – Explaining Integration and FDI

		Market Imperfections	
		Intangible Assets	Specific Assets
Locational Advantages	Yes	Horizontally Integrated MNC	Vertically Integrated MNC
	No	Horizontally Integrated Domestic Firm	Vertically Integrated Domestic Firm

The market imperfections arising from intangible and specific assets can be combined with locational advantages to describe the dominant structure of a FDI project, as illustrated in Table 2. However, supply chains feature complexities far beyond the dominant structure of a single FDI project. A single MNC may engage in different – and overlapping – forms of FDI with

⁴ Markusen 1995 provides a good discussion.

multiple host markets, complementing these investments with direct and indirect trade, on top of any foreign licensing arrangements. Consequently, the motivations underlying two investments in the same country and industry may differ, both in terms of their internal implications for their investors' supply chains, but also for their broader effects on the host-country's economy.

Aggregation and (Mis)Measurement

A substantial literature is dedicated to the study of FDI in a cross-national setting, primarily relying on aggregated country-level flows and stocks. Assuming away measurement concerns, this body of work has yielded important findings. For example, Blonigen and Wang identify distinct differences in the determinants of FDI to rich economies from FDI's determinants in developing economies.⁵ Similarly, industry-level studies can provide useful insights into commonalities between individual investments. However, the process of aggregating investments can mask important measurement issues.

Measuring Flows

These measurement problems stem from a variety of sources. The aspect of foreign ownership and control provides a useful starting point. IMF guidelines distinguish FDI from foreign portfolio investment when a foreign entity holds an ownership stake of at least 10%.⁶ However the ability to wield effective control over a foreign affiliate depends on other factors, such as the affiliate's corporate governance structure and host-country financial regulations. Likewise, these can give rise to questions relating to how effectively a foreign owner can control its affiliate. One particularly salient recent example is that of China, where regulations limit foreign ownership stakes, which has contributed to intellectual-property issues with foreign governments, most visibly that of the United States.⁷

These ownership and control-driven concerns are also reflected in the data itself, with some countries deviating from the IMF's 10% threshold, often based on whether the foreign entity possesses an effective voice in management decisions. These reporting exceptions are not uncommon among frequently used sources of national-level FDI data; for example, in the IMF's 2001 *Survey of Implementation of Methodological Standards for Direct Investment*, 10 of 28 OECD countries and 8 of 23 non-OECD countries relied on non-standard reporting criteria.⁸

The financial aspects of FDI also cause problems for aggregation. This is particularly acute in the case of FDI flow data, where reported values represent net inflows during the reported period of time. For low levels of reported flows, this becomes particularly problematic as the data conflate different experiences. A country with quantitatively similar capital inflows and outflows will

⁵ Blonigen and Wang 2004.

⁶ The guidelines can be found here: <https://www.imf.org/external/np/sta/di/index.htm>

⁷ As one example, the US government investigated China specifically over these concerns: <https://ustr.gov/issue-areas/enforcement/section-301-investigations/section-301-china/investigation>

⁸ IMF/OECD. <https://www.imf.org/external/pubs/ft/fdis/2003/index.htm>

appear to be the same in the data as a country with low levels of capital account activity. Andrew Kerner illustrates this issue with the cases of Poland and Moldova.⁹ In 2005 Poland reported inbound US FDI of approximately \$0, while in 2010 Moldova's FDI inflows from the US came to -\$1 million. In the case of Poland, US MNC activities actually expanded their already significant activities over the course of the year, but intercompany debt flows and equity outflows negated this gain in the capital account. In contrast, Moldova's recorded outflows reflected a large percentage of the American MNCs' FDI stock in the country, with little inflow activity to offset FDI outflows. Finally, if profits from a MNC's foreign affiliate are reinvested in its host market, this investment is omitted from flow data because it never crosses international borders, despite sharing important characteristics with financial flows that do.

Furthermore, the ways in which direct investments are financed impacts measurements of flows. MNCs vary in the extent to which they rely on host-country credit markets. MNCs may take on local debt to reduce exchange-rate risk or because of loan guarantees and tax implications. Where local credit markets are utilized, FDI flow data based on cross-border financial flows understates the extent to which FDI is actually taking place. As others have observed, it is difficult to tell exactly how this measurement error may bias results: good host-country institutions may both foster local MNC borrowing through healthy financial markets or discourage local borrowing by reducing exchange-rate risk.¹⁰

Measuring Stocks

Aggregated data on FDI stocks also suffer from measurement concerns, some of which relate to the issues facing those seeking to accurately capture FDI flows. Stocks are generally measured in three ways: through accumulated flows, at approximate market value, or at historical cost. Flow-based stock calculations are vulnerable to measurement problems inherent in flow data, but such an approach also misses changes to the parent MNC's market value that impact the valuing of its foreign affiliates.¹¹

The IMF and OECD favour market-value based stock estimates. While these figures are readily available, they do not necessarily capture value-adding activities in the affiliate's host country. Likewise, variability in market-based valuations may not reflect actual productive activities. As is the case of other measures of FDI stocks, liquid and illiquid assets are not differentiated; as a result, changes in stocks in response to (or in anticipation of) shifts in the investment environment may be underestimated, as immobile assets are not easily adjusted. Historical-cost stock estimates offer another alternative, but may misrepresent figures where price- or exchange-rate changes are significant. In practice, common cross-national FDI stock datasets rely on a combination of these measurement approaches, reducing comparability across countries.

⁹ Kerner 2014, 804-085.

¹⁰ Beugelsdijk et al. 2010.

¹¹ Kerner 2014 and Damgaard and Elkjaer 2014 discuss this in greater detail.

Furthermore, as Beugelsdijk et al. and others have noted, stock data are biased by the incorporation of tax-haven activities.¹² Incorporating tax haven FDI biases estimates of flows and stocks upward, while reducing estimations of the link between FDI and productive activities.

Aggregation and FDI Effects

Measurement error aside, aggregated FDI data create a pooling effect when it comes to ascertaining its influence on host economies. Chinese outward FDI under the guise of the Belt and Road Initiative (BRI) has highlighted this rather vividly. These projects typically focus on resource extraction and infrastructure and, consequently, might be expected to positively influence host economies' economic growth and welfare. However, these investments often are accompanied high-interest loans and additional stipulations, such as the use of Chinese labour.¹³ As a result, labour-based spillovers to the local economy are non-existent; the focus on linking resources to trade reduces positive infrastructure effects for other aspects of the domestic economy, and in the event of cash-flow problems, host governments are forced into restructuring that often benefits Chinese firms. Critics have likened these issues to neo-colonialism, particularly in the popular press.¹⁴

The BRI case highlights the individuality of FDI approaches. While FDI has been linked to technical spillovers and growth effects, these vary on the host market's financial development and investment characteristics.¹⁵ These characteristics include the affiliate's position within the establishing MNC's supply chain and the industry within which the operations are classified. These, in turn, relate the characteristics of capital and labour employed. Skill- and capital-intensive investments will have greater positive effects on the broader host economy than those relying on low-skilled labour, but these may be lessened by the MNC's operating practices. Efforts to keep knowledge capital, such as organizational or technical expertise, within the organization prevent local firms from benefiting from these gains. Likewise, reliance on non-native skilled labour reduces labour force spillovers to local firms, limiting positive growth effects. There is another, more basic, aspect at play. Greenfield FDI, or investment in new productive assets, can be expected to have greater positive implications for growth than M&A activities, where MNCs acquire control of pre-existing local firms. However, the extent to which these spillovers occur is dependent on the MNC's operating policies.

FDI has been associated with other, non-growth spillover effects, some of which are particularly acute in the developing world.¹⁶ MNCs shifting polluting production processes to low-regulation host countries can create new environmental-policy concerns, particularly for host governments.

¹² Beugelsdijk et al. 2010.

¹³ Cheng 2016.

¹⁴ Sarwar 2017 discusses some of this.

¹⁵ Alfaro et al. 2004 introduce the identification of a threshold level of financial development linking FDI to growth. Harish and Plouffe 2018 give an overview of the effects of FDI in the developing world.

¹⁶ Harish and Plouffe 2018 cover these issues, and their political implications in greater detail. Alfaro 2016 also discusses the gains to be had from using both micro- and macro-level data.

Likewise, the increased productivity of MNCs' affiliates compared to local firms can induce demand shifts for different forms of labour and increase wage inequality. If a particular investment contributes to the host's macroeconomic growth, it may be feasible to deal with consequences like these through policy once they emerge; without an increase in growth or another potential tax base, policy makers will be left with increasing demands and limited options for response.

Policy Implications

I have highlighted a number of issues with readily available aggregated FDI data. These include measurement problems, the pooling of dissimilar investment activities, and a lack of distinction between important micro-level investment characteristics. At the investment level, supply-chain motivations, financing choices, and operating decisions all influence the effects an FDI has on its host economy.

For policy makers seeking to benefit from FDI, these components all require serious attention. Investor preferences often run counter to governance concerns, such as encouraging knowledge spillovers, requiring careful negotiation for both parties to reach a suitable outcome, particularly with respect to FDI's potential externalities. While research relying on crossnational analyses can provide useful insights for both policy and business, decision makers must also look to micro-level studies for closer matching of investment characteristics to the desired outcomes. In an age of rising protectionist sentiment, missteps in the handling of FDI are likely to lead to politically costly fallout.

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